

Additional copies are available from:

Publications Unit
Communications Directorate
Health Canada
Ottawa, Ontario
K1A 0K9

Permission is granted for non-commercial reproduction
related to educational or planning purposes.
Please acknowledge the source.

Published by
Health Promotion and Programs Branch
Health Canada

Également disponible en français sous le titre:
Modèles organisationnels de soins de santé communautaires :
Revue de la documentation

Cat. No. H39-351/2-1996E
ISBN 0-662-24227-0

***BUILDING A STRONGER FOUNDATION:
A FRAMEWORK FOR PLANNING AND EVALUATING
COMMUNITY-BASED HEALTH SERVICES IN CANADA***

Component 2:

**ORGANIZATIONAL MODELS IN
COMMUNITY-BASED
HEALTH CARE: A REVIEW OF THE LITERATURE**

**W. John B. Church, Ph.D.¹
L. Duncan Saunders, MBBCh., Ph.D.¹
Margaret I. Wanke, M.H.S.A.¹
Raymond Pong, Ph.D.²**

¹Healthcare Quality and Outcomes Research Centre
Department of Public Health Sciences
University of Alberta
Edmonton, Alberta

²Northern Health Human Resources Research Unit
Laurentian University
Sudbury, Ontario

1995

ACKNOWLEDGMENTS

This report was prepared for the Federal/Provincial/Territorial Conference of Deputy Ministers of Health through the Advisory Committee on Health Human Resources (ACHHR).

The authors wish to acknowledge the contributions of the several individuals. Carol Spooner played an important role in the critical appraisal of studies as the second blind reviewer. Marlene Dorgan and Georgia Makowski provided invaluable expertise in the design and implementation of the on-line literature searches. David Diamond spent countless hours retrieving articles from the library. Treasure Whaley and Felicity Hey provided administrative support through numerous drafts. All of these individuals were essential to the completion of the task. However, the authors assume full responsibility for any errors or omissions.

The views expressed in this publication are those of the authors, and do not necessarily represent those of Health Canada, or the Advisory Committee on Health Human Resources.

TABLE OF CONTENTS

- EXECUTIVE SUMMARY iv**
- 1 INTRODUCTION 1**
- 2 DEFINITION OF TERMS 3**
 - 2.1 Modalities/Outcomes Matrix 4
- 3 INFORMATION SOURCES 6**
 - 3.1 On-line Literature Search 6
 - 3.2 Hard Copy Search 7
 - 3.3 Government and Other Contacts 7
 - 3.4 Screening and Description of Articles 7
 - 3.5 Limitations of the Literature Review 9
- 4 LITERATURE REVIEW: CBHS MODELS 10**
- 5 ORGANIZATIONAL MODALITY 1: GOVERNANCE 11**
 - 5.1 Citizen Participation in Decision-Making 11
 - 5.2 What Level of Input Should the Community Have in the
Decision-Making Process? 12
 - 5.3 In What Types of Decisions Might Citizens be Involved? 15
 - 5.4 How is the Organization/Program Accountable to the Community? 17
 - 5.5 What Scope of Decision-Making Responsibilities Does the
Community Want? 20
 - 5.6 Summary and Policy Considerations: Governance 20
- 6 MODALITY 2: SERVICE DELIVERY APPROACHES 22**
 - 6.1 Are Services Delivered Through an Integrated Continuum of
Care Approach less Costly and/or more Effective than
Other Approaches? 22
 - 6.1.1 Community Health Centres (Community Health Centres,
Community Health and Social Services Centres,
Neighbourhood Health Centres and Community-
Sponsored Health Maintenance Organizations) 23
 - 6.1.2 Continuing Care 24
 - 6.1.3 Mental Health 32
 - 6.1.4 Prenatal Care 34
 - 6.2 What Range and Mix of Services do Community-Based Health
Services Models Offer? 36

6.3	How Accessible are Community-Based Health Services Models?	37
6.4	Summary and Policy Considerations	37
7	MODALITY 3: FUNDING APPROACH	39
7.1	What Funding Approach Best Addresses the Issue of Equity in the Distribution of Health Care Resources?	39
7.1.1	Utilization-based Funding	39
7.1.2	Population-based Funding (capitation)	40
7.1.3	Needs-based Approach	42
7.1.4	Budget/Request-based	43
7.2	What Are the Issues Related to the Implementation of a Regional Funding Approach?	43
7.3	Summary and Policy Considerations: Funding Approaches	44
8	MODALITY 4: SERVICE CATCHMENT AREA	45
8.1	Summary and Policy Considerations: Service Catchment Area	46
9	MODALITY 5: MANAGEMENT STRUCTURES	47
9.1	What are the Prospects and Challenges of Integrating Management Structures and Service Delivery Across the Health Sector?	47
9.1.1	System or Regional Level	47
9.1.2	Intra-organizational Level	52
9.1.3	Summary and Policy Consideration: Management Processes and Structures	52
10	SYNOPSIS OF THE LITERATURE REVIEW	54
10.1	Governance	54
10.2	Service Delivery	54
10.3	Funding Approach	55
10.4	Service Catchment Area	55
10.5	Management Structures	55
	REFERENCES	57
	APPENDIX 1: On-Line Search Strategies	68
	APPENDIX 2: Contacts	77
	APPENDIX 3: Screening Criteria for CBHD Study	82
	APPENDIX 4: Summary of Literature on CBHD Models	84

EXECUTIVE SUMMARY

Over the past decade Canadian provinces and territories have conducted extensive reviews of their health care systems. Current provincial and territorial health reform initiatives have placed a growing emphasis on community-based health services models.

In the context of this shifting policy emphasis the Federal/Provincial/Territorial Advisory Committee on Health Human Resources fielded a Request For Proposal for a project entitled: A Framework for Evaluation and Policy Decisions for Community-Based Health Care in Canada - Focus on Health Human Resources. The project has three major deliverables. The first component involves a systematic review and critical assessment of the literature on community-based health human resources. The second component involves a systematic review and critical appraisal of the literature on community-based health services models. The third component of the project involves the development of a terminology and a framework for evaluating and establishing policies related to community-based models. This summary highlights the second component of the project.

The objective of the second component of the project was to determine which organizational structures and organizational dimensions (modalities) result in higher quality and more cost-effective community-based health services. To achieve this objective the research team conducted a systematic search and critical assessment of the literature on community-based health services using pre-established criteria.

After a preliminary review of the available literature and the relevant policy questions, the team established an initial definition of community-based health services, and identified organizational characteristics and expected outcomes. Community-based Health Services Delivery Models were broadly defined as encompassing organizations or programs that are delivered closer to home, in non-institutional settings, and providing a spectrum of services. The organizational characteristics included: governance, service delivery approaches, service catchment, funding, and management structures. The outcomes identified included: sense of control (individual and collective), fairness (equity), value for money (cost-effectiveness), quality and outcomes of care, and quality of life.

The body of literature reviewed was established through a systematic search of the following: relevant on-line data bases; relevant unpublished government and academic studies; and relevant hard copy sources. The criteria used for the identification and review of relevant articles were derived from the definition of community-based health service delivery, and the modalities/outcomes matrix. There is a great need for methodologically strong studies comparing the outcomes of different modalities of community-based health care services delivery.

Preliminary findings based on the available literature are summarized below.

Governance

In the area of governance, the majority of the literature either attempted to interpret a phenomenon or provided opinion on a particular policy issue. The literature suggested that effective lay governance in the health sector has been impeded in three major ways: imbalanced resources; failure to empower communities or individuals; and, a lack of accountability to communities. In the past physicians and administrators have dominated health decision making because of their control over specialized knowledge. This has been reinforced by the tendency to frame health care decision making within the boundaries of technical knowledge.

The literature on citizen participation suggested there is no empirical evidence that community governance boards empower citizens in relationship to other stakeholders. The literature on patient choice suggested that, when provided with appropriate information about treatment options, patients are inclined to choose less invasive and less costly interventions.

Service Delivery

The literature on community-based health services models reviewed for this component indicated that, in general, integrated, multi service, multidisciplinary models are less costly, and more cost-effective, than comparable services provided by single-service providers and institutional providers. This is particularly evident when comparing the community health centre organizational model with solo fee-for-service physician practice. The major cost saving appears to occur through a reduction in the use of hospital outpatient and inpatient services by populations receiving services from community health centres. Community health centres also offer patients increased access to care.

Beyond community health centres, community-based services appeared to offer the potential for cost savings in the provision of continuing care for the elderly, mentally ill, children, and terminally ill patients. Studies on care of the elderly, prenatal care, children, the mentally ill, and the terminally ill, indicated that community-based health services can lead to increased access to care, and better health outcomes at a lower cost than care provided by stand-alone providers or in institutional settings. Specifically, better outcomes have been recorded in the quality of life of the elderly, mentally ill, and terminally ill patients. In addition, better outcomes have been recorded for newborns when their mothers receive coordinated prenatal care. Quality of care improvements have been noted for these populations. However, additional research needs to be conducted in this area to determine the range of quality of life outcomes that are affected by the choice of service delivery modality.

Funding Approach

Either a population-based or needs-based approach or a combination of the two seemed likely to lead to a more equitable distribution of resources, and a focus on health outcomes. Implementing such an approach will require development of a valid proxy for measuring the health status of the population, and reliable mechanisms for gathering the data necessary to accurately track population health at the regional level.

Service Catchment Area

A clear definition of the service catchment area is an essential ingredient to decision making based on the health of the population, including assessing needs and allocating health care resources based on these needs. Unanswered important questions concerning CBHS include: the usefulness of geographic catchment areas for improving the population health; and, the optimum size of catchment areas.

Management Systems, Processes and Structures, and Outcomes

The literature on integration at a regional and/or system level was based largely on discussions of the facilitators and barriers to the integration of hospital systems in the United States. The consensus of the literature reviewed was that there are significant barriers to system integration associated with the existing distribution of power and resources. Overcoming these barriers will require strong leadership, a new corporate culture, clear vision, and integrated information systems.

Of particular importance, both in terms of successful implementation and costs, was the inclusion of physicians in decision making related to the process of change and the overall management of an integrated system. Several authors suggested that integration will not work unless physicians have been involved in decision making. The system must incorporate the preferences of the medical profession along with those of administrators and patients.

There was a consensus in the literature examined that, to date, there was no good empirical evidence to support the supposition that integrated systems were less costly than non-systems. However, most studies have focused on hospital systems alone.

1 INTRODUCTION

Over the past decade Canadian provinces and territories have conducted extensive reviews of their health care systems. Current provincial and territorial reform initiatives linked to these reviews attempt to enhance the cost efficiency and effectiveness, accountability, equity, and quality of services. One of the major thrusts in current policy thinking has been an official recognition that the existing institutionally-based, physician-centred approach to health care delivery is costly, and is not leading to substantial improvements in the health of the population.

To address both cost and outcome issues, policy makers are suggesting that greater emphasis should be placed on delivering services in community-based settings, which are focused on the following: the provision of an integrated continuum of care in non-institutional settings; delivery by an integrated continuum of health care workers; and, evaluation based on the extent to which the health of the population is improved.

In the context of this shifting policy emphasis the Federal/Provincial/Territorial Advisory Committee on Health Human Resources fielded a Request For Proposal (R.F.P.) for a project entitled: A Framework for Evaluation and Policy Decisions for Community-Based Health Care in Canada - Focus on Health Human Resources. The purpose of the project is “to develop a terminology and framework for evaluation of policy decisions for alternative and traditional community-based health care models”, with particular emphasis on effectiveness and health workforce implications. The project has three major deliverables. The first component involves a systematic review and critical appraisal of the literature on community-based health human resources. The second component involves a systematic review and critical appraisal of the literature on community-based health services models. The third component of the project involves the development of a terminology and a framework for evaluating and establishing policies related to community-based models, which emphasizes health human resources. This report addresses the second component of the project.

As a means of focusing the project, the R.F.P. stated that the following kinds of questions be addressed:

- i.* Do alternative community-based health care models address the following areas of interest:
 - clearly defining accountability for health resource allocation to meet population health needs in the community;
 - improving health benefits/outcomes
 - improving efficiency
 - improving integration and coordination of health services with other sectors in the community (e.g., housing, schools, social programs, volunteer organizations/ programs, family violence, environment) at both the community and regional levels

increasing community participation in setting health program priorities and in allocating health resources

increasing the ability of people in the community to make informed decisions on health by improving their knowledge of the system

ensuring responsiveness to community health needs

decreasing barriers to accessing effective health services

improving the distribution, mix and effectiveness of care providers and increasing interdisciplinary collaboration

improving consumer and provider satisfaction

the changing role of “hospitals”, particularly rural institutions, from acute care facilities to “community health centres” (e.g. long term care, 24 hour emergency, observation beds)

impact of devolution and regionalization on service delivery and funding models in communities

defining the types of “basic” or “core” services that should be available in the community, in the region, or at the provincial level

ii. What key factors appeared to contribute to the success or lack of success of the community-based pilot project in each of these areas?

iii. How did the management of health human resources contribute to the effectiveness of community-based pilot projects?

What skill/competencies were required for client assessment, care coordination, community health assessment/planning, prioritizing client needs, social marketing and health community education?

How were role flexibility and responsibility of health providers encouraged and integrated? What types of health care providers were involved?

Were there any significant differences in the basic and ongoing education of community-based versus institutional-based practitioners?

Were changes to professional legislation required?

What was the role of assistants, aides, volunteers?

How effective were pilot project funding or practitioner remuneration approaches in meeting the objectives of pilot projects?

To make these policy questions operational for the literature review, the research team developed a preliminary definition of “community-based health services”, and then developed a matrix framework based on characteristics (modalities) of community-based health services delivery models, and expected health systems outcomes. The definition, modalities and outcomes are outlined below.

2 DEFINITION OF TERMS

A preliminary review of readily-available documentation yielded no ideal definition of community-based services. The perspectives from which the concept is evolving can be loosely grouped into four categories: primary care (usually medical care), community/home care, social services and other non-health services, and community/public health. While the various community-based services included under these categories have traditionally been delivered in different organizational models, the current trend is towards integrating these kinds of services into more holistic models of care.

Despite the lack of a universally-accepted definition, the researchers noted that community-based health services models (CBHS) tended to have some or all of the following characteristics:

- delivery of services as close to where people live, work, go to school, and undertake leisure activities;

- services that are generally non-institutionalized and generally technology non-intensive;
- governance structures which maximize consumer participation and the democratic process;

- services that are designed to reflect local community priorities and are delivered in collaboration with other community agencies or groups;

- services that are integrated across multiple provider disciplines and that may involve the spectrum of health and related services (i.e., social services, health promotion, disease prevention, acute and emergency services, and long-term care);

- provision of services in a manner which actively seeks to empower clients by maximizing their independence, right to risk, and personal control; and

- definition of “consumer” that is oriented to a population perspective related to either a geographic jurisdiction or specific target population such as the disadvantaged, elderly, those at high risk (i.e., although services may be provided to individual consumers, the programs and services offered may be evaluated with respect to their impact on a population or specific target sub-group of the population).

From the above list of characteristics community-based services can be defined operationally as a broadly integrated range of health and related services which are designed for, governed by, and delivered in, local communities.

The above “definition” requires considerable refinement as additional definitions and ideas are incorporated from the literature searches. However, the concepts identified were useful as a basis for identifying selection criteria for the systematic review of the literature.

2.1 Modalities/Outcomes Matrix

As a means of determining which studies from the literature search would be eligible, and for assessing eligible studies, the researchers developed a health human resources and organizational modalities/outcomes matrix (see Figure 1).

Modalities

In the context of this review, the term “modalities” refers to the major characteristics of an organization model. These modalities and outcomes are outlined below:

Governance - refers to the structures and processes through which policy decisions are made about the allocation of organizational resources

Service Delivery Approaches - refers to the structures, scope and mix of services provided. Community-based service delivery models are noted for the provision of a continuum of health and/or social services through an integrated and coordinated service delivery approach. Also, services are usually located closer to the communities served, and are easily accessible.

Funding - refers to the different methods of allocating funds to a delivery model, as distinct from different methods of remunerating providers in those organizations. This might include capitated prepayment, which involves payment based on a fee per capita arrangement; or, it might involve lump sum payment through a global budget.

Catchment Area - refers to the recognized tendency of community-based service delivery models to serve defined populations.

Management Structures - refers to the processes and structures through which operational decisions are made about the organization and delivery of services

Outcomes

Through the preliminary review of the literature, the researchers identified a number of themes relating to what community-based initiatives are intended to achieve. These themes may be associated with the authors believe were four underlying societal values currently being expressed by Canadians. Stated from a lay perspective, these four themes along with the pragmatic outcome terms generally associated by the health sector with them are as follows:

“Sense of Control” experienced both as individual consumers of care and as tax-paying citizens -included are concepts such as citizen/lay/client/consumer participation in decision-making, consumer sovereignty, accountability, choice, access to information, and self-help;

“Fairness” - included are concepts such as equity, accessibility, waiting lists, and rationing of services;

“Value for Money” - included are the concepts of efficient and economical service delivery; and

“Quality” - included are the concepts of quality of care, health status outcomes, consumer satisfaction, level of independent functioning and appropriateness of care, provider satisfaction and quality of work life.

It is important to note that the above outcomes are not associated only with community-based services. Institutional-based service managers are also aware of and responsive to the above desired outcomes.

Figure 1

THE MODALITY - OUTCOME MATRIX

MODALITY		OUTCOME				
		A	B	C	D	E
		Sense of Control	Fairness	Value for Money	Quality of Care	Quality of Life
I	Governance	- participation - boards - accountability - preferences				- patient choice
II	Service Delivery		- accessibility	- cost - reduced hospitalization - case management	- convenience	- birth weights - worklife - satisfaction - development status
III	Funding		- equity	- cost - efficiency		
IV	Service Catchment	- ownership		- efficiency - integration tool		- improved health status
V	Management			- integration barriers and facilitators - cost savings		

3 INFORMATION SOURCES

In an effort to conduct an inclusive review of available evidence on CBHD models, the researchers included the following sources of information: documentation obtained through systematic on-line computerized searches of Medline, Healthplan, and Cinahl databases; studies referenced in documents obtained through the on-line search and immediately available sources; studies obtained by contacting provincial/territorial government departments, and relevant academic or practitioner experts. The process for each of these searches is described below.

3.1 On-line Literature Search

Initial searches of Medline, Cinahl and Healthplan (Years: 1975-1994; Search term: exp: community health services) yielded over 76,000 potential articles, therefore, a focused on-line search was performed. Search terms for community-based care were chosen to reflect the core characteristics identified in our preliminary literature review. Additional search terms were chosen for the organizational modalities and outcomes in the matrix (see Appendix 1 for search terms). The search term selection was made cooperatively with librarians, who were experts in on-line searches.

Separate on-line searches were conducted in Medline 1966-1994, Healthplan 1974-1994, and Cinahl 1982-1994. Each of these searches was limited to French and English languages; countries -specifically Canada, U.S, U.K., France, Netherlands, Germany, Norway, Denmark, Sweden, Finland, Australia, and New Zealand; and comparative studies. The search terms initially chosen were refined during the course of the on-line search to reflect the recognition of terms by the various on-line services. Several test runs were done before researchers and library specialists were satisfied that a sound initial on-line search strategy was in place.

Once the searches for all articles pertaining to each category had been conducted they were combined in the following way:

community-based health services + organizational modalities + outcomes + French/English
+ comparative studies.

A total of 1,210 potential articles were identified for screening from the organizational modalities combined search.

This core body of literature was then loaded into Reference Manager, a computer program specifically designed for managing literature searches. Reference Manager provided a further means of eliminating duplication in the data base. A list of all articles contained on the data base was generated for the organizational modalities combined search.

3.2 Hard Copy Search

While the on-line search was in progress, the researchers began to identify potentially relevant articles from existing hard copy. These were also entered into Reference Manager.

3.3 Government and Other Contacts

During the course of the on-line search, relevant experts, provincial associations and government departments were contacted to determine if unpublished studies had been conducted on community-based models. Appendix 2 provides a list of those individuals/organizations contacted.

3.4 Screening and Description of Articles

The potentially relevant articles derived from the on-line and initial hard copy searches were then screened for eligibility. Two reviewers blindly reviewed potentially relevant articles using a standardized set of screening criteria (Appendix 3). The reviewers discussed and resolved differences about the inclusion/exclusion of individual journal articles. Where necessary, a third member of the team was consulted to resolve differences in opinion. Each eligible article was then classified according to its methodology into one of the following categories: informed opinion, descriptive, quasi-comparative and comparative. This was intended as a hierarchical classification where, in general, informed opinion articles were considered to provide the least valid evidence and comparative studies the most valid evidence for the link between different service modality interventions and outcomes of interest.

i. **Informed opinion articles:**

This category included articles of relevance to the study but whose purpose is not to describe the methods or results of original studies. For example, articles which discuss the pros and cons of various options for funding community health centres were included in this category. These articles may cite data from other studies. Non-systematic review articles were included in this category.

ii. **Descriptive studies:**

These are studies which do describe the methods and results of original studies, but whose purpose is not to compare the outcomes of different interventions. This category includes a wide variety of study designs including surveys of patient satisfaction, comparisons of practice patterns (but not of outcomes); and organizational case-studies.

iii. **Quasi-comparative studies (without contemporaneous local comparisons)**

These are original studies whose purpose is to compare the outcomes of different interventions. In these studies the outcomes occurring in the study group are compared with outcomes in historical or non-local controls, for example, birth-weights of infants born to teenagers enrolled in a city-wide prenatal program compared to birth-weights of teenagers in the same city prior to the onset of the program. Differences in group characteristics, other external factors and data collection decrease the validity of such studies.

iv. **Comparative studies**

These are original studies to compare the outcomes of different interventions. The outcomes are compared between groups that are integral to the study with similar selection criteria and in whom outcomes are measured in a similar manner. These studies were sub-classified as follows:

cross-sectional: (outcome and interventions are measured at the same time)

case-control: (participants with good and bad outcomes are compared for differences in interventions)

cohort: (participants with different interventions are followed longitudinally and compared for outcomes)

pre/post: (participants are compared for outcomes before and after interventions)

clinical trials: (patients are randomized to receive different interventions and are compared for outcomes)

community trials: (community members or groups are randomized to receive different interventions and are compared for outcomes)

systematic reviews: (results from several original comparative studies are systematically compared and synthesized)

A small number of articles which evaluated the process of care (but not patient outcomes) were tabled as comparative or descriptive quality of care studies.

All comparative studies were included in the literature review. Informed opinion, descriptive and quasi-experimental studies judged most relevant to the goals of the study were also included. As the study progressed, other relevant articles were identified and included in the review.

Each opinion, descriptive, quasi-comparative and comparative study included in the literature review was summarized for setting; target populations; research design; interventions and outcomes (The descriptions of studies are found in Appendix 4).

Comparative studies were also rated according to their methodological strength. Two reviewers blindly assessed each comparative article for the similarity of the comparison groups; explicitness of the definition and the correctness of the allocation of the interventions; the accuracy of outcome measurements, the completeness of follow-up; and sample size. Each article was qualitatively rated as methodologically strong, moderate or weak. A methodologically strong study in this context is one that provides convincing evidence for the relationship between an intervention and an outcome that is not due to bias, confounding or chance. This rating is not a judgement on the expertise of the investigators or the overall value of the article. The context of the study may not have allowed for a methodologically strong study. In addition, the study may have provided other valid and useful information. These ratings were then compared. Differences were resolved by consensus.

The combined screening and evaluation of the comparative, quasi-comparative, descriptive and informed opinion articles yielded a total of 108 studies, which were included in the review.

3.5 Limitations of the Literature Review

While every effort was made to ensure that the most relevant studies meeting the established criteria were included in the literature review, given the size and scope of the body of literature and the time limitations placed on the project, this review was not exhaustive of the subject area.

4 LITERATURE REVIEW: CBHD ORGANIZATIONAL MODELS

The following review of the literature:

examines the available evidence on the relationship of community-based services modalities to outcomes; and,
identifies the relevant policy issues.

The review focuses on articles identified in the literature searches and relevant articles identified through the bibliographic references and key contacts. The previous literature reviews by Abelson and Hutcheson, 1994; Birch, Lomas, Rachlis, and Abelson, 1990; and Crichton, Robertson, Gordon, and Farrant, 1991 were very useful. In addition, policy studies by Angus and Manga, 1990; and, ARA Consulting, 1992, provided helpful references. Other applicable literature has been reviewed systematically where appropriate.

The written presentation of the literature review is based on the outcomes/modalities matrix. The literature is grouped by modality, type of service delivery (i.e. continuing care/mental health), and related questions. In addressing these questions, reference is made to the types of outcomes recorded in the literature. These outcomes are summarized at the end of the discussion of each modality.

5 SERVICES MODALITY 1: GOVERNANCE

The term “governance” as used in the context of this review refers to the structures and processes through which communities, or individuals, participate in decisions about the organization and delivery of health services. Thus, the term has a broader meaning than its usual association with board structures. Governance might include everything from formal board structures to patient choice.

One of the objectives of current health care reforms is to enhance the role of the consumer in health decision making. The increased interest in consumer participation stems from two emerging trends. The first trend is the growing recognition of the importance of incorporating lay preferences into collective and individual decisions about resource allocation and choice of treatment. The second trend is the desire to make providers more accountable for decisions about the allocation of health care resources.

In this section we will review the literature relating to several questions, which are fundamental to participation. These questions will address the following issues:

- the extent to which consumers share decision-making with other stakeholders
- the extent to which CBHS organizations are accountable to communities
- the range or scope of decisions in which consumers are involved
- information requirements and barriers
- characteristics of effective community participants
- methods of selection

The literature search revealed that there is a paucity of comparative empirical studies assessing the impact on outcomes of different governance models. With the exception of several studies on patient choice, the majority of the literature in this section is based on informed opinion.

5.1 Citizen Participation in Decision-Making

At the conceptual level there is a lack of clarity about the meaning of “citizen participation.” The concept means different things to different groups or individuals. The current focus on enhancing citizen participation is based on two fundamental assumptions: citizens *want* to participate; and citizen participation leads to *better* decision-making. There is little clear evidence to support either of these assumptions (Charles and Demaio, 1993; Saltman, 1994). As Saltman notes, there has been a “tendency for elected officials and planners to overstate the value of elected officials and collective choice,” and in the process to merge the notion of formal political control (periodic election) with that of direct citizen participation -decision-making at the local-collective and individual levels (Saltman, 1994).

Significant attention has been devoted to the subject of governance in the health care literature over the past three decades under the general rubric of citizen/lay participation. However, no systematic means of gauging citizen participation has been rigorously applied. Despite this apparent gap in the literature, several frameworks for evaluating citizen participation generally, and more specifically, citizen participation in health care, have been developed (Charles and Demaio, 1993; and Saltman,

1994). These frameworks form the basis of the discussion that follows, and are supplemented by other literature.

5.2 What level of input should the community have in the decision-making process?

A useful means of approaching this dimension of governance is to view community input as a spectrum or “ladder” of participation (Charles and Demaio, 1993; and Saltman, 1994). The lower rungs of the participation ladder comprise processes that are essentially consultative in nature (i.e. round tables, royal commissions, public forums, advisory committees). At this level of participation individuals are invited by decision-makers to make their views known, but are not guaranteed that these views will be translated into decision outputs. The middle rungs of the ladder encompass governance arrangements in which lay individuals and current decision-makers agree to share responsibilities for decision-making (i.e. joint policy boards and planning committees). At this level, some redistribution of decision-making power occurs. At the top rungs of the ladder lay individuals dominate decision-making. This level of participation requires a transfer of decision-making power from traditional decision-makers (i.e. providers, politicians, government bureaucrats, and local administrators) to lay individuals (Charles and Demaio, 1993). Therefore, a fundamental aspect of citizen participation is power-sharing (Eyles, 1993).

To use Saltman’s patient choice terminology, the lower rungs of the ladder denote “voice”, forums for verbal communication, and the upper rungs of the ladder denote “voice and choice”, forums and “options to select alternative approaches” (Saltman, 1994,). For example patients might attend provincial round table discussions, sit in a majority on locally-elected health boards, and choose among different options for addressing a personal health problem. In this case patients are participating at different rungs on the ladder and in several different decision-making domains (provincial, local-collective, and individual). For Saltman, full empowerment of patients requires gaining substantial control over budgetary authority and resource allocation from managers and physicians. As experience in Sweden is demonstrating, this can be achieved within preset regional, provincial or national spending limits.

However, despite Saltman’s observations about Swedish experience, in Canada, the literature indicated that citizen participation has not progressed beyond the lower rungs of the participation ladder (Charles and Demaio, 1993). Although Ontario has introduced a variety of opportunities for citizen participation, they do not appear to have moved beyond the consultative stages of participation. For example, District Health Councils (DHCs), which were initiated in 1974 to allow local boards with a balance of appointed consumers, municipal officials, and providers to advise the Minister, have served mainly as a political buffer between the provincial government, and local institutional and individual providers. Lacking any formal mechanism for local accountability, they have also encountered substantial difficulties in establishing a local constituency (Church, 1986; Tuohy and Evans, 1986). A more recent analysis of the trend to involve consumers in public policy-making and implementation in Ontario suggested “that government-initiated participatory strategies elicit only particular kinds of information from consumers and do not live up to their democratizing promise” (Aronson, 1993, p.367). Previous research in the United States (Checkoway, 1982) has suggested a similar pattern.

The assessment of citizen participation in Quebec is similar to that in Ontario. A recent review and assessment of citizen participation in health decision-making in Quebec suggested that despite more than two decades of efforts to enhance participation in health care decision-making, “the presence of citizens on the boards has not succeeded in empowering the community in such a way as to significantly influence health.” (O’Neill, 1992, 291) Previously, several other authors (Eakin, 1984; Godbout, 1981 Renaud, 1987) expressed a similar view. The problem stems from the power relationships among lay individuals, administrators, and providers.

Two examples from the literature served to illustrate these power relationships. The first, and perhaps most celebrated example of the power relationships between physicians and citizens in community-based health governance structures, is the experience of consumer boards for community health clinics in Saskatchewan (Church, 1994; Young, 1975). At issue in the Saskatchewan dispute was the challenge of physician decision-making autonomy by both government administrators and citizens. The resolution of the dispute resulted in the marginalization of consumer decision-makers. As several authors have noted, the medical profession tends to resist any challenge to its autonomy. (Alford, 1975; Church, 1994; Naylor, 1986; and, Tuohy, 1976)

The second example relates to the relationship of board administrators to volunteer boards. Attempts by the provincial government in Quebec to democratize hospital boards by mandating the appointment of new boards that were more broadly representative of the population were countered by existing business and administrative elites (Akin, 1984). New and inexperienced board members, who either represented non-professional staff or community organizations, were controlled by hospital CEOs. At the same time, the old cadre of board elites shifted the locus of decision-making out of the board room and onto the golf course, or into smaller elite dominated committees. “Administrators reported that after reorganization they brought issues to the board at a later stage of the decision-making process” (p. 227). In the broader context, Carroll (1989) states that “management theory suggests that the executive directors [of non-profit organizations] will effectively run the organizations ... ‘in their own best interests’, and the volunteer members of the board will tend to be managed by the executive director.” (p. 352)

The root of the problem is the imbalance of resources among citizens, providers, and administrators, which consumers encounter when participating in shared decision-making processes. The imbalance manifests itself in two fundamental ways: unequal interests; and disproportionate information. The conventional wisdom concerning unequal interests as expressed in the literature (Alford, 1975, Church, 1994, Crichton, 1976, Marmor and Morone, 1980; Trebilcock, 1978) is that in decision-making situations involving consumers, administrators, and providers, both administrators and providers have greater incentives to participate than citizens.

Providers and administrators are motivated to participate in decision-making because they have a concentrated interest related to employment and income. Therefore, the benefits of participation are likely to outweigh the costs. Consumer interests tend to be broader and more diffuse than provider and administrative interests. As Marmor and Morone (1980) noted, citizen contact with the health system is sporadic and episode specific. The majority of these contacts occur in the physician’s office. As long as individual encounters with the system are generally satisfactory, consumers are unlikely to see a benefit in becoming involved in the ongoing decision-making process.

Most consumers will not see a net advantage in participation if it involves spending countless hours reading lengthy and complex documents; weighing technical and value choices; engaging in cyclical battles with other stakeholders; and listening to late night presentations followed by crucial votes

(Brown, 1981). They are more likely to mobilize around single issues such as the potential construction/closure of a health facility, the addition/closure of a program, or inappropriate provider behaviour. As Marmor and Morone (1981) suggested, “administrative politics are far less visible ... not bounded by clear, discrete decisions, and are cluttered with technical details rather than with symbols that are more likely to arouse diffuse constituencies.” (p.129)

The problem of the imbalance of information (Hurley, Birch and Eyles, 1992; and, Marmor and Morone, 1981) relates to the traditional technical nature of many decisions relating to health care, and the relative monopoly of this information by providers and administrators. While this imbalance is present to some extent in virtually all types of policy decisions, it is especially present when decisions are technical in nature.

Hurley et al (1992) suggested that if decentralized decision making in health care is to result in increased technical and allocative efficiency, structures must be designed to facilitate the combination of expert knowledge and consumer knowledge. The former refers to empirical, technical knowledge about health care interventions, and the organization and financing of the health system. The latter refers to subjective knowledge related to collective and individual values and preferences. Both types of information have limits, and pose challenges for provider, administrative, and lay decision-makers. As is suggested by Charles and Demaio (1993) “if lay participation ... is to be oriented toward enhancing community status, then providing the public with the technical information to facilitate decision-making in line with these goals will become increasingly important, and a key policy challenge will be to identify the types of information that will enhance decision-making.” (p. 900)

Based on his empirical research of the experience with Community Health and Social Services Centres (CLSCs) in Quebec, Godbout (1981) suggested that certain conditions are necessary for citizens to exercise power in health governance structures. These include: board members that are truly representative of their constituents; the capacity to mobilize constituents, especially in poor neighbourhoods; a capacity to have a real say in the daily affairs; and recognition by administrators and health providers that the board has legal authority, which in principle gives them the legitimacy to exercising decision-making power.

In Godbout’s research (1981) on governance of CLSCs in Quebec, citizen board representatives of three CLSCs situated in underprivileged neighbourhoods were not generally recognized as legitimate representatives of consumer interests (condition one). In three other neighbourhoods, which were essentially working class and middle-class suburbs, the consumer representatives managed to implement some important decisions and exercise real power. To overcome the lack of class affinity with administrators that middle-class board members enjoyed, consumer board members in poor neighbourhoods needed a capacity to mobilize the citizens in the neighbourhood. However, in the cases examined, board members were either less effective than employees at community mobilization, or were reluctant to exercise this form of power because it implied playing boss. In one instance, the board resigned rather than mobilizing the neighbourhood (condition two).

The third condition necessary for citizens to exercise power is the capacity to have real authority over the daily activities of the CLSC. In this respect, the relationship of citizen boards and managers is crucial. As previously discussed, the literature suggested that the interests of managers are not necessarily synonymous with those of lay board members.

The final condition is the recognition by other CLSC stakeholders of the legally based legitimacy of the board's authority. In five of six cases, providers did not see citizen board members as "agents with autonomous interests." (p. 158) Instead, providers viewed them as partisans for particular staff projects, and the staff vision of the clinic. They were given token representation on provider dominated operational committees. In effect, citizen participation was "absorbed" into a staff driven vision of the mission of the organization.

Along with the Godbout's analysis other authors have attempted to define a set of characteristics that they believe will lead to more effective representation of community interests. These characteristics include:

- strong personality: effective speaker, successful operator, well connected, understands constituents interests and pursues them
- ability to mobilize a constituency when necessary
- knowledgable of the issues. (O'Neill, 1992; Godbout, 1981; Marmor and Morone, 1980).

To return to the question raised for discussion in this section, according to the literature, at a minimum, citizens should be involved in joint-decision making with other stakeholders. However, past experience has indicated that where this has occurred on community-based boards of governance, the imbalance of political and information resources has contributed to the failure of citizen participation from the perspective of empowerment. The literature in this area is based largely on informed opinion, with little rigorous empirical support.

5.3 In what types of decisions might citizens be involved?

Despite the consensus of informed opinion, that citizen participation in health decision-making has traditionally been weak and largely ineffective, a number of authors have also suggested that citizens can and do participate effectively in certain types of decisions. (Deber et al, 1994; Eyles, 1993; and, Saltman, 1994)

Saltman (1994) suggested that past experience with patient empowerment has given us a clearer sense of the objectives of a system geared to patient empowerment, and the types of institutions conducive to enhanced citizen participation. The following are what Saltman considered to be desirable objectives of effective patient influence:

- logistical improvements, such as shorter queues; on-time appointments; enhanced information; and greater participation in clinical decisions about treatment patterns.
- patient choice, as opposed to provider or administrator preferences, as the guiding force in short term budget allocations
- improved clinical quality
- patient choice of provider, site and treatment
- direct political accountability of providers through empowerment process
- enhanced sense of personal responsibility
- system legitimation through empowerment.
- education for choice and self-advocacy

Saltman cited several areas in which patients already had realized significant empowerment in decision making. These areas include: breast cancer, maternity, abortion, alternative medicine, and interactive video disks.

For example, experiments with interactive video disks at Dartmouth College indicated that when presented with appropriate information concerning alternative intervention strategies for surgery, patients may choose a far less aggressive treatment approach than their physicians. This has the benefit of allowing patients to have a voice in an important life-style decision, while resulting in a cost saving for the system. (Saltman, 1994)

Deber et al (1994) suggested, also, that patients have an important role to play in health care decision making in answering two questions: is a particular intervention wanted and, should the public pay? While scientific evaluations about effectiveness and appropriateness are essentially technical in nature, the actual decision about whether a particular treatment or intervention is wanted involves a value choice. As indicated by Deber et al (1994), and Wennberg (1990), beyond the technical aspects of a particular intervention, many medical decisions involve value choices. Several other studies, discussed below, support the idea that patients have an important role to play in health care decision making.

In a prospective study of cancer patients from a hospital, hospices and home settings, Townsend et al (1990) found that the majority of patients preferred to die at home, even though some died in hospital. Of the 84 patients interviewed: 58 % wished to die at home; 12 % in hospital; 20% in hospice; and 2% elsewhere. Of those who died in their own home, 94% had expressed a preference to do so. In contrast to those who died in hospitals, 68% would have preferred to die elsewhere. Under more favourable circumstances 67% of patients would have preferred to die at home, 16% in hospital, and 15% in hospice. They concluded that limited additional resources devoted to community care would provide support for 50% more patients to die at home, which was the preference of them and their care givers.

To determine the importance of patients' preferences, Barry et al (1988) conducted a decision analysis comparing the expected outcomes with immediate transurethral resection and watchful waiting for men in small geographic areas. The results indicated that there is a tradeoff between quantity and quality of life involved in the choice. Therefore, patient preferences should be a primary consideration.

Fowler et al (1988) undertook a descriptive health interview study to determine the probabilities for symptom relief, improvement in the quality of life, and complications from surgery. Patient concerns about the symptoms were also evaluated. The results indicated that patients with similar symptoms reported considerable differences in the degree to which they were bothered by their symptoms. Given this variation, the authors concluded that patient participation in the decision about treatment was important.

A descriptive study of the choice of treatment options for benign urinary tract obstruction (Wennberg et al, 1988) concluded that the clinical sources of unwanted variations in prostatectomy rates appeared to be due to three trends: a lack of information concerning the risks and benefits of the procedure; inappropriate belief that the operation prolongs life; and, a failure to base decisions on patient preferences. They recommended that, given the results from other assessments, such as Fowler et al (1988), procedures should be developed for objectively conveying information to patients about options for treatment of prostate hypertrophy. Computer driven video disk presentations and taped interviews of past patients are suggested as a possible approach.

5.4 How is the organization/program accountable to the community?

The question of how organizations are accountable and who is represented are central to discussions of citizen participation. Simply defined, “accountability” means being answerable to. In the context of the “Westminster Model” of parliamentary democracy employed in Canada, the Minister of Cabinet, responsible for a particular department/policy area, is answerable to the democratically-elected legislature for all actions carried out by representatives of the Crown (government as representative of the Queen). This implies that the Minister is answerable for the expenditure of all public funds through contractual arrangements with non-governmental organizations, which deliver services on behalf of the government. Given that health care is constitutionally a provincial responsibility, community-based health services delivery organizations, which operate under contractual arrangements with the provincial government, would fall under this category. As will become clearer below, the nature of the accountability relationship between the Minister and community-based health services delivery organizations is relatively weak. However, community-based boards of governance are responsible, ultimately, to the provincial Minister of Health.

As with the discussion of citizen participation, accountability can be understood better through the employment of a typology. According to Carrol (1989) accountability can be classified into four distinct types: bureaucratic accountability, legal accountability, professional accountability, and institutional accountability. These different forms of accountability have either a pre-audit capacity (prevent error) and/or post audit capacity (detect error after the fact). The relevance of these two forms of capacity is the assumption that it is better to detect error before it occurs (i.e. before the money is spent, the building is constructed), then after the error has occurred. Each of these is described briefly below.

Bureaucratic accountability employs a hierarchical command and control approach, which is process-oriented, rule bound, and standardized. The continuity of superior/subordinate supervision focuses on detection and correction of errors. This form of accountability has the most reliable pre-audit capacity. Most community-based organizations operate at arms length from the government and are, therefore, not directly affected by this type of accountability.

Professional accountability places control of the organization in the hands of expert employees. This form of accountability is based on deference to experts within the organization, who are governed by professional standards. Pre-audit capacity is weak. Post-audit capacity is subject to the interpretation of professional standards.

Legal accountability is based upon a financial relationship between the regulator and the regulatee. It has a degree of post-audit control, but no inherent pre-audit control. Prevention of error is dependent on compliance with rules and the extent of sanction for non-compliance. Most community-based health services delivery organizations are contracted by government to provide services. Therefore, they are directly affected by this type of accountability.

Institutional (political) accountability describes the relationship between the organization and external constituents, and is characterized by responsiveness. Pre-audit capacity is low. Post-audit capacity is low as well. This category applies to situations in which members are elected or appointed by a constituency. Some observers might argue that any organization funded by the government is politically accountable through the responsible Minister.

While the majority of the discussion focuses on institutional accountability, the implications for other forms of accountability are discussed first, in two examples. The first example is the HSO program in Ontario. The second example discusses the trend in the past for hospitals to incur budget overruns as a negotiation tactic.

In the first example, Ontario began developing Community Health Centres during the 1970s as a means of addressing unmet needs and controlling costs in the health system. At the same time they began funding Health Service Organizations (HSOs), which are essentially capitated group practices, controlled by physicians. In the case of HSOs, the government developed the Ambulatory Care Incentive Plan (ACIP) to provide additional moneys to those organizations whose patients used less hospital services than the average for the area. The money was intended to allow HSOs to broaden the range of health personnel and programs beyond core medical services. However, a review of the program after it had been in operation for approximately a decade revealed that the money from ACIP was actually used by HSO physicians to augment their own incomes, some by as much as 34 % (Ontario Ministry of Health, 1991). The application of the accountability typology to this case suggests that the accountability relationship between the government and the HSOs was weak and post-audit in nature, or that enforcement or sanction was not stringent enough.

In the second example, attempts to control hospital costs in Ontario during the 1970s through funding cuts were countered by the decision on the part of hospitals to go over budget and then bargain for additional funding to cover the shortfall (Murray et al, 1984). The application of the typology in this case suggests that over time compliance with the requirements of the legal accountability relationship declined and benefitted from the institutional (political) accountability of provincial politicians to their constituents. Legal accountability was not enforced until the mid-1980s when the province decided to no longer fund hospital deficits.

The most commonly recognized form of accountability in democracies is that of elected officials to voters (institutional-political). This is also the most commonly employed mechanism, although it is not without significant flaws. According to Marmor and Morone (1980), mechanisms often touted as implying accountability such as public access to records of board proceedings or open and well publicized meetings have little bearing on accountability. Some form of formal mechanism is necessary to ensure that decision-makers are accountable to their constituents.

One of the criticisms (Charles and Demaio, 1993) of the existing health system is that there is a lack of sufficient accountability on the part of those who are responsible for making decisions about resource allocation. One popular “solution” to this problem is the decentralization of decision-making to structures closer to communities. Again, this is based on an assumption - that local decision-makers will be more accountable to communities than provincial decision-makers.

In essence, this reasoning implies that substituting institutional-political accountability at one level of governance with that at another will enhance accountability. However, the type of accountability relationship and its inherent characteristics remain essentially unchanged. It also assumes that more appropriate decisions about the allocation of resources can be made at the local level. These assumptions may not necessarily hold true (Newton, 1978; Sharp, 1970; and, Tindal and Tindal, 1990).

If local decision-making is to be implemented, the question then becomes who should participate. This involves addressing fundamental issues relating to who is to be selected; how they are selected; and what expectations govern their behaviour (Marmor and Morone, 1980).

As Eyles (1993) noted, there are four distinctive forms of representation: formal political; ascriptive, descriptive; and substantive (see also Marmor and Morone, 1980). Formal political representation refers to elected officials who hold decision-making power in trust for their constituents. Ascriptive representation, which usually takes the form of advocacy, involves the delegation of decision-making power to an individual by a group by virtue of that individual's social position or knowledge. For example, during the 1960s, advocacy for the protection of neighbourhoods was common in the urban planning process. Descriptive representation assigns decision-making power to an individual because they reflect the characteristics of a larger group. Substantive representation refers to the selection of an individual based on their personal or professional interest in a defined set of issues, and their commitment to representing the interests of a group.

Descriptive representation, which has become a popular means of addressing the issue of equitable representation for visible minorities, assumes that outward appearance equates with general preferences (stereotyping). If this is chosen as one of the criteria for selection of representatives, it leads to the equally thorny issue of which interests should be represented. Should emphasis be placed on social status, ethnicity, age, gender, or ailment?

Physicians have traditionally been seen as substantive representatives of their patients, because of their perceived role as guardians. The broadened definition of health has called this role into question (Eyles, 1993).

A further dimension of the representation issue is choosing the appropriate appointment mechanism. Marmor and Morone (1980) viewed formal political representation as essential to ensuring some form of accountability. However they also note that "elections must not merely be held but must offer significant 'choice'." (p.137) For them, an important issue is whether to select representatives through general elections, by organized groups, by officials, or by self-selection. Although general elections are often employed, they may not be the best means of ensuring accountability. As experience with Health Services Agencies in the United States has demonstrated, general electoral processes can result in destructive competition between consumer and provider groups (Checkoway and Doyle, 1980; and Checkoway, 1982). A more commonly recognized difficulty with the electoral process is the tendency for an over-representation of well-educated middle class participants at the expense of other groups (Eyles, 1993).

Given the difficulties identified above, and observation of the process in the United States, Marmor and Morone (1980) suggested that representatives for community health boards be selected from the ranks of existing community health organizations or groups. The linkage between these organizations and their narrowly defined constituents generated more participation than the selection of candidates through general elections with a more diffuse constituency. Coincidentally, this approach has been adopted by the Government of Quebec in the reform of its regional health system (Alberta Health, 1993).

To return briefly to the question, community-based health delivery models tend to be accountable through a legal relationship with the Minister/department and/or through a locally elected board of governance. According to the literature, in practice both of these forms of accountability are relatively weak. However, this observation is based mainly on informed opinion rather than empirical studies.

5.5 What scope of decision-making responsibilities does the community want?

As stated at the outset of this section, one of the assumptions underlying discussions of consumer governance is that communities want to participate in the decision-making process. Beyond this simplistic expression of the democratic value, that participation is desirable, little research has been conducted on the types of management/planning decisions in which citizens would like to participate.

One exception in the health care field is a recent study (Abelson et al, 1994) in which a deliberative polling exercise was conducted in Ontario with five potential health decision-making groups. The five groups were: randomly selected consumers, town hall meeting attendees, District Health Council (DHC) appointees, elected officials, and other local experts. In a series of two hour focus group meetings, participants became less willing to assume decision-making responsibilities, and more willing to defer these decisions to traditional decision makers such as provincial governments. Among the DHC participants, less than 30 % were in favour of assuming more responsibilities.

In an earlier descriptive survey (Pinto et al, 1979) comparing the attitudes and values of board members and management staff of four Community Mental Health Centres and one mental health clinic, researchers discovered that board members felt strongly that citizens did not have a better understanding of mental health needs and problems in their community than health professionals. The board preferred to take an advisory role in decision making. In terms of the type of individual deemed most suitable for board membership, the board and management staff ranked existing or potential service consumers at the bottom of the list. Given this, the authors questioned the ability of the Centres to enhance responsiveness to citizens.

To answer this question, then, the two studies included in this literature review suggested that citizens preferred not to assume major decision-making responsibilities.

5.6 Summary and Policy Considerations: Governance

The discussion of the governance modality of community-based health services models encompasses two overlapping bodies of literature: citizen/consumer participation, and patient choice.

The literature on citizen participation suggested that there is no empirical evidence that boards of governance are an effective mechanism for empowering citizens in relationship to other stakeholders, or in holding decision-makers accountable to communities. While some authors suggested that local administrators might assist citizens in narrowing the knowledge gap with providers, the literature suggested that administrators are not likely to be motivated to do this.

Past experience, as recorded in the literature, has suggested that administrators are interested in consolidating their own power base as much as providers or citizens. The solution to moving consumers from the lower rungs of the participation ladder to the upper rungs may lie outside of the boardroom, or the boardroom may only be one site in which the citizen may be empowered. Another, equally important locus of decision making may be the encounter between citizen and provider.

The literature on patient choice suggested that patients can and do play an important role in health care decision making, despite the general view that citizen participation to date has been disappointing. New approaches to health care decision making that link patient preferences (as opposed to provider or administrator preferences) to budgetary considerations are essential to any empowerment strategy. The evidence indicated that the potential outcome is greater cost efficiency. The studies included in this literature review suggested that patients have an important role to play in decisions that involve value choices between competing options. The evidence suggested that when presented with appropriate information about options for treatment of acute conditions, individual patients are inclined to choose less intensive and less costly interventions.

The question of accountability is complex and offers no clear solution. The literature indicated that the traditional means of ensuring accountability and enhancing community control of community-based health delivery models do not appear to have been very effective.

The literature concerning community preference for participating in decision making is particularly sparse. However, it does suggest that greater attention should be paid to identifying citizen preferences for participating in health care decision-making.

Given the lack of empirical evidence about what might constitute the *best* governance structures for CBHS models, policy makers need to consider what they want to achieve, and then to design governance structures that seem supportive of these goals. The following questions may be useful in developing appropriate policies. Also, they could be used as a basis for evaluating whether the policy goals have been met.

What do we mean by community governance/citizen participation?

What is/are the objective(s) of including citizens in community-based health decision making?

What expectations do we have of community representatives?

What qualities or skills should community representatives require?

What structures/processes/resources are needed to realize the stated objective(s) of citizen participation?

Are these resources available, and who will provide them?

Is there sufficient philosophical commitment on the part of all stakeholders, governments, providers, administrators and consumers, to empower communities?

How can community-based governance structures be held truly accountable to the communities and clients they serve?

What criteria and mechanisms for appointment to community boards best ensure an inclusive yet effective representation of community/client interests?

6 MODALITY 2: SERVICE DELIVERY APPROACHES

Improving the ability of service providers to respond in an efficient and effective manner is an important aspect of current health reforms. Services provided in non-institutional settings are considered an appropriate means of making services less costly, and more responsive to community needs. The specific issues relating to CBHS approaches include:

- range and integration of services
- mix of services (preventive/curative/social)
- efficiency of service delivery
- effectiveness of service delivery

In this section we review the major findings of previous literature reviews and policy studies that have been conducted on well recognized community-based services models, such as community health centres. We then review studies that have attempted to determine whether an alternative organization “offers a cheaper means of delivering services while providing a level of care that is at least equivalent to that currently available”(Crichton et al, 1991, 334). Some studies have also dealt with other outcomes, such as the integration of service modalities and its relationship to the value for money and quality of care outcomes. Since the majority of the literature reviewed here is organized around the organizational form (i.e. community health centre) or the type of service provided (i.e. continuing care), as opposed to the expected or documented outcomes, presentation for this section of the literature review will be ordered according to the type of service and/or organizational form.

6.1 Are services delivered through an integrated continuum of care approach less costly and/or more effective than other approaches?

This question has several important dimensions including: the extent to which services represent a broad continuum of care (health/social services; acute care, promotion, prevention, rehabilitation, and chronic care); the extent to which there is continuity of care for individuals over time; the extent to which a variety of disciplines are involved in service delivery; and the extent to which different disciplines, internal and external to the health care system, integrate and coordinate their efforts.

Until recently, the major focus of research on CBHS models has been on their potential for saving money. Often referred to as “cost effectiveness” studies, these studies are limited because they have usually focused on cost without taking account of outcomes related to the improvement of health status (ARA, 1992; Crichton et al, 1991). Under this question the literature will be reviewed in relationship to a number of different organizational models, with emphasis being placed on the service delivery modality.

6.1.1 Community Health Centres (Community Health Centres, Community Health and Social Services Centres, Neighbourhood Health Centres and Community-Sponsored Health Maintenance Organizations)

Over the past decade several literature reviews have been conducted relating to well recognized community-based health services model (Abelson and Hutchison, 1994; Angus and Manga, 1990; ARA Consulting Group, 1992; Birch et al, 1990; Crichton, 1994; and Crichton et al, 1991). The major findings of these previous reviews are highlighted below.

In their review of the international literature on primary care models, Abelson and Hutchison (1994) concluded that the literature on primary care models (nurse-centred, physician-centred and collaborative) did not clearly indicate a superior delivery model based on quality of care or efficient use of resources. The evidence on community health centres and the reduction of hospital admission rates and overall costs compared to fee-for-service was weak. There was stronger evidence to suggest that CLSCS in Quebec provided better quality of care than fee-for-service for certain interventions. The ability to generalize this finding was limited because of the narrow range of interventions examined.

Crichton (1994) in her review of the findings from Crichton et al (1991), indicated that they had questioned whether the development of alternative community-based health services models had fundamentally changed the organization of medical practice or the configuration of service delivery.

The review conducted by Birch et al (1990) focused on the findings of studies of the clinical and economic performance of Health Service Organizations in Ontario. The scope of the review included literature on Health Maintenance Organizations (HMOs) in the United States, and comparisons of HSOs and CHCs in Canada. The policy review by Angus and Manga (1990) discussed the current understanding of the benefits of the CHC model (in a generic sense) and attempted to compare in the benefits of this model against other models of service delivery, including fee-for-service. The ARA Consulting Group (1992) conducted an evaluability assessment of the CHC program in Ontario, including an assessment of the literature in the field. Collectively, the three reviews identified the following as commonly held assertions about HSOs, HMOs, and

CHCs, when compared to fee-for-service practice:

- lower hospital utilization rates;
- comparable use of ambulatory care;
- greater patient loads for physicians;
- employment of more ancillary health personnel;
- higher quality care;
- structures which facilitate more preventive services;
- physicians who believe that their method of payment favours the delivery of preventive services; and
- less patient satisfaction with their care.

The analysis by Birch et al (1990) concluded that with the exception of hospital utilization and personnel substitution, the confidence level in the other assertions was low, and the conclusions could easily be altered with further research. According to the authors none of these commonly held assertions about HSOs is supported in the literature by rigorous empirical investigation from a large number of studies. The results of these studies are discussed further under the section on funding because of their focus on methods of payment.

In the United States, a descriptive assessment of neighbourhood-based health care delivery for inner-city residents in five major U.S. cities indicated that although neighbourhood centres provided lower cost care than other public facilities, they remained dependent on outside financing (Ginzberg and Ostow, 1985). Freeman et al (1982) discussed the results of two surveys on neighbourhood health centres in the U.S.. Based on the results of the surveys they concluded that:

neighbourhood health centres provided access to ambulatory services for low income and minority populations at an equivalent cost to services provided to patients enrolled with private physicians;

neighbourhood health centres have reduced utilization of hospital ambulatory care clinics and emergency rooms, with the potential for a substantial cost saving; and

neighbourhood patients have measurably lower hospital utilization rates than outpatient hospital user populations.

In a review of the evaluative literature on neighbourhood health centres in the US, Seacat et al (1977) concluded that the centres generally succeeded in “delivering good comprehensive care, including preventive services and health supervision through a team approach ... at a reasonable cost.” (P.168).

A weak cross-sectional comparison of adolescent health care provided at a school-based clinic and a hospital-based clinic reported variation in utilization patterns and accessibility. The school-based clinic had more visits for counselling and health maintenance, while the hospital-based clinic had more visits for acute and chronic illnesses. The school-based clinic appeared to allow easier access to health care, especially confidential visits for sensitive issues (McHarney-Brown and Kaufman, 1991).

6.1.2 Continuing Care

Angus et al (1994) noted that while the definition of “continuing care” varies, it has two common elements: continuous care over a long period of time; and, integration of care across service components. Continuing care serves a wide variety of clientele including: the elderly; physically disabled; emotionally disturbed children; people with alcohol and drug problems; transients; and families in crisis. In his descriptive review of Continuing Care in Canada, Hollander (1994) defined Continuing Care as a complex system of service delivery, with a number of components integrated through a continuum of care, including long term care, home support and home care. He listed the following services as “core components of continuing care:”

Community-based Services - meals-on-wheels, homemaker services, home nursing services, community physiotherapy and occupational therapy, adult day care, and group homes

Residential Services - long term care residential facilities, chronic care units/hospitals, assessment and treatment centres and day hospitals

Optional Additional Services - equipment and supplies, transportation services, support groups, crisis support, life and social skills for independent living, respite services, palliative care, volunteers, and congregate living.

Hollander (1994) in his examination of the various systems of continuing care across Canada suggested the following ideal characteristics for community-based continuing care:

Single Entry - continuous screening to ensure the provision of appropriate Coordinated services based on individual needs;

Assessment and Placement - to reinforce single entry

Coordinated Case Management - regular monitoring to ensure that patients do not deteriorate to the point where they require more costly services

Single Administration - to encourage integration of funding, planning and service delivery

Consistent Care-level Classification - to allow the client's illness to be assessed

The studies reviewed in this section compare services for the elderly, children, and individuals with terminal cancer that might be considered within Hollander's broad definition of continuing care. We will first examine the major reviews related to continuing care in Canada and the United States. We will then examine some additional comparative studies.

Elderly

Several major literature reviews and policy studies of the costs and effects on continuing care for the elderly have been previously undertaken. (Crichton et al, 1991; Hollander, 1994; Weissert et al, (1988); and Kemper et al, 1987).The findings of these reviews are reported below, along with a number of other individual studies.

According to Crichton et al. (1991) cost-effectiveness studies comparing community-based services with institutional care for the elderly have yielded mixed results. This is reflected in the on-going debate about the cost effectiveness of home- and community-based care for the elderly presented below.

In a effort to reach overall conclusions on the costs and effects of home care and community care for the elderly through a descriptive study, Weissert, Cready and Pawelek (1988) examined 27 "rigorous and generalizable" studies of home care in the United States from a potential pool of 700 articles. The 27 studies included in the review met the following five criteria: (1) tested the effects of providing a home- and community-based care compared to existing long-term care services (some of which included home and community-based components); (2) used an experimental design including a treatment and control group; (3) at least 50 individuals in each study group;(4) individual as the primary unit of analysis; and (5) served an elderly population.

The authors concluded that “home and community care as it is practised during the past 30 years has not tended to produce cost savings in most studies.” According to the authors, the potential for cost savings might be enhanced by:

linking home and community care programs with nursing home preadmission-screening programs;

using multivariate models to estimate patients’ risk of institutionalization;

modelling patients potential savings on institutional care and considering these savings on institutional care and considering these in setting home care expenditure limits for the patient or a case mix of patients;

carefully specifying different expected benefits for various subgroups of patients served and considering these different outcomes in care-planning and utilization-review decisions;

making efforts to reduce treatment costs, possibly by better planning to avoid excess capacity and by utilization control, especially with respect to total volume and duration of care;

closer attention to control of outlier cases’ use and cost;

avoiding treatment decisions that increase hospital use unless patients will clearly benefit; and,

further investigation of congregate housing as an efficient setting for delivering home and community services.

In terms of the impact on health status and well-being, the authors concluded that:

survival and mental functioning may be positively affected sometimes by community care, but not by much - evidence is tenuous;

increased life satisfaction for caregivers and patients appears to be a relatively consistent benefit; and

patients may have fewer unmet needs and be more socially involved - evidence based on small sample sizes and number of studies

Overall, the authors suggested that policy makers should “abandon hopes of cost savings” and instead focus on providing community care for other outcomes. In particular, they noted that recent evidence indicated positive outcomes in the areas of patient and provider satisfaction, although “the magnitude of the benefit is small and persistence beyond several months remains problematic.

In addition to those conclusions discussed above the authors suggested the following future directions:

increased emphasis on producing and measuring life satisfaction benefits for caregivers and patients, and lowering the expectations of policy makers of these benefits so that qualitative outcomes become more acceptable;

development, testing, and adoption of prospective budgeting methods that take net social savings of home and community care into account; and

improved methods of imputing values reflecting society's willingness to pay for non-economic patient and caregiver outcomes.

These findings are supported by a previous descriptive review of home and community care demonstrations conducted by Kemper, Applebaum, and Harrigan (1987). In reviewing 16 case-managed community care demonstration projects for impaired elderly populations in the US, the researchers concluded that "expanding publicly financed community care does not reduce aggregate costs, and it is likely to increase them - at least under the current long term care system." (p. 96) As noted above, despite the increased costs, the projects reviewed indicated increases in the quality of life of those patients receiving the services. The authors concluded that the expansion of community care should be justified on the basis of the benefits to the disabled elderly and those who care for them, rather than on cost savings.

In a review of research on home- and community-based long term care, Weissert (1985) identified seven reasons why it is difficult to make community-based long term care cost-effective: These reasons include:

- the failure of home and community care to reduce institutionalization because it is treated as an add-on to existing care rather than a substitute;

- even the small proportion of community care users who are at risk of institutionalization are at risk of short stays, not long enough to generate major savings;

- the magnitude of effect of community care on institutionalization rates has been small, usually too small to offset costs of community care;

- patients at high risk of institutionalization are difficult to find in the community;

- the costs of screening and assessment are high; and

- limited effectiveness in producing statistically significant health status change.

Hollander (1994) disagreed that data from the U.S. are applicable to Canada. Although the findings presented by Hollander in his study were "ballpark estimates" (his words), he contended that community-based services could be cost effective in a coordinated delivery system. Hollander suggested that the Continuing Care System in British Columbia is a case in point because it contained his ideal characteristics as described above.

In applying Weissert's criteria to continuing care in British Columbia, Canada, Hollander noted that, contrary to points one and three (community services are add-ons and community care has not reduced the rates of utilization), the B.C. philosophy has been to offer residential placement when a client cannot be accommodated in the community. The proactive strategy of reducing bed utilization through restricted bed growth, and community-based care substitution has resulted in reductions from 71.6 beds/ 1000 population in 1983 to 57 beds/1000 population, and a corresponding increase in community-based clients. He attributed this success to a strategy involving single entry, assessment and case management, and control of waiting lists.

Where Hollander was in agreement with Weissert was on the issue of little demonstrated evidence of significant improvements in health status. This he attributed to the fact that long term care is a care system, rather than a cure system. As such, good care, and a reduction in the rate of deterioration, are legitimate system goals. Measuring cost effectiveness will remain problematic in the Canadian

context until senior decision makers define the core components of the continuing-care system, and develop a system of comparing cost and utilization data for each component of the system across jurisdictions.

An important issue related to the cost of community care for the elderly is the lack of appropriate streaming of patients. For example, Weissert et al (1988) concluded that the key to realizing cost efficiency in alternative home and community care for the elderly is to target service delivery to individuals who would otherwise have required long term institutional care (366-67). Descriptive studies by Robertson (1987) and Davidson et al (1989) have suggested that case management may be an efficient means of steering patients to more appropriate utilization of these services.

Kemper et al (1987) differed from the conclusions of Weissert et al (1988) on the issue of case-management as a solution to the cost problem. They suggested that determining eligibility criteria is not primarily an issue of "targeting efficiency" - for which populations will substitution of community care for nursing home care lead to the greatest cost reductions, but is primarily an issue of equity - who deserves the limited community care for which society can pay (p.97).

In addition to the larger studies above, a number of other comparative studies assessing continuing care are discussed below.

The results of a moderate strength cohort study of the effect of coordinated, multidisciplinary care in a community-based ambulatory-care centre in Seattle on service use, quality of care and satisfaction on a low-income, urban, elderly population, suggest that those attending the clinic used less hospital emergency services than the comparison neighbourhood group (Baldwin et al, 1993). In terms of quality of care, the multidisciplinary clinic provided equal or better care in all but one area. Patients attending the clinic recorded higher patient satisfaction scores, especially in the area of convenience of care. The estimated annual charges for the clinic patients were \$1000 less than for the neighbourhood group.

A review of the On Lok Senior Health Services' Community Care Organization for Independent Adults (Ansak and Zawadski, 1984) indicated a cost saving of 26 per cent compared to a neighbourhood sample. On Lok serves an institutionally certified elderly (55 and over) population, within a four mile catchment area. Patients are evaluated for service needs by a multidisciplinary intake and assessment team. The service team includes: physicians, nurse practitioners, social workers, a dietician, nurses, physical therapists, home care attendants, licensed home health aides, occupational therapists, recreational therapists, drivers, health workers, and a host of medical specialists. Services provided through On Lok may include medical services such as physician and pharmacy consultant services, rehabilitative services (physical and occupational therapy), social services, supportive services (dietary counselling, meals-on-wheels, supervised diets), transportation (to and from the centre), outpatient, homemaker, escort and interpretive services. Inpatient days for On Lok patients were 33 % lower than for the comparison group. This is largely attributable to the greater utilization of services in an outpatient day centre. In terms of quality of life, the majority of the On Lok population improved on ten health and functional status indexes compared to the comparison group.

A moderate strength clinical trial of a regional triage model, serving a population of approximately 1,700 elderly people in a seven town region (166 square miles) in central Connecticut, determined that those patients in the Triage group showed greater improvement in functioning status than the control group (Doherty et al, 1980). Also, per capita expenditures for conventional Medicare service and institutional services were lower for the Triage group. Some ancillary services were significantly

higher for the Triage group (intermediate care, homemaker, chore/companion/meals on wheels, dentist, podiatrist, optometrist, mental health counsellor, pharmaceuticals, hearing aid/glasses, other transportation). However, overall service expenditures were not significantly different between the two groups.

A quasi-experimental assessment (Oktay and Volland, 1990) of a post-hospital support program for the frail elderly and their families indicated that caregivers experienced a slight reduction in stress, while hospital days used by the treatment group decreased substantially. However, the study indicated no impact (positive/negative) on the functional status of patients. The authors admitted that the results should be subjected to more rigorous tests before drawing firm conclusions. The program used a nurse-social worker team approach in the provision of assessment, case management, skilled nursing, counselling, referral, respite education, support group, medical back-up, and on-call services.

A weak clinical trial comparing frail elderly patients placed in nursing home care and community-based foster home care (Oktay and Volland, 1987) indicated that foster home care could be substituted for nursing home care with no clear negative effect. The findings related to cost demonstrated that the direct cost of foster care is about 25 per cent lower than nursing home care. Patients assigned to foster home care had a greater likelihood of improvement in their ADL and mental health status scores at 12 months. However, patients in nursing home care were more likely to maintain or improve life satisfaction scores at 12 months. The authors offered several alternative explanations for the life satisfaction findings, relating to methodological issues.

In the United Kingdom, a study of a Family Support Unit, which provides a continuum of care including daycare, respite, and occasional residential care, indicated that FSU services were three times as costly as traditional services, but prolonged life at home for elderly patients by 172 days on average compared to the control group. Costs per patient were also 41 % of the per diem cost for a long term care bed. However the authors acknowledged that the study design did not allow for firm conclusions (Donaldson and Gregson, 1989). An additional UK study compared the costs of intensive home care services with those for hospital care. The study was controlled for comparable disabilities between groups. In 75 % of the cases, hospital care costs were higher (Gibbons et al, 1982).

Hospital-in-the Home

First introduced in New Brunswick, the extra-mural hospital in that province offers a range of nursing, laboratory, pharmacy and allied health services as a substitute for hospital care. In a descriptive study of the hospital-in-the home program in Verdun, Quebec, and the extramural hospital program in New Brunswick, Bouchard (1990) reported that both programs had operational costs that were less than the average cost of an acute care bed. The absence of capital and maintenance costs were suggested as key to this difference. However, Bouchard noted that “indirect costs borne by both the patients and their families may be greater because both options place greater reliance on the family to assist in the care.” The author noted the need to do an evaluation study, especially to measure marginal costs, impact on health status and satisfaction of patients and families.

In two surveys involving relatives of children and the relatives of deceased patients associated with the extra-mural hospital program in New Brunswick (New Brunswick, 1995), the combined approval rating for the program was approximately 97 percent. Surveys were mailed to 97 survivors

and 190 parents. A questionnaire was mailed to 450 randomly selected patients discharged from the extra-mural hospital, with a 71 % response rate. Patients were asked to answer eight questions using a four point rating scale. A maximum satisfaction rating was recorded by 77 % of those surveyed.

In an evaluation of five hospital-in-the home programs (HITH) in Ontario (ARA Consulting Group, 1994) indicated that the five shared the following characteristics:

quick response - assessment and admission procedures to admit patients in a quick and timely manner;

flexible structure - site coordinator had a mandate to tailor services to patient needs;

service flow - patients were admitted through the hospital emergency - referred by a physician; assessed by a physician and nurse; given education when appropriate; and sent home to await services. Nursing services usually arrived within a few hours. Medication was either transported by the patient or by courier the same day; and

physician role - primarily provided a screening function; instrumental in diverting patients from the hospital to HITH.

The strengths and benefits common to all of the sites included: satisfied patients and families; introduction of new technology into community services (e.g. , blood transfusions); enhanced training for case providers; access to medication through HITH funding; enhanced relationships between hospitals, home care, and physicians; quality care; governance that bridged sectors; flexible service strategies; more frequent nursing visits; and pharmacy support.

The outcomes reported, which are specific to service delivery, included:

less homemaking services than the home care program;

greater likelihood of discharge to other modes of care than either home care or hospital care;

physician visits more than once per year (significant variation across sites);

HITH patients were less likely to receive a visit from allied health professional (occupational, speech, physiotherapy, nutrition) than home care or hospital care;

average length of stay (8.3 days) similar to hospital care (8.2), but dramatically different from home care (32 days). This difference suggests the HITH is treating different types of patient or patients at different stages of treatment;

HITH patients more likely to be discharged to the care of someone else than home care or hospital care;

most physicians satisfied or very satisfied with the program;

overall patient and family caregiver satisfaction levels “extremely high”;

increased budgets and costs for home care of 10 - 40 per cent; and

reduced in-patient case days.

Children

A before and after assessment of ventilator-assisted children entering a home care program after previously receiving care in a hospital setting suggested that cost savings can be achieved, mainly through the substitution of parental for professional nursing, and eliminating frequent laboratory procedures (Aday et al, 1989). Families reported varying degrees of the following spectrum of services in the home: nurse (majority), physical therapist, teacher, occupational therapist, and respiratory therapist. The children's developmental status was evaluated on a five point scale. On average caregivers reported that the developmental status was much improved in the home setting. Families expressed concerns about the continued health of their children, long range developmental issues, technical and financial aspects of providing care in the home, level of commitment, and tension with professional staff in the home. Overall, the families felt extremely positive about having their children at home.

Terminal Illnesses

Three studies on community-based services related to terminally ill patients were identified in the literature search. A quasi-comparative retrospective cost comparison of health care for terminally ill children, provided either in the home or in-hospital, determined that home care was less expensive for total costs than hospital care (Birenbaum and Clarke-Steffen, 1992). However, home care was more expensive for non-health care and indirect costs than hospital care. Direct costs comprised approximately 76 % of total costs, and non-health care and indirect costs comprised 12 % each of the total costs. Families paid between 12 and 24 % of costs, even when indirect costs were excluded. The authors concluded that, while terminal care in the home may appear to cost less overall, this did not take into account the extent of cost shifting that may occur.

A moderate strength randomized controlled trial of the effects of coordinating care for terminally ill cancer patients in London (Addington-Hall et al, 1992), determined few differences between the experimental and control groups. All patients received routinely available services. The experimental group received the assistance of two nurse coordinators, whose role was to ensure that patients received appropriate and well-coordinated services, based on individual needs and circumstances. The authors concluded that lack of an adequate budget to obtain services or a mismatch of the skills of nurse-coordinators and the requirements of the coordinating role were the major causes of the lack of difference between the two groups.

A strong randomized trial of the cost effectiveness of hospital-based home care for terminally-ill veterans (Hughes et al, 1992) indicated cost savings and increased patient satisfaction. The experimental group used 5.9 fewer hospital days per annum, resulting in a 47 % per capita saving. Costs for home care were higher, but were offset by reductions in hospital utilization. The authors noted that the cost findings should be viewed with caution due to methodological weaknesses. Analysis of the types of visits received indicated that while the control group rarely received home visits from disciplines other than nursing, more than half the home-based health care group received visits from a range of disciplines (nurse, physical therapist, social worker, health technician, and dietician. Collectively, the process data indicated that the home-based group received "comprehensive and continuous" home care in comparison to the control group. Results on patient outcomes indicated that access and satisfaction increased in the experimental group. There were no differences in survival days or functional status between the control and experimental group. Caregiver morale increased as well. This was attributed to the level of education.

The authors concluded that the home-based health care model was “more comprehensive, encompassing an interdisciplinary team approach to care that differs from the skilled nursing service utilized by control group patients.” (p. 814)

6.1.3 Mental Health

According to Fried et al (1989), since the 1970s, the continuous debate over the appropriate location of mental health services has been framed as a choice between community-based and hospital-based services. Typically, this debate has been dominated by two issues: treatment costs, and, clinical effectiveness and appropriateness of care in the two settings. The studies reviewed below focused mainly on comparing costs in the two settings, with some emphasis on health status outcomes.

With reference to cost studies, Fried et al (1989) noted that “economic evaluations in health, [which] should be simple ... are often complicated by problems of measurement, which leave them replete with errors.” (p. 638) The problems are even more pronounced in the mental health field because of the nature of the discipline. They listed the following as potential problems for conducting economic evaluation of mental health programs:

- assuming mental health patients fit the economic definition of “rational man”;
- the “externalities” created by shifting mental health from hospitals to the community;
- measuring effectiveness given the problem of the reliability of psychiatric diagnosis;
- calculating “foregone wages”; and
- resistance by those being evaluated.

To illustrate these difficulties Fried et al (1989) compared two “well conducted” economic evaluations comparing community and hospital-based mental health services in Canada and the U.S. These studies will be briefly reviewed below followed by the discussion as presented in Fried et al of the limitations of such studies.

Fenton et al (1979) conducted a moderate strength randomized trial to determine the effectiveness of community-based treatment, emphasizing home care, versus hospital-based psychiatric care. One hundred and fifty patients were randomly assigned to either home care or hospital care. The home care group were treated by a multidisciplinary team consisting of a half-time psychiatrist, a psychiatric social worker, and a psychiatric nurse. The team was on-call 24 hours. Patients in the hospital group received short-term, intensive treatment from the hospital department’s regular psychiatric and paramedical staff - two attending psychiatrists (one and one part-time), two to three attending psychiatric residents, and nursing and occupational therapy staff.

The results showed that in-hospital stay for hospital care patients was 41.7 days compared to 14.5 days for home care patients. There was no significant difference in the amount of ambulatory care received by each group. The authors concluded that community-based psychiatric care is an effective alternative to hospital-based care for most severely disabled patients. A follow-up, moderate strength, clinical trial (Fenton et al, 1982) comparing the costs of the two types of delivery, found that both manpower (64.1 %) and operating costs (108 %) were higher for hospital-based treatment than community-based treatment.

A cost-benefit analysis of a controlled experiment that used a traditional hospital treatment approach and a community-based alternative, reached a similar conclusion: community-based mental health care appeared to be more cost effective than hospital-based care (Weisbrod et al, 1980). The

community-based program involved transplanting retrained mental-hospital ward staff into a community setting. The staff provided individually tailored programs on a 24 hour, seven day per week basis. Patient programs were designed based on an assessment of coping-skill deficits and requirements for community living. The programs were characterized as follows; staff members present in patients' homes, place of work, and neighbourhoods taught and assisted them in daily living activities (i.e., laundry, shopping, cooking, budgeting, hygiene, and transportation). In addition, patients were assisted in finding and maintaining employment, and using leisure time constructively. An important component of the programs was sustained support for other family members (Stein and Test, 1980).

The results indicated a net benefit of nearly \$ 400 per patient per year. During the first year, patients in the experimental group had a readmission rate of 6 % compared to a readmission rate of 58% for the control group. While both groups spent comparable amounts of time employed, the experimental group earned significantly more income. Although leisure time activities and social contacts were equivalent between the two groups, the experimental group had significantly more contacts with trusted friends. The experimental group was also more satisfied with life than the control group. When the program was discontinued the experimental group showed a marked decline on all of these indicators.

An important caveat of the results, as noted by the authors, was a recognition that traditional community-based programming is "insufficient, inappropriate, or both." (Stein and Test, 1980, p.396) They concluded that patients with chronically disabling psychiatric illness in a community setting required ongoing, flexible service delivery that is tailored to the needs of individual patients. This involves careful needs assessment, close monitoring, assertive intervention, and close working relationships with patients and community members.

To return to the discussion by Fried et al (1989), the authors noted that the strength of these two studies was that they "adhere[d] closely to the theoretical basics" underlying economic evaluation. The study by Fenton et al was unlike most cost-effectiveness studies because it considered a relatively wide range of costs. In a similar fashion the Weisbrod et al study measured a wide range of benefits and costs. Both studies took a broad social perspective. However, according to Fried et al, the two studies were weakened in terms of ability to generalize, due to flaws in the study design such as measurement, patients, and organization of interventions. These weaknesses are acknowledged by the two sets of authors in the original studies (Fenton et al, 1979; Fenton et al, 1982; and, Weisbrod et al, 1980). All the authors agreed that the strength of economic evaluations is in the accumulation of findings from a variety of studies, which should increase the confidence of the findings. Several other studies employing varied methodologies, which focus on cost, are presented below.

A weak randomized controlled trial (Burns et al, 1993) of a community-based outreach service for general adult psychiatric referrals found that the substitution of home-based psychiatric care for institutionally-based care in suburban London resulted in a substantial reduction in-patient care, and a 50% decrease in costs for those receiving care from the community focused team (controlled for by diagnostic grouping). The study compared three paired catchment areas with identical multidisciplinary teams providing services in either the community or institutional setting. Each team consisted of a consultant psychiatrist (lead), a full-time community psychiatric nurse, and a joint-appointment social worker.

A moderate strength pre/post clinical trial (Borland et al, 1989) comparing intensive case management of 72 young, recidivistic, treatment-resistant, chronically thought-disordered patients over five years with a two-year pre-study baseline, indicated that while hospital bed days were reduced by 75 %, residential care days rose by 193 per cent.

Several of the studies discussed above also examined clinical and/or social outcomes. In their weak controlled trial of home-based acute psychiatric care and hospital-based care, Burns et al (1993) found no differences in clinical or social functioning outcomes between patients randomly assigned to the two settings. Fenton et al (1979) found little change over a one year period in the symptoms, role functioning and family psychosocial burden related to patients randomly assigned to either home care or hospital care. Borland et al (1989) found that the patients' level of functioning remained essentially unchanged over the five years. However clear improvement was recorded in areas of functioning such as crisis episodes, suicide attempts, drug and alcohol abuse, and medication compliance. The utilization of emergency and after hours on-call services declined steadily.

A moderate strength experimental clinical trial comparing the effectiveness of three community-based treatment programs for homeless, mentally ill people found that at 12 months patients had fewer symptoms, increased income, interpersonal adjustment, and increased self-esteem than patients in the other two programs (Morse et al, 1992). The three programs were: traditional outpatient treatment offered by a mental health clinic, a daytime drop-in centre, and a continuous treatment program, including assertive outreach, a high client/staff ratio, and intensive case management. The continuous treatment team was guided by the following principles: assertive community intervention; "no-reject" policy; provision of services for an unlimited amount of time; and, a flexible, individualized approach to address clients' multiple needs. The continuous treatment team showed "superior" results to the other two programs in the areas of consumer satisfaction, improved resource utilization, frequency of program contact, and reduction in homelessness. The authors considered the last of these outcomes (reduction of homelessness) to be the most significant.

A moderate strength randomized controlled trial to compare the efficacy of home-based care with standard hospital care in treating seriously mentally ill patients in London (Muijen et al, 1992) yielded the following results: an 80 % reduction in hospital stays for the home care group; no increase in the number of hospital admissions for the home care group; similar improvements in both groups on the global adjustment scale, home care, and hospital care; significantly better results in the home care group for relatives of new patients on measures of relatives' satisfaction. In other areas of the home care program such as support for patients (employment, personal hygiene, shopping) a lack of expertise on the part of staff led to a low success rate. However, acceptance of the home care program by patients and relatives was unexpectedly high. A noted weakness of the study was the potential bias of clinicians, assessors, and patients, which may have influenced the outcomes.

6.1.4 Prenatal Care

A number of studies relating prenatal care to integrated service delivery approaches such as managed care and case management, and outcomes such as improved birth weights, lower infant mortality rates, increased access, and increased patient satisfaction were identified from the literature search.

In a moderate strength, cohort study comparing use and outcomes in fee-for-service and Medicaid managed care in Washington State (Krieger et al, 1992), the researchers concluded that enrollment by Medicaid beneficiaries in managed care plans did not eliminate the large gap in prenatal care between the Medicaid population and the general population. Medicaid enrollees delivered

low-birth weight babies and had inadequate access to prenatal care in comparison to the other group. The study suggested that availability of providers or benefits is not enough to equalize the rates of utilization or good outcomes. The structure and content of the care appeared important to promoting improved health outcomes. The authors concluded that managed care may offer an opportunity for modest cost savings while promoting modest improvements in prenatal care. However, managed care alone did not alleviate the differences between access and birth outcomes.

A moderate strength, cohort study of low income women receiving prenatal care from private physicians or through the Chicago Department of Public Health in 1988 -1989 (Handler and Rosenberg, 1992), concluded that the likelihood of giving birth to a preterm, low-birthweight infant was significantly greater (odds ratio 3.1, 95 % confidence interval 2.3-4.0) for women who received care only from private physicians (n=530) compared with those who received care entirely from the Chicago Department of Health (n=2465). The authors noted that the results should be interpreted cautiously.

A moderate strength, cohort study of the low birth weight among Medicaid patients of public health departments and other providers in North Carolina and Kentucky yielded a similar conclusion (Buescher and Ward, 1992). As well the authors concluded that a multidisciplinary approach to prenatal care is more likely to occur in public health departments in the two states than in the offices of other provider. Through coordination with other health and social programs, health departments are more likely to rely on nurses, nutritionists, educators, and other support staff.

An earlier moderate strength, cohort study comparing Medicaid women receiving coordinated maternity care with those who did not receive these services in North Carolina found that those women not receiving coordinated care had a 21 % higher low birth weight rate, a 62 % higher very low birth weight, and a 23 % higher infant mortality rate, than those women receiving coordinated care (Buescher et al, 1991). Therefore, the authors concluded that maternity care coordination could be an effective means of reducing infant mortality and increasing positive birth weight outcomes.

A weak retrospective survey was conducted of women attending three clinics which utilized three different staffing models for the delivery of low-risk prenatal care: physician-based; mixed staffing; and, clinical nurse specialists with physicians available for consultation. The results indicated no differences in maternal-neonatal physiological outcomes, although newborn admissions to the Neonatal Intensive Care Unit approached significance among the clinics. The clinical nurse specialist staffing model proved most cost efficient and most satisfactory for patients (Gravely and Littlefield, 1992).

A weak clinical trial of the impact of paraprofessional services on the amount of prenatal care received and birth weight was conducted using a sample of 111 low-income women (Poland et al, 1992). Women attending a publicly-financed prenatal clinic at Hutzel Hospital in Detroit were randomly assigned to indigenous paraprofessionals. The comparison group was matched for ethnicity, parity, and trimester entering prenatal care. The results showed that women accompanied by a paraprofessional were likely to have more prenatal appointments, and higher birth weight babies in contrast to the comparison group.

A comparison of birth weight outcomes between a case management pregnancy and parenting program and the general teenage population in San Francisco indicated that teens enrolled in the coordinated program had higher birth weight babies than the general teenage population (Korenbroet et al). The program was designed to fill existing service gaps in San Francisco by establishing a community-based network of specialized services to address the educational, psychosocial, and

clinical needs of pregnant and parenting teens, female and male. The primary feature of the program was case management.

A weak cohort study comparing the provision of prenatal care at six sites (two neighbourhood health clinics, two hospitals, and two HMOs) concluded that adolescents are likely to obtain more adequate care if the prenatal site is attractive and inviting, and if special efforts are made to register and retain them in care . Also, the study results indicated better birth outcomes (Cartoof et al, 1991). However, insufficient evidence was provided to show that the attractiveness of the clinic influenced care.

6.2 What range and mix of services do community-based health services models offer?

An important issue that remains unanswered by the literature is the optimum range and mix of services that constitute a continuum of care. There is a paucity of material examining which individual services function most efficiently and effectively when integrated or coordinated. The literature reviewed below gives a descriptive overview of the range and mix of services provided through community-based delivery models. Some outcomes associated with the mix of services are reported.

In their descriptive survey of “local community health and social service centres” in Canada, Robichaud and Quiviger (1991) noted that, in seven of ten provinces, the majority of services offered were primarily social as opposed to medical. Only three provinces reported having a primarily integrated approach to service delivery within the centres. The services most frequently offered included: information and referral; primary prevention; health education; community development; psychosocial services; and establishing self-help groups.

An earlier descriptive study by Bozzini (1988) of CLSCS in Quebec noted the following mix of services: 73% of centres provided primary medical care; 98% provide primary social services; the majority provided integrated health and social services through home care, mother and child (prenatal and public health)services, and school services (health prevention and promotion).

Seacat’s descriptive study (1977) of Neighbourhood Health Centres in the United States indicated, that with some exceptions, the centres provided the following range of services: primary care, specialty services (dentistry, optometry, podiatry, mental health, physical and speech therapy), nursing and social services that included family planning, nutrition, home health services, health education, outreach, follow-up, and transportation.

Abelson and Lomas (1990) compared the levels of disease prevention and promotion between community health centres and fee-for-service practice in Ontario. Their results indicated that, while there were few differences in the presence of recall systems for screening or in knowledge of, compliance with, or coverage of selected preventive interventions, CHCs reported a significantly greater variety of health promotion programs than fee-for-service practices. Also, CHCs reported a greater tendency to use non-physician personnel to carry out these activities. Although they cautioned against the general application of these findings because of the self-reported nature of the survey, the authors suggested that the current evidence brings into question the assumption that CHCs provided more preventive activities than other modalities of service delivery.

6.3 How accessible are community-based services models?

The survey of community health and social services centres in Canada conducted by Robichaud and Quiviger (1991) assessed the general accessibility of the centres using an index based on six questions. The six questions were designed to obtain information on three aspects of accessibility: daily opening hours; availability of emergency services; and location of equipment and means of communication. Twelve percent of centres received a high accessibility rating. The majority of centres (59%) received a medium accessibility rating. Twenty-eight percent received a low rating. An interesting correlation was found between the status of the centre (public or private) and accessibility. Private centres (75%) were found to be more accessible than public health centres (55%).

6.4 Summary and Policy Considerations: Service Delivery

The issue of less costly service delivery through integrated community-based models has been frequently researched. This reflects the tendency to view such models as a potential means of reducing costs. Far less research has been devoted to examining the extent to which multidisciplinary, multi service models lead to more effective service delivery. Within the recognized limitations of the economic studies, and the dearth of studies examining non-economic outcomes, a number of trends emerge from the literature.

The first trend is the continuing evidence that community health centres are a less costly means of delivering a range of health services. Cost reduction is reflected mainly in the decreased use of hospital services by populations served by these centres. Although there is evidence to suggest that community health centres provide a broader range of health and social services than other organizational models, the impact of the range and mix of services on the health of the population is unclear.

The second trend is that evidence on the cost reduction capacity of community-based care for the elderly is mixed. Studies of services provided in a clinic setting indicated lower costs for the same reason as those observed for community health centres serving other populations - lower hospital utilization. Other studies comparing institutional and home care (mainly in the US) suggested that cost savings may not be realized through home care substitution. The major reason for the lack of cost savings offered by researchers is that home care has not been appropriately targeted to those most in need. However, one author, Hollander (1994) cautioned that these conclusions are based on studies of home care in the United States where there is no coordinated system. In Canada where the level of coordination is enhanced, there may be greater opportunity to realize cost savings. However, Hollander suggested that accurately measuring this will not be possible until a coordinated national data base is established.

The third trend is that improved outcomes have been realized in the following areas: quality of life (functional status, and patient satisfaction), improved birth weights, and decreased infant mortality. Also, as the On Lok example indicated, there is the potential for improved efficiency.

The fourth trend is that case management is the approach favoured for delivering community-based care because of the potential to coordinate appropriate access to services.

The fifth trend is that while community-based delivery models appeared to offer a wide range and mix of integrated services, the mix of services provided varies greatly.

One final observation that does not represent a trend, but is worth noting, is that, cost savings realized through the reduction in hospital utilization may mask cost shifting to families for other costs associated with care based in the home.

When making decisions about how best to integrate community-based services decision makers need to consider the following:

What range of services/programs can be integrated most effectively?

What cost and health outcomes will be realized through the integration of a given range of services/programs?

7 MODALITY 3: FUNDING APPROACH

One of the challenges to health policy decision makers is to develop a method of funding health care services that balances the preferences of providers with those of other stakeholders. The traditional bias, which has favoured providers, has hampered efforts to deliver services in an equitable fashion. In this section we briefly discuss three approaches to funding, and the implications for equity.

Abelson and Hutchison (1994) draw a distinction between “the concepts of paying providers in different ways and employing different methods to allocate funds to a delivery model.” (p. 46) In this section of the literature review, we are concerned mainly with different methods of allocating funds to a delivery system, organizational model or program.

7.1 What funding approach best addresses the issue of equity in the distribution of health care resources?

According to the British Columbia (B.C.) Ministry of Health (1993), although health status is affected by various influences extraneous to the health care system, health care equity remains a fundamental issue. As the B.C. Ministry of Health noted, “equity” refers to equal quality of care and equal access to care. Deployment of resources at the regional level offers the opportunity to address the equity issue when allocation is based on population, demographics and health needs resulting from socio-economic and environmental factors.

Health services can be regionally funded using four basic approaches: utilization-based; population-based; needs-based and budget/request-based. The approaches should be viewed as falling along a continuum. Each of these approaches is discussed briefly below.

7.1.1 Utilization-Based Funding

In this approach, funding is allocated to regions in proportion to utilization patterns - the health care services actually being used in a region. Utilization-based funding can be implemented in a number of ways. The simplest of these ways would be fee-for-service without any cap. This could also be implemented within total expenditure caps, total volume caps and funding pegged at less than 100 percent. Other adjustments to enhance the efficiency of this approach might include some sort of hospital performance index and a case mix index for long term care funding.

The potential benefit of using a utilization-based funding approach is the ready availability of data. Comparison across regions is relatively easy. Optimal resource allocation could occur if the above noted efficiency adjustments are added and the system is operating at a near-optimum level.

The potential drawbacks of such an approach include: the perpetuation of existing inequities; funding driven by utilization as opposed to population health considerations, and difficulties with incorporating effectiveness criteria.

As Birch et al (1993) noted in their discussion of a needs-based approach to resource allocation, the implication from the empirical research of utilization under Medicare is that “there is no natural tendency for health-care resources to be allocated in line with health needs.” (p. 74)

7.1.2 Population-based Funding (capitation)

With this approach, a fixed sum per person is distributed to an organization or region within a defined geographic area based on the size and demographics of each regions’ population. In return for funding, the organization or region provides guaranteed coverage for anyone eligible for and requiring designated health services. The focus is on the characteristics of the population as opposed to the patterns of utilization. For example, the allocation might take into account such characteristics as age and sex.

The potential benefits of this approach include: it is less influenced by provider behaviour; it has built-in incentives to decrease inappropriate/unnecessary utilization; and, it may lead to better control over referrals and consultation if patients are committed to a designated provider.

The potential drawbacks to this approach include: the failure to take into account differences in income level, education, and other socio-economic factors across regions (e.g. utilization differences between inner city residents and the rest of the population); administration of funds for “transients” is complicated; and it could be difficult to implement for centrally administered provincial programs..

At the organizational level, there have been a number of studies comparing non-geographically defined capitation-based payment approaches with fee-for service. This form of captitation payment is often associated with physician-centred organizational models such as Health Maintenance Organizations (HMOs) in the United States and Health Service Organizations (HSOs) in Ontario, Canada. As Abelson and Hutchison have suggested, capitation has been used by governments and insurance plans as a method of physician reimbursement because it provides a degree of “predictability in physician expenditures for a defined population”, and contributes to a “reduction in hospital utilization through substitution of ambulatory care for hospital care and preventive services.” (p.47)

As Birch et al (1990) have noted, the development of HSOs in Canada has been premised on the belief that equal or better quality care can be provided by health providers paid by capitation in comparison to those paid on a fee-for-service basis. Studies comparing HMOs and fee-for-service practice have been the basis of this assertion. Their review of the empirical findings on this assertion indicated that payment mechanisms can effect the cost and quality of care. However, differences within models are as great or greater than differences between models.

According to Crichton et al (1991) the most thorough of the cost studies on CHCs in Canada was conducted by the Ministry of Health in Saskatchewan (Saskatchewan Ministry of Health, 1983). The study compared the costs of medical services and hospitalization of patients in two community clinics and those of private practice physicians. As reported in Crichton et al, 1991, the study results indicated that while costs for medical services were higher in the clinics than the fee-for-service physician practices, the total per capita costs (an average of 64 % of which was hospitalization) f

were higher in the clinics than the fee-for-service physician practices, the total per capita costs (an average of 64 % of which was hospitalization) for hospitalization and pharmaceutical drug plans was 13 % less in one clinic, and 17 % less in the other clinic. This phenomenon was particularly evidenced in those patients over 65 years old. According to Abelson and Hutchison (1994), the researchers encountered methodological difficulties with data sources, sample selection, and the means of defining comparative populations.

Crichton et al (1991) reported that a comprehensive budget audit of four rural CHCs in British Columbia detected a net benefit in all centres linked primarily to reduced hospital utilization. As identified in Birch et al, 1990) earlier (often cited) Canadian controlled trial studies (Defreise, 1974; Hastings et al, 1972; Mott et al, 1973; University of Toronto and University of Michigan, 1973) produced similar results with some variation in identified causes, and the recorded percentages of reduction in hospital utilization.

The consensus expressed in the literature of the Canadian experience with the CHC organizational model was that current evidence on hospital utilization is relatively strong, but methodological weaknesses suggest a cautious interpretation of results (Angus and Manga, 1990; ARA Consulting Group, 1992; Birch et al, 1990; and, Crichton et al, 1991). The identified methodological weaknesses include:

- estimation of true practice populations;
- self-selection of patients and providers;
- calculation of costs;
- lack of measurement of effectiveness; and
- lack of adequate attention to variation within models
- lack of attention to differences in service quality, appropriateness, accessibility, or outcomes; and
- lack of attention to process variables.

Given the methodological weaknesses and paucity of studies, Crichton et al wondered why no systematic evaluations of the hospital utilization phenomenon had been undertaken on CLSCs in Quebec (p. 339). Abelson and Hutchison (1994) in their literature review of primary care delivery models in the international context suggested that even here methodologies are "moderate to weak" and "results are often limited in their application to other settings."(p. 64)

Our literature review identified several studies of CHC models undertaken outside of Canada. Findings from these studies generally support Canadian findings. In the United States, a quasi-comparative study to determine the impact of 5 CHCs located in geographic disparate areas on hospital utilization (Freeman et al, 1982), supported the Canadian findings recording nearly a 50 percent difference in rates of admission and nights spent in hospital between clinic and fee-for-service practices. The methodology employed controlled for social and demographic variables (Crichton et al, 1991, 339).

In a strong clinical trial on the effect of a community-sponsored prepaid group practice (Manning et al, 1984), the study design allowed researchers to examine the relationship of the responsiveness of health services utilization to user price in fee-for-service and capitation-based practice, and the impact of delivery modality on health care utilization.

Again the results are comparable to those produced through cost studies of CHCs in Canada with average costs per capita being 28 % less, and hospital days being nearly 50 % less for the community-based HMO members than fee-for-service

A quasi-comparative study of referral rates between individual G.P.s and G.P.s practising in health centres in the Netherlands indicated that G.P.s practising in health centres had lower referral rates to hospitals (Wukel, 1986).

In reviewing studies on the effects of capitation payment on service utilization Hutchison et al (1994) concluded that capitation payments led to reduced hospitalization rates for some populations and increased referral costs for others.

7.1.3 Needs-based Approach

With this approach, funds are distributed to the regions based on relative health needs of regional populations as identified through health status indicators, assessment of risk behaviours, and evaluation of health outcomes. This represents an extension of the population-based approach because it relies in part on regional population characteristics as a basis for the allocation of funds. However, in addition to basic population health indicators, the needs-based approach incorporates an additional calculation for "special needs" populations, such as preteens and/or low-income mothers. The increasing focus on these populations reflects the recognized relationship between socioeconomic conditions and health.

The potential benefits of this approach include: an emphasis on maximizing the potential "health" of a population by targeting resources where the need is greatest; incentives to redirect resources to populations with the greatest needs; the development of indicators for defined populations that identify specific needs as opposed to demands; an opportunity to allocate resources based on relative levels of need; and encouragement of substitution of low- cost, high-impact services for high-cost, low-impact services.

The potential drawbacks are: the continuing requirement of collecting socio-economic and health status data; and the lack of agreement on what indicators are appropriate (Birch et al, 1993; Carr-Hill, 1987)

The needs-based approach allows for many variations. Some extensions of the population-health approach can be referred to as needs-based. Once a funding pool is established under one approach (e.g. population) funding allocations at the sub-regional level might involve some form of case mix within utilization. Therefore, the three approaches should be viewed as falling along a continuum.

Of the three possible approaches to allocating funds at the regional level, the B.C. Ministry of Health (1993) suggested that utilization-based was weakest because it did not reflect the real health care needs of the population. Instead, it reflected the patterns of provider behaviour, and the historic distribution of resources within the health care sector.

In their discussion of the needs-based approach, Birch et al (1993) suggested that "a relative needs-based approach provides equal resources for communities with equal

needs (horizontal equity) but unequal resources for communities with unequal needs (vertical equity).

In a descriptive study, Birch and Chambers (1993), applied a needs-based approach to the simulated allocation of resources for the populations of 49 Ontario counties. The results indicated that while the needs-based approach did not promote efficient use of resources, neither did it provide disincentives for efficient use. The authors viewed this as an improvement over the "use-based" approach which was subject to manipulation to increase future allocations.

In a descriptive study to develop and apply a methodology for calculating a capitation rate for a Comprehensive Health Care Organization (CHO) in Ontario, Birch et al (1990) reported considerable differences between use of and need for services in the study population.

As was noted in Shortell et al,(1993) and Shortell et al (1994), population-based needs assessment remains a key tool for building an integrated health system.

7.1.4 Budget/Request Based

The budget or request based funding approach relies on the negotiation of a fixed budget, which specifies the resources required to meet the objectives of the organization. Historical utilization plays an important role in the determination of the budget. As noted in Alberta Health, (1991), the budget/request approach was the most widely used method of distributing community-based health care resources.

Robichaud and Quiviger (1991) noted that CHCs in Canada can be funded in a variety of ways. Their survey of CHCS in Canada indicated that: 37% (N 128) received funding from other methods/combinations; 28% (N 89) received global funding; 23 % (N 73) received specific program funding; 9 % (N 29) received case-by-case funding based on patient volume; and 3 % (N 9) received per capita funding. The authors concluded that global and specific needs appeared to be the most common funding approaches.

7.2 What are the issues related to the implementation of a regional funding approach?

A number of issues relating to the implementation of a regional funding approach were identified, including: administrative feasibility; information requirements; and methodology. Each of these is outlined briefly below.

As the B.C. Ministry of Health (1993) noted, whatever measure is chosen "to quantify the impact of social, economic and environmental factors of health" it must address the following criteria:

Administrative Feasibility: The funding approach must be inexpensive and feasible to administer. Data should be available from the current system rather than a new administrative data base. However, a new set-up may be a desirable long term goal.

Currency: The model should be based on current information and consistent with the currency of other information used in the resource allocation mode. As was noted by Hurley et al, 1993, the large Canadian population health surveys cannot be used in resource allocation decisions because:

the surveys are often based on a “snapshot” of the population at one point in time, and do not produce the data of interest on a regular basis;

the execution, analysis and reporting of such surveys is lengthy, meaning the data are often out of date by the time they are available;

where surveys are repeated over time, the precise question asked often differs between surveys producing inconsistent data; and

data are often collected at the level of the population which does not coincide with, or cannot be analysed at, the level of the planning populations.

Methodology: According to B.C. Ministry of Health (1993), developing a methodology that captures the socioeconomic variations and environmental influences into a quantifiable measure is a challenge for decision makers. This issue has been hotly debated by academics since the introduction of a population-based funding approach in Britain during the 1970s. The British approach has been criticized for its use of the Standardized Mortality Ratio (SMR) as a proxy for morbidity. Some critics view mortality ratios to be inadequate proxies for morbidity (Carr-Hill, 1987). On the other hand, morbidity ratios are considered to be not useful for allocating resources. One major criticism of the British approach was the failure to include socio-economic indicators. In estimating the needs of the population and, therefore, the funding allocation, the estimation of regional populations must be accurate.

A final methodological consideration is how to deal with the cross-boundary flow of patients, and possibly providers. If patients are “free” to seek medical care outside of their designated region some method of compensation will have to be included in the funding approach (Carr-Hill, 1987, Tuohy and Evans, 1986).

Based on the history of the methodological debate, the B.C. Ministry of Health concluded that it would be difficult to develop any measure which addresses all of these issues.

7.3 Summary and Policy Considerations: Funding Approaches

The literature reviewed concerning funding approaches suggested some form of funding tied to the socio-economic and demographic characteristics of an identified population, and the assessed needs of that population. At the methodological level, the debate over what measures serve best as a proxy of population health status will continue for some time.

8 MODALITY 4: SERVICE CATCHMENT AREA

In examining service catchment area, we found four issues to be most relevant: territory versus specific interest; planning implications for a population health approach; optimum size; and impact on health status. While we realized that research related to the service catchment area is in progress, we were only able to locate a few relevant studies in the literature. These studies are discussed briefly below.

In relation to territory versus specific interest, Robichaud and Quiviger (1991) suggested that the definition of community is closely tied to the concept of place. Thus community-based services are defined locally "in relation to a population residing on a given territory or sharing common interests." (p.7)

In examining this concept in relationship to community health and social service centres in Canada, Robichaud and Quiviger (1991) noted that 54 % of those centres surveyed reported offering services to specific populations. However, in Saskatchewan, Ontario and New Brunswick centres used a territorial approach. The authors observed a correlation between the territorial approach and ethnically heterogeneous target populations. Approaches targeting specific populations seemed more common where the population was homogeneous.

The planning and allocation of resources based on a population health approach requires a clear identification of the population either in terms of geography or identified need. As was noted by Dowling (1995), defining the geographic area or population is an important prerequisite to maximizing the ability of a system to contribute to the health of the community. Such a definition would:

provide a basis for assessing community needs, taking an epidemiological or population-based approach to planning, identifying which community organizations to collaborate with, judging the accessibility of the points of entry to the system, deciding where to locate facilities, and so forth. (p. 159)

As Abelson and Hutchison (1994) concluded, the introduction of a capitation payment system would require the identification of a "discretely-defined practice population." This will require some form of patient registration system in which patients would receive services only from those providers or CHCs with which they were registered.

In considering the optimal size of the service catchment areas, a recent descriptive study of HMO catchment areas in the U.S. (Kronick et al, 1993) noted that "the size of the population required for a managed-care firm to organize efficient primary care and specialty units varies according to specialty and according to assumptions about the minimal number of physicians needed to sustain the service. The authors concluded that a minimum population of 180,000 would be required to support three managed care plans (e.g. HMOs) and many specialty services. A broader continuum of services, including hospital care, would require a minimum population of 360,000 residents. Smaller metropolitan and rural areas would not be financially viable for managed care plans. Although no studies were found on this topic as it relates to community health

centres, we suspect that the optimum service catchment area is less than those stated above.

8.1 Summary and Policy Considerations: Service Catchment Area

The literature has suggested that the service catchment area is important for three reasons: the definition of community; the facilitation of planning based on a population health approach; and the creation of catchment areas which are financially viable. In a fourth area, the impact on health status, we were unable to find anything in the literature.

In considering service catchment area, policy makers need to ask the following questions:

How will the population be defined: geography, need, other?

What is the minimum required population size to maximize administrative and financial efficiency?

Does having a defined catchment area contribute to more cost effective service delivery?

Does having a defined catchment area contribute to community ownership?

9 MODALITY 5: MANAGEMENT STRUCTURES

In the current context of health system reform, decision makers are moving towards integration of service management and delivery. In this section we address the following issues:

potential for increased efficiency and effectiveness
prospects and challenges of developing integrated health care systems

9.1 What are the prospects and challenges of integrating management structures and service delivery across the health sector?

Two perspectives are examined in addressing this question. The first perspective relates to integration of services at the system level. This discussion emphasizes the barriers and facilitators to system integration and coordination. The second perspective deals with integration within a community-based health delivery organization.

9.1.1 System or Regional Level

According to Hollander (1994) a unified administrative structure has several benefits, including:

ability to shift funds across service delivery sectors;
policy issues are likely to be viewed in the context of a continuity of care system;
planning can be done on a systems basis; and
health professionals are likely to have a sense of the broader context of the continuum of care.

Despite these purported benefits, moving from theory to practice is fraught with a variety of barriers. These barriers are discussed below.

In her seminal discussion of administrative reform and coordination/integration of human services, Weiss (1981) argued that decision makers have continued to advocate coordination despite discouraging evidence because they have been seduced by the “symbolic and expressive content of the coordination message.” (p.p. 21-22) She suggested the following as impediments to creating coordinated services:

Conceptual Conflict - ambiguity in translating the idea into administrative and professional practice;

Professional Resistance - professional perception that coordination represents a means to increase management control over professionals;

Bureaucratic Constraints - tendency of organizations to resist change; and maximize autonomy and survival ;

Political Context - coordination and integration programs can become straightforward power struggles over control, priorities, or resources.

According to Weiss, at that time, there was little or no evidence to indicate that coordinated delivery systems yielded short- or long-term economic benefits, or that they provide better services than uncoordinated systems. On the symbolic level, the aura of rationality surrounding coordination and integration provides decision makers with increased legitimacy when attempting to implement reform.

In a more recent survey of the literature on the integration and coordination of community-based human service delivery, Rondeau and Deber (1992) suggested that the integration of human service delivery structures is impeded by a number of “major political, social and economic barriers.” (p.387) These barriers included: system complexity, impaired or contrary vision, professional ideologies, lack of incentives, funding realities, and uneven and fragmented capabilities of local governments. The authors cautioned that attempts to integrate human services should be seen as occurring within a political context. They concluded that the integration of human services may require the creation of a number of interrelated structures, which collectively reduce the existing barriers on a number of levels. A key to achieving greater integration is creating sufficient incentives to encourage cooperation among the various stakeholders.

More specific to health care, Shortell (1988), in his seminal review of the evidence on the performance of hospital systems in the United States, echoed Weiss’s concern about the lack of evidence. Based on a small number of studies available at the time, and comparative data on 1,000 systems and free-standing hospitals, Shortell concluded there was little if any evidence to support the idea that system hospitals were more cost efficient, offered better quality of patient outcomes, or realized economies of scale in comparison to non-system hospitals.

Shortell et al (1993) conducted a descriptive study of the barriers and facilitators to creating organized health delivery systems in the United States. The research was based on semi-structured interviews with the chairs of system boards; board members; operating unit board members; top management at the system and unit level; and physician leaders in twelve hospital systems in the United States . The findings suggested that there are eight major barriers to integration. These barriers included:

Failure to Understand the New Core Business -continuing to base decisions on individual facilities; continuing to allocate the majority of funding to acute care, although the emphasis on paper is on primary care; primary care based on acute care management principles; confusion by operating managers between the primary care “talk” and the acute care “walk”; physician integration as a strategy to feed hospital inpatient business as opposed to developing primary care; and failure to convince operating managers that a system based on primary care is viable;

Inability to Overcome the Hospital Paradigm - System growth strategy based on horizontal integration of hospitals; hospital mergers based on voluntary compliance; prevalence of hospital needs over the needs and decision processes of physicians; development of hospital pet projects not related to system priorities;

Inability to Convince the Major Facility to Accept a System Strategy - dominance of the system by the major facility;

Inability of the Board to Understand the New Health Care Environment - failure to shift the emphasis from acute care to primary care; lack of fixed accountability for specific strategies; lack of support for bold strategic moves by management;

Ambiguous Roles and Responsibilities -Managers view themselves as the targets of change as opposed to the agents; fear by operating managers of the loss of power and influence; lack of fixed accountability, rewards system;

Inability to “Manage” Managed Care -management fails to understand the strategy concerning the relationship of the managed care product and the hospital; failure to view physician recruitment from a system perspective; failure to know how to implement the system strategy; role confusion of operating units;

Inability to Execute the Strategy -unwillingness to implement the strategy; little consideration of internal capacity is given when developing a system strategy; and

Lack of Strategic Alignment - improper allocation of resources; lack of consistent strategic direction; managerial confusion about the real strategy; overemphasis on accounting and financial controls at the expense of customer satisfaction, market research, and community health needs assessment.

The problems of integration at the system level are illustrated in Gosselin’s (1984) description of the regional system in Quebec. He noted that the belief that change could be achieved in a cooperative fashion has held true, but mainly because the focus of reform has been on the community-based sector. Hospitals have continued to define patient’s needs according to their own organizational priorities with little rationalization of functions occurring. He suggested divergent value systems were at the root of the failure to integrate more completely hospital and community-based services.

Shortell et al (1993) suggested that there are seven *core capabilities* that organized delivery systems need to achieve integration. These included the following:

Creating a New Management Culture - emphasis on managing across boundaries; managing markets and networks of care across episodes of illness, and pathways of wellness; greater emphasis on negotiation and conflict management; systems thinking; team building; and blurring of the boundaries between line and staff roles;

Basing Decisions on Population Needs Assessment - to be held responsible for the health status of defined populations will require assessing the population needs, demands and preferences. This will require closer relationships with communities;

An Integrated Information System - focused on ensuring continuity of care; integration of clinical and financial data; organized case management; team management; clinical guidelines and continuous quality improvement processes;

Integrated System for the Assessment and Management of Technology - formal system for assessing the cost/benefit ratios of alternative technologies;

Continuous Improvement Process - continuous quality improvement and total quality management allows the organization to respond more efficiently to the changing environment; and

Information Linkages and System Incentives -tie patients and providers together across the continuum of care, and reward collaborative behaviour.

Building on the work of Shortell and others in his descriptive review of the relationship of strategic alliances to integrated delivery systems, Dowling (1995) suggested that “practitioners” have come to agreement on the following points about the success factors related to integrated systems. These factors are listed below.

Commitment and Leadership by the Board, CEO and Top Management - essential to ensuring that the system becomes truly integrated. Desirable leadership qualities include: ability to articulate a vision for the future; ability to inspire and empower others; ability to build teamwork; ability to manage conflict and change.

Shared Decision Making with Key Participants -especially important to make physicians “co-owners” of the vision and partners in the success of the delivery system

Education - to strengthen organizational change, and foster buy-in

Careful Choice of Physician Leadership - The goal is to find or foster physicians who are open to change . Once identified, these individuals should become full participants in decision making about the goals, directions and success of the system. This will facilitate developing a sense of ownership for system integration.

Affirmation of the Autonomy of Physicians in Clinical Decision Making

Decision Making Based on Population Health, and the Logic of the Continuum of Care

Clear Vision of the Future - The vision must be explainable, but more importantly “felt.”

Alignment of organizational roles, strategies, structures, and management systems with the vision

Development of new management attitudes and skills through education and training

Emphasis on goals related to better serving the community, and patients

Openness to needs and expectations of the constituencies served, and the purchasers of service

The need to break away from the hospital paradigm

Of note in the above list of integration success factors is the emphasis placed on integrating physicians into the system. In a descriptive study of organized delivery systems, Shortell et al (1994) found some indication that the degree of physician integration is positively associated with financial performance. The authors acknowledged that the data base from which this conclusion and the conclusions of the earlier (Shortell et al, 1993) study are drawn are only suggestive because the data base is limited to financial performance data on hospitals for a fixed point in time.

In a descriptive study of coordinating patient care services in regional health systems, Conrad (1993) emphasized the need to achieve clinical integration as a prerequisite to vertical integration. Shortell et al (1994) reaffirmed this when they stated “it is simply not possible to achieve any measurable level of clinical integration for patients without a close relationship of physicians with an organized delivery system. In particular, the percentage of physicians practising in multi-specialty groups and/or system-owned/managed facilities was significantly associated with such measures as the

number of clinical treatment protocols developed, the percentage of clinical outcome measures collected, and the percentage of shared clinical service lines.” (p. 53)

Conrad (1993) suggested that there are a number of facilitators and limiting factors associated with the integration of clinical services. The facilitators included: the development of new hospital-physician collaborative arrangements; shifts toward ambulatory and preventive (population-based) broadening of the health “continuum of care”; internal care management strategies in hospitals; relatively well integrated financial management and strategic planning; changing physician payment arrangements; changing practice patterns; and increasing innovation in information technology. The limiting factors included: lack of trust between physicians and institutions, resistance to regionalization and “systematizing” technology, decentralized records and patient management systems; loosely integrated information systems; the existing regulatory framework; and the continuing high cost of information technology.

In a weak clinical trial Corcoran et al (1988) evaluated the outcome of changing a public health system from block clinics to integrated service clinics. The results of a pre/post comparison of randomly selected clients, and staff, indicated that staff perceived improvements in patient care, patient education and follow-up, and workload management. The results of the patient survey indicated improvements in waiting times, availability of services, and days attended. The survey suggested improved levels of satisfaction for both workers and clients.

Begin (1977), in his discussion of the integration of hospitals and CLSCS in rural communities, found that opposing organizational value systems had made the integration of the two distinct entities unworkable. At the board level, integration was superficial with hospitals continuing to dominate. At the level of internal operations, physicians affiliated with the hospital continued to provide all of the primary care services with no integration into the CLSC. The attitude of physicians to CLSCs was lukewarm to hostile. Access to records was controlled by the hospital side of the organization. The greatest level of integration appeared to have occurred at the level of reception, with both organizations sharing space.

A descriptive study (survey methodology) of the integration of public health in hospitals in Quebec (Pineault et al, 1986) indicated that DSCs (Departments of Public Health) were well integrated into the administrative structure of the hospitals. However, they were not well integrated with the professional structure of the hospitals. DSCs performed “better” on the internal coordination of ambulatory care, and the traditional disease control functions. However, they performed “poorly” on external functions relating to the new community health role (external coordination, programming and evaluation), with the exception of health needs assessment. Pineault et al concluded that administrative integration could be advantageous with mechanisms to protect the resources of the unit.

In a descriptive study of the benefits of service coordination for mental health patients in Quebec, White and Mercier (1991) concluded that while service coordination is viewed often as the key to continuity of care, coordination also has negative effects. In comparing the strengths and weaknesses of two types of community agencies that provide mental health services, the authors found that coordination may lead to the elimination of diversity of options for service delivery. In doing so, the process may rob certain patients of the benefits offered by some organizations. Some patients may be marginalized or excluded through the standardization of services.

In a case history of the integration of a local health department and a community health centre in rural North Carolina, Lambrew et al (1993) noted that “circumstance and state involvement were the catalysts for service integration, more so than the need for or the benefits of the arrangement.” (P.19) The authors cautioned against the general application of the results.

9.1.2 Intra-organizational Level

A descriptive study (Lennie et al 1990) examined the performance of the delivery of primary health care services in nine Australian community health centres based on input and output criteria, including the following: internal management, shared goals/ethos, community management, financial arrangements and educational experience (inputs); client orientation, satisfaction, teamwork, and community orientation. Internal management structure was the most important single predictor of a centre’s rating. As the authors noted:

the best internal structure gave expression to a shared ethos ... and effectively reconciled client and community orientation. Systems existed to ensure that all team members would meet regularly and have regular opportunities for working with each other. Formal mechanisms ensured responsibility and opportunity for community orientation.(p 114)

Shared ethos between management, other staff, doctors, and board members was another strong predictor of a centre’s performance.

9.1.3 Summary and Policy Considerations: Management Processes and Structures

The literature reviewed for this study suggested that the integration of management at the regional or system level is desirable because it allows for the planning and allocation of resources across sectoral boundaries based on a broad conception of population health as opposed to the preferences of individual organizations. Despite this theoretical statement about the benefit of integration, the literature indicated that, thus far, there is little evidence to support the administrative or economic benefits of integration.

Several authors suggested that integration is facilitated by the following: development of a new management culture; the presence of strong leadership, the inclusion of physicians in the decision making process about the change and on-going management of the system; and integrated information systems.

A significant amount of importance was placed on the inclusion of physicians within integrated systems. They were viewed, by some authors, as a major component in the success of integration at the systems level.

As well, a number of authors suggested that there were significant barriers to the integration of health services at the regional or system level. These included: resistance from major stakeholders to change; lack of committed leadership; failure to fully understand the direction of change; failure to convince managers to buy-in to change; and failure to include physicians in major decisions about change.

In planning for the integration of management at the regional or system levels decision-makers needs to consider the following:

How can the most important factors relating to the success in the implementation of an integrated regional health care system be made operational?

How can the most important factors relating to the failure in implementation be overcome?

What strategies will encourage physicians to embrace change?

These issues need to be continually assessed during and after the implementation of integration.

10 SYNOPSIS OF THE LITERATURE REVIEW

The literature review of CBHS organizational modalities covered 5 topics: governance, service delivery, funding approaches, service catchment areas, and management structures. The major findings from the review are summarized below.

10.1 Governance

The literature on governance addressed issues relating to citizen participation and patient choice. The literature on citizen participation suggested that there is no empirical evidence that boards of governance lead to empowerment of citizens in relationship to other stakeholders.

The literature on patient choice suggested that when provided with appropriate information about specific interventions, patients may choose less intensive and less costly interventions.

The traditional approach to governing community-based health delivery models has not been an effective means of empowering communities or the clients served by the organizations. In fact, the community board approach to governance appears to reflect an elitist bias against strong consumer input. The choice of the method of appointment and the criteria for selecting board members remain important issues. The major challenge appears to be to match skills sets to board responsibilities on the one hand, while ensuring that a broad cross-section of the community is represented on the other.

Due to the arms-length relationship between the government as funder and the community agency as private service provider, pre-audit accountability tends to be weak. This includes the local electoral mechanism. As the two examples cited in the review illustrated, without a strong preaudit capacity government has difficulty enforcing compliance with policies and guidelines.

Another important issue raised in the discussion of community governance is the extent to which lay individuals want to participate in decision making. While there is an inherent tendency to assume that consumers want to participate on community boards, there is little evidence to support this assumption, and some evidence to suggest that consumers are not interested in assuming responsibility for major decisions about resource allocation. Given that one of the objectives of current health reform initiatives is to strengthen the role of communities in decision making, careful consideration should be given to the range of decision-making responsibilities, and the mechanisms through which consumers have input into decisions about their health.

10.2 Service Delivery

The literature on community-based health delivery models reviewed for this component indicated that in general integrated, multiservice, multidisciplinary models are less costly, and more cost-effective, than comparable services provided by single-service providers and institutional providers. This is particularly evident when comparing the community health centre organizational model with solo fee-for-service physician practice. The major cost saving appears to occur through a reduction in the use of hospital outpatient and inpatient services by populations receiving services from the community health centres. Community health centres also offer patients increased access to care.

Beyond community health centres, community-based service delivery appeared to offer the potential for cost savings in the provision of continuing care for the elderly, mentally ill, children, and terminally ill patients. Studies on care of the elderly, prenatal care, children, the mentally ill, and the terminally ill, indicated that community-based health delivery can lead to increased access to care, and better health outcomes at a lower cost than care provided by stand-alone providers or in institutional settings. Specifically, better outcomes have been recorded in the quality of life of the elderly, mentally ill, and terminally ill patients. In addition, better outcomes have been recorded for newborns when their mothers receive coordinated prenatal care. Quality of care improvements have been noted for these populations. However, additional research needs to be conducted in this area to determine the range of quality of life outcomes that are affected by the choice of service delivery modality.

In general, past research on cost “efficiency” and “effectiveness” has been limited by a variety of methodological problems. Hollander (1994) openly questioned the applicability of studies of home care in the US to the Canadian context. Beyond methodological difficulties, Hollander suggested that a more accurate assessment of the costs and benefits of continuing care in Canada will only be possible when all provinces have agreed to collect and record data in a standardized fashion.

10.3 Funding Approach

Either a population-based or needs-based approach or a combination of the two seems likely to lead to a more equitable distribution of resources, and a focus on health outcomes as opposed to health care resource inputs. Implementing such an approach will require developing of a valid proxy for measuring the health status of the population, and reliable mechanisms for gathering the data necessary to accurately track population health at the regional level.

10.4 Service Catchment Area

A clear definition of the service catchment area is an essential ingredient to decision making based on the health of the population, including assessing needs and allocating health care resources based on these needs. Decision makers should be careful that defining the catchment area does not result in adverse selection by service providers.

10.5 Management Structures

The literature on integration at a regional and/or system level was based largely on discussions of the facilitators and barriers to system integration. The consensus of the literature reviewed was that there are significant barriers to system integration associated with the existing distribution of power and resources. Overcoming these barriers will require strong leadership, a new corporate culture, clear vision, and integrated information systems.

Of particular importance, both in terms of successful implementation and costs, was the inclusion of physicians in decision making related to the process of change and the overall management of an integrated system. Several authors suggested that integration will not work unless physicians have been involved in decision making. The system must incorporate the preferences of the medical

profession along with those of administrators and patients. One descriptive study (Shortell et al, 1994) suggested that the degree of physician integration is positively related to the financial performance of the system. However, this was based on hospital data alone.

There was a consensus in the literature examined that, to date, there was no good empirical evidence to support the suppositions that integrated systems were less costly than non-systems. However, most studies have focused on hospital systems alone.

REFERENCES

- Abelson, J. and Hutcheson. *Primary Health Care Delivery Models: Review of the International Literature*. Centre for Health Economics and Policy Analysis, McMaster University, Working Paper 94-15, 1994.
- Abelson, J., Lomas, J., Eyles, J., Birch, S. and Veentstra, G. *Does the Community Want Devolved Authority? Results from Deliberative Polling in Ontario*. McMaster University, Centre for Health Economics and Policy Analysis, Working Paper 94-19, 1995.
- Abelson, J. and Lomas, J. Do health service organizations and community health centres have higher disease prevention and health promotion levels than fee-for-service practices? *Canadian Medical Association Journal*, 575-581, 1990.
- Aday, L.A., Wegener, D.H., Andersen, R.M. and Aitken, M.J. Home Care For Ventilator-Assisted Children. *Health Affairs - DataWatch* Summer, 1989:137-147.
- Addington-Hall, J.M., MacDonald, L.D., Anderson, H.R., Chamberlain, J., Freeling, P., Bland, J.M. and Raftery, J. Randomised controlled trial of effects of coordinating care for terminally ill cancer patients. *British Medical Journal* 305(6865):1317-1322, 1992. Alberta, Ministry of Health. A Discussion Paper on Alternative Funding Models for the Alberta Public Health System, Public Health Division, 1991.
- Alberta, Ministry of Health. Draft Paper on Regional Funding Allocation Methodology, Health Economics and Statistics, 1994.
- Alberta, Ministry of Health. Regionalization of Health Services Planning and Management: A Canadian Perspective, Health Strategy and Evaluation, July, 1993.
- Alford, R. *Health Care Politics: Ideological and Interest Group Barriers to Reform*. University of Chicago Press , 1975.
- Angus, D.E. and Manga, P. *Co-op/Consumer Sponsored Health Care Delivery Effectiveness*. Canadian Co-operative Association, Ottawa , 1990.
- Angus, D.E., Auer, L., Cloutier, J.E. and Albert, T. *Sustainable Health Care for Canada. Synthesis Report*. Queen's - University of Ottawa, Economic Projects. 1995.
- Anonymous Planning for Health: Toward Informed Decision- Making. Health and Welfare Canada. Ottawa: Supply and Services , 1993.
- Ansak, M-L. and Zawadski, R.T. On Lok CCODA: A Consolidated Model. *Home Health Care Services Quarterly*. 4 (3-4): 147-170, 1984.
- ARA Consulting Group Inc. Final Report: Evaluability Assessment of Ontario's Community Health Centre Program. Submitted to the Evaluation Project Group, Strategic Planning and Evaluation Project, Community Health Centre Program, Ontario Ministry of Health , 1992.
- Aronson, J. Giving Consumers a Say in Policy Development: Influencing Policy or Just Being Heard? *Canadian Public Policy* 19(4):367-378, 1993.

- Baldwin, L., Inui, T.S. and Stenkamp, S. The effect of coordinated, multidisciplinary ambulatory care on service use, charges, quality of care and patient satisfaction in the elderly. *Journal of Community Health* 18(2):95-108, 1993.
- Barry, M.J., Mulley, A.G.Jr., Fowler, F.J. and Wennberg, J.W. Watchful Waiting vs Immediate Transurethral Resection for Symptomatic Prostatism. *Journal of the American Medical Association* 259(20):3010-3017.
- Begin, C. "Can the HCs and the LCSCs co-exist?" *Mental Health in Canada* 5(4):11-15, 1977.
- Birch, S., Chambers, S., Eyles, J., Hurley, J. and Hutchison, B. Development and Application of a Needs-Based Methodology for Calculating a Capitation Rate for a Comprehensive Health Organization. McMaster University, Hamilton, Ontario, May, 1990.
- Birch, S., Lomas, J., Rachlis, M. and Abelson, J. *HSO Performance: A Critical Appraisal of Current Research*. Centre for Health Economics and Policy Analysis, McMaster University, 1990.
- Birch, S. and Chambers, S. To each according to need: a community-based approach to allocating health care resources. *Can. Med. Assoc. J.* 149(5):607-612, 1993.
- Birch, S., Eyles, J., Hurley, J., Hutchison and Chambers, S. A Needs-based Approach to Resource Allocation in Health Care. *Canadian Public Policy* XIX:1:68-85, 1993.
- Birenbaum, L.K. and Clarke-Steffen, L. Terminal Care Costs in Childhood Cancer. *Pediatric Nursing* 18(3):285-288, 1992.
- Bond, G.R., Witheridge, T.F., Wasmer, D., Duncan, J., McRae, S.A., Mayes, J. and Ward, R.S. A comparison of two crisis housing alternatives to psychiatric hospitalization. *Hospital & Community Psychiatry* (2):177-183, 1989.
- Borland, A., McRae, J. and Lycan, C. Outcomes of five years of continuous intensive case management. *Hospital & Community Psychiatry* 40(4):369-376, 1989.
- Bouchard, H.S. Can In-home Hospital Care be Implemented in Ontario? Implications for Public Policy. *Health Care Management Forum* 24-27, Summer, 1990.
- Bozzini, L. Local Community Services Centers (CLSCs) in Quebec: Description, Evaluation, Perspectives. *Journal of Public Health Policy* 347-375, 1988.
- British Columbia, Ministry of Health. Draft 2, Discussion Paper, Regional Funding Allocation Model. A Funding Scheme to Support New Directions Decentralization Initiative. New Directions Development Office, November, 1993.
- Brown, L.D. Some Structural Issues in the Health Planning Program. *Health Planning in the United States: Selected Policy Issues* 2, Washington, D.C.: National Academy Press, 1981, 1-53.
- Buescher, P.A., Roth, M.S., Williams, D. and Goforth, C.M. An evaluation of the impact of maternity care coordination on Medicaid birth outcomes in North Carolina. *American Journal of Public Health* 81(12):1625-1629, 1991.

- Buescher, P.A. and Ward, N.I. A comparison of low birth weight among Medicaid patients of public health departments and other providers of prenatal care in North Carolina and Kentucky. *Public Health Reports* 107(1):54-59, 1992.
- Burns, T., Beadsmoore, A., Bhat, A.V., Oliver, A. and Mathers, C. A Controlled Trial of Home-Based Acute Psychiatric Services. I: Clinical and Social Outcome. *British Journal of Psychiatry* 163:49-54, 1993.
- Burns, T., Raftery, J., Beadsmoore, A., McGuigan, S. and Dickson, M. A Controlled Trial of Home-Based Acute Psychiatric Services. II: Treatment Patterns and Costs. *British Journal of Psychiatry* 163:55-61, 1993.
- Carr-Hill, R.A. *Health Status, Resource Allocation and Socio-Economic Conditions* (Interim Report of Health Needs Research Study). Centre for Health Economics, University of York, Heslington, York, B.I., 1987.
- Carroll, B.W. Administrative devolution and accountability: the case of the non-profit housing program. *Canadian Public Administration* 32(3):345-366, 1989.
- Cartoof, V.G., Klerman, L.V. and Zazueta, V.D. The effect of source of prenatal care on care-seeking behavior and pregnancy outcomes among adolescents. *Journal of Adolescent Health* 12(2):124-129, 1991.
- Charles, C. and DeMaio, S. Lay Participation in Health Care Decision Making: A Conceptual Framework. *Journal of Health Politics, Policy and Law* 18(4):881-904, 1993.
- Checkoway, B. The Empire Strikes Back: More Lessons for Health Care Consumers. *Journal of Health Politics, Policy and Law* 7(1):111-123, 1982.
- Checkoway, B. and Doyle, M. Community Organizing Lessons for Health Care Consumers. *Journal of Health Politics, Policy and Law* 5(2):213-226, 1980.
- Checkoway, B. Public Participation in Health Planning Agencies: Promise and Practice. *Journal of Health Politics, Policy and Law* 7(3):723-733, 1982.
- Church, W.J.B. District Health Councils: The Local Advisory Body and Health Care Policy in Ontario. Unpublished Masters Thesis, University of Waterloo, 1986.
- Church, W.J.B. Structural Interests and Health Politics in Ontario: The Case of Community Health Centres. Unpublished Ph.D Dissertation, University of Western Ontario, 1994.
- Conrad, D.A. Coordinating Patient Care Services in Regional Health Systems: The Challenge of Clinical Integration. *Hospital & Health Services Administration* 38:4, 491-508, 1993.
- Corcoran, J., Hill, N., Credle, J., Lowe, P.H., Dever, G.E.A., Lofton, T.C. and Anderson, S.L. Improving the delivery of services in a local health department: integration versus block. *Public Health Nursing* (2):76-80, 1988.
- Crichton, A., Robertson, A., Gordon, C. and Farrant, W. Implementing Canada's Social Model of Health Care; A Review of the Literature on Organizational Models for Community-based Health Services. *NHRDP Grant No. 5-52047-2522*, 1991.

- Crichton, A. Health Insurance and Medical Practice Organization in Canada: Findings from a Literature Review. *Medical Care Review* 51:2;149-177, 1994.
- Davidson, G., Moscovice, I. and McCaffrey, D. Allocative Efficiency of Case Managers for the Elderly. *Health Services Research* 24(4):539-554, 1989.
- Deber, R., Ross, E. and Katz, M. *Comprehensiveness in Health Care, Report to: The Health Action Lobby*, 1993.
- DeFriese, G.H. The Sault Ste. Marie Community Health Survey of 1973: Community Health Centres and Private Solo Practice Under Universal Health Insurance: The Consumer's View. 1974.
- Doherty, N., Hicks, B., Raisz, H. and Segal, J. Triage: overcoming organizational and financial barriers to care for the elderly. *Home Health Care Services Quarterly* 1(3):37-48, 1980.
- Donaldson, C. and Gregson, B. Prolonging Life at Home: What is the Cost? *Community Medicine* 11(3):200-209, 1989.
- Dowling, W. L. Strategic Alliances as a Structure for Integrated Delivery Systems, in Kaluzny, A.D. et al, eds., *Partners for the Dance: Forming Strategic Alliances in Health Care*, Ann Arbor: Health Administration Press, 1995.
- Eakin, J.M. Hospital Power Structure and the Democratization of Hospital Administration in Quebec. *Social Science and Medicine* 18(3):221-228, 1984.
- Eakin, J.M. Survival of the Fittest? The Democratization of Hospital Administration in Quebec. *International Journal of Health Services* 14(3):397-412, 1984.
- Eyles, J. *The Role of the Citizen in Health-Care Decision-Making*. Centre for Health Economics and Policy Analysis. Policy Commentary C93-1, 1993.
- Feldman, P.H. Work life improvements for home care workers: impact and feasibility. *Gerontologist* (1):47-54, 1993.
- Fenton, F.R., Tessier, L. and Struening, E.L. A Comparative Trial of Home and Hospital Psychiatric Care. One-Year Follow-up. *Arch Gen Psychiatry* 36:1073-1079, 1979.
- Fenton, F.R., Tessier, L., Contandriopoulos, A-P, Nguyen, H. and Struening, E.L. A Comparative Trial of Home and Hospital Psychiatric Treatment: Financial Costs. *Canadian Journal of Psychiatry* 27:177-187, 1982.
- Ferguson, G. The New Brunswick Extra-Mural Hospital: A Canadian Hospital-at-Home. *Journal of Public Health Policy* 561-570, Winter, 1987.
- Fleming, G.V. and Andersen, R.M. The Municipal Health Services Program. Improving access to primary care without increasing expenditures. *Medical Care* 24(7):565-579, 1986.
- Fowler, F.J. et al. Symptom Status and Quality of Life Following Prostatectomy. *Journal of the American Medical Association* 259(20):3018-3022, 1988.

- Freeman, H.E., Kiecolt, K.J. and Allen, H.M. Community Health Centres: An Initiative of Enduring Unity. *Milbank Memorial Fund Quarterly/ Health and Society* 60(2):245-267, 1982.
- Fried, B.J., Worthington, C. and Deber, R.B. Economic Evaluations in the Canadian Mental Health System II: From Theory to Practice in Mental Health Care. *Canadian Journal of Psychiatry* 34: 637-640, 1989.
- Gibbins, F.J., Lee, M. and Davidson, P.R. Augmented Home Nursing as an Alternative to Hospital Care for Chronic Elderly Invalids. *British Medical Journal* 284:330-333, 1982.
- Ginzberg E. and Ostow, M. Conservation of Human Resources, Columbia University. The Community Health Care Center: Current Status and Future Directions. *Journal of Health Politics, Policy and Law* Vol. 10(2):283-298, 1985.
- Godbout, J. Is Consumer Control Possible in Health Care Services? The Quebec Case. *International Journal of Health Services* 11(1):151-167, 1981.
- Gosselin, R. Decentralization/regionalization in health care: the Quebec experience. *HCM Review* 7-23, 1984.
- Graveley, E.A. and Littlefield, J.H. A cost-effectiveness analysis of three staffing models for the delivery of low-risk prenatal care. *American Journal of Public Health* 82(2):180-184, 1992.
- Handler, A. and Rosenberg, D. Improving Pregnancy Outcomes: Public Versus Private Care for Urban, Low-Income Women. *BIRTH* 19:3, 123-130, 1992.
- Hastings, J.E.F., Mott, F.D., Barclay, A. and Hewitt, D. Prepaid Group Practice in Sault Ste. Marie, Ontario: Part 1: Analysis of Utilization Records. *Medical Care* 11(2):91-103, 1973.
- Hollander, M.J. *The Costs and Cost-Effectiveness of Continuing-Care Services in Canada*, Queen's-University of Ottawa Economic Projects, Working Paper No. 94-06, University of Ottawa, Ottawa, p.11, 1994.
- Hughes, S.L., Cummings, J., Weaver, F., Manheim, L., Braun, B. and Conrad, K. A randomized trial of the cost effectiveness of VA hospital-based home care for the terminally ill. *Health Services Research* 26(6):801-817, 1992.
- Hulsman, B. and Chubon, S.J. A comparison of disabled adults' perceived quality of life in nursing facility and home settings. *Public Health Nursing* (3):141-146, 1989.
- Hurley, J., Birch, S. and Eyles, J. *Information, Efficiency and Decentralization within Health Care Systems*, Centre for Health Economics and Policy Analysis, Working Paper Series No.92-21, McMaster University, , 1992.
- Kemper, P., Applebaum, R. and Harrigan, M. Community care demonstrations: What have we learned? *Health Care Financing Review* 8(4):87-100, 1987.
- Korenbrodt, C.C., Showstack, J., Loomis, A. and Brindis, C. Birth Weight Outcomes in a Teenage Pregnancy Case Management Project. *Society for Adolescent Medicine* 10(2):97-104, 1989.

- Krieger, J.W., Connell, F.A. and LoGerfo, J.P. Medicaid Prenatal Care: A Comparison of Use and Outcomes in Fee-for-Service and Managed Care. *American Journal of Public Health* 82(2):185-190, 1992.
- Lambrew, J.M., Ricketts, III, T.C. and Morrissey, J.P. Case Study of the Integration of a Local Health Department and a Community Health Center. *Public Health Reports* Vol. 108(1):19-29, 1993.
- Lehman, A.F., Postrado, L.T., Roth, D., McNary, S.W. and Goldman, H.H. Continuity of care and client outcomes in the Robert Wood Johnson Foundation program on chronic mental illness. *The Milbank Memorial Fund Quarterly* 72(1):105-121, 1994.
- Lomas, J. *First and Foremost in Community Health Centers: The Centre at Sault Ste Marie and the CHC Alternative*. University of Toronto Press , 1985.
- Manning, W.G., Leibowitz, A. and et al. A Controlled Trial of the Effect of a Prepaid Group Practice on Use of Services. *New England Journal Of Medicine* 310(23):1505-1510, 1984.
- Marmor, T.R. and Marone, J.A. Representing Consumer Interests: Imbalanced Markets, Health Planning and HSA's. *Milbank Memorial Fund Quarterly/Health and Society* 58(1):125-165, 1980.
- Morse, G.A., Calsyn, R.J., Allen, G., Tempelhoff, B. and Smith, R. Experimental comparison of the effects of three treatment programs for homeless mentally ill people. *Hospital & Community Psychiatry* 43(10):1005-1010, 1992.
- Mott, F.D., Hastings, J.E.F. and Barclay, A. Prepaid Group Practice in Sault Ste. Marie, Ontario: Part 2: Evidence from the Household Survey. *Medical Care* 11(3):173-188, 1973.
- Muijen, M., Marks, I., Connolly, J. and Audini, B. Home based care and standard hospital care for patients with severe mental illness: a randomised controlled trial. *BMJ* 304(6829):749-754, 1992.
- Murray, V.V., Jick, T.D. and Bradshaw, P. Hospital Funding Constraints: Strategic and Tactical Decision Responses to Sustained Moderate Levels of Crisis in Six Canadian Hospitals. *Social Science and Medicine* 18(3):211-219, 1984.
- Naylor, C.D. *Private Practice, Public Payment: Canadian Medicine and the Politics of Health Insurance, 1911-1966*, Kingston: McGill-Queen's University Press, 1986.
- New Brunswick Ministry of Health, Extra-Mural Hospital, Survey Report, March, 1995(a).
- New Brunswick, Ministry of Health, Extra-Mural Hospital, Questionnaire, March, 1995(b).
- Newton, K. Is Small Really so Beautiful? Is Big Really So Ugly? Size, Effectiveness, and Democracy in Local Government *Political Studies* Vol. XXX(2): 190-206, 1970.
- Oktay, J.S. and Volland, P.J. Post-hospital support program for the frail elderly and their caregivers: a quasi-experimental evaluation. *American Journal of Public Health* 80(1): 39-46, 1990.

- Oktaay, J.S. and Volland, P.J. Foster Home Care for the Frail Elderly as an Alternative to Nursing Home Care: An Experimental Evaluation. *American Journal of Public Health* 77(12):1505-1510, 1987.
- O'Neill, M. Community Participation in Quebec's Health System: A Strategy to Curtail Community Empowerment? *International Journal of Health Services* 22(2):287-301, 1992.
- Ontario, Ministry of Health. New Beginnings. Draft Discussion Paper on the Review of the HSO Program, February, 1991.
- Pineault, R., Champagne, F. and Trottier, L-H. The Integration of Public Health in Hospitals: The Case of Community Health Departments in Quebec. *Journal of Public Health Policy*. Autumn, 1986, 314-324.
- Pinto, R. and Fiester, A. Governing Board and Management Staff Attitudes Toward Community Mental Health Center Citizen Participation. *Community Mental Health Journal* 15(4):259- , 1979.
- Poland, M.L., Giblin, P.T., Waller, J.B., Jr. and Hankin, J. Effects of a home visiting program on prenatal care and birthweight: a case comparison study. *Journal of Community Health* 17(4):221-229, 1992.
- Renaud, M. Reform or Illusion? An Analysis of the Quebec State Intervention in Health. in David Coburn, ed., *Health and Canadian Society*, Toronto: Fitzhenry and Whiteside 1981, 369-292.
- Robertson, D. Alternative Methods of Health Care Delivery for Canada's Aging Population. *Economic Council of Canada, Aging with Limited Health Resources: Proceedings of a Colloquium on Health Care*. Supply and Services, Ottawa :59-67, 1987.
- Robichaud, J-B and Quiviger, C. *Active Communities*. Canadian Council on Social Development. A Study of Local Community Health and Social Service Centres in Canada in 1988.
- Rondeau, K.V. and Deber, R.B. Models for Integrating and Coordinating Community-Based Human Service Delivery: An Analysis of Organizational and Economic Factors. *Restructuring Canada's Health Services System* 387-392, 1992.
- Saltman, R.B. Patient Choice and Patient Empowerment in Northern European Health Systems: A Conceptual Framework. *International Journal of Health Services* 24(2):201-229, 1994.
- Seacat, M.S. Neighborhood Health Centers: A Decade of Experience. *Journal of Community Health* Vol. 3(2):156-170, 1977.
- Schinnar, A.P., Kamis-Gould, E., Delucia, N. and Rothbard, A.B. Organizational determinants of efficiency and effectiveness in mental health partial care programs. *Health Services Research* 25(2):387-420, 1990.
- Sharpe, L.J., Nuffield College, Oxford. Theories and Values of Local Government. *Political Studies* Vol. XVIII(2):153-174, 1970.
- Shortell, S.M. The Evolution of Hospital Systems: Unfulfilled Promises and Self-Fulfilling Prophecies. *Medical Care Review* 45:2(Fall 1988).

- Shortell, S.M., Gillies, R.R., Anderson, D.A., Mitchell, J.B. and Morgan, K.L. Creating Organized Delivery Systems: The Barriers and Facilitators. *Hospital & Health Services Administration* 38:4:447-466, 1993.
- Shortell, S.M., Gillies, R.R., and Anderson, D.A. The New World of Managed Care: Creating Organized Delivery Systems. *Health Affairs* 13:5, 47-64, Winter 1994.
- Stein, L.I. and Test, M.A. Alternative to Mental Hospital Treatment. I. Conceptual Model, Treatment Program, and Clinical Evaluation. *Arch Gen Psychiatry* 37:392-397, 1980.
- Stevenson Kellogg Ernst & Whinney (Prepared by), Funding and Incentives Study:1-100, 1989
- Tindal, C.R. and Tindal, S.N. Local Government in Canada, Third Edition. McGraw-Hill Ryerson, 1990.
- Townsend, J., Frank, A.O., Fermont, D., Dyer, S., Karran, O., Walgrove, A. and Piper, M. Terminal cancer care and patients' preference for place of death: a prospective study. *British Medical Journal* 301:415-7, 1990.
- Trebilcock, M.S. Winners and Losers in the Regulatory State, in Rea, K.J. and J.T. Macleod, *Business and Government in Canada*, Toronto: Methuen, 1976.
- Tuohy, C.J. Medical Politics After Medicare. *Canadian Public Policy* 2(2):192-210, 1976.
- Tuohy, C.J. and R. G. Evans. Pushing on a String: The Decentralization of Health Planning in Ontario, in Gotembiewski, R.T. and A. Wildavsky (eds.), *The Costs of Federalism*. New Brunswick, N.J.: Transaction Books, 1986.
- University of Toronto School of Hygiene and University of Michigan School of Public Health Effects of Delivery Systems and Health Care Resources on Medical Care Behavior. Report to the Ontario Ministry of Health , 1973.
- Wasson, J., Gaudette, C., Whaley, F. and Sauvigne, A. Telephone Care as a Substitute for Routine Clinic Follow-up. *Journal of the American Medical Association* 267(13):1788-1793, 1992.
- Weisbrod, B.A., Test, M.A. and Stein, L.I. Alternative to Mental Hospital Treatment. II. Economic Benefit-Cost Analysis. *Arch Gen Psychiatry* 37:400-405, 1980.
- Weissert, W.G., Cready, C.M. and Pawelak, J.E. The Past and Future of Home and Community-Based Long Term Care. *The Milbank Memorial Fund Quarterly* 66(2):309-388, 1988.
- Wennberg, J.E. et al. An Assessment of Prostatectomy for Benign Urinary Tract Obstruction. *Journal of the American Medical Association* 9(20):3027-3030, 1988.
- Wennberg, J.E. Sounding Board. Outcomes Research, Cost Containment, and the Fear of Health Care Rationing." *The New England Journal of Medicine* 323(17):1201-1204, 1990.
- White, D. and Mercier, C. Coordinating Community and Public-Institutional Mental Health Services: Some Unintended Consequences. *Social Science and Medicine* 33(6):729-739, 1991.

Wukel, D. Encouraging the Development of Integrated Health Centres: A Critical Analysis of Lower Referral Rates. *Social Science and Medicine* 23(1):35-41, 1986.

Young, T. Kue. Lay-Professional Conflict in a Canadian Community Health Centre: A Case Report. *Medical Care* XIII(11):897-904, 1975.

APPENDICES

APPENDIX 1

ON-LINE SEARCH STRATEGIES

I. Database: Medline 1966 to December 1994

Set	Search	Results
1	*deinstitutionalization/	277
2	exp *primary health care/	2575
3	community based.tw.	1742
4	exp community health centers/	1072
5	exp community mental health centers/	307
6	maternal-child health centers/	90
7	*community health services/	1170
8	exp *community health services/ec,ma,mt,og,st,sn	11198
9	1 or 2 or 3 or 4 or 5 or 7 or 8	16617
10	exp *managed care programs/	1222
11	*health promotion/	2249
12	exp *preventive health services/	11623
13	professional practice location/	188
14	models, organizational/	476
15	exp *group practice/	481
16	10 or 11 or 12 or 13 or 14 or 15	15394
17	exp *community health centers/	517
18	native healing.tw.	2
19	*indians, north american/	704
20	*home care services/	1714
21	models, organizational/	476
22	17 or 18 or 19 or 20 or 21 or 16	18181
23	9 and 22	7557
24	exp *health services accessibility/	2809
25	*waiting lists/	180
26	24 or 25	2964
27	*self care/	903
28	exp *consumer satisfaction/	1247

Set	Search	Results
29	accountability.tw.	357
30	consumer advocacy/	213
31	empowerment.tw.	309
32	27 or 28 or 29 or 30 or 31	2994
33	cost allocation/	151
34	cost-benefit analysis/	3804
35	exp cost control/	2389
36	economic value of life/	219
37	33 or 34 or 35 or 36	6279
38	exp peer review/	928
39	program evaluation/	2471
40	patient satisfaction/	2358
41	provider satisfaction.tw.	9
42	exp *quality assurance, health care/	6676
43	*quality of health care/	1706
44	exp *"outcome and process assessment (health care)	1600
45	43 or 44 or 38 or 39 or 40	8658
46	26 or 32 or 37 or 45	19071
47	23 and 46	1214
48	comparative study/	187044
49	program evaluation/	2471
50	cross-sectional studies/	8631
51	exp case-control studies/	37269
52	exp evaluation studies/	55036
53	exp cohort studies/	81367
54	reproducibility of results/	12443
55	48 or 49 or 50 or 51 or 52 or 53 or 54	321726
56	limit 47 to (clinical trial or clinical trial, ph)	72
57	47 and 55	653
58	56 or 57	673
59	limit 58 to english language	601
60	limit 58 to french	24
61	59 or 60	623

II. Database: Healthplan 1975 to November 1994

Set	Search	Results
1	*deinstitutionalization/	856
2	exp *primary health care/	6493
3	community based.tw.	2670
4	exp community health centers/	2279
5	exp community mental health centers/	1507
6	maternal-child health centers/	272
7	*community health services/	4490
8	exp *community health services/ec,ma,mt,og,st,sn	25951
9	*ambulatory care facilities/	1295
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9	40589
11	exp consumer organizations/	6409
12	exp health planning organizations/	2313
13	exp governing board/	3128
14	decision making, organization/	1979
15	11 or 12 or 13 or 14	13243
16	exp *delivery or health care/	68484
17	exp *delivery of health care/ec,lj,ma,mt,og,st,sn	21657
18	*delivery of health care/	9265
19	service mix.tw.	32
20	continuity of patient care/	2261
21	multiservice.tw.	34
22	integration of services.tw.	29
23	exp *health services accessibility	8411
24	medically underserved area/	1234
25	single point of entry.tw.	3
26	comprehensive health care/	1573
27	17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25	33924
28	exp *regional health planning/	11374
29	population density/	261
30	exp population/	8058
31	exp "health services needs and demand"/	8996

Set	Search	Results
32	28 or 29 or 30 or 31	26084
33	funding.tw.	4959
34	global budgets\$.tw.	81
35	capitation fee/	701
36	"fees and charges"/	2966
37	user fee\$.tw.	53
38	fund holding.tw.	13
39	fundholding.tw.	49
40	fees, medical/	2258
41	health planning support/	122
42	*financing, government/	1971
43	budgets/	2455
44	33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41	12493
45	15 or 27 or 32 or 44	75035
46	10 and 45	8665
47	personnel loyalty/	208
48	personnel turnover/	833
49	*workload/	411
50	*burnout, professional/	744
51	exp personal satisfaction/	4958
52	*life style/	1213
53	*health status/	2872
54	*"outcome assessment (health care)"/	737
55	*attitude of health personnel/	7329
56	47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55	18291
57	cost allocation/	846
58	cost-benefit analysis/	9656
59	exp cost control/	9250
60	economic value of life/	428
61	57 or 58 or 59 or 60	19597
62	exp *health services accessibility/	8411
63	*waiting lists/	286
64	62 or 63	8662

Set	Search	Results
65	*self care/	1813
66	exp *consumer satisfaction/	3873
67	accountability.tw.	1381
68	consumer advocacy/	564
69	empowerment.tw.	358
70	65 or 66 or 67 or 68 or 69	7931
71	56 or 61 or 64 or 70	52780
72	71 and 46	1577
73	comparative study/	50690
74	program evaluation/	3185
75	cross-sectional studies/	7550
76	exp case-control studies/	18329
77	exp evaluation studies/	47940
78	exp cohort studies/	42867
79	reproducibility of results/	3676
80	73 or 74 or 75 or 76 or 77 or 78 or 79	138673
81	72 and 80	258
82	limit 72 to (clinical trial or clinical trial, ph)	11
83	81 or 82	262
84	limit 83 to english language	261
85	limit 83 to french	1
86	84 or 85	262
87	limit 86 to non-medline	85

III. Database: Cinahl to October 1994

Set	Search	Results
1	exp *community health services/	16753
2	deinstitutionalization/	196
3	community based.tw.	453
4	exp ambulatory care facilities/	725
5	home health agencies/	299
6	primary health care/	1065
7	1 or 2 or 3 or 4 or 5 or 6	18580
8	exp population/	4125
9	exp residency characteristics/	1429
10	exp *health/	4817
11	*health services for the aged/	427
12	health services for the indigent/	82
13	"health services needs and demand"/	256
14	demography/	422
15	patient selection/	356
16	8 or 9 or 10 or 11 or 12 or 13 or 14 or 15	10645
17	exp *health care delivery/	3959
18	exp continuity of patient care/	604
19	service mix.tw.	2
20	(service\$ and integration).ti,sh,ab,it.	61
21	multiservice.tw.	4
22	*case management/	638
23	point of entry.tw.	3
24	*collaboration/	469
25	one stop shopping.tw.	7
26	*health care industry/	118
27	patient centered care/	191
28	17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25	5832
29	*research support/	214
30	exp financing, government/	1477
31	*medicaid/	163

Set	Search	Results
32	exp *cost control/	493
33	exp financial management/	1133
34	exp income/	1487
35	exp "fees and charges"/	458
36	user fee\$.tw.	4
37	funding.tw.	401
38	funded.tw.	172
39	global budget\$.tw.	5
40	fundholding.tw.	11
41	fund holding.tw.	1
42	*health resource allocation/	230
43	exp *economics/	6074
44	economics.hw	115
45	29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37	5339
46	39 or 40 or 41 or 42 or 43 or 44 or 45	8589
47	shared governance/	237
48	decision making, organizational/	51
49	exp consumer organizations/	479
50	governing board/	63
51	*patient centered care/	132
52	decentralization/	85
53	*decision making, patient/	128
54	*patient autonomy/	86
55	*empowerment/	244
56	16 or 28 or 46 or 55	22847
57	7 and 56	3379
58	cost benefit analysis/	722
59	exp *"costs and cost analysis"/	2104
60	exp cost control/	807
61	cost savings/	132
62	economics.hw.	115
63	economic.hw.	417
64	58 or 59 or 60 or 61 or 62 or 63	3147

Set	Search	Results
65	exp *health care costs/	416
66	64 or 65	3147
67	exp consumer organizations/	479
68	exp consumer satisfaction/	1378
69	empowerment.tw.	251
70	accountability/	692
71	*patient centered care/	132
72	67 or 68 or 69 or 70 or 71	2856
73	*health services accessibility/	388
74	health resource allocation/	364
75	exp "appointments and schedules"/	87
76	*health services for the aged/	427
77	health services for the indigent/	82
78	*"health services needs and demand"/	180
79	*needs assessment/	401
80	73 or 74 or 75 or 76 or 77 or 78 or 79	1786
81	exp personal satisfaction/	2237
82	exp quality of life/	1617
83	*personnel retention/	641
84	personnel loyalty/	26
85	personnel turnover/	239
86	exp quality of health care/	8151
87	*health status/	229
88	team building/	158
89	workload/	79
90	exp consumer satisfaction/	1378
91	evaluation studies/	1226
92	81 or 82 or 83 or 84 or 85 or 86 or 87	12255
93	92 or 88 or 89 or 90 or 91	14480
94	66 or 72 or 80 or 93	19216
95	57 and 94	1174
96	exp comparative studies/	2816
97	*research methodology/	959

Set	Search	Results
98	96 or 97	3757
99	95 and 98	61
100	case study.pt.	8318
101	protocol.pt.	932
102	research.pt.	32827
103	standards.pt.	371
104	exp evaluation/	2265
105	evaluation studies/	1226
106	exp "research studies by design (non-cinahl)"/	13039
107	reproducibility or results/	39
108	statistics.pt.	1088
109	100 or 101 or 102 or 103 or 104 or 105 or 106 or	46142
110	95 and 109	494

APPENDIX 2

CONTACTS

Association of Community Health Centres

1. Federation of CLSCS (Quebec) - T. Kaufman
2. Association of Ontario Health Centres
3. Manitoba Association of Community Health Centres - P. Sullivan
4. Community Health Centre Federation of Saskatchewan - Denise (contact person)
5. Federation of CHCs of Nova Scotia - Carol Ann Wright
6. McAdam CHC Pilot Project
Health Region 3, New Brunswick
Carole Dilworth (contact person)

Academic Research Centres

1. Manitoba Centre For Health Policy Evaluation
Department of Community Health Sciences
Faculty of Medicine, University of Manitoba
S-101 - 750 Bannatyne Avenue
Winnipeg, Manitoba R3E 0W3
Contact: Dr. Noralou Roos, Director
2. Northern Health Research Unit
Department of Community Health Sciences,
Faculty of Medicine, University of Manitoba
Contact: Dr. Kue Young
3. Regis Blais
Groupe de Recherche Interdisciplinaire en Sante
Universite de Montreal
4. Jonathan Lomas
Centre for Health Economics and Policy Analysis
McMaster University
1200 Main Street West, Room 3H26
Hamilton, Ontario L8N 3Z5

5. Chris Woodward, Professor
Department of Epidemiology & Biostatistics
McMaster University
6. Dr. Gina Browne
School of Nursing
McMaster University
(Associated with Health & Social Service Utilization Research Unit)
7. John Dorland
Co-Director, Health Policy Research Unit
Queen's University
Kingston, Ontario
8. Community Health Research Unit
University of Ottawa
Department of Epidemiology and Community Medicine
Ottawa Public Health
451 Smyth Road
Ottawa, Ontario K1H 8M5
Nancy Edwards, Co-Director (Elizabeth Lindsay, Co-Director)
9. Dr. Rhonda Cockerill
Hospital Management Research Unit
Faculty of Medicine and Health Administration
2nd Floor, McMurrich Building
University of Toronto
Toronto, Ontario M5S 1A8
10. Dr. Linda O'Brien-Pallas
Quality of Nursing Worklife Research Unit
University of Toronto
11. Dr. Irv Rootman
The Centre for Health Promotion
University of Toronto
100 College Street, Suite 207
Toronto, Ontario
12. Hector Ouellet
Centre de recherche sur les services communautaires
Universite de Laval
Quebec, Quebec
13. Nicole de Dobbeleer
Universite de Montreal
(associated with GRIS - Regis Blais)

14. Brigitte Maheu
Departement de medecine social
Universite de Montreal
(associated with GRIS)

Government

1. Daniel Poirier
Directeur adjoint
Recherche et Planification,
Ministere de la sante et des services sociaux
1075, chemin Ste-Foy, 7-etaage
Quebec City, Quebec
(aussi membre de la commission federale-provinciale -ressources humaines)
2. Jane Bartram
Executive Director
Health Strategies Office
Ontario Ministry of Health
3. Anne Premi
Project Manager
Community Health Framework Project
Ontario Ministry of Health
4. Judy Watts
Director, Resource Management
Department of Health
Government of Northwest Territories
6th Floor, City Centre, Box 1320
Yellowknife, NWT
X1A 2L9
5. Dr. Ian Gilchrist
Medical Director
Department of Health
Northwest Territories
6. Brian Kitchen
Director of Policy and Program Development
Department of Health and Social Services
Yukon Territory
7. Joan Dawe
ADM Community Health
Department of Health
Newfoundland

8. Bonny Hoyt-Hallet
ED, Planning and Evaluation Division
Department of Health and Community Services
New Brunswick
9. Carol Dilworth
Department of Health and Community Services
New Brunswick
10. Dean Hirtle
Administrator
Policy, Planning and Research
Department of Health
Nova Scotia
11. Steven Mathieu
Ministry of Health and Social Services
Quebec
12. David Bogart
Director
Information, Planning and Evaluation Branch
Ministry of Health
Ontario
13. Dorothy Loranger
Program Director
Community Health
Ministry of Health
Ontario
14. Ulrich Wendt
Ministry of Health
Manitoba
15. Wayne Fritz
ED, Planning and Policy Development Branch
Ministry of Health
Saskatchewan
16. Ray Lafleur
Ministry of Health
Alberta
17. Gail Matheson
Ministry of Health
Alberta

Professional Associations

1. Stephen Vail
Health Policy Consultant
Canadian Nurses Association

APPENDIX 3

SCREENING CRITERIA FOR COMMUNITY-BASED HEALTH CARE DELIVERY STUDY

Purpose of screening

To select articles that might provide evidence of the impact of different community-based organizational or human-resource modalities in Canadian-like settings.

Criteria

Articles must fulfill all the following criteria:

i. Community-based health care delivery (CBHCD)

Characteristics are:

Close to home (Services are delivered in settings and in a manner that there is not an abrupt transition from routine daily activities).

In non-institutional settings (Settings are not primarily for institutional care)

As part of a spectrum of services (Services are delivered for a number of condition by different provider types).

Therefore exclude articles that describe:

Institutional settings such as hospitals, referral centres, day surgery centres, free-standing day surgery and ambulatory care centres.

Institutional type services such as non-minor surgery, intensive diagnostic investigations.

Single service or single provider settings such as abortion clinics, medi-centers, family physician offices.

ii. Countries

Include only studies in the following countries:

Canada, U.S.A, Great Britain, Italy, France, Germany, Holland, Belgium, Sweden, Norway, Denmark, Finland, Australia and New Zealand.

iii. Focus on Organizational or Human Resource Modalities

Do not include articles that compare different therapeutic modes.

SUMMARY OF LITERATURE ON CBHD MODELS

Comparative Studies

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Addington-Hall/ 1992	Clinical trial	Service Integration	Inner London, England Cancer pts., yr. to live and their care givers, on home care. Ages 18-75, male & female	Case management vs. usual care	Quality and outcomes of care: No significant difference to presence, severity, control of symptoms/ADL/psychiatric morbidity/sources of help/use of & satisfaction with service/career problems.	Moderate
Baldwin, LM/1993	Cohort study	Service Integration	Seattle, USA - downtown CBHC centre. Self reported health status fair/poor. Low Income, elderly (60), ambulatory	Pike Market Clinic (PMC) care vs. other medical care sources	Quality and outcomes of care: PMC clients found the clinic more convenient and had fewer disability days, fewer ER visits, but more Doctor visits in two months than comparison group.	Moderate
Beuscher, PA/1991	Cohort study	Service Integration	North Carolina, USA Pregnant women on Medicaid who delivered at 36 wks in 1988-89	Coordinated maternity care vs. other prenatal care	Quality and Outcomes of care: 21% increased birth weight, 23% decreased mortality, \$140 average savings in postnatal infant costs.	Moderate
Beuscher, PA/1992	Cohort study	Service Integration	Kentucky & North Carolina, USA Low Income women on Medicaid who give birth to a live baby.	Prenatal care of public health department vs. other providers.	Quality and outcomes of care: Increased birth weight at PHD's.	Moderate

Outcomes may be related to:

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Bond, GR/1989	Cohort study	Service Integration	Indianapolis, USA Adults with acute persistent mental illness. Poor, refused from 1 of 2 private inner city hospitals for 1st time to a threshold Bridge program.	Bridge West short- term program, 8 bed crisis home with 24hr. supervision vs. Bridge South short- term program; temporary shelter at hotels and boarding houses.	Quality and outcomes of care: No significant differences in program effectiveness or costs - both reduced hospitalizations, improved accommodations, but staff turnover high in 24hr. crisis home.	Weak
Borland, A/1989	Clinical trial: pre/ post test comparison	Service Integration	Spokane County, USA Adult psychiatric patients age: 18-60.	Pre case management vs. initiation of case management.	Quality and outcomes of care; 4/5 utilization measures decreased p05 function remained stable. Value; no cost differences.	
Burns, T/1993 Parts I & II	Clinical trial	Service mode	London, England Adult psychiatric patients	Home-based psychiatric service vs. standard care.	Quality and outcomes of care; HC - fewer in-hospital days, similar outcomes. Value; HC - substantial cost savings.	Weak
Cartoof, VG/1991	Cohort study	Service mode	NE, USA Pregnant adolescents aged 13-18 in a city of 126,500 who delivered a live infant in 1984-85.	Prenatal care at SCHC vs LTH vs LCHC vs STH.	Quality and outcomes of care; Increased care gives better outcomes. Attractiveness of clinic inconclusive.	Weak
Corcoran, J/1988	Clinical trial: pre/ post comparison	Service mode	Lawrenceville, Georgia, USA Clients attending a public health clinic and Staff of that clinic	Integrated service clinics vs. block clinics	Quality and outcomes of care; some perception of improved care. Quality of Worklife; Improved staff satisfaction	Weak

community or client sense of control (participation, ownership, empowerment)

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Doherty, N/1980	Cohort study	Service Integration	Connecticut, USA Elderly people eligible for Medicaid within a 7 town region	Triage model system vs conventional system	Quality and outcomes of care; function tests; mental status maintained or improved p01. Value: no significant difference.	Moderate-Weak
Fenton, FR/1979	Clinical trial	Service mode	Montreal, Canada Adult psychiatric patients in need of hospital admission (18)	Home care vs. hospital care.	Quality and outcome of care: Hospital days 14.5 vs. 41.7. Outpatient care higher in hospital care. Function, burden & symptoms NS.	Moderate
Fenton, FR/1982	Clinical trial	Service mode	Montreal, Canada Adult psychiatric patients, 60% female, 18-35 yrs. old.	Home-care vs hospital care.	Value: Hospital care 84% - 108% more expensive.	Moderate
Fleming, GV/1986	Community survey pre/post design	Service mode	Baltimore, Cincinnati, Milwaukee, St. Louis & San Jose, USA People who live in the service areas of one MHSP clinic in each city. 1000 families/city.	Membership in MHSP clinic.	Fairness: Improved access in some areas. No increase in continuity or user satisfaction. No cost savings.	Weak
Graveley, EA/1992	Survey	Service Integration	Texas, USA 156 women 17 yrs, 48 hrs postpartum, delivered at county hospital, had 2 prenatal visits at one of 3 study clinics, 1989.	Prenatal care at MD Clinic vs. Mixed Service Clinic vs. RN Clinic	Fairness: no difference Value: RNC most cost efficient Quality of care; MSC least satisfactory	Weak

sickness (equity, accessibility)

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Handler, A/1989	Cohort study	Service Integration	Chicago, USA Women who delivered at University of Illinois or Cook County Hospitals	Prenatal care from Chicago Dept. of Health vs. private physicians vs. mixture.	Quality and Outcomes of care: Private care - Increased low birthweight OR = 3.1 - Increased transfers OR = 2.2.	Moderate
Hughes, SL/1992	Clinical Trial	Service Integration	Illinois, USA Terminally ill (mos.) admitted to urban hospital April 1984-1987. Had a caregiver. Lived within 30 mile area.	Hospital based home care vs. traditional community home care or hospice care.	Quality and Outcomes of care: Increased patient and caregiver satisfaction, fewer hospital days, decreased per capita costs.	Strong
Hulsman, B/1989	Cross sectional survey	Service mode?	South Carolina, USA People who required intermediate or skilled nursing service defined by Medicaid criteria. Were orientated, communicate, on Medicaid.	Residents of nursing home vs. clients of long-term care program.	Quality and outcomes of care. No difference in QUAL.	Weak
Hutchison, et al/1993	Cohort study	Funding	39 physicians who converted from FFS to capitation funding.	FFS vs capitation.	No difference between capitated and FFS practice hospital utilization rates for three time periods.	Moderate
Krleger, JW/1992	Cohort study	Service mode	Washington State, USA Pregnant women on Medicaid	Medicaid recipients in managed care plans (MCP) vs. matched group in fee-for-service (B) matched non-medicaid group in MCP.	Quality and outcomes of care: No difference between MCP & B on Medicaid. Medicaid (MMC) vs. Non-Medicaid in MCP-MMC lower use and poorer outcomes. Fairness: gaps remain in use, outcomes and access for women on Medicaid.	Moderate

value for money (cost, cost-effectiveness)

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Manning, WG/1984	Clinical Trial	Funding	Puget Sound, USA Seattle area residents not enrolled in GHP, > salary 53,000.	New users of pre- paid group practice plan vs. fee-for-service users vs. longer term users of PPGP.		Strong
McHarney-Brown, C/1991	Cross sectional study	Service mode	Albuquerque, NM, USA Inner-city, Indigent, adolescents.	School-based clinic (SBC) vs University Hospital pediatric clinic.	Access and patterns of use Aug. 1988-Dec. 1988; SBC saw significantly more for counselling and health care maintenance.	Weak
Milligan, SE/1989	Cross-sectional survey	Service mode	Western Pennsylvania, USA Women age 13-44 who attended 1 or 44 family planning clinics.	Free standing clinic vs. community health clinic vs. hospital clinic.	Accessibility and satisfaction; freestanding most accessible and most satisfactory. Hospital clinics least in both categories.	Weak
Mlujen, M/1992	Clinical trial	Service mode	South Southwark, London, England Severe mentally ill, needed immediate hospitalization. No primary admission, 80% first time, 20% repeats. Aged 18-64.	Home based care vs. hospital care.	Decreased hospital stays by 80%, other slight advantages.	Moderate
Morse, GA/1992	Clinical trial	Service Integration	St. Louis, USA Homeless individuals with serious psychiatric illness (Global Severity Index), geographic stability, no serious violent behaviour.	Case manager vs. drop-in vs. outpatient treatment.	Patients in all groups improved over time in most areas. Those in CT most satisfied.	Moderate

Quality of Life for Clients (quality of care, effectiveness, satisfaction)

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Matt, FD/1973	Cohort study	Service mode	Sault Ste. Marie, Canada Families of Algoma Steel Corporation	Prepaid group practice plan (GHA) vs. Insurance company plan (IP).	Patterns of use July 1987-1988; GHA-less continuity of care. 25% lower hospital rates.	Moderate
Oktaç, JS/1987	Clinical trial	Service mode	John Hopkins, USA 64 yrs & thought to need nursing home placement. Selected Mar. 1979-Sept. 1981.	Foster home care vs. nursing home care.	No significant differences, #s too small. Cost difference NS.	Weak
Poland, ML/1992	Clinical trial	Service Integration	Detroit, USA Low Income pregnant women enrolled at Hutzel Hospital prenatal clinic, April 1986-Mar. 1988.	Indigenous paraprofessional Maternal-Child Health Advocate vs. control group.	Some positive results but inconclusive.	Weak
Renaud, M/1980	Cohort study	Service mode	Montreal, Canada GPs in Montreal area who graduated after 1984.	CLSC care vs. private group clinic care for tension headache.	Quality and outcomes of care: CLSC physicians provided more adequate care, gave better examinations, had higher patient satisfaction scores.	Moderate
Stein, L/1980	Clinical trial	Service mode	Madison, USA Adult psychiatric patients (18-62 yrs.) seeking admission.	Training in Community Living (TCL) vs. Hospital care plus follow-up.	Quality and outcomes of care: TCL decreases hospital use. Increased independent living, & employment time, contact with friends, self esteem. All decreased when program ended.	Strong
Stergachis, A/1983	Clinical trial	Service mode?	Puget Sound, USA All enrollees of the Group Health Cooperative, an HMD.	An upper respiratory infection (URI) self-care pamphlet mailed with reminder vs. control group.	Patterns of use; fewer phone consults and drug prescriptions.	Weak

SUMMARY OF LITERATURE ON CBHD MODELS

Quasi-comparative, Descriptive and Informed Opinion Studies

Utility of Life for Providers (provider satisfaction, staff-turnover)	Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
	Abelson, et al/1994	Descriptive	Governance	Random sample of citizens, town hall participants, DHC appointees, local elected politicians. Random sample of local health & social services experts.		10% want responsibility for revenue-raising, 30% of DHC appointees want responsibility for allocating funds. 72% willing to take some formal decision-making responsibility. Local politicians ranked cost information higher. Health experts obtained the vote as most suitable decision-making group.	N/A
	Abelson & Hutchison/1994	Descriptive	Governance Service delivery Management	Nurse-centred models. Physician-centred models. Collaborative models.	Literature review.	Successful health centres appear to be based on small teams consisting of a GP, two nurses, and a social worker.	N/A
	Abelson & Lomas/1990	Descriptive	Service delivery	23 FFS practices, 19 HSOs, 11 CHCs	Questionnaire administered during personal interview. Comparison of the performance of 3 types of practice.	Few differences between practice types in approach to and conduct of disease prevention activities. As much variability among providers within practice types as between practice types. High level of health promotion activity reported by CHCs. Trend by CHCs to be less likely to undertake ineffective or dubious screening procedures.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Aday, et al/1989	Quasi-comparative	Service delivery	Ventilator assisted children.	Survey of Impact of home care on children and families in terms of costs and benefits.	Improved developmental status in home setting. Overall, home care less costly but attributed to substitution of parental for professional nursing. Parental concerns; health of children, long-term development, technical & financial costs, level of commitment, tension with professional staff.	N/A
Alberta Health	Opinion Funding			Discussion of Issues.		N/A
Alford/1975	Descriptive	Governance	Health Care Agencies In U.S.A.	Analysis of health care decision making process related to planning.	Competition among structural interests results in dynamics without change in health care policy.	N/A
Angus & Manga/1990	Descriptive	Governance Service delivery Management	CHCS/Cooperatives		Cost effectiveness - accessibility, quality of care, range of services.	N/A
Angus, et al/1995	Descriptive	Management Service delivery H.H.R.		Analysis of cost drivers in Canadian health system	Significant cost savings are feasible. Focus on developing cost-effective continuing care. Some funding reallocated for human transition costs. Balance must be maintained between strong central control and regional authority to respond to needs.	N/A
Ansak & Zawadzki/1984	Descriptive (Review)	Service delivery	Elderly average age 79. 52% vision impaired. 44% hearing impaired.	Multi-disciplinary multi-service consolidated care.	Participants maintain independence. Receive more professional services and show more improvement. They use hospitals and nursing homes less. Costs are lower.	N/A

APPENDIX 4

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
ARA Consulting Group/1992	Descriptive	Governance Service delivery Management	CHCs	Literature review. Discussion of evaluability issues		N/A
Aronson/1993	Informed Opinion	Governance		Discussion of consumer involvement in long-term care policy in Ontario.	Government-initiated participatory strategies do not live up to democratizing promise.	N/A
Barry, et al/1988	Quasi-Comparative	Governance	Massachusetts, USA 70 men with benign prostatic hypertrophy.	Decision analysis to compare expected outcomes with im- mediate transurethral resection and watchful waiting.	Patient preferences should be the dominant factor in the decision whether to recommend prostatectomy.	N/A
Beclin/1977	Opinion	Management	Hospitals and CLSCs.	Discussion of attempts to integrate hospitals and CLSCs in rural Quebec.	Clash of value systems. Limited integration.	N/A
Blich, et al/1990	Descriptive	Service delivery	HSOs, CHCs, HMOs, FFS	Review of studies of the clinical and economic performance.	Some justification that HSO & FFS patient ambulatory care utilization is similar. More justification that HSO physicians manage greater patient loads. More justification that HSOs employ more non-physician per- sonnel. Some justification that HSOs provide higher quality care. Some justification that HSOs are better structured to deliver preven- tive services. Some justification that HSO physicians believe method of remuneration favours preventive services. Some justification that patients of HSOs are less satisfied with some aspects of care.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Birch, et al/1990	Descriptive	Funding	CHO population.	Application of a needs-based funding model.	N/A	N/A
Birch, et al/1993	Informed Opinion	Funding		A discussion of the applicability of a needs-based approach to funding in Canada.	Needs-based approach severs the link between resources currently used and relative future needs.	N/A
Birch & Shelley/1993	Descriptive	Funding	49 Ontario counties.	For each health care program population mean levels were calculated and adjusted for age/sex to produce a national age- and sex- adjusted share.	Existing data can be used to propose allocations that related to relative need.	N/A
Birenbaum & Clarke-Steffen/1992	Quasi-comparative	Service delivery	19 terminally ill children. 18 families.	Exploratory comparison of costs of terminal illness in home vs. hospital.	Home care less expensive for total costs. More expensive for non-health costs.	N/A
Bozzini/1988	Descriptive	Service delivery	CHSCs.	Discussion of service delivery in CLSCs.	Good accessibility. 27-43% penetration. Impressive quantity and variety of preventive and community programs.	N/A
Brown/1981	Informed Opinion	Governance	HSAs in the U.S.A.	Discussion of governance issues related to HSAs.	Highly politicized. Conflict between economics and politics. Countervailing sources of power.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Carr-Hill/1987	Descriptive	Funding	Regional Health Authorities In Great Britain.	Examination of the process of resource allocation for health services.	Mortality ratios cannot be taken as a sufficiently good proxy of morbidity.	N/A
Carroll/1989	Informed Opinion	Governance	Ontario non-profit housing program.	Application of accountability typology to program.	Enhanced accountability mechanisms need to be developed.	N/A
Charles & DeMaio/1993	Informed Opinion	Governance	N/A	Literature review In the context of a conceptual framework.	Greater conceptual clarity is needed in defining goals and dimensions of lay participation.	N/A
Checkoway/1982	Descriptive	Governance	HSA's In U.S.A.	Description of a national study on participation objectives and methods of HSA's.	Agencies favoured "safe" participation method that doesn't transfer power to citizens.	N/A
Checkoway & Doyle/1980	Descriptive (case)	Governance	East Central Illinois, U.S.A. HSA.	Description of power struggle between providers and consumers.	Health care planning cannot be considered apart from a context of politics. Community organization is important for those wishing to exercise power.	N/A
Church/1994	Descriptive	Governance	7 CHC development processes In Ontario.	Comparison of development process based on interview, review of primary documentation, and literature review. Use of an evaluative framework.	CHCs have developed as an outcome of the competition among structural interests In health care politics.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Conrad/1993	Informed Opinion	Management	N/A		Argument that vertical integration involves the coordination of service input and outputs to achieve optimal personal health.	N/A
Crichton/1976	Informed Opinion	Governance	N/A	Discussion of the shift in power from medical entrepreneur to corporate rationalizers in health care in Canada.	N/A	N/A
Crichton, et al/1991	Descriptive	Service delivery Management		Literature review within a conceptual framework	N/A	N/A
Crichton/1994	Informed Opinion	Service delivery		Overview of the development of CHCs in Canada.	Medical practice organization is still tightly controlled by the medical profession and is geared toward individualistic approaches to medical care.	N/A
Davidson, et al/1989	Descriptive	Management	Elderly clients in two rural counties in Minnesota. Pre-admission screening/alternative care grants program.	Analysis of the allocative efficiency of case managers for community-based elderly. One year follow-up.	Case managers were allocating home and community-based care in a reasonably efficient manner.	N/A
Deber, et al/1993	Descriptive (Review)	Governance	2-4 senior government officials in each Canadian province.	Telephone interviews and literature review.	Conceptual framework to determine where public participation in decision making is appropriate.	N/A
Dowling/1995	Descriptive (Review)	Management	N/A	Literature review. Discussion of integration and findings from a number of studies.	Success factors.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Eakin/1984	Descriptive	Governance	140 board members in 11 anglophone hospitals between 1973 and 1976.	50 formal semi-structured interviews with administrators, senior doctors, board members, and government officials. Review of organizational documentation. Literature review.	Despite government efforts to democratize boards, traditional board "elites" and administrators maintained control.	N/A
Fowler, et al/1988	Descriptive	Governance	471 patient candidates for prostatic resection for benign prostatic hypertrophy.	Prospective patient interview.	Patient choice is important if the goal of surgery is to improve the quality of life.	N/A
Freeman, et al/1982	Descriptive	Service delivery	Catchment areas for planned CHCs in twelve U.S.A communities.	Survey.	Nearly 50% lower utilization. Access for low income and minority areas to ambulatory care.	N/A
Fried, et al/1989	Descriptive	Service Delivery	N/A	Discussion about difficulties of economic evaluations of mental health.	Questionable external validity of economic evaluations.	N/A
Godbout/1981	Descriptive	Governance	6 CLSCs in Montreal, Canada.	Analysis of introduction into community. Analysis of minutes. Interviews. Monograph for discussion.	Tendency towards domination by professionals and bureaucratization. Consumers require autonomous source of power.	N/A
Gosselin/1984	Informed Opinion	Management	N/A	Discussion of the first decade of decentralized health care in Quebec.	Health care decentralization has not yet lived up to expectations.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Hurley, et al/1992	Informed Opinion	Governance		Discussion of information requirements in decentralized decision-making.	Need to integrate expert knowledge with values, needs and preferences. Decentralization may provide the opportunity to bring these two types of information together.	N/A
Kemper, et al/1987	Descriptive	Service delivery	16 demonstration projects provided case-managed community care to impaired elderly populations, age 50-65.	Review of 16 demonstration projects.	Expanded funding leads to increased aggregate costs. Expanded funding appears to positively affect quality of life. Cost reductions through improved targeting.	N/A
Korenblat/1989	Quasi-comparative	Service delivery	411 mothers in a teen pregnancy and parenting program in San Francisco, U.S.A.	Birth certificate data audited for birth weight, age of mother, race of mother. Comparison with teen births and birthweights for San Francisco teens.	Participation in program strongly associated with better birth weight outcomes.	N/A
Kronick, et al/1993	Descriptive	Service catchment	HMOs	Ratio of physicians to enrollees as an indicator of the staff needs of an efficient plan.	360,000 to support three plans for acute care. 180,000 to support three plans for primary care.	N/A
Lambrew, et al/1993	Descriptive	Management	Local health department and hospital.	Case study	Mutual interest and physical proximity are facilitators. Outside crisis and assistance were keys in this case.	N/A

Author/ Year	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Lehman, et al/1994	Quasi-comparative	Service delivery	Clients experiencing acute 24 hour care screened in 4 cities.	Comparison of two cohorts on continuity of care, case management and outcomes.	Improvement in the provision and continuity of care management. No improvement in outcomes.	N/A
Lennie, et al/1990	Descriptive	Management	9 CHCs in Australia	Examination of the performance of CHCs as primary care organizations.	Effective internal management and shared ethos were the strongest predictors of favourable outcomes overall.	N/A
Marmor & Morone/1980	Informed Opinion	Governance		Discussion of imbalance of power and information in health care decision making.	Support of staff is essential to stronger consumer role. Existing consumer organizations as a source of representation. HSAs need authority.	N/A
Murray, et al/1984	Descriptive	Governance	6 Ontario hospitals	Preliminary test of several hypotheses in the literature.	Hypothesized importance of the decision-makers subjective interpretation of the causes for cutbacks, and the tendency to blame inward and cut costs through efficiency measures.	N/A
Naylor/1986	Descriptive	Governance	Medical Profession in Canada	Discussion of the rise of medical professionalism in Canada.	N/A	N/A
Newton/1970	Informed Opinion	Governance		Discussion of the relationship between size, effective and democracy in local government.		N/A

Author/ Year	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
O'Neill/1992	Informed Opinion	Governance		Discussion of the record of citizen participations in health-care decision making in Quebec.	Community participation and empowerment are two different things. Adequate information and a strong mandate are precursors to effective citizen participation.	N/A
Ontario Ministry of Health/1991	Descriptive	Governance funding	HSOs in Ontario.	Program evaluation.	Switch from fee-for-service to capitation increase by an average of 46% + bonuses – 70%. Alternative bonus mechanism recommended.	N/A
Oklay & Volland/1990	Quasi-experimental	Service delivery	93 comparison group frail elderly/caregivers in a Post-Hospital Support Program at Johns Hopkins in Baltimore. 98 treatment group pairs.	Interviews were conducted with patients and caregivers at 1, 3, 6, 9 and 12 months after discharge.	Slight reduction in caregiver stress. Substantial reduction in hospital days. Possible extension of life. Annual savings of \$4,585/patient. DSCs have been well integrated into administrative structure of hospitals. Less integrated with professional structure. Achievement of mandate reflects integration findings.	N/A
Pineault, et al/1986	Descriptive	Management	32 DSCs and Hospitals in Quebec	Questionnaires were administered to heads of DSCs, CEOs, and Directors of Professional Services and EDs of other short-and long-term hospitals, nursing homes, CLSCs and Regional Councils.	Poorly rated on external role.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Rana/1993	Opinion	Funding		Discussion of regional funding allocation model.	N/A	N/A
Rondeau & Deber/1992	Opinion	Management		Discussion of factors affecting integration and coordination of CBHD.	A number of political, social and economic barriers to creating truly integrated human service delivery.	N/A
Saltman/1994	Opinion	Governance		Discussion of conceptual framework for patient choice and empowerment and basic issues.	N/A	N/A
Seacat/1977	Descriptive	Service delivery	Neighbourhood Health Centres	Review of Evaluative Study	Evaluative studies on effectiveness in disease prevention, in reduction of hospitalization and emergency room usage, and improved quality of care show the centers compare favourably to other methods of similar care.	N/A
Sharpe/1970	Informed Opinion	Governance	N/A	Discussion of local government theory.	N/A	N/A
Shortell/1988	Descriptive	Management	N/A	Discussion of the performance of systems vs. non-system hospitals.	Hospital systems have not yet lived up to their promise in terms of efficiency and cost.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Shortell, et al/1993	Descriptive	Management	12 U.S.A. hospital systems.	Interviews with chairs of system boards, other board members, operating unit board members, President/CEO, and physician leaders. 2-3 day site visits. Background material on each system. Meetings with research advisory groups from each system.	Facilitators of Integration. New management culture. Population-based needs assessment. Patient care management system. Technology management system. Continuous Improvement. Information Linkage and Incentives.	N/A
Shortell, et al/1994	Descriptive	Management		Description of various approaches to developing Integrated systems and based on research, the performance of such systems.	Clinical Integration still not well developed. Better performance measures needed. More research needed. Considerable barriers.	N/A
Stevenson, et al/1989	Opinion	Funding		Discussion of Issues and options for funding community-based services.	N/A	N/A
Tindall & Tindall/1990	Descriptive	Governance	N/A	Discussion of local government in Canada.	N/A	N/A
Townsend, et al/1990	Descriptive	Governance	84 terminally ill patients.	Prospective study of randomly selected cancer patients in hospital and community.	Majority of patients preferred to die at home. With additional resources 50% more patients could be supported to die at home.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Treblecock/1976	Opinion	Governance	N/A	Discussion of the power imbalance between provider groups and consumer groups in the political decision-making arena.	Imbalance of political resources favours provider groups.	N/A
Tuohy & Evans/1986	Opinion	Management		Discussion of political and economic considerations in decentralization.	Need to link planning to resource allocation. Need to minimize organizational costs.	N/A
Wellsbrod, et al/1980	Comparative	Service delivery	Psychiatric patients needing admission to hospital.	Benefit-cost analysis of a controlled experiment comparing hospital and community-based mental health.	Costs of mental health were high for both groups. 40-50% of costs are indirect. Hospital-based program was 20% cheaper. Community-based program contributed to increased work productivity for patients. Community-based program provides both additional costs and benefits compared with the conventional treatment.	Strong
Wessert/1985	Descriptive	Service delivery	N/A	Discussion of problems associated with cost-effective.	Few of the assumptions concerning the potential cost-effectiveness of home-care community-based long-term care were warranted.	N/A
Wells/1981	Opinion	Management	N/A	Discussion of barriers to integration and coordination in human services.	Conceptual conflict. Professional resistance. Bureaucratic constraints. Politics.	N/A

Author/ Yes	Study Design	Mortality	Participants	Intervention/ Exposure	Outcomes	Strength of Study
Wennberg/1990	Opinion	Governance	N/A	Discussion of patient choice within the context of cost containment.	N/A	N/A
Wennberg/1988	Descriptive	Governance	Patients who were candidates for prostatectomy in Manitoba & Maine.	Analysis of claims data. Patient and physician interviews. Decision analysis.	Risk and frequency of applications much higher than reported in literature. Need to increase quality of information for patients when deciding on which procedure to undergo.	N/A
Wessert, et al/1988	Descriptive	Service delivery	Home care and community for the elderly in the U.S.A.	Examination of 27 studies of home care in the U.S.A.	Home care and community care has not tended to produce cost savings. Positive affect on health status and well-being.	N/A
White & Mercler/1991	Descriptive	Management	Community Mental Health and Public-Institutional Health in Quebec.	Comparison of two types of mental health organizations.	Conversion from loosely knit network to coordinated integrated system may limit the variety of service delivery arrangements.	N/A
Wukel/1986	Quasi-comparative	Service delivery	GPs practicing in CHCs in Holland.	Statistical analysis of relationship of GP referral rates in community health centres to performance of GPs.	Differences cannot be explained by structural factors, nor by selection of patients and doctors.	N/A
Young/1975	Descriptive	Governance	Regina Community Clinic	Discussion of the resignation of the medical staff at the clinic in 1974.	Medical professionals are resistant to change in payment system or professional autonomy.	N/A