Determinants of Effective Collaboration between Health Care Organizations

A Literature Review

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Executive Summary

Question

What is known about the determinants of collaboration between Health Care Organizations?

Background and Context

Collaborating, partnering, joint working, coalition forming and other like concepts are prominent and well used ideas in health care today (1-7). In East Central Health, "collaborative" was used to describe the key process expected when working together to develop the Pediatric Regional Integrated Services Model (PRISM). Alberta Health and Wellness would also like to enhance collaboration between regions working together. The World Health Organization website, Health Canada website, Alberta Health and Wellness website, and documents within them are full of the term "collaboration" or some variation (8-11). Despite the popularity of the term, it is not clear that everyone is referring to the same idea when discussing 'collaboration'.

Method

A review of the literature was completed systematically in an attempt to find all the known literature containing the key concepts of collaboration, health care organization and determinant using resources available through SEARCH Caanda. In total, 698 potentially relevant articles were found. Applying specific inclusion and exclusion criteria reduced the total of potentially relevant studies to 25. Furthering filtering eventually reduced the number of studies to 12. The 12 identified studies were critically appraised using well known tools (34-35) and after further filtering for quality, five studies with the greatest validity, importance and applicability were identified. Analysis of these studies yielded 34 determinants of effective collaboration between health care organizations, of which six of the factors were common to at least four of the five studies.

Findings

The 6 factors that were common to four of the five highest quality studies reviewed (the most prevalent factors) are summarized as follows:

1. Shared and / or adequate resources, including time / human resources and sustainable finances that are sufficient to support the collaborative endeavor (common to all 5 studies)

2. Good communication and an infrastructure for good communication, including information technology (IT)

3. Trust, understanding, respect, and a positive working climate between partners

4. Skilled, strong leadership

5. Clear, realistic, concrete, and attainable goals and objectives

6. Absence of constant reorganization and/or adaptability and ability the organizations to manage change

The remaining 28 factors are identified in Table 8.

Recommendations for East Central Health

When contemplating working with other (one or more) organizations, it is recommended that the organizations:

1. Address the question "Is collaboration the best 'way of working together?" Collaboration is one way for two or more organizations to work together, however it is not the only way. Other ways of working together (communication, contribution, coordination or cooperation) may yield the intended results with different expectations related to sharing of resources, level of integration and other considerations related to 'working together'.

2. Engage in open discussion of the known determinants (and the fact that there *are* known determinants) of collaboration. Being deliberate in considering the many determinants of effective collaboration will help organizations gauge the likelihood of success and resources required to effectively collaborate. Organizations may wish to consider using a tool that measures areas of strength and weakness and reflect on these periodically as the relationship progresses.

3. Create an action plan that capitalizes on determinants that are strengths, and attends to determinants that are areas of weakness.

Determinants of Effective Collaboration between Health Care Organizations

A Literature Review

Question:
What is known about the determinants of collaboration between Health Care Organizations?

Context:
Collaborating, partnering, joint working, coalition forming and other like concepts are prominent ideas in health care today (1-7). Searching the websites of the The World Health Organization, Health Canada, and Alberta Health and Wellness for the terms "collaboration" or "collaborate" yielded 50100 hits, 3407 and 57 hits respectively (8-10). A search for the root term "collab" in a recent Alberta Health and wellness document ("Health Authority Accountability in Alberta's Health system"), yielded 18 results from within the 37 page document (11).

In East Central Health, 'collaborative' has been used to describe the method used by health care professionals when working together:

- to provide pediatric service in the Pediatric Regional Integrated Services Model (PRISM)
- across service streams (i.e. Rehabilitation and Continuing Care)
- between organizations such as East Central Health, the University of Alberta, and the City of Camrose to create the progressive wellness facility named the Edgeworth Centre

The above list is not a comprehensive list; it is a sample. Collaboration has also been singled out as one cause of recent challenges between East Central Health and its contracted, faith-based health service providers.

It is clear that on large and small scales, organizations are collaborating. It is important to know if they are collaborating in the best way possible.

Background
As a focus for study, the term *collaboration* was chosen from among some of its related concepts (partner, partnership, joint-working, interorganizational relationship, cooperate and coalition). This choice was based on its colloquial appeal and the power associated with the use of the word *collaboration* in Alberta's health sector. There is an expectation that organizations work together to address problems. Collaboration is viewed as a means to respond to the complexity of social issues within (12) and between organizations (6, 13), "To achieve a vision otherwise not possible when independent entities work alone" p. 65 (14). A joint vision can result from bringing in multiple perspectives from people of different disciplines and organizations with diverse cultures and mandates-thus bringing a spectrum of strengths to the table to solve a problem. As demands increase for services by non-profit and public services despite constant or diminishing funding, collaboration is viewed as a means to streamline services and improve efficiencies within the system (15).

Collaboration is at one end of a continuum described by Taylor-Powell et. al as a 'collaborative umbrella' p. 4 (16) that describes differing levels of integration that may occur when two or more organizations are working together (Table 1). At one end of the continuum, with the least amount of integration between groups, is *communication*. *Communication* may be roughly interpreted as "This is what I am doing. What are you doing?" The continuum proceeds with increasing degrees of integration through phases termed *contribution*, *coordination*, and *cooperation.* At the other end of the continuum is the most integrated way of working together: Collaboration. Collaboration might be roughly interpreted as "We each have problems. By working together, can we share resources and create a unique vision regarding the solution?"

Table 1: 'Collaborative Umbrella' - taken from Taylor-Powell et. al, p. 5 (16)

Integration	Process	Structure	Purpose
low	Communication	network, roundtable	• Dialogue and common understanding • Clearinghouse for information • Explore common and conflicting interests
↓	Contribution	support group	• Mutual exchange to support each others efforts • Build mutual obligation and trust
↓	Coordination	task force, council, alliance	• Match and coordinate needs, resources and activities • Limit duplication of services • Adjust current activities for more efficient and effective results
↓	Cooperation	partnership, consortium, coalition	• Link resources to help parties achieve joint goals • Discover shared interests • Build trust by working together
high	Collaboration	collaboration	• Develop shared vision • Build interdependent system to address issues and opportunities • Share resources

Collaboration is defined by Mattessich et. al p. 4 (6) as:

> "a mutually beneficial and well-defined relationship entered into by two or more organizations to achieve common goals … The relationship includes a commitment to mutual relationships

and goals; a jointly developed structure and shared responsibility; mutual authority and accountability for success; and sharing of resources and rewards."

The appeal of the term 'collaboration,' and a lack of clarity regarding its definition, often results in individuals and organizations saying that they are collaborating when they are later found to be working at another level of the continuum. In other cases one organization is aiming for collaboration, but the other is hoping to work at another level. This discrepancy can cause significant distress among participating individuals or organizations because, for example, the expectations of resource contributions and processes are much different for contribution vs. collaboration.

Barbara Gray and Donna Wood, two of the first scholars to write explicitly about collaboration, identify "three broad issues essential to understanding collaborative alliances: (a) the preconditions that make a collaboration possible and that motivate stakeholders to participate, (b) the process through which collaboration occurs, and (c) the outcomes of the collaboration" p. 13 (3). This literature review will deal primarily with the preconditions and conditions required for collaboration. It is beyond the scope of this review to address outcomes or specific motivations.

Purpose

The purpose of this review is to determine the conditions necessary for one health care organization to effectively collaborate with one or more different organizations. The specific question that has been addressed by this review is:

What is known about the determinants of collaboration between health care organizations?

Literature Identification and Selection

Search Strategy:

Health Business Fulltext Elite, Psychology and Behavioral Sciences Collection, Nursing & Allied Health Collection: Comprehensive, Biomedical Reference Collection: Comprehensive, CINAHL Plus with Full Text, MEDLINE, Google Scholar, PubMed, ABI Inform and Google.ca databases were searched between September 10, 2007 and November 18, 2007. Highly relevant articles were also retrieved through key informants and hand searching bibliographies.

Medical Subject Heading (MeSH) and other database-specific terms:

The search question "What is known about the determinants of collaboration between health care organizations?" was broken into its three constituent concepts as follows:

Concept 1 - Collaboration
Concept 2 - Health care organizations
Concept 3 - Determinants

The synonym for each concept word was determined by brainstorming, background searches and by using medical subject headings (MESH) or the equivalent key-word utility of the individual database. In cases where there was no identified term (ie. MeSH and ABI had no key word for 'determinant'), searches were carried out using the non-MESH terms, such as 'antecedent', 'determinant' and 'factor'. In test searches, it was determined that combining all search concepts using Boolean operators was too restrictive in some cases, thus several searches were completed using only one of the three search

concepts or related key words. Initially, the search using concept 2 was restricted to health care organizations, however this was also too restrictive and it was decided that for the purposes of this review, 'human service' could be substituted for 'health care' and yield applicable results. The strategy and key words are indicated in Appendix C and a record of searches can be found in Appendix D.

Searches of Google.ca were reviewed up to approximately 1000 returns / hits, and relevant articles / citations were retrieved. This was determined to be a sufficient strategy for a general search engine. Clinical Practice Guidelines were searched using the National Guidelines Clearinghouse. Using the single term "collaboration' resulted in 410 results being returned, and searches using combinations of the above search terms resulted in no returns. In reviewing the titles of the 410 guidelines that were returned, it was apparent that no result was related to collaboration between organizations.

Initially, 698 article citations were retrieved and stored in a RefWorks folder. After removing duplicates, 562 articles remained for further review. A summary of the number of articles found in each source database can be found in Table 2.

Table 2 – Number of articles retrieved in initial searches of one or more key concepts.

Database	Number of Articles retrieved.
PubMed	244
Google Scholar	57
EBSCO (Health Business Full Text Elite, Comprehensive Biomedical Reference, Nursing and Allied Health, Psychology and Behavioral Sciences, CINAHL, Medline)	158
ABI Inform	53
Google.ca	10
Bibliography search / Key informant	40
Total	***562***

When available, the titles and/or abstracts of the remaining 562 articles were reviewed (Table 3). It was often apparent from a title whether or not an article was clearly excluded, for example "Nepal: Postive trends in ARH" or "The Jakarta Declaration on health promotion in the 21st century". However, when available, abstracts were reviewed.

Table 3 – Summary of articles reviewed

	Articles with abstract available	Abstract / article not available	Total	Abstract did not exclude article	Articles excluded upon reading	Articles critically appraised
Number of articles	483	79	**562**	25	13	12

The inclusion / exclusion criteria were as follows:

Inclusion Criteria:

1. Study must be in English
2. Study must be related to collaboration between organizations
3. Titles must include one of the search concept words. (The exception allowed was the term 'Joint working' and 'multi-agency services' which were found to be previously unrecognized terms that are related to the concept of 'collaboration'
4. Article abstract must indicate that the study includes concepts # 1 and #3 above, and preferably concept #2
5. Studies must have been completed in the years 2000 to present (an exception was made for 2 highly cited articles) (1-2)

Exclusion Criteria:

1. Articles dealing with collaboration at a team or intra-organizational (within the organization) level
2. Articles that deal with one determinant at depth
3. Opinion or editorial comment papers
4. Articles completed prior to 2000
5. Articles not in English
6. Articles that were not available in full-text through SEARCH databases or the Grant MacEwan College databases

Twenty-five articles remained after reviewing the titles and abstracts of the 483 articles with abstracts available. The 25 articles were read and inclusion and exclusion criteria were then applied to the methods sections and a summary can be found in Tables 4 and 5. None of the articles found through hand searching bibliographies or key informants passed through the specific inclusion or exclusion criteria, however several of the articles identified this way have been referred to as valuable background information related to the topic of collaboration.

Table 4 - Inclusion Criteria

	Gray (17)	Oliver (2)	Sloper (18)	Wildridge (5)	Cameron (19)	Mattessich (6)	Foster-Fishman (20)	Snavely (7)	Einbinder (21)	Johnson (22)	Allen (4)	Dedekorkut (23)	Wells (24)	Redfield (25)	Foster-Fishman (26)	Foster (15)	Gray / Wood (3)	San Martin Rodriguez (27)	Nelson (28)	Hoffman (29)	Halverson (30)	Irons (31)	Vangen (32)	Babiak (17)	Snavely / Tracy (33)
English	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Inter -- organizational	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	x	√	√	√	√	√	√	√
Title includes Search concept	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
2000 or newer	x	x	√	√	√	√	√	√	√	√	√	√	√	√	√	√	x	√	x	x	√	√	√	√	√
Concept #1	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Concept #2	x	x	x	√	√	x	x	x	x	x	x	x	√	X	x	x	x	√	√	√	√	√	x	x	x
Concept #3	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	x	√	x	x	√	√	x	√	√

Table 5 – Exclusion Criteria

* exception made as these author's are frequently cited in the literature

	Gray (17)	Oliver (2)	Sloper (18)	Wildridge (5)	Cameron (19)	Mattessich (6)	Foster-Fishman (20)	Snavely (7)	Einbinder (21)	Johnson (22)	Allen (4)	Dedekorkut (23)	Wells (24)	Redfield (25)	Foster-Fishman (26)	Foster (15)	Gray / Wood (3)	San Martin Rodriguez (27)	Nelson (28)	Hoffman (29)	Halverson (30)	Irons (31)	Vangen (32)	Babiak (17)	Snavely / Tracy (33)
Team level collaboration	x	x	x	x	x	x	x	X	x	x	x	x	x	X	x	x	x	√	x	x	x	x	x	x	x
Deals with one determinant at depth	x	x	x	x	x	x	x	√	x	x	x	x	√	X	√	x	x	x	x	x	x	x	x	x	√
Opinion Paper / Editorial Comment	x	x	x	x	x	x	x	X	x	x	x	x	x	X	x	x	x	x	x	√	x	√	x	x	x
Completed Prior to 2000	* √	* √	x	x	x	x	x	X	x	x	x	x	x	X	x	x	√	x	√	√	x	x	x	x	x
Not available in full text	x	x	x	x	x	x	x	X	x	x	x	x	x	X	x	x	x	x	x	x	x	x	x	x	x
Not health or human services related	x	x	x	x	x	x	x	X	x	x	√	√	x	X	x	x	x	x	x	x	x	x	x	√	x

Articles in Tables 4 and 5 that have been grayed out did not, upon closer inspection, meet the pre-selected criteria and were not used. In total, 12 articles remained after inclusion and exclusion criteria were applied.

Data Extraction and Appraisal of Quality

The 12 studies that remained after applying inclusion and exclusion to the abstracts and / or methods sections were critically appraised using the Critical Appraisal Worksheets as developed by the User's Guide to the Medical Literature (34) if an appropriate worksheet was available. Appraisals for descriptive / cross-sectional studies were completed using Critical Appraisal sheets found on the Yeshiva University website through a google.ca search (35).

Validity

Addressing validity answers the question "Can I trust the information?" (36)

As mentioned in the previous section, each of the 12 articles meeting inclusion and exclusion criteria have been critically appraised using the User's Guide to the Medical Literature worksheets (34-35) and can be found in Appendix A. Each worksheet has a set of questions designed to facilitate understanding of the extent to which the study yielded valid results. Table 6 summarizes the findings of each article and provides a brief discussion of the quality of each.

The following criteria were applied in the order indicated to identify articles as sufficient with respect to validity:

i. Systematic reviews of reasonable validity as determined by working through the User's Guide's worksheets (34). Reasonable quality was determined by weighing and considering methods as assessed by the critical appraisal worksheets (33-34).
ii. Other articles deemed reasonable quality as determined by the critical appraisal sheets (34).
iii. Determinants identified in personal or non-systematic reviews and theoretical articles were not used for the purpose of this review as it was decided that there was sufficient doubt as to their ability to answer the question addressed by this review.

Based on the above criteria, the following studies were identified as having reasonable validity: Mattessich et. al (6), Cameron et al (19), Sloper (18), Foster (15), Halverson (30), Johnson (22), Foster-Fishman (26). The study by Redfield (25) was excluded as only 5 interviews were used and the study by Einbinder (21) was excluded as the important issue of corroboration of data from various sources was not discussed in the article's methods section (and various sources of data collection were used, including videotaping of meetings, surveys and focus groups). The study by Wildridge (5) was excluded as it was not a systematic review, thus significant bias cannot be ruled out. The studies of Gray (1) and Oliver (2), despite contributing vastly to knowledge in this area, did not use methods designed to answer the question addressed by this review and there was no mention of methods used to retrieve articles.

Table 6 – Validity – "Can I trust this information?"

Study	Type of Study	Discussion of Quality	Sufficient Validity
Mattessich et. al (6)	Systematic Review	Sensible question, detailed and exhaustive search for relevant studies, search terms were explicit, a process was used to reduce overall number of articles attained from 281 to 22 (process not explicit). Interrater reliability checking regarding selection of articles was not reported.	Yes
Cameron et al (19)	Systematic Review	Sensible question, detailed and exhaustive search for relevant articles with search terms and databases explicit, inclusion and exclusion criteria are discussed. Interrater reliability checking regarding selection of articles was not reported.	Yes
Sloper (18)	Systematic Review	Sensible question, detailed and exhaustive search for relevant studies, no mention of number of articles initially retried or included in final selection. No inter rater reliability checking regarding selection of articles.	Yes
Foster (15)	Cross sectional, descriptive	Study organizations were recruited purposively from 3 different population pools to avoid bias. A 120 item questionnaire was used that has been pilot tested; the survey also included some open ended questions and there were 645 participants, a large sample.	Yes
Halverson (30)	Cross sectional, descriptive	A nonrandom sample of 60 geographically, demographically and structurally diverse counties from 15 states in the US was used. Structured telephone interviews were used. Fewer participants were included than the Foster study.	Yes
Johnson (22)	Qualitative	Participants were chosen by a panel of experts and were categorized by occupation / role. Interviews were audio taped and transcribed and dependability was assessed by having 2 people code 15% of the data.	Yes
Foster-Fishman (20)	Qualitative	The authors collected articles, book chapters and practitioner guides that described forums in which multiple stakeholders met to resolve problems. Inclusion of sources of information was clear, and dependability of coding was checked using 2 researchers.	Yes
Redfield (25)	Qualitative	Purposive sampling was used and guided by key informants. A tested tool was used to gather information and 5 interviews were conducted as well. The sample size is relatively low - 28 / 34 agencies returned surveys.	No
Einbinder (21)	Qualitative	Purposive sampling was used to select 10 counties with variations in proportion of children from among all 33 counties in California. Videotapes of meetings, surveys and focus groups were used. There is no mention as to whether data from the various sources (videtaped meetings, surveys and focus groups) corroborate each other.	No
Wildridge (5)	Personal, non-systematic review	Not a systematic review. There is no information to indicate that the review was completed in a detailed or exhaustive way. Inclusion and exclusion criteria are not specific, except to note that selected articles needed to provide guideance on the principles of successful partnership working.	No
Gray (1)	Synthesis / theoretical	No methods section, no mention of systematic process to retrieve articles.	No
Oliver (2)	Synthesis / theoretical	No methods section, no mention of systematic process to retrive articles.	No

Importance
Whereas validity addresses the trustworthiness of the information, importance addresses the question, "Will the information, if true, make an important difference?" (36) There was no attempt, in any of the studies, to determine the potency of impact that any given factor, or the factors collectively, may have on collaboration between organizations.

Collaboration is a complex activity, and any individual factor can be more or less important depending on the context of any given collaboration at any given time. Further research is required to determine the impact of consciously working to consider necessary factors / determinants for collaboration between organizations. Such research will be complicated by the complexity of the workings of organizations in their contexts, which will be difficult to describe or categorize, however there are methods that can be used to approach this. It may be more practical for leaders in organizations such as East Central Health to reflect on the variety of identified determinates of collaboration on a regular basis and continually ask themselves the question "Given our accumulated experience and knowledge of our organization, and the organization we are considering working with, what factors are most significant right now?" and "How do we address these factors in order of priority?"

Applicability
The question of applicability is the question "Can I use this information?" (36) To answer this question it is of utmost importance to consider the context of the individual and the organization asking the question.

Three questions were constructed, the answers to which were expected to shed light on the usefulness of the information for East Central Health. Table 7 provides a summary of the performance of each article on each question. The questions were as follows:

1. Is it reasonable to expect that East Central Health, and the organizations that it might collaborate with, are the *types* (i.e. for profit, non-profit, unions etc) of organizations discussed in the article?

2. Is it reasonable to expect that the *nature / extent* (degree of interdependence) of the collaboration discussed in the article is similar to collaborations that East Central Health might engage in?

3. In East Central Health, is it reasonable to expect that knowledge of the factors identified in the study might assist leaders when collaborating with other organizations?

The studies selected were all largely applicable, which is partly a function of the inclusion and exclusion criteria that are influenced directly by the study question. However, the studies of Foster (15), Halverson (30) and Oliver (2) each met only 2 of the 3 applicability questions, and thus were deemed less applicable than the other nine articles. Foster (15) looked at feminist organizations; East Central Health is not identified as being a feminist organization. Halverson (30) included private organizations. East Central Health is not private, thus the operation of the organization is likely to be different. Oliver (2) discussed a number of different types of interorganizational relationships such as trade associations, voluntary agency federations, joint ventures, joint programs, corporate-financial interlocks and agency-sponsor linkages. Much of this terminology is not applicable to the East Central Health context.

Table 7 - Applicability – Can I use this information?

Study	Question 1 Similar types of organizations	Question 2 Similar Nature (extent) of collaboration	Question 3 Knowledge of factors might assist ECH leaders	Description of study context	Sufficient Applicability
Mattessich et. al (6)	√	√	√	Described as applicable to organizations, large and small and sought research in health, social science, education and public affairs arenas. Collaboration is defined as a mutually beneficial and well-defined relationship entered into by two or more organizations to achieve common goals.	Yes
Cameron et al (19)	√	√	√	Joint working in the UK/social services interface. Joint working described as including: placement schemes, multi-agency teams and projects, strategic-level working and case or care management.	Yes
Sloper (18)	√	√	√	Multi-agency working in Children's services in the UK. Literature sought via keywords such as: multi-agency, interagency, multidisciplinary, interdisciplinary, joint working, and team working – thus broader literature was sought that the focus of this review, however still applicable to ECH.	Yes
Johnson (22)	√	√	√	State departments and private social services firms in Ohio, USA. Extent / nature of collaboration described as interagency.	Yes
Foster-Fishman (20)	√	√	√	The study referred to coalitions, however a footnote indicates that all collaborative venues were explored (task forces, community coalitions, multiple stakeholder groups, interagency coordinating councils and coordinating committees).	Yes
Redfield (25)	√	√	√	Nonprofit organizations involved in collaborations and/or strategic alliances.	Yes
Einbinder (21)	√	√	√	Family services collaboratives in California (county agencies) that collaborate with a variety of other organizations. Extent of collaboration is described as interorganizational.	Yes
Wildridge (5)	√	√	√	Partnership working, primarily based in the UK. The authors believe that the principles can be applied in many policy areas. The author discusses 6 different forms of partnership working in the UK which, in this writer's view, are applicable to East Central Health.	Yes
Gray (1)	√	√	√	Collaboration in various sectors of society – business, government, labor, and communities and is concerned with underorganized systems – potential networks, rather than already established networks.	Yes
Foster (15)		√	√	Non-profit (voluntary) organizations in Canada. One half of the organizations were selected as they were women's organizations. This study sought information from the organizations regarding the extent (nature) of collaborative activity.	No
Halverson (30)		√	√	Looked at Public Health, community hospitals and community health centres in the United States. Some of these organizations are private, for profit. Collaboration described as between organizations and other institutions.	No
Oliver (2)	√		√	Interorganizational relationships including trade associations, voluntary agency federations, joint ventures, joint programs , corporate-financial interlocks and agency-sponsor linkages	No

Overall Quality
In assessing the overall quality of the studies examined, an attempt was made to weigh the most valid, important, and applicable studies heavily and expect that the associated findings would bring the greatest value to East Central Health. This was not a simple task as there remains considerable debate regarding the best way to assess and synthesize evidence and thus assess quality. Some key points as raised by Mays et. al., (37) were:

- Policy makers and managers use a wide range of sources of evidence, including but not limited to published literature (current methods of formal synthesis / review of published literature are not sufficient in and of themselves);
- Differing philosophies are used to make meaning out of information (relativist, subtle realist etc.) Depending on the overarching philosophy that any individual or organization uses, more or less value may be placed on any given strategy (qualitative, quantitative etc.);
- There are differing opinions as to whether the relative value of qualitative research vs. quantitative research is one of hierarchy (one is better than the other) or of nature (one is better at answering one type of question than the other). In some circumstances, qualitative and quantitative methods may be used concurrently to complement one another.
- "There is no single, agreed framework for synthesizing such diverse forms [research, non-research, qualitative and quantitative] of evidence.." p. 18

In a systematic review of the content of critical appraisal tools completed in 2004, Katrak et. al. concluded that there was no consistently recognized and accepted standard critical appraisal tool (38). Without such a tool, the assessment of quality is not standardized. The issues around determining quality become even more complex when literature is of mixed-methods designs, as it is for this review.

As there are different ways of approaching the determination of quality and methods continue to evolve, the method used in this literature review was holistic and the steps were as follows:

1. Inclusion and exclusion criteria were determined
2. Final articles were appraised using the worksheets associated with the User's Guide to the Medical Literature (34) and Yeshiva University website (35)
3. Articles with recognizable and significant flaws to validity were excluded (Table 6)
4. The importance of articles was determined (all articles were deemed important with respect to the question addressed by this literature review).
5. Studies not meeting all 3 applicability criteria were excluded (Table 7)

Based on the rationale provided in the previous sections on validity, importance and applicability, the following 5 author's articles were selected as meeting overall quality criteria: Mattessich et. al (6), Cameron et al (19), Sloper (18), Johnson (22), Foster-Fishman (26) and the factors / determinants identified in these top 5 quality articles are presented in table 11. In total, 34 determinants have been identified. The reader is referred to Appendix A for a synopsis of all studies appraised using the User's Guide to the Medical Literature worksheets (34).

Analysis and Findings

The top 5 quality studies yielded 34 determinants as indicated in Table 8. The following factor was common to all 5 of the top quality studies:

1. Shared and / or adequate resources - including time, human resources and sustainable finances that are sufficient to support the collaborative endeavor.

The following 5 factors (in no set order) were common to 4 of the 5 studies:

1. Good communication and an infrastructure for good communication, including information technology (IT);
2. Trust, understanding, respect and a positive working climate between partners;
3. Skilled / strong leadership;
4. Clear and realistic aims and objectives and/or concrete, attainable goals and objectives;
5. Absence of constant reorganization and/or adaptability and ability of the organization's to manage change.

The following 10 factors (in no set order) were common to 3 of the 5 studies:

1. Shared perceptions that the collaboration resulted in a unique purpose and that there was a sense of urgency or that the timing was right;
2. Awareness amongst the collaborating organizations of their interdependence and roles and responsibilities;
3. Joint vision, values setting and or information searching;
4. Appropriate support and supervision of staff by senior administration;
5. Lack of stereotypes toward collaborating organizations, absence of negative assessments and a shared value of member diversity;
6. Favorable political, social, environmental or ecological climate;
7. Positive personal / informal communication links between collaborating organizations;
8. Shared past history of successful collaboration;
9. An action plan with an appropriate and agreed upon pace and target completion date / timeframe;
10. Commitment of senior and frontline staff and / or multiple layers of participation.

The remaining 19 factors are indicated in Table 8. Some authors synthesized the information such that the factors became grouped into categories. When applicable, the corresponding categories are included as a legend on Table 8.

Authors often used different language to describe determinants pointing to similar concepts. For purposes of this review, like concepts were collapsed and attempts were made to include key elements of the original language in the descriptor. For example, Sloper (18) described the factor numbered 10 in Table 8 as 'commitment of senior and frontline staff,' while Mattessich et. al (6) discussed the importance of 'multiple layers of participation,' and Johnson (22) wrote simply of 'commitment.' It was determined that the different authors were indicating similar ideas; however the reader is urged to judge this independently.

Table 8

Determinant Groupings by Author

Sloper (16)	
PI	Planning Phase
I	Implementation Phase
B	Barriers

Cameron et. al (17)	
O	Organizational Issues
C	Cultural and Professional Issues
X	Contextual Issues

Mattesich et. al. (6)	
E	Environment
M	Membership
S	Process & Structure
C	Communication
P	Purpose
R	Resources

Foster-Fishman et. al. (23)	
MC	Member Capacity
RC	Relational Capacity
OC	Organizational Capacity
PC	Programmatic Capacity

● indicates that the author did not group the factors into categories

	Determinants Identified	Study					
		Sloper (18)	Cameron et. al (19)	Mattessich et. al (6)	Foster-Fishman (20)	Johnson (22)	Number of final studies Identifying this factor
1.	Shared and/or adequate resources (time, money, human resources) and / or financial certainty (lack of financial certainty is a barrier). Recruitment of staff with the right experience.	I/B	O/X	R	OC	●	5
2.	Absence of constant reorganization; adaptability and ability to manage change	B	X	S		●	4
3.	Clear and realistic aims and objectives; concrete, attainable goals and objectives	PI	O	P	PC		4
4.	Good communication and infrastructure for communication, including Info. Technology (IT)	PI	O	C	OC		4
5.	Skilled or strong leadership	PI		R	OC	●	4
6.	Trust, understanding and respect between partners; positive working climate		C	M	RC	●	4
7.	An action plan with appropriate / agreed upon pace and completion time; task oriented work environment	PI		S	OC		3
8.	Appropriate support and supervision of staff by senior administration; strategic support	I	O			●	3
9.	Awareness of interdependence and clearly defined roles and responsibilities	PI	O	S			3
10.	Commitment of senior and frontline staff; commitment; multiple layers of participation	PI		S		●	3
11.	Joint vision, values setting and/or info search			P	RC	●	3
12.	Lack of stereotypes / negative assessments or members value diversity		C		RC	●	3
13.	Past history of successful collaboration		O	E		●	3
14.	Personal connections and established informal communications links; personalities involved; positive external relationships		O	C	RC		3
15.	Political / social / ecological / environmental climate is favorable; ecologically valid		X	E	PC		3
16.	Shared perceptions that collaboration results in a unique purpose; unique and innovative; shared sense of urgency and necessity			P	PC	●	3
17.	Joint training and team building	I	C				2
18.	Members see collaboration as in their self interest.			M		●	2
19.	Monitoring and evaluation of the service with regular review of policies / procedures	I			OC		2
20.	Similar agency geographic borders; coterminosity; geographic proximity or co-location	B	X/O				2
21.	Similar agency ideologies / cultures / philosophies – different ideologies / cultures is a barrier	B	O/C				2
22.	Ability to compromise			M			1
23.	Absence of hindrance of rules and regulations					●	1
24.	Appropriate cross section of members			M			1
25.	Appropriate dispersion of power				RC		1
26.	Collaborative group seen as a legitimate leader			E			1
27.	Continuous Improvement Orientation				OC		1
28.	Core member attitudes towards engaging in collaboration				MC		1
29.	Core skills and knowledge regarding collaboration				MC		1
30.	Flexibility			S			1
31.	Joint (multi-agency) steering committee	PI					1
32.	Linkage of planning and decision making of the collaborative into planning and decision making processes currently operating in member organizations	PI					1
33.	Organizations mandated to collaborate					●	1
34.	Sense of shared risk – members all share a stake in process and outcome			S			1

Recommendations for East Central Health

Collaboration is a tool and as with any tool, it has tasks for which it is well designed and tasks for which it is not well designed. Collaboration is a tool for working in complex systems. It is participative and has the potential to yield the engagement of all parties involved. However, it requires significant time and effort to ensure that the multitude of determinant factors mentioned have been considered. According to Mattessich et. al., "The past decade has included 'collaboration mania' among some people who set policy and offer funding" (6) p. 34. The efficiencies gained by sharing resources between organizations and providing a more integrated framework of providing service to the end user need to be balanced by the time and energy commitment of the individuals engaging in the process. Using a screwdriver and screws to assemble all the beams of a house will yield very strong construction; however a hammer and nails will yield adequate construction and a much quicker result. That said, there are times a hammer and nails simply do not provide the required strength and any amount of time spent hammering and nailing would be wasted. The challenge is deciding which tool to use and when. Further research is required to address this question.

The recommendations for East Central Health when contemplating working with another organization are as follows:

1. When contemplating working with another organization to provide service to a shared population of clients, East Central Health representatives should seek to engage in explicit dialogue regarding the level of integration the organizations wish to achieve. It is important for the organizations to be clear regarding to the level of the collaborative umbrella (Table 1) that they believe is best suited to meeting the needs of their stakeholders and the level that they are willing to work towards achieving. In other words, the question of whether or not the organizations all agree that collaboration (the highest, and most resource-intensive, level of integration) is the best process to achieve the desired outcome, is an important question to address in early stages.

2. Assuming that Step One has yielded a decision to collaborate, each organization must deliberately reflect on the determinants needed to gauge the overall probability of success given available resources. Alternatively, organizations will benefit from gauging the amount of time, energy, and resources needed to succeed in the collaborative endeavour. Consideration needs to be given to opportunity cost - the opportunities not taking while resources are otherwise engaged in or dedicated to the pursuit of the collaborative endeavour.

3. In the early stages, the organizations should agree to deliberately reflect on these determinants at regular periods throughout the collaborative process. Collaboration is a complex undertaking, often applied in complex organizations. The determinants of interest in the beginning are not likely to remain the determinants of interest throughout the project. "Complex systems *co-evolve.* (italics in original) This means that different parts of the system change their relationship to, and the way they interact with, other parts of the system over time." p. 533-34 (39)

Limitations and Future Research

Although 16 determinants were highlighted in the analysis and findings, it is important that individuals who are responsible for leading organizations through a collaborative endeavour review and consider all of the determinants listed in Table 8.

Due to the state of evolution regarding the study of interorganizational collaboration, there is currently no weighting assigned to the various determinants. It would be beneficial for future research to focus on determining the relevance of each of the determinants or in arriving at a framework that might help organizations decide which determinants are important under given circumstances. Providing users with a weighting mechanism might assist in allocating resources and in mitigating or overcoming the challenges associated with the most influential factors. This may help determine early-on whether it is feasible to undertake the collaborative process.

To complement further research aimed at clarifying the relevance of various determinants, health care organizations are encouraged to monitor and evaluate their approaches to collaborating. Monitoring can be accomplished by using program evaluation methods and tools that measure collaboration.

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Appendix A – Critical Appraisal of Selected Studies

Gray B. Conditions Facilitating Interorganizational Collaboration. Human Relations 1985;38(10):911.

Type of Study: Synthesis / Review / Theoretical

Context: All types of organizations were considered, author based in USA.

Question:
During each of three phases of the collaborative process (problem setting, direction setting and structuring), what conditions are essential in achieving effective collaboration?

Are the results Valid?

Did the review explicitly address a sensible question?
Yes - the question was sensible as it directly relates to the question of this review.

Was the search for relevant studies detailed and exhaustive?
Not discussed explicitly. The author cites many articles, however it is not clear from the writing in the article that a systematic literature retrieving process was used. Gray indicates that McCann, 1983, is a base of some of this model. The choice of studies was not clearly explicit or comprehensive as the process is not explained.

Were the primary studies of high methodologic quality?
This is not reported. The author cites articles, however does not discuss the specifically how she retrieves key concepts.

Were assessments of studies reproducible? N/A

What are the Results?

Were the results similar from study to study?
N/A

What are the overall results of the review?

1) ***Problem setting is defined and facilitative conditions are outlined (see factors section);***
2) ***Direction Setting is defined and facilitative conditions are outlined;***
3) ***Structuring is defined and facilitative conditions are outlined.***

How precise were the results?
This is unable to be determined.

Gray B. Conditions Facilitating Interorganizational Collaboration. Human Relations 1985;38(10):911.

How can I apply the results in my Organization?

How can I best interpret the results to apply them to the care of patients in my practice?
Incorporate into findings of other authors in this review.

Were all (clinically) important outcomes considered?
Absolutely - it contributes to a growing body of knowledge in this area. This article is frequently cited.

Are the benefits worth the costs and potential risks?
Yes – the benefits could be significant if a collaborative approach is the approach of choice. Having all parties clear on the vision and goals of the collaboration or partnership might significantly reduce time and effort if conflict arises. The costs are time – the collaborative process requires significant time and commitment.

Factors / determinants examined or discussed:
Problem Setting (defined as identifying stakeholders and mutually acknowledging the issues which join them).

Five propositions:

1) the number of stakeholders needs to reflect the complexity of the issue and be evolving,
2) collaboration must be perceived by stakeholders as having a cost-benefit advantage; benefits must be perceived as exceeding costs,
3) the stakeholders must be aware of and appreciate their interdependence
4) the group must have shared perceptions of legitimacy of stakeholders and not exclude legitimate stakeholders.
5) there needs to be a convenor with legitimate authority and can rally other stakeholders to participate.

Direction Setting (stakeholders articulate the values which guide their individual pursuits and begin to develop a common purpose). Two further propositions:

6) the collaborative process is facilitated by coincidence in values between stakeholders through joint information search;
7) collaboration is enhanced by appropriate (not necessarily equal) dispersion of power among stakeholders. With greater dispersion of power "each stakeholder gains greater functional control over the problem as it impacts them specifically" and "Widely dispersed power permits individual stakeholders to moderate the impact of the problem on their own operations and to help moderate impacts on other stakeholders as well." Who decides the power distribution is a function of structuring.

Structuring (creation of long-term structures to support and sustain collective appreciation and problem-solving activities)

Five further propositions:

8) stakeholders perceive that continued dependence upon each other is necessary to implement their desired directions for the domain;
9) mandated structuring is not sufficient, but assists with structural framework;

Gray B. Conditions Facilitating Interorganizational Collaboration. Human Relations 1985;38(10):911.

10) negotiation amongst stakeholders regarding regulation of the collaboration (the domain), implementing actions and power distribution should occur;
11) geographic proximity facilitates structuring;
12) ability of stakeholders' collective ability to respond to changes in their contextual environment (monitoring changes and building relationships with parties external to the collaboration)

Oliver C. Determinants of Interorganizational Relationships: Integration and Future Directions. Academy of Management Review 1990 04;15(2; 2):241-265.

Type of Study: Review / Synthesis

Context: All types of organizations, author based in Canada.

Question (s):

1. ***What does the interorganizational literature say about generalizable determinants of relationship formation and how they may be applied to the prediction of interorganizational relations?***
2. ***What future research might be undertaken to specify the conditions under which each determinant will more likely predict different types of relations?***

Are the results Valid?

Did the review explicitly address a sensible question?
Yes it does – knowing the determinants of successful relationship formation is expected to be a precursor to finding strategies to improve these relationships.

Was the search for relevant studies detailed and exhaustive?
This is not clearly described. The author cites sources to justify her statements, but does not explain how she arrived at her statements / framework.

Were the primary studies of high methodologic quality?
This is not reported.

Were assessments of studies reproducible? N/A

What are the Results?

Were the results similar from study to study?
The author contrasts different views or findings of authors.

What are the overall results of the review?
Understanding the reasons for Interorganizational relationship formation ('the why') is important. There are broad, general patterns in the factors that influence 6 critical contingencies for Interorganizational Relationship formation:

1) necessity (i.e. mandate);
2) asymmetry (ability to influence another organizations resources),;
3) reciprocity (to pursue common or mutually beneficial goals);
4) efficiency (internal motivation of one organization to improve input/output ratio);
5) stability (to help reduce the risk of environmental uncertainty); and
6) legitimacy (i.e. partner with organizations that have a good reputation).

How precise were the results?
The results, the six critical contingencies, are based on a review and synthesis of literature from 1960. They are described as being "proposed as generalizable determinants of IOR (interorganizational relationship formation) across organizations, settings and linkages.

Oliver C. Determinants of Interorganizational Relationships: Integration and Future Directions. Academy of Management Review 1990 04;15(2; 2):241-265.

How can I apply the results in my Organization?

How can I best interpret the results to apply them to the care of patients in my practice?
Consider them with all other collected knowledge on this topic and inform partnership development in the future; consider when assessing collaboration tools;

Were all important outcomes considered?
This topic is very context dependent by nature, and thus these factors can add to overall knowledge and generation of further hypotheses. The outcome considered is that of establishing good interorganizational (collaborative) relationships and this is very important in the context of health care, in Alberta, in 2008.

Are the benefits worth the costs and potential risks?
Despite the outcomes of collaboration not being clear, there is significant momentum, public and political pressures that make it an important topic to understand. Asking the question and pursuing the answer may help to create an expectation that the outcomes be scrutinized.

Factors / determinants examined or discussed:

1) necessity (ie. mandated);
2) asymmetry (ie. to exercise power);
3) reciprocity(ie. to cooperate);
4) efficiency (ie.improve input/output ratio);
5) stability (ie. mitigate uncertainly or risk);
6) legitimacy (ie. help justify activities to appear in agreement with prevailing norms /rules / beliefs / expectations of stakeholders); and interaction among the previous 6 factors.

Other factors examined

Conditions that promote relationship formation:

1) resource scarcity – organizations are more likely to establish ties with other organizations when resources are scarce and they need access to them;

2) relationship specific conditions – the author states that the specific conditions that cause certain types of relationships to be established has not been clarified, however proposes a framework / matrix based on the 6 factors discussed previously and the following six types of interorganizational relationships:

   I. trade associations;
   II. voluntary agency federations;
   III. joint ventures;

   IV. joint programs;
   V. corporate-financial interlocks;
   VI. agency-sponsor linkages.

Sloper P. Facilitators and barriers for co-ordinated multi-agency services. Child Care Health Dev. 2004;30(6):571-580.

Type of Study: Review

Context: literature on multiagency working, not confined to children's services, author based in the UK.

Question(s):

I. ***What models of multi-agency working are utilized in practice?***
II. ***What evidence is there that multi-agency working improves outcomes for service users?***
III. ***What evidence is there about the factors that facilitate co-ordinated multi-agency working?***
IV. ***What evidence is there on the barriers to coordinated multi-agency working?***

(The questions above noted in bold most closely align with the question of this literature review.)

Are the results Valid?

Did the review explicitly address a sensible question?
Yes. Two of the four questions are directly related to the question of this review.

Was the search for relevant studies detailed and exhaustive?
The search strategy is explicit (terms are identified, scope of literature is defined, databases are defined, inclusion / exclusion are defined).

Were the primary studies of high methodologic quality?
The authors stated that they aimed to focus on existing reviews, systematic reviews and good quality reviews which synthesize research evidence.

Were assessments of studies reproducible?
No there is insufficient information to determine this and there are no reports of blinding or of having utilized more than one reviewer.

What are the Results?

Were the results similar from study to study?
Gives a brief phrase description of the findings of each study; the author basically lists the key findings of the reviews for each of the 4 questions.

What are the overall results of the review? See "Factors / Determinants examined / discussed on next page.
"existing research provides useful information for organizations developing multi-agency services"; "there is a need for methodologically sound research which investigates the outcomes of different models of multi-agency working … and includes assessment of cost effectiveness".

How precise were the results?
There may be benefit in having further definitions or descriptions for terms such as "clear and realistic aims and objectives"; "clearly defined roles and responsibilities"; "commitment"; "strong leadership" etc. to

operationalize this, however the recommendations are as precise as would be expected without getting into literature that defines the above terms.

How can I apply the results in my Organization?

How can I best interpret the results to apply them to the care of patients in my practice?
Ensure that, assuming other literature is being considered as well, all factors are discussed with members of a partnership at beginning of a collaborative activity, and in an ongoing manner.

Were all (clinically) important outcomes considered?
This review is focused on the intermediate outcome being *effective collaboration* (assuming that once high quality collaboration is established, further goals or outcomes with result). As mentioned previously, outcomes of collaboration between organizations have not been studied extensively.

Are the benefits worth the costs and potential risks?
Yes, if the process for determining when collaboration is the best choice for 'working together' is deliberate, the benefits in terms of all stakeholders buying into the joint vision will be worth the time taken to gain buy-in.

Factors / determinants discussed:
What are the factors that facilitate co-ordinated multi-agendy working?

During the planning phase, aim for:
1) clear and realistic aims and objectives;
2) clearly defined roles and responsibilities;
3) commitment of both senior and frontline staff;
4) strong leadership and multi-agency steering committees;
5) an agreed timetable for implementation;
6) linkage of projects into other planning and decision-making processes;
7) assurance that good systems of communication are in place at all levels of the partnering organizations, with information sharing and adequate IT systems.

During Implementation and Ongoing Management, ensure that there are / is:
1) shared and adequate resources;
2) recruitment of staff with the right experience;
3) joint training and team building;
4) appropriate support and supervision of staff;
5) monitoring and evaluation of the service, with regular review of policies and procedures.

Barriers:
Often barriers are found to be a lack of, or are opposite conditions to the facilitating factors discussed above.

In addition to the lack of opposite of facilitating factors, the following are discussed as being barriers to collaboration, however cites a study performed in 2001 indicating that there is little evidence supporting interventions to overcome barriers to change. The additional factors described are:

Sloper P. Facilitators and barriers for co-ordinated multi-agency services. Child Care Health Dev. 2004;30(6):571-580.

1) constant reorganization;
2) frequent staff turnover;
3) lack of qualified staff;
4) financial uncertainty (sustaining the collaborative when funding ceases or there is unequal contribution from partner agencies;
5) different professional ideologies and agency cultures;
6) one study found a lack of coterminosity of agency boundaries hindered joint working but not in all studies.

There is some evidence that joint, rather than separate, training for professional groups may mitigate some of the barriers and cites Lyne et all (2001) and suggests that interprofessional education is more helpful if it is:

1) of longer duration;
2) delivered in the workplace;
3) administered in the acute sector;
4) in the nature of continuing professional education, versus being school based;
5) pooled budgets.

In Children's Services, collaboration is more effective if there is/are:

1) an existing base of well developed local collaboration;
2) high and equal commitment between organizaitons;
3) financial equity;
4) stability in partner organizations;
5) senior managers with time and skills to develop the partnership.

This article gives tips on evaluating multi-agency services and provides more evidence on the process of multi-agency working than on the outcomes of good multiagency working / collaboration.

Wildridge V, Childs S, Cawthra L, Madge B. How to create successful partnerships-a review of the literature. Health.Info Libr.J. 2004 Jun;21 Suppl 1:3-19.

Type of Study: Personal review - not systematic

Context: Authors based in the UK, sought a wide range of literature on partnership working.

Question: What is partnership working? What different types of partnerships exist? What are the drivers of partnership working? ***What are the critical success factors for partnership working? What are barriers to partnership working?*** * What are the benefits of partnership working? What is the process of partnering like? How can partnerships be evaluated / what tools exist?

* (questions most aligning with the topic of this review are in bold)

Are the results Valid?

Did the review explicitly address a sensible question?
Yes - aligns well with the question of this project, which is sensible.

Was the search for relevant studies detailed and exhaustive?
This is not described, except that "this literature review covers a wide range of publications … that provide an overview of the wider topic of partnership working" and "it is not a systematic review, but the authors' personal review, drawing largely on the resources available in the King's fund Library".

Were the primary studies of high methodologic quality?
The author reports that items for inclusion in the review were selected on the basis that they provided guidance on the principles of successful partnership working, not just descriptions of the activities of specific partnerships.

Were assessments of studies reproducible?
The process used is not mentioned.

What are the Results?

Were the results similar from study to study?
This is not mentioned.

What are the overall results of the review?
Critical Success factors and barriers are discussed - see the section "Factors / determinants examined or discussed".

How precise were the results?
It may be beneficial to have operational definitions, however the results are quite precise.

How can I apply the results in my Organization?

How can I best interpret the results to apply them to the care of patients in my practice?

Wildridge V, Childs S, Cawthra L, Madge B. How to create successful partnerships-a review of the literature. Health.Info Libr.J. 2004 Jun;21 Suppl 1:3-19.

Managers can ensure that these factors are in place, or that there is a plan to operationalize and measure them when considering collaborative activities.

Were all (clinically) important outcomes considered?
Yes – if good collaboration is the outcome of consideration. Effects of collaboration are beyond this review.

Are the benefits worth the costs and potential risks?
This is not clear – there is need for further research in regards to the outcomes of collaboration. However, the costs and benefits of each collaborative relationship need to be considered in the environment / context of the times.

Factors/determinants examined or discussed:

Critical Success Factors:
1) common vision;
2) trust;
3) clear, consistent communication;
4) effective means of making decisions and ensuring accountability (corporate governance issues);
5) good processes for managing change;
6) appropriate seniority of commitment;
7) skills in working across professional, organizational or other boundaries ("boundary spanners" or "reticulists") - article reinforces the Wilder Research Centres six groups (20 total subpoints).

Barriers:
1) awkward boundary demarcation;
2) fundamental ideological differences;
3) significant disparities in power;
4) a history of antagonism and failed attempts to work together;
5) significant costs to working together;
6) underresourcing (lack of appreciation of the work involved in a partnership or reluctance to fund administration costs as well as direct delivery costs);
7) cultural clashes (view each other stereotypically, different perspectives);
8) different lines of accountability.

This article summarizes different models that have been developed to describe the stages organizations go through when working with each other. A summary follows:

Wildridge V, Childs S, Cawthra L, Madge B. How to create successful partnerships-a review of the literature. Health.Info Libr.J. 2004 Jun;21 Suppl 1:3-19.

Nuffield Institute - 6 Principles:
1) Recognize and accept the need for partnership;
2) Develop clarity and realism of purpose;
3) Ensure commitment and ownership;
4) Develop and maintain trust;
5) Create robust and clear partnership working arrangements;
6) Monitor; measure and learn.

Child and Faulkner: developmental stages:
1) the nature of cooperation;
2) establishing cooperation;
3) managing cooperation;
4) the maturing relationship.

Childs and Dobbins
1) starting the process - a champion;
2) achieving agreement;
3) creating a self-sustaining partnership independent of the individuals.

Gray: Phases:
1) problem setting;
2) direction setting;
3) implementation.

Joseph Rowntree
1) coming together;
2) dialogue;
3) establish a formal structure;
4) delivering the action plan;
5) planning an exit strategy.

ourpartnership.org.uk
1) connecting;
2) contracting;
3) conflict;
4) collaborating;
5) closing.

Cameron A, Lart R. Factors Promoting and Obstacles Hindering Joint Working: A Systematic Review of the Research Evidence. Journal of Integrated Care Volume 2003;11(2).

Type of Study: Systematic Review

Context: Organizations and the National Health Service (NHS) / Social Services interface, UK.

Question: ***What are the factors promoting and obstacles hindering joint working at the NHS/social services interface?***

Are the results Valid?

Did the review explicitly address a sensible question?
Yes it closely matches the question of this review.

Was the search for relevant studies detailed and exhaustive?
Yes – the authors searched Medline, Psyclit, Embase and Sociofile and used terms: "joint working", "collaboration", "inter-professional", "multi-professional" and "interdisciplinary".

Were the primary studies of high methodologic quality?
This is not explicitly discussed, however may be loosely assumed as the authors narrowed down from 491 articles to 32.

Were assessments of studies reproducible?
Inclusion criteria are described as being: an actual vs. proposed model, including primary data, evaluation of the model had been carried out, published during or after 1983.

What are the Results?

Were the results similar from study to study?
The 32 studies identified described models of working together that were grouped as either:
1) placement schemes;
2) multi-agency teams and projects;
3) case or care management;
4) strategic level working.

What are the overall results of the review?
There are three broad themes of factors that either promote or inhibit joint working: (details under 'Factors / determinants examined or discussed'):
1) Organization issues;
2) Cultural and professional issues;
3) Contextual issues.

Cameron A, Lart R. Factors Promoting and Obstacles Hindering Joint Working: A Systematic Review of the Research Evidence. Journal of Integrated Care Volume 2003;11(2).

How precise were the results?
Operational definitions may have been helpful. For example, 'improve communication' might be easier to implement if more details around the process for doing so are discussed.

How can I apply the results in my Organization?

How can I best interpret the results to apply them to the care of patients in my practice?
Ensure that these factors are considered when collaborating with other organizations.

Were all (clinically) important outcomes considered?
Yes – this study gives ways to group ideas / concepts together to examine and work to address particular areas.

Are the benefits worth the costs and potential risks?
This is not clear regarding outcomes to clients - however politically, this is important now and collaboration is widely believed to be beneficial, and is often mandated. As well, as the system functions more productively upstream, the benefits will accrue downstream.

Cameron A, Lart R. Factors Promoting and Obstacles Hindering Joint Working: A Systematic Review of the Research Evidence. Journal of Integrated Care Volume 2003;11(2).

Factors / determinants examined or discussed:

Three broad themes of factors that either promote or inhibit joint working were identified:

ORGANIZATIONAL ISSUES:		Facilitative / Inhibitive
	1) clear aims and objectives;	facilitative
	2) organizational differences;	inhibitive
	3) clear roles and responsibilities;	facilitative
	4) strategic support / commitment;	facilitative
	5) support fromcommunication / IT systems;	facilitative
	6) co-location;	facilitative
	7) personalities involved;	facilitative or inhibitive
	8) strong management / appropriate professional	facilitative
	support;	facilitative
	9) resources and personnel;	facilitative
	10) past history of joint working.	
CULTURAL AND PROFESSIONAL ISSUES:		
	1) negative assessments / professional stereotypes;	inhibitive
	2) trust and respect;	facilitative
	3) joint training / team building;	facilitative
	4) different professional philosophies or ideologies.	inhibitive
CONTEXTUAL ISSUES:		
	1) supportive political climate;	facilitative
	2) constant reorganization;	inhibitive
	3) coterminosity;	facilitative
	4) financial uncertainty.	inhibitive

Four models of Joint Working were identified:

1) placement schemes;
2) multi-agency teams and projects;
3) case or care management;
4) strategic level working.

Mattessich PW, Murray-Close M, Monsey BR, Foundation AHW. The Wilder Collaboration Factors Inventory: Assessing Your Collaboration's Strengths and Weaknesses. : Wilder Pub. Center; 2001.

Type of Study: Systematic Review

Context: Organizations in human services, government and other nonprofit organizations. Authors based in the USA.

Question: ***From within existing literature, what is known about factors that influence the success of collaboration?***

Are the results Valid?

Did the review explicitly address a sensible question?
Yes.

Was the search for relevant studies detailed and exhaustive?
"we searched through computer-based bibliographies, contacted researchers interested in the topic, and tracked down bibliographic references in each document obtained"

Were the primary studies of high methodologic quality?
Yes, they describe that a process of weaning down articles was used - from 133 to 18 in 1992 and from 281 to 22 in 2001, however details are not provided.

Were assessments of studies reproducible?
Inter-rater reliability checks were not reported. They are not explicit on exclusion or inclusion criteria except to say "we screened out studies that were general 'how-to' manuals, did not meet our definition of collaboration, or failed to meet other research criteria.

What are the Results?

Were the results similar from study to study?
The authors completed a matrix that identified the factors identified in the rows and the studies in the columns. This presentation made it easy to compare how many authors / studies identified any given factor as important. This is similar to the way the information is presented in this review (see determinant chart).

What are the overall results of the review?
Six groups of 20 factors overall are described (see under 'Factors / determinants examined or discussed').

How precise were the results?
Quite - there is a description, implication and illustration for each of the 20 factors.

How can I apply the results in my Organization?

Mattessich PW, Murray-Close M, Monsey BR, Foundation AHW. The Wilder Collaboration Factors Inventory: Assessing Your Collaboration's Strengths and Weaknesses. : Wilder Pub. Center; 2001.

How can I best interpret the results to apply them to the care of patients in my practice?
There is a tool - The Wilder Collaboration Factors Inventory - that can be used by participants to gauge their perceptions on these known factors.

Were all (clinically) important outcomes considered?
A wide range of important process outcomes are described - outcomes of collaboration are beyond the scope of this review.

Are the benefits worth the costs and potential risks?
Yes. Given the assumption that collaboration is a means of working together that yields better results for clients. (The impact of the end user is beyond the scope of this literature review).

Factors / determinants examined or discussed:

Factors are grouped into six categories:

Environment:
1) history of collaboration or cooperation;
2) collaborative group seen as a ligitimate leader;
3) favourable political and social climate.

Membership
4) mutual respect, understanding and trust;
5) appropriate cross section of members;
6) members see collaboration as in their self-interest;
7) ability to Compromise.

Process and structure
8) members share a stake in process and outcome;
9) multiple layers of participation;
10) flexibility;
11) development of clear roles and policy guidelines;
12) adaptability;
13) appropriate pace of development.

Communication
14) open and frequent communication;
15) established informal relationships and communication links.

Purpose
16) concrete attainable goals and objectives;
17) shared vision;

18) unique purpose.

Resources
19) sufficient funds, staff, materials and time; and

20) skilled leadership.

This document includes some discussion of "When should Organizations Collaborate". The authors point out that the past decade has seen 'collaboration mania' and suggests that collaboration is a tool - not an end in itself - and should be used when it is the correct tool for the job.

Foster-Fishman PG, Berkowitz SL, Lounsbury DW, Jacobson S, Allen NA. Building collaborative capacity in community coalitions: a review and integrative framework. Am.J.Community Psychol. 2001 Apr;29(2):241-261.

Type of Study: Review and qualitative study

Context: Community organizations, USA.

Question: ***What are the core competencies and processes needed within collaborative bodies to facilitate their success and to build an integrated framework?***

Are the results Valid?

Was the choice of participants explicit and comprehensive?
The authors "collected articles, book chapters, and practitioner guides published since 1975 that describe community forums where multiple stakeholders gathered to collaborate and resolve community-based problems". (pg. 242)

Was data collection sufficiently comprehensive and detailed?
Inclusion criteria, articles or studies had to be either:
1) a detailed qualitative descriptions of the coalition processes and outcomes;
2) a proposed conceptual framework or 'wisdom' piece that described effective coalition functioning;
3) empirical results of a study investigating the factors influencing coalition outcomes; or
4) a systematic review of the coalition literature.

Were the data analyzed appropriately and the findings corroborated adequately?
Verbatim summaries of articles were entered into QSR NUD.IST software and analyzed. As well, 15 highly cited articles were content analyzed. All articles were coded by at least 2 researchers.

What are the Results?

Critical Elements of Collaborative Capacity*:
1) member capacity;
2) relational capacity;
3) organizational capacity;
4) programmatic capacity;
a) clear, focused programmatic objectives;
b) realistic goals;
c) unique and innovative;
d) ecologically valid. *the article contains further details, as does the 'Factors' / determinants examined' and 'Other factors'.

Foster-Fishman PG, Berkowitz SL, Lounsbury DW, Jacobson S, Allen NA. Building collaborative capacity in community coalitions: a review and integrative framework. Am.J.Community Psychol. 2001 Apr;29(2):241-261.

Strategies for Building Core Collaborative Capacities:

1) Member Capacity
a) understand current member capacity;
b) value the diversity of member competencies;
c) enhance current member capacities;
d) engage in incentives management;
e) foster positive innergroup understanding;
f) build diverse membership;
g) support diversity.

2) Building Relational Capacity
a) build positive intergroup interactions;
b) create group norms;
c) develop superordinate, shared goals;
d) create inclusive decision-making processes;
e) value member diversity;
f) build external relationships.

3) Building Organizational Capacity
a) proactively build leadership;
b) develop tasks focus;
c) formalize roles/processes;
d) develop quality plans;
e) create committee infrastructure;
f) promote active communication;
g)build financial resources;
h) develop skilled staff;
I) develop an outcome orientation;
j) Develop a monitoring system.

4) Programmatic Capacity
a) seeking community input;
b) develop innovative programs.

How can I apply the results in my Organization?

Does the study offer helpful theoretical conclusions?
Yes - a framework is established that identifies four critical levels of collaborative capacity:
1) member capacity;
2) relational capacity;
3) organizational capacity; and
4) programmatic capacity.

Foster-Fishman PG, Berkowitz SL, Lounsbury DW, Jacobson S, Allen NA. Building collaborative capacity in community coalitions: a review and integrative framework. Am.J.Community Psychol. 2001 Apr;29(2):241-261.

Does the study help me understand the context of my practice?
Yes - it gives ways to group ideas / concepts together to examine and work to address particular areas.

Does the study help me understand my relationships (with patients and their families)?
Read as "Does the study help me understand relationships between organizations?" Yes - this article gives an understanding of essential components and starts to point towards directions and strategies to improve these components"

Factors / determinants examined or discussed:

Critical Elements of Collaborative Capacity*:

1) Member Capacity
a) core skills and knowledge (ability to work collaboratively with others, ability to create a and build effective programs, ability to build and effective coalition infrastructure);
b) core attitudes Motivation (holds positive attitudes about collaboration, committed to target issues or program, holds positive attitudes about other stakeholders, holds positive attitudes about self. Access to member capacity, coalition supports member involvement, coalition builds member capacity)

2) Relational Capacity
a) develops a positive working climate;
b) develops a shared vision;
c) promotes power sharing;
d) values diversity;
e) develops positive external relationships .

3) Organizational Capacity
a) effective Leadership;
b) task oriented work environment;
c) formalized procedures;
d) effective communication;
e) sufficient resources;
f) continuous improvement orientation.

4) Programmatic Capacity
a) clear, focused programmatic objectives;
b) realistic goals;
c) unique and innovative;
d) ecologically valid.

*the article contains further details

Einbinder SD. Interorganizational collaboration in social service organizations: A study of the prerequisites to success. Journal of Children and Poverty 2000;6(2):119-140.

Type of Study: Case Study (with a survey component)

Context: Social service organizations, USA

Question*: What is the relationship between incentive, willingness, ability and capacity to collaborate and hence to the effectiveness of the collaboration?*

Are the results Valid?

Was the choice of participants explicit and comprehensive?
Yes - all collaboratives involving counties in California that had been in existence for 3 years and involved agencies mandated to respond to abuse and neglect allegations were selected. From these 33 counties, 10 were selected purposively (to ensure variations on proportion of children in the county, county median family income, distribution of race/ethnicity, variety of statistics describing foster care stays, teen pregnancy rates and high school dropout rates). Two collaboratives had to be excluded for logistical reasons.

Was data collection sufficiently comprehensive and detailed?
Yes - there were 3 phases:
1) videotaped, regularly-scheduled meetings;
2) survey of representatives regarding the characteristics of the collaboration, their organization and themselves; and
3) focus groups were conducted and representatives were asked to define collaboration success and to describe specific factors comprising each of four categories of prerequisites.

Were the data analyzed appropriately and the findings corroborated adequately?

Definitions:

1) Incentive - a reason for an individual organization to collaborate. This is mostly related to *goal congruence* and the ability of the collaborative to help meet some of the individual organizations goals

2) Willingness - as opposed to the rational reasoning of Incentive, willingness is rooted in emotional or 'normative' concerns such as equity, value congruence, trust and basic belief in the value of collaboration to meet the needs of the target population. It is important to take steps to increase shared values and trust.

(Potential barriers: free-riders - unequitable participation) and heterogeneity that makes shared values and norms more difficult to establish);

3) Ability – the collective knowledge and skills of the members, in conjunction with requisite authority to carry out responsibilities.

4) Capacity - refers to the administration of the collaboration. It is felt to be best to avoid administrative integration and aim for a supraorganizational 'steering committee' or 'advisory

committee'; coordinative capacity needs to be developed both at the managerial and operational (staff) levels.

Survey data were analyzed and survey reliability was acceptable for scales that measured incentive, effectiveness, ability, and capacity. Reliability for the willingness scale was not acceptable. More than one article has been generated from this one study - but for this article, only the survey data were analyzed. Unfortunately, there is not any comment regarding whether data retrieved from the videotaped sessions nor the focus groups corroborate the findings of the survey data. Regression analysis was used to examine the relationships between prerequisites and collaborative effectiveness.

What are the Results?

There is reasonable support, provided by regression analysis that incentive, willingness, ability and capacity contribute to collaboration effectiveness. The factor demonstrating the strongest relationship with effectiveness is incentive.

How can I apply the results in my Organization?

Does the study offer helpful theoretical conclusions?
Definitely - offers factors to be compared with other studies and to be studied further.

Does the study help me understand the context of my practice?
Yes - the concepts here are general enough that there is good reason to believe that they are applicable to a variety of human services collaborations.

Does the study help me understand interorganizaitonal relationships?
Yes – this study helps to understand collaboration between organizations.

Factors / determinants examined or discussed:
Also see "What are the results?" above.
1) incentive;
2) willingness;
3) ability;
4) capacity.

Johnson LJ, Zorn D, Tam BKY, Lamontagne M, Johnson SA. Stakeholders'Views of Factors That Impact Successful Interagency Collaboration. Except.Child. 2003;69(2):195-210.

Type of Study: Mixed methods

Context: State departments and private social services organizations, USA.

Question: What can be learned from stakeholders in state departments and private social services agencies about the factors related to successful and unsuccessful collaboration, specific problems that are part of the collaboration process and potential solutions to minimize the occurrence of these problems?

Are the results Valid?

Was the choice of participants explicit and comprehensive?
Yes - a panel of experts chose interviewees from the list of state department and private social service agencies that had reason to work with young children with disabilities and their families. Interviewees were categorized as either program chiefs (state officials that were decision makers or policy makers) or program specialists (those who implemented the policies and provided technical assistance to local entities).

Was data collection sufficiently comprehensive and detailed?
Interviews were audiotaped, transcribed, and coded. Reliability was tested by having two individuals that were not involved in developing the categories code fifteen percent of the data and percentage agreement and kappa coefficients were computed.

Were the data analyzed appropriately and the findings corroborated adequately?
Yes - 5 open ended questions were used in addition to a few direct questions related to background information. These questions often yielded similar information; for instance while trust was indicated as a facilitator of collaboration, lack of trust was noted as an inhibitor, no trust was indicated as a problem that arose, and development of trust was indicated as a solution to overcoming this barrier.

What are the Results?

Contributing Factors (in order of priority / frequency of response:

1) willingness to work together;
2) strong leadership;
3) sharing a common vision;
4) trust;
5) commitment;
6) previous collaboration experience;
7) support of federal and state funding;
8) sharing sense of urgency and necessity;
9) no choice but to collaborate;
10) no resistance to change;
11) understanding the cultures of cooperating agencies.

Contributing factors for unsuccessful collaboration:
1) lack of support from upper management / leadership;

2) lack of commitment;
3) lack of common visions and goals;
4) lack of trust;
5) lack of financial support;
6) turf issues / resistance to change;
7) lack of communication;
8) lack of time;
9) hinderance of rules / regulations;
10) lack of understanding of collaborating agencies' cultures;
11) no negative consequences if not collaborating;
12) change of personnel.

Problems encountered during collaboration process:
1) lack of communication;
2) turf issues / resistance to change;
3) lack of common visions / goals;
4) hinderance of rules / regulations;
5) disrespect for others / no trust;
6) lack of financial support/competition for resources;
7) problems within systems;
8) lack of time;
9) poor participation of clients;
10) lack of preplanning;
11) lack of collaboration experiences.

Solutions for overcoming barriers:
1) enhanced communication;
2) commitment;
3) involvement of key persons who are decision makers;
4) forces behind collaboration
5) development of trust / respect;
6) interagency support;
7) threat/elimination of turf;
8) intangible human factor;
9) change of rules / regulations.

What would have been done differently if participating in a collaboration again:
1) enhanced communication;
2) preplanning;
3) involvement of key persons who are decision makers;
4) no idea;
5) more entities / parental involvement; understanding the cultures of cooperating agencies;
6) change of rules / regulations;

7) elimination of turf issues;
8) more funding.

Johnson LJ, Zorn D, Tam BKY, Lamontagne M, Johnson SA. Stakeholders'Views of Factors That Impact Successful Interagency Collaboration. Except.Child. 2003;69(2):195-210.

How can I apply the results in my Organization?

Does the study offer helpful theoretical conclusions?
Yes it contributes to the knowledge in this area.

Does the study help me understand the context of my practice?
Yes, it provides insight into current interorganizational collaborations and gives ideas to consider for developing collaborations in the future. It also corroborates findings in other studies. In regards to East Central Health collaboration with the University of Alberta for the Edgeworth Centre, commitment, strong leadership and minimizing of turf issues contributed to success. If there had been enhanced communication, engagement in serious preplanning, provision of adequate resources (or recognition of the resources required) the writer believes the collaboration may have progressed more quickly.

Does the study help me understand relationships?
Yes.

Factors / determinants examined or discussed:

Seven factors were identified as being most important to successful interagency collaboration:
1) commitment;
2) communication;
3) strong leadership from key decision makers;
4) understanding the culture of collaborating agencies;
5) engaging in serious preplanning;
6) providing adequate resources for collaboration and
7) minimizing turf issues.

These factors can be synthesized into 3 major variables for promoting successful collaboration:
1) commitment (sharing goals, trust, mutual responsibility);
2) communication;
3) strong leadership.

Suggestions to improve commitment:
a) avoid following own agenda at expense of fellow collaborators;
b) be willing to examine or modify your own procedures;
c) provide incentives / consequences for cooperative / uncooperative behaviors develop a way to compromise on important differences;
e) make clear those issues that cannot be compromised;

f) keep the goals and the potential positive outcomes of the collaboration in mind at all times.

Suggestions to improve communication:
a) develop a proactive approach to communication with agency partners - be upfront with issues, talk about differences, ensure each party aware of problems, update agency partners with important information;
b) create frequent opportunities for communication;

c) develop personal connections to promote a cohesive working relationships and informal communication links.

Suggestions to improve leadership from key decision makers:
Commitment from upper management that are truly representative is key:
a) involve someone who truly understands the agencies position and priorities;
b) involve someone with enough authority to make decisions on behalf of the agency;
c) involve someone that can provide immediate and direct assistance when problems arise;
d) involve someone that can authorize the utilization of their agency's resources to support the collaboration.

Interagency collaboration is multidimensional, interactional and developmental and there are many factors that contribute to the success of a collaboration, and the interactions of the factors are significant. Successful interagency collaborations are developmental in nature and needed time and work to reach a successful outcome.

Understand the culture of collaborating agencies: (i.e. rules, values, communication patterns, structure etc.)
a) take time to learn and understand each collaborating agency's mission, priorities, and technical language (staff loan program, presentation);
b) clarify definitions of what might appear to be common terms;
c) review pertinent laws and regulations surrounding the issues.

Provide adequate resources for collaboration
a) provide time and additional resources for those engaging in the collaboration
b) look for extra resources to avoid having those involved in the collaboration remain responsible for their prior commitments in addition to new commitments.

Minimize turf issues
a) provide staff a positive view of the collaboration
b) discuss previously successful collabrations
c) reward and apply consequences to those participating in the collaborative project
d) engage in ‘serious preplanning’

Johnson LJ, Zorn D, Tam BKY, Lamontagne M, Johnson SA. Stakeholders'Views of Factors That Impact Successful Interagency Collaboration. Except.Child. 2003;69(2):195-210.

Engage in serious preplanning

a) form a steering committee
b) clearly articulate developing goals and expected outcomes of the collaborative effort

Redfield MB. Strategic alliances and collaborations: A study of the perceptions of leaders about factors influencing successful collaborations among nonprofit organizations. United States -- Ohio: Union Institute and University; 2002.

Type of Study: Qualitative (case study). Quantitative methods were used to describe findings and assess correlations between various questions on the mailed surveys and structured interviews.

Context: Nonprofit organizations that are involved in collaborations or strategic alliances, USA.

Question: How important are the 20 factors of success, as identified by the Wilder Foundation in 1992 and 1999, in the formation of a collaboration?

Are the results Valid?

Were subjects recruited in an acceptable way?
Participating organizations were recruited by asking key informants that were experts in strategic alliance / collaboration, which nonprofit organizations were known to have had successful strategic alliances or collaborations. Thus, sampling was purposive and can be expected to recruit organizations perceived as successful collaborators by experts.

Were the measures accurately measured to reduce bias?
The tool developed by Mattessich et al. was used and went through a testing and review process.

Were data collected in a way that addressed the research issue?
Yes - leaders of organizations deemed successful at collaborating by the experts as mentioned above, were asked to complete the surveys.

Did the study have enough participants to minimize the play of chance?
Of an initial 34 nonprofit agencies, 28 returned surveys. Five structured interviews were used as well. This is deemed to be a sufficient number for the nature of the study – qualitative – to draw out themes.

What are the results?

How are the results presented and what is the main result?
Respondents (presidents or executive directors of nonprofit organizations throughout USA) were asked to rate 20 factors (six categories). Descriptive statistics are presented for the 20 factors with mean and standard deviation, median and mode. As well, the correlations between each question were assessed and significant correlations were presented. The same technique was used to analyze the interview data. The groups, survey group and structured interview group, "(did) not differ overall from one another." Three of the 20 questions differed significantly. The difference can be explained by the difference in proportion of positive responses between the interviews and case studies. As there were only 5 case studies, it is reasonable that the 5 picked for case study are not expected to be completely representative of the mean of the total 28 organizations.

Redfield MB. Strategic alliances and collaborations: A study of the perceptions of leaders about factors influencing successful collaborations among nonprofit organizations. United States -- Ohio: Union Institute and University; 2002.

Was the data analysis sufficiently rigorous?
Yes. This study gives further information regarding key factors, leaders perceptions, and consistency of responses between leaders. There was agreement among the majority of leaders on all factors, except for factor 9 "Every level (upper management, middle management and operations) within each organization in our collaborative group and/or strategic alliance is encouraged to participate in decision-making".

Is there a clear statement of findings?
There is a 'Summary of Major Findings' - and the majority of presidents and executive directors in 28 nonprofit organizations agree on the importance of the 20 factors studied, with the exception of one factor related to the importance of shared decision making throughout the organization. The author proposes that this difference may be related to the philosophy of the organization regarding decision making: centralized or decentralized.

How can I apply the results in my Organization?

Can the results be applied to the local population?
Yes, although this is a US study on nonprofit organizations, it is reasonable to believe that the factors are general enough that they would apply in the nonprofit sector in Canada, and East Central Health.

How valuable is the research?
It provides support to the findings of Mattessich et.al.

Factors/determinants examined or discussed:
The reader is directed to the review of Mattesich et al for a list of the factors discussed, as Redfield studied the factors identified in that study.

Foster MK, Meinhard AG. A Regression Model Explaining Predisposition to Collaborate. Nonprofit.Voluntary Sector Q. 2002; 31(2): 549

Type of Study: Descriptive, cross sectional

Context: Nonprofit organizations in Canada

Question: What organizational characteristics, environmental pressures and attitudes predispose organizations to engage in increasingly formalized collaborative relationships?

Are the results Valid?

Were subjects recruited in an acceptable way?
Organizations were selected from three separate population pools. One quarter from the National Action Committee on the Status of Women, one quarter from women's organizations not affiliated with the National Action Committee on the status of women, and one half from organizations that did not fall into the defined category of a women's organizations. A clear definition was established regarding the types of organizations used in the sample, which was stratified.

Were the measures accurately measured to reduce bias?
A 120 item questionnaire with closed and open-ended questions was used and had been pilot tested with 35 executive directors. There are no further details on the administration of the surveys (ie. it is not clear how many evaluators there were).

Were data collected in a way that addressed the research issue?
Yes – a survey of mixed closed and open ended questions was completed by presidents or executive directors and is appropriate to answer this type of question.

Did the study have enough participants to minimize the play of chance?
Yes – there were 645, which is a significant number.

What are the results?

How are the results presented and what is the main result?

Results are presented graphically as a regression model.

The following factors lead organizations to be ***more*** likely to engage in formalized interogranizational partnerships:

1) feminist organizations as defined by affiliation with the National Action Committee on the Status of Women;
2) greater perceived environmental impact, such as funding relationships with the government
3) motivation to collaborate (perceptions that collaboration would reduce risk, improve community involvement etc.).

As well, feminist organizations are more likely to perceive greater impact of environmental changes, have a less competitive outlook, have greater motivation for collaboration and are less likely to have collaborative obstacles (i.e. believe that they only need to collaborate when times are good or when less financially

independent) Perceived environmental impact was found to be a mediating variable for motivation to collaborate (greater perceived environmental impact is associated with greater motivation to collaborate)

The following factors lead organizations be ***less*** likely to engage in formalized interogranizational partnerships:

1) small (less than $100,000 organizational budget)organizations;
2) collaboration obstacles (i.e. the belief that collaboration is not important when times are good or when the organization is financially dependent);
3) competitive outlook (belief that the organization must have a competitive edge to survive and that competition can have a positive influence on organizations);
4) small organizations are marginally more likely to experience collaboration obstacles (mediating variable).

There were no relationships between age of the organization and willingness to collaborate.

Was the data analysis sufficiently rigorous?
SPSS stepwise multiple regression analysis using forward selection was used.

Is there a clear statement of findings?
Yes – results are reported in narrative and diagrammatic form and are clear.

How can I apply the results in my Organization?

Can the results be applied to the local population?
Loosely. This study creates an awareness of factors that have not surfaced in some of the other literature reviewed for this project.

How valuable is the research?
It is mildly valuable for East Central Health as ECH is not, to the writer's awareness, described in terms of being feminist or non-feminist.

Halverson PK, Mays GP, Kaluzny AD. Working together? Organizational and market determinants of collaboration between public health and medical care providers. Am.J.Public Health 2000 Dec;90(12):1913-1916.

Type of Study: Cross sectional, descriptive

Context: Collaborations between public health organizations and community hospitals / health centers in the USA.

Question(s):

1) Are privately owned and for-profit institutions less likely to generate public goods such as public health activities?
2) Does the growth of managed care within local health care markets strengthen the incentives for collaboration between medical care providers and public health agencies.

Are the results Valid?

Were subjects recruited in an acceptable way?
A nonrandom sample of 60 geographically, demographically and structurally diverse counties in the US within 15 states was used. Interorganizational relationships within these counties were analyzed.

Were the measures accurately measured to reduce bias?
Directors of local public health agencies were telephoned and asked questions about the number and nature of partnerships their organization was a member of.

Were data collected in a way that addressed the research issue?
Yes, through structured telephone interviews.

Did the study have enough participants to minimize the play of chance?
Overall, this study has sufficient participant organizations, however with a gross average of four organizations per state, if there is diversity among the organizations in the various states this would likely not be detected.

What are the results?

How are the results presented and what is the main result?

Results are presented in tabular form.

1) Public hospitals were more than twice as likely as private nonprofit hospitals to engage in collaborative relationships. Private nonprofit hospitals were more than twice as likely to form collaborative partnerships than private, for-profit hospitals.
2) Association with a health maintenance organization (HMO) was negatively associated with the likelihood of collaboration.

Halverson PK, Mays GP, Kaluzny AD. Working together? Organizational and market determinants of collaboration between public health and medical care providers. Am.J.Public Health 2000 Dec;90(12):1913-1916.

Was the data analysis sufficiently rigorous?
Multivariate models and logistic regression were used to model the effects of organizational and market characteristics on the probability of collaboration.

Is there a clear statement of findings?
Yes - this study may give further insight into collaborative activities.

How can I apply the results in my Organization?

Can the results be applied to the local population?
Yes – it is another factor that should be considered when contemplating forming a collaborative relationship. Although most health care organizations in Canada are not for profit, there are organizations that are for profit and, depending on the nature of the collaboration and potential partners, this study provides insight.

How valuable is the research?
It contributes to overall knowledge in this area and adds information for the decision making process. If considering partnership with a private entity, it may be wise to consider the likelihood of success.

Factors / determinants examined or discussed:

1) likelihood of collaborating as a function of ownership of a hospital;
2) effect of health maintenance organization (HMO) market penetration on collaboration.

Appendix B – Dissemination Plan

Scheduled Dissemination

February 2008

1. Present draft presentation of methods and results to SEARCH VI participants and faculty at SEARCH Classic, module 6.

2. Present key determinants at play in the collaboration between East Central Health, the University of Alberta and the City of Camrose for the Edgeworth Centre to SEARCH VI participants, faculty, East Central Health and University of Alberta staff and executives.

July 2008

3. Present project at SEARCH Canada Annual General meeting.

October 2008

4. Present findings to Senior Leadership in East Central Health

5. Present findings to East Central Health Continuing Care Leaders at monthly Continuing Care Leadership meeting

November, 2008

6. Present findings to Rehabilitation Council, East Central Health

Appendix C – Key Search Terms

Table 1 – Pubmed and Medline

Concept #	Concept and Related words	MeSH Term (Medline, PubMed)
1	collaboration, partnership	cooperative behavior
2	healthcare organization, organization, health care	organization; delivery of healthcare; delivery of health care, integrated; health care sector; health care coalitions; community health services
3	determinant, factor, antecedent, influence, inducement	N/A – no MeSH term returned

Table 2 – Health Business Full Text Elaine and Comprehensive Biomedical Reference

Concept #	Concept and Related words	Health Business Full text Elite and Comprehensive Biomedical Reference Terms
1	collaboration, partnership	consortia; strategic alliance
2	health care organization, healthcare organization, organization	organization; interorganizational relations; associations; institutions
3	determinant, antecedent, factor	determinants

Table 3 – Nursing and Allied Health

Concept #	Concept and Related words	Nursing and Allied Health Term
1	collaboration, partnership	collaboration; consortia; strategic alliances
2	health care organization, healthcare organization, organization	organization; interorganizational relations; associations; institutions
3	determinant, antecedent, factor	determinants

Table 4 – Psychology and Behavioral Sciences

Concept #	Concept and Related words	Psychology and Behavioral Sciences Term
1	collaboration, partnership	collaboration; consortia; joint venture; strategic alliances (business)
2	health care organization, healthcare organization, organization	medical care; organization
3	determinant, antecedent, factor	determinant

Table 5 - CINAHL

Concept #	Concept and Related words	CINAHL Term
1	collaboration, partnership	collaboration, coalition, interinstitutional relations
2	health care organization, healthcare organization, organization	health care delivery, integrated; organizations, health care delivery
3	determinant, antecedent	antecedent variable

Appendix C – Key Search Terms

Table 6 – ABI Inform

Concept #	Concept and Related words	ABI Term
1	collaboration, partnership	collaboration; cooperation; partnership; alliance
2	health care organization, healthcare organization, organization	health care; organizations; health care industry; health care
3	determinant, antecedent, factor	N/A

Google Scholar and Google did not have an index of terms.

Appendix D – Record of Searches

Date of Search	Search Terms	Database	Number of Hits	Subjective Impression	Refworks File Stored in
Sept 10, 2007	cooperative behavior	PubMed	12075	too many	n/a
Sept 10, 2007	cooperative behaviour	PubMed	12075	too many, as per initial spelling	n/a
Sept 10, 2007	partnership	PubMed	8586	too many	n/a
Sept 10, 2007	determinant	PubMed	45552	too many	n/a
Sept 10, 2007	antecedent	PubMed	4747	too many	n/a
Sept 10, 2007	"healthcare organization"	PubMed	313	too many	n/a
Sept 10, 2007	"health care organization"	PubMed	623	too many	n/a
Sept 10, 2007	organization	PubMed	1324627	too many	n/a
Sept 10, 2007	healthcare	PubMed	547974	too many	n/a
Sept 10, 2007	health care	PubMed	704801	too many	n/a
Sept 10, 2007	cooperative behavior AND partnership AND "healthcare OR health care"	Pubmed	290	too many	n/a
Sept 10, 2007	determinant AND cooperative behavior AND partnership AND "healthcare OR health care"	Pubmed	0	poor	n/a
Sept 10, 2007	factor AND cooperative behavior AND partnership AND "healthcare OR health care"	Pubmed	4	good	_Local Proj - Possibly Relevant
Sept 10, 2007	organization AND cooperative behavior AND partnership AND "healthcare OR health care"	Pubmed	266	too vague	n/a
Sept 10, 2007	"cooperative behavior" and organizations and "delivery of healthcare"	Pubmed	1	Good	_Local Proj - Possibly Relevant
Sept 10, 2007	"cooperative behavior" and organizations and "delivery of Health Care"	Pubmed	121	Fair to good	_Local Proj - Possibly Relevant
Sept 10, 2007	"cooperative behavior" AND	Pubmed	36	good	_Local Proj - Possibly

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Date of Search	Search Terms	Database	Number of Hits	Subjective Impression	Refworks File Stored in
	partnership AND "Delivery of Health Care"				Relevant
Sept 10, 2007	Health Care Coalitions[Mesh] AND "Delivery of Health Care"[Majr]	PubMed	522	many, not clearly relevant	n/a
Sept 10, 2007	determinant AND Health Care Coalitions[Mesh] AND "Delivery of Health Care"[Majr]	PubMed	0	n/a	n/a
Sept 10, 2007	antecedent AND Health Care Coalitions[Mesh] AND "Delivery of Health Care"[Majr]	PubMed	1	poor return	_Local Proj - Possibly Relevant
Sept 10, 2007	determinant AND "cooperative behavior"	PubMed	20	fair to good	_Local Proj - Possibly Relevant
Sept 10, 2007	antecedent AND "cooperative behavior"	PubMed	16	poor	_Local Proj - Possibly Relevant
Sept 13, 2007	inducement AND "cooperative behavior" AND "Delivery of Health Care"	PubMed	15	fair to good	_Local Proj - Possibly Relevant
Sept 13, 2007	factor AND "cooperative behavior" AND "Delivery of Health Care"	PubMed	9	fair to good	_Local Proj - Possibly Relevant
Sept 17, 2007	collaboration	ABI	17880	too many	n/a
Sept 17, 2007	cooperation	ABI	40096	too many	n/a
Sept 17, 2007	partnership	ABI	70942	too many	n/a
Sept 17, 2007	health care	ABI	125883	too many	n/a
Sept 17, 2007	healthcare	ABI	88004	too many	n/a
Sept 17, 2007	determinant	ABI	18139	too many	n/a
Sept 17, 2007	antecedent	ABI	3585	too many	n/a
Sept 17, 2007	(antecedent OR determinant) AND ("health care" OR healthcare) AND (collaboration OR cooperation OR partnership)	ABI	17	fair to good	_Local Proj - Possibly Relevant

Appendix D – Record of Searches

Date of Search	Search Terms	Database	Number of Hits	Subjective Impression	Refworks File Stored in
Sept 17, 2007	("health care" OR "healthcare") AND (collaboration OR cooperation OR partnership)	ABI	4343	too many	
Sept 17, 2007	TITLE(determinant* OR factor OR antece* OR indu* OR influ*) AND TITLE(organ*) AND TITLE (cooperat* OR collabor* OR partner*) AND TITLE(health*)	ABI	1	good	_Local Proj - Possibly Relevant
Sept 21, 2007	(antecedent OR determinant) AND ("health care" OR healthcare) AND (collaboration OR cooperation OR partnership OR alliance)	ABI	19	OK	_Local Proj - Possibly Relevant
Sept 21, 2007	(antecedent OR determinant) AND ("health care" OR healthcare) AND (coalition OR collaboration OR cooperation OR partnership OR alliance)	ABI	21	similar to line 90	_Local Proj - Possibly Relevant
Sept 21, 2007	(antecedent OR determinant) AND ("health care" OR healthcare) AND (coalition OR collaboration OR cooperation OR partnership OR alliance)	EBSCO	66	fair to good	_Local Proj - Possibly Relevant
Nov 7, 2007	collaboration	Health Organization Studies - U of A - Grey Lit on Desktop	10	1/10 OK -	saved in July 10+ folder in C:
Nov 11, 2007	collaboration and factors	google.ca	48.2 million	first ones OK	_Local Proj – Possibly Relev

Appendix D – Record of Searches

Date of Search	Search Terms	Database	Number of Hits	Subjective Impression	Refworks File Stored in
Nov 11, 2007	(factors) and (collaboration or partnership) and (interorganizational or intersectoral)	ebsco	93	ok	_Local Proj - Possibly Relevant
Nov 11, 2007	(determinants) and (collaboration or partnership) and (interorganizational or intersectoral)	abi	45	ok	_Local Proj - Possibly Relevant
Nov 11, 2007	(factors) and (collaboration or partnership) and (interorganizational or intersectoral)	abi	32	ok	_Local Proj - Possibly Relevant
Nov 11, 2007	interinstitutional relations AND "cooperative behavior" AND "health care"	pubmed	48/412	fair overall, good ones taken	_Local Proj - Possibly Relevant
Nov 12, 2007	given by Tammy Horne	found in google scholar	1 (measuring collaboration among grant partners) - lee, frey, lohmeier, tollefson	good	_Local Proj - Possibly Relevant
Nov 12, 2007	collaboration and factors	google scholar	549000	too many	
Nov 12, 2007	interagency collaboration	abi	23	fair	_Local Proj - Possibly Relevant
Nov 12, 2007	interagency collaboration and DE "Interinstitutional Relations"	ebsco	46	fair	_Local Proj - Possibly Relevant
Nov 12, 2007	allintitle: interorganizational collaboration OR partnership " "	google scholar	197	many good articles	_Local Proj - Possibly Relevant
Nov 18, 2007	collaboration and factors and "health care" and "interinstitutional relations"	EBSCO-All	63	few good	_Local Proj - Possibly Relevant

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Date of Search	Search Terms	Database	Number of Hits	Subjective Impression	Refworks File Stored in
Nov 18, 2007	antecedent variables and "health care delivery, integrated"	EBSCO-All	0	0	n/a
Nov 18, 2007	antecedent variables and collaboration	EBSCO-All	1	not relevant	n/a
Nov 18, 2007	antecedent variables and consortia	EBSCO-All	0	0	n/a
Nov 18, 2007	factors and consortia	EBSCO-All	157	not relevant	b/a
Nov 18, 2007	factors and partnership) and DE "Cooperative Behavior"	EBSCO-All	99	3 good	_Local Proj - Possibly Relevant