The Relations Between Homelessness & Health in Canada

Research Lessons and Priorities

A Discussion Paper written for the
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Homelessness remains a major social and health issue in Canada. The following discussion paper was written for the International Think Tank on Reducing Health Disparities and Promoting Equity for Vulnerable Populations from September 21-23 in Ottawa, Canada. It is intended to provoke questions and to raise issues for discussion during the meeting. It does not represent an exhaustive review of all possible research, programs or policies. Our paper begins with a brief overview its organization, rationale and objectives. We then describe our methods, sources and inclusion/exclusion criteria. Next, we provide a descriptive overview of the homelessness problem in Canada and the terminology used throughout the paper. The subsequent section provides an overview of the vulnerabilities and health issues associated with homelessness. We describe the interrelations between and among biological, behavioural and socio-environmental factors that may contribute to increased morbidity and mortality among persons at-risk or homeless. We identify important risk factors and conditions, and both physical and mental health outcomes. We then summarize the potential mechanisms that may help to explain relations between increased morbidity or mortality and exposure to various combinations of risk factors and conditions. The next section of our paper provides an overview of existing interventions, policies and programs. We conclude by identifying research gaps and opportunities, and potential strategic directions emerging from the report. The present paper offers a useful foundation for a more exhaustive review and critical analysis of homelessness (and related research) following input from the Think Tank.

I. BACKGROUND

A. Introduction

Homelessness research is an essential source of information for the array of stakeholders working to address this issue. Program planners, service providers, policy makers and community groups all utilize the results of homelessness research. The information from research is used for a wide variety of purposes including public education and awareness campaigns, public policy decisions, resource allocation, the development of programs and interventions, and program or policy evaluation (Quantz and Frankish, 2001; see http://www.hvl.ihpr.ubc.ca). As such, the identification of research gaps and priorities is a vital element in responding to the needs of the homeless and related stakeholders (i.e., service providers, professionals, government). The identification of research gaps may also assist both funders and researchers in the planning and undertaking of future research projects. Recently initiated programs from the Canadian Institutes of Health Research to reduce health disparities in vulnerable populations are but one example of research programs that can benefit from a clear research agenda.

This paper responds to this need by providing a preliminary framework and overview of existing research on homelessness in Canada, with the intent being to identify future research topics and strategies. In addition, this framework also provides an opportunity for engaging research partners by identifying the roles that stakeholders may potentially play in research activities.

The content and conclusions of this paper compliment the mandate of Canada's National Homelessness Initiative's and their call for a comprehensive (national) research agenda. The purpose of this national agenda will be to "lay the foundation for understanding the root causes of homelessness, support future policy development and serve as a resource for accountability and reporting" (HRDC, 2003). The creation of this agenda is important and also raises immediate questions as to who will be responsible for which aspects of the planning, execution and evaluation of research-related initiatives.

For example, which decisions and activities are best undertaken by which level of the system and what is the 'capacity' of the system and community partners to engage inresearch in a meaningful manner? (Note: Health Canada has recently funded one of the authors of this paper to produce a now-completed, report on the measurement and operationalization of community capacity).

B. Purpose

The primary purpose of this paper is to provide a discussion list of potential strategic directions for future homelessness research in Canada. These strategic directions. will emerge from the overview and analysis of homelessness literature presented throughout this paper. The results of this paper also provide a starting point for the creation of a research agenda around the relationship between homelessness and health. Further development and utilization of this agenda will occur during various national workshops and meetings that will feature partners from government, service agencies and academic institutions.

C. Methods

A number of different strategies were used to ensure a representative array of homelessness literature, both geographically and topically. This was deemed essential considering that many sources of information are not found within the mainstream academic literature, but are found in reports from government, community and service agencies. This paper is not a comprehensive collection and review of the homelessness literature in Canada, rather it is an opportunity to frame the different types and areas of research for the purpose of developing future work in this area.

The scope of homelessness implies a wide range of issues and responses. For the purposes of this paper, only documents that specifically identified homelessness as their major topic were collected. As such, housing policy and program descriptions were only included if they were part of a larger homelessness report or document. General papers on broad housing policy and programs were not included. In order to capture the most recent and applicable information, only homelessness literature since 1990 was collected. Only English language literature was reviewed.

An initial strategy involved the search of electronic databases, including major social sciences, health, and humanities databases. This process yielded academically based research, generally undertaken in post-secondary settings. A second strategy sought out examples of literature from relevant government, community, advocacy and service websites. In this search, the research team identified and collected examples of homelessness research, service frameworks, program descriptions and policy documents. Canadian literature was the primary target of this literature search but review papers from international sources were also sought for comparison purposes and to provide additional examples of strategies and interventions to address homelessness.

Upon their collection, documents were individually reviewed and categorized based on the type of literature (e.g., research, program description) and the type of intervention or strategy employed (See Section 4). A number of strategies/interventions were then chosen from the available documents as examples for each category.

D. Report Organization

Section II of this paper will provide an overview of homelessness in Canada and the definitions used throughout the report. Section III will outline a model of the mechanisms between homelessness and health status and outcomes, while Section IV will provide an overview and exemplars of the strategies and interventions undertaken to address homelessness. In Section IV, the paper will conclude with an outline of strategic directions for future homelessness research. Throughout the report, a summary of each section will provide implications for the information presented.

II. HOMELESSNESS IN CANADA

A. Overview

Canada has long had an international reputation as one of the best countries in which to live. On average, Canadians enjoy a high status of health and have access to many government services, including health and social programs. For a growing number of Canadians, however, obtaining basic shelter has become a daily struggle and it is widely recognized that the problem is getting worse (Begin et al., 1999). Homelessness has been referred to as a growing epidemic in this country and stakeholders are calling for immediate solutions to a problem that threatens the health and quality of life of many Canadians.

Homelessness is associated with poorer health status as indicated by high mortality rates and a high prevalence of substance abuse, mental illness, and infectious diseases (Begin et al., 1999; Hwang, 2001). Homeless people also have a high risk of experiencing injuries and violence (Hwang, 2001). Many of these problems are exacerbated by barriers to accessing health services (Begin et al., 1999; Judd & Forgues, 1989). For example, many homeless persons may not have a health card, many are unable to make health appointments, and their ability to receive coordinated care is impaired by their lack of an address and/or place of contact (Begin et al., 1999). As such, many health care services to the homeless end up being delivered in emergency departments. Subgroups such as youth, women, Aboriginal persons and those suffering from mental illness may also suffer from unique health conditions that require a specialized approach (Begin et al., 1999; Hwang & Gottlieb, 1999). At a national level, health disparities affecting homeless people are not well described and documented (Quantz and Frankish, 2002). Further investigation is required to clearly understand the complex interactions between homelessness and poor health (Hwang, 2002).

In order to initiate an appropriate response to homelessness, researchers and policy makers have thus attempted to ascertain a clearer picture of the problem. Many of these efforts have been dedicated towards trying to capture a clear profile and count of the homeless population. Canada's first efforts to provide an estimate of the homeless population began in 1987 through the work of the Canadian Council on Social Development (Begin et. al, 1999). The purpose of this initiative was to provide a profile

of homelessness and its causes, as well to develop a number of strategic responses. Further efforts at measuring homelessness were undertaken with varying results, primarily through the Statistics Canada Census. Data from the most recent census (2001) indicated that over 14,000 individuals were homeless in this country (Werapitiya, 2002) and that 18% of Canadians live in poverty. Most advocates and researchers, however, believe that even these numbers vastly under-represent the extent of the problem and that new strategies are necessary to accurately capture usable information on this population. The latest measurement strategies have revolved around the development of the HIFIS database (Homelessness Individuals and Families Information System) and have focused on capturing a greater range of information on shelter users (Canada Mortgage and Housing Corporation, 1999). This database has been implemented in shelters across Canada and it is hoped that the information collected will provide policy makers and service providers with greater tools to respond to homelessness, as well as measure intervention outcomes.

As urban areas try to respond to this issue, local initiatives have also been undertaken to try and determine the scope of the problem. In 2002, Woodward et. al released a report documenting an estimate and profile of the number of homeless and "at-risk" persons in the Greater Vancouver Region. This report described the development of a data management system to store and update this profile, as well as methods for ensuring stakeholders have access to relevant information. Similar initiatives to measure the scope of homelessness have been undertaken in other Canadian cities such as the Toronto Report Card on Homelessness (2000); the City of Calgary Homelessness Study (2002), and in a number of smaller Canadian urban areas (See Kelowna Steering Committee on Homelessness, 2002; York Region Homelessness Task Force, 2000; Nelson's Committee on Homelessness, 2003).

Although most would acknowledge that homelessness is a large problem in Canada, there are numerous challenges associated with obtaining a clear picture of homelessness. Part of this problem stems from the lack of a consistently used definition of homelessness (see Section D). Other challenges often faced by researchers include a lack of participation from agencies (Begin et al., 1999), difficulty in identifying homeless

persons, the transient nature of homelessness and difficulty in communicating with homeless persons (Bentley, 1995). Successful measurement efforts will not only provide an idea of the numbers of homeless persons, but a descriptive profile of the causes and health/service needs of this group that will allow stakeholders to respond appropriately.

B. Concurrent Issues

Several other factors also warrant consideration in understanding the issue of homelessness in Canada. The first of these is Canada's rapid and continuing trend towards urbanization. Canada is considered one of the most urban societies in the world as indicated by the fact that almost 80% of Canadians now live in cities with populations of 10,000 or more (Sustainability Report, 2003). Although homelessness is a problem in rural areas, it has become a crisis in many of Canada's urban areas. Homelessness in these centers is tied directly to an increasing lack of availability of affordable housing. Housing costs have increased and substantial numbers of rental housing have been lost to other uses (HRDC, 2003). The high demand for affordable and safe housing is reflected in the long waiting list for limited numbers of social housing. In the Vancouver region, for example, there are over 13,000 people on a waiting for social housing (Woodward et al, 2002).

Another issue to consider is that homelessness is not limited to any one group. In fact, homeless persons come from numerous subgroups including men and women, youth, families, Aboriginal people, immigrants/refugees and persons suffering from chronic health conditions. For example, a recent report by the Greater Vancouver Regional District showed that 41% of those in the 'at-risk' for homelessness category were immigrants and refugees (Woodward et al, 2002).

Furthermore, there is no one pathway to homelessness. It is caused by a complex interaction of any number of factors, both at the individual and societal level. In a report to the United Nations, Hulchanski (1998) noted that a number of contributing factors including a decrease in services and assistance; the lack of a federal social housing supply program; spending decreases by all levels of government; racism and discrimination, and;

a lack of action on previous national plans to address homelessness. A multifaceted approach is necessary for successfully addressing the problem of homelessness.

C. Stakeholders

The identification of a research agenda and action on homelessness will require broad governmental and community involvement. The complex range of biomedical, social, cultural, economic and political issues that surround homelessness imply that the list of potential stakeholders is a lengthy one. At the top of this list are the homeless and those at risk of being homeless. The poor health status of homeless persons has been well documented and effective and accurate research knowledge can have a fundamental impact on guiding program and policies to improve this population's health. As such, those who provide services and plan programs and policies (i.e., research consumers) for the homeless populations are also key stakeholders. This group comprises service providers, community agencies and groups, educators, advocates and government. Finally, researchers themselves are important stakeholders, including research funders who need to allocate funding dollars in an effective manner. The information and recommendations found in this paper can provide direction for planning and undertaking needed research that will have a direct impact on policy and programs. It also highlights the question of roles and responsibilities for stakeholders in addressing homelessness.

D. Definitions and Terminology

1. Homelessness

Defining homelessness is one of the first challenges in addressing this issue. There is no agreed-upon definition (Bentley, 1995). At a general level, definitions of homelessness can be viewed on a continuum (Begin et al., 1999). On one end of this continuum is the most exclusive definition and includes those who are without any kind of shelter of their own. These include those who are living outdoors, in the park or are in emergency accommodation and are generally referred to as the absolute homeless. On the other end of the continuum is the most inclusive definition and includes those who are

at risk of being homeless. Those who are at risk can include persons who are living in substandard/unsafe housing, persons who are paying an unreasonable amount of their income towards accommodation, or those who are staying with friends or family on a temporary basis, often referred to as 'couch surfing'.

Discussions of the definition of homelessness are not trivial. Like recent discussions of low-income cut-offs (LICOs) for defining poverty, they may have profound consequences for policy, practice and resource allocations. They also have important implications for 'defining success' of homelessness initiatives. We define evaluation as "*the comparison of objects of interest against standards of acceptability*" (from Green & Kreuter, 1999). At present, it is not totally clear who the objects of interest (i.e., homeless) are. More important, it is far less clear as to how Canada will set 'standards' for measuring levels of homelessness and for ascertaining the relative impact of specific programs or policies.

For the purposes of this paper, the information presented focuses on programs, information and research about the absolute homeless. We excluded general poverty reduction strategies unless they were specifically focused on reducing homelessness. However, it is important to recognize that many of the programs and policies presented here still have implications for those who are at risk of homelessness. This is especially true considering the transient nature of homelessness, in that those affected may find themselves in different areas of the homelessness continuum over short periods of time.

2. Research

Research can be defined as *the systematic generation of new knowledge* but there is a danger that this definition may exclude a large proportion of the available homelessness literature. If 'systematic' refers only to randomized control trials (RCTs) there is little or no homelessness research to appraise. It is clear that positivist, RCT-like designs may not fit with community-based, homelessness research (i.e., one cannot randomly assign the homeless to a given community). RCTs may not represent a proper 'gold standard'. Much work remains to be done in developing proper research designs and analytic strategies for homelessness research. Some direction may be found in

efforts like the WHO's recent 2001 publication, *Evaluation in Health Promotion* (Rootman et al., 2001).

Other supports may be found in the work of the Canadian Institute for Health Information. CIHR has also funded innovative, research training programs on community partnership research (see www.pchr.net). These programs are examining appropriate quantitative and qualitative designs and analyses for use in homelessness research.

For the purposes of this paper, a broad definition of research was utilized in the collection of documents. The use of a more inclusive definition allowed for the capture of a broad range of the work done in this country including primarily descriptive reports, such as program/policy and administrative documents. The collection of this literature also allows for a starting point in identifying potential research directions. To organize and comment on the collected research, we utilized a six-part taxonomy of different 'types' of research. These include:

1. **Conceptual research** refers to research that examines the definition and meaning of homelessness.

2. **Environmental scan research** documents the extent of the homelessness problem, as well as the extent of issues related to homelessness (i.e., health, social issues).

3. **Methods research** focuses on the development of new tools for studying homelessness.

4. **Needs assessment research** focuses on the needs of the homeless as expressed by homeless persons, policy makers, program planners or service providers.

5. **Intervention research** examines the development, planning and implementation of programs, services or interventions for the homeless.

6. **Evaluation research** describes the process and/or outcomes of homelessness programs, policies or interventions. A key question is the effectiveness of programs or services for the homeless.

We recognize that these six research types are neither independent nor mutually exclusive. Often research projects fit into several of these research types. These categories merely provide a simple heuristic device for planning future research strategies and topics.

E. Summary

Homelessness is a growing problem in Canada. Homeless persons suffer from a poorer health status than the general population and face numerous barriers to accessing care. Increasing urbanization and the unique health problems of subgroups also warrant attention in considering this issue.

In order to initiate an appropriate response to homelessness, researchers and policy makers have attempted to ascertain a clearer picture of the problem through several research and community-based initiatives. A long list of stakeholders including homeless persons, service providers and decision makers must be part of any response.

This paper focuses on the absolute homeless, those who are without any kind of shelter of their own. A broad definition of research, which includes documents of a purely descriptive nature, was used to identify exemplars of homelessness initiatives in Canada.

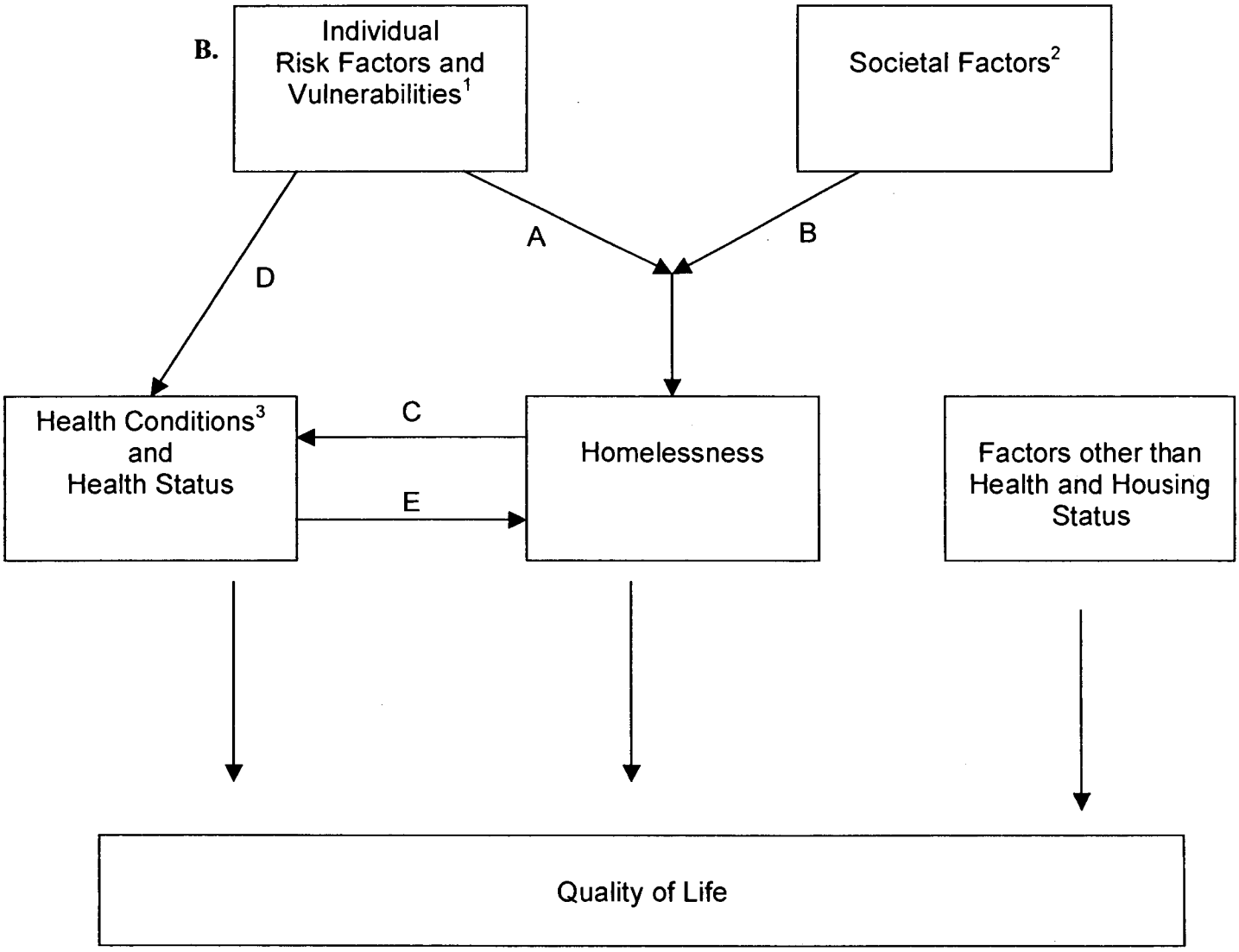
III. Risk Factors, Health Status, Health Conditions, and Quality of Life

A. Introduction

The following sections provide an overview of research on risk factors for homelessness, and health status, health conditions, and quality of life in homeless persons. An adequate discussion of these topics requires consideration of the causal pathways underlying these interrelated issues. The simplified diagram of possible

pathways shown in Figure 1 is used as a heuristic device to aid in this discussion, without any claims regarding theoretical or predictive validity.

Figure 1. Simplified diagram of causal pathways relating homelessness, health status, and quality of life.



Causal Pathways

1. Risk Factors for Homelessness

Most research on risk factors for homelessness have emanated from the observation that certain characteristics and conditions are far more prevalent among homeless people than in the general population. Individual characteristics clearly place certain individuals at increased risk of homelessness (Figure 1, Arrow A). These factors include poverty, minority race, low educational attainment, foster care or abuse as a child, major mental illness, alcohol and drug abuse, and concurrent mental illness and substance abuse (Herman, Susser, & Struening, 1994; Herman et al., 1997; Koegel, Melamid, & Burnam, 1995; Susser, Moore, & Link, 1993; Susser, Struening, & Conover, 1987; Susser, Lin, & Conover, 1991; Susser et al., 1991). However, these individual risk factors and vulnerabilities do not necessarily explain the "causes" of homelessness (Schwartz & Carpenter, 1999). In any society, individuals with certain characteristics will be at increased risk of becoming homeless. At the same time, how many of these at-risk individuals actually become homeless will, to a large extent, be determined by certain societal factors, particularly housing cost and availability, labor market conditions, and the extent of the social services "safety net" (Figure 1, Arrow B).

[1] E.g., poverty, low educational attainment, foster care or abuse as a child,personal habits and behaviors
[2] E.g., labor market, housing cost and availability, social services "safety net"
[3] E.g., mental illness

A similar analysis can be applied to efforts to explain changes in the prevalence of homelessness (Schwartz & Carpenter, 1999). At the level of individual vulnerabilities, both alcoholism and crack cocaine use are associated with an increased risk of homelessness. Crack cocaine use increased dramatically during the mid-1980's and early 1990's and may have contributed significantly to the rising number of homeless people in many cities during this time period (Jencks, 1994). However, the same cannot be said for alcohol abuse, which remained at relatively stable levels. Thus, despite the undisputed association between alcohol abuse and homelessness, alcoholism cannot be said to have "caused" a rise in urban homelessness. Societal factors, such as a shrinking supply of

inexpensive housing, almost certainly played a major contributory role (Jencks, 1994, O'Flaherty B, 1996).

2. Political and Policy Implications of Research on Homelessness

The way in which research questions are asked about the risk factors and causes of homelessness and the health of homeless people is not of merely academic significance. This process has generally reflected disciplinary traditions: health researchers have tended to focus on individual risk factors for homelessness, whereas social scientists have concentrated on the role of marginalization, exclusion, and economic forces in creating homelessness. Perhaps most importantly, the way in which research questions are formulated can both influence and is influenced by public policy debate regarding the proper response to homelessness. Emphasis on individual risk factors can support the position that homelessness is the result of personal failings, and that the requisite solution is greater personal responsibility, not housing per se (Baum & Burnes, 1993).

On the other hand, an emphasis on structural factors can bolster the viewpoint that homelessness is a societal failing that should be remedied by increasing housing subsidies and income supports for the poor. Clearly, these two explanatory models invoking individual and societal factors as the causes of homelessness must be integrated. Health researchers should consider how their work can promote this integration through collaboration with researchers from the social sciences and the use of more sophisticated analytic methods, such as multi-level modelling.

There is also a need for both horizontal and vertical integration of homelessness efforts. *Horizontal integration* refers to greater collaboration across diverse ministries (i.e., Health Canada, Attorney General, HRDC) around homelessness. *Vertical integration* refers to the need and opportunity for greater collaboration and work across all levels of government and community organizations. Positive examples include the National Homelessness Initiative (HRDC) and the Vancouver Agreement, engaging three

levels of government. Questions remain, however, about the role of the 'health sector' in addressing complex issues such as homelessness.

One striking feature of the landscape of research on homelessness and health is how inconsistently this work has been translated into policy and programs. Despite the thousands of published articles on homelessness in the health literature, few of these studies have had a major impact on public policy. Researchers need to consider how to design and conduct studies on homelessness that are policy-relevant. Researchers should also develop strategies for translating this research knowledge into policy and clinical practice.

3. Homelessness and Poor Health

An array of research conducted since the mid-1980's has clearly documented that homeless people suffer from poor health. Homeless people in their 40's and 50's often develop health disabilities that are more commonly seen in persons who are decades older (Gelberg, Linn, & Mayer-Oakes, 1990). Research from the 1990's demonstrated that various subgroups of homeless people have different patterns of health problems. In particular, street youth, homeless single adults, and homeless families have quite distinctive health needs and issues (Burt & Cohen, 1989). This differentiation is particularly important given the fact that homeless parents and children account for an alarmingly large proportion of homeless people in the U.S. (Urban Institute et al., 1999).

Other researchers have shown that certain patterns of homelessness and shelter use (e.g., chronic, episodic, and transitional homelessness) are associated with different health profiles and service needs (Kuhn & Culhane, 1998). While chronically homeless people account for a relatively small percentage of the homeless population, these individuals tend to have very high levels of morbidity and health care utilization. Persons living on the street tend to have worse health status than shelter residents (Gelberg & Linn, 1989).

4. Direct Effects of Homelessness

Both common sense and the documentation of the poor health status of homeless people have led to the assumption that homelessness has an adverse effect on health (Figure 1, Arrow C). This assumption is correct, at least in part. Certain illnesses are either a direct result of, or greatly exacerbated by, the homeless state. For example, homelessness, with the attendant factors of inadequate footwear, prolonged exposure to moisture, long periods of walking and standing, and repetitive minor trauma, predisposes to the development of skin and foot diseases such as cellulitis, impetigo, venous stasis, fungal infections, and immersion foot (Stratigos et al., 1999; Wrenn, 1990; Wrenn, 1991). Living under crowded shelter conditions can easily result in infestations with scabies and lice. Homeless people are often exposed to the elements, with the risk of frostbite and hypothermia in colder climates, or severe sunburn and heatstroke in the summer months.

5. Confounding by Risk Factors

These conditions exemplify the simplest case, a unidirectional causal link between homelessness and specific health conditions. Of course, the relationship between homelessness and ill health can be far more complex. Certain individual risk factors for homelessness – such as severe poverty and substance use – are also strong risk factors for a number of health conditions and poor health status (Figure 1, Arrows A and D). For example, injection drug use simultaneously predisposes individuals towards homelessness and HIV infection. Such confounding associations raise the possibility that much of the research on ill health among homeless people may be placing an undue emphasis on the importance and causal role of homelessness.

Most people who are homeless would likely remain at high risk for poor health even if they were to obtain stable housing (Gelberg & Leake, 1993). While it is difficult to quantify the extent of this phenomenon, it raises the distinct possibility that an intervention whose main effect is to reduce homelessness may not have a large impact on the health of its target subjects.

6. Reverse Causation and the Vicious Cycle

Another possible relationship complicating this analysis is reverse causation and the "vicious cycle" of homelessness and ill health (Figure 1, Arrows C and E). Certain conditions (e.g., mental illness) may both contribute to homelessness and be exacerbated by the homeless state. Accurate identification of the contribution of each of these causal pathways to the association between homelessness and poor health is almost impossible using cross-sectional data. Longitudinal data is far more difficult to collect in homeless populations, but is obviously critical in the assessment of causality.

7. Quality of Life

A final consideration illustrated in Figure 1 is the need for researchers to place an increased emphasis on quality of life among homeless people and to recognize the challenges this approach would entail. Over the last twenty years, health researchers have increasingly recognized the necessity of valuing and measuring quality of life. This trend has not been as prominent in research on homelessness and health. Nonetheless, the interaction between homelessness, quality of life, and health-related quality of life is important and complex. For example, obtaining stable housing may have positive effects on a homeless individual's health, overall well-being, or both (Lehman et al., 1995). Efforts to improve a homeless individual's health may or may not improve other aspects of their well-being. Factors other than health and housing status may have large effects on a homeless person's quality of life. These complexities highlight the importance of measuring the impact of interventions on the quality of life of homeless people (Lehman et al., 1997).

As these interventions are developed and implemented, rigorous scientific evaluation using an appropriate instrument to measure quality of life is critical. However, the measurement of quality of life is particularly challenging among homeless people. Standardized generic scales, such as the MOS SF-12, have been used in homeless people, but this approach makes the assumption that the standard needs of the general population apply equally well to the homeless population (Larson, 2002). Other quality of life instruments for homeless people have been developed without asking homeless people

themselves what life areas are important to them. Furthermore, quality of life instruments may not be applicable across all subgroups of homeless people; an instrument designed for use in middle-aged homeless persons with severe and persistent mental illness may not be appropriate for street youth.

Finally, we must recognize, as stated by the World Health Organization, "*health has an instrumental value*". That is, health is not the end goal. Rather, it is one means to a better quality of life. Improving the health status of homeless persons may rightly create a consequent, positive demand for increased educational and employment resources.

C. Specific Health Problems

1. Mortality

A number of studies from North America and Europe have shown that homeless people are at greatly increased risk of death. Compared to the general population, mortality rates among street youths in Montreal are 9 times higher for males and 31 times higher for females (Roy E et al., 1998a). When men using homeless shelters in Toronto are compared to the general population, mortality rates are 8.3 times higher among 18 to 24 year olds, 3.7 times higher among 25 to 44 year olds, and 2.3 times higher among 45 to 64 year olds (Hwang, 2000). However, death rates among homeless men in Toronto are about one-half that of homeless men in U.S. cities (Hwang, 2000). Possible explanations for lower mortality rates in Toronto include lower rates of homicide and HIV infection, and various social factors such as Canada's system of universal health insurance.

The association between homelessness and high mortality illustrates the difficulty of determining the causal pathways linking homelessness and health. In a study examining the relationship between shelter use and risk of death using longitudinal data in a cohort of more than 8,000 homeless men in Toronto, Ontario, the risk of death increased by more than 80% during months in which homeless shelters were used (Hwang, 2002). However, this finding does not necessarily mean that homelessness itself increases the risk of death (Figure 1, Arrow C). The association between shelter use and

risk of death may be confounded by other variables: for example, periods of increased substance abuse may predispose individuals to become homeless, while at the same time increasing their risk of death (Figure 1, Arrows A and D).

2. Chronic Diseases

Homeless people suffer from a wide range of chronic medical conditions. Medical problems that are particularly prevalent among homeless adults include seizures, chronic obstructive pulmonary disease, arthritis, and other musculoskeletal disorders (Crowe & Hardill, 1993). Conditions such hypertension and diabetes are often inadequately controlled (Hwang & Bugeja, 2000; Kinchen & Wright, 1991). Oral and dental health is often poor (Gibson et al., 2003; Lee, Gaetz, & Goettler, 1994; Pizem et al., 1994).

3. Tuberculosis

Homeless people are at increased risk of tuberculosis (TB) due to predisposing factors such as alcoholism, poor nutritional status, and AIDS ("Prevention of tublerculosis", 1992) In addition, the likelihood of exposure to TB is high in shelters due to the presence of crowding, large transient populations, and inadequate ventilation (Nolan et al., 1991). More than half of all TB cases among the homeless represent clusters of primary tuberculosis rather than reactivation of old disease (Barnes et al., 1996). Most data on TB in homeless populations comes from the U.S.; Canadian data are limited. The incidence of active TB among homeless people in Toronto is 71 per 100,000 (about 10 times the average rate in Ontario) (Yuan et al., 1997.) Data on the molecular epidemiology of TB in the homeless in Canada are lacking.

Treatment of active TB in homeless persons can be complicated by loss to follow-up, non-adherence to therapy, prolonged infectivity, and the development of drug resistance (Pablos-Mendez et al., 1997). Directly observed therapy results in higher cure rates and fewer relapses ("Prevention of tuberculosis", 1992). Homeless persons with positive tuberculin skin tests without active TB may be considered for directly observed prophylaxis (Nazar-Stewart & Nolan, 1992).

4. HIV Infection

Common risk factors for HIV infection in homeless youth in Canada include prostitution, multiple sexual partners, inconsistent use of condoms, and injection drug use (Roy et al., 1999). Infection rates were 2.2% and 11.3% among homeless youths seeking HIV testing at two clinics in Vancouver in 1988 (Manzon, Rosario, & Rekart, 1992). The higher rate was seen at a clinic that served street youths involved in prostitution. In contrast, the prevalence of HIV infection was only 0.6% in a convenience sample of homeless youths surveyed in Toronto in 1990 (Wang et al., 1991).

The pattern of HIV risk factors in homeless adults is distinct from that of youths. In a 1997 study of a representative sample of adults using homeless shelters in Toronto, 25% had a history of using injection drugs and 41% had a history of using crack cocaine (Goering et al., 2002). These drug use behaviors, rather than sexual behaviors, were associated with an increased likelihood of HIV infection. The overall HIV infection rate in this study was 1.8%. By comparison, a study of homeless adults and runaway youth in 14 cities in the U.S. in 1989-1992 found HIV infection rates ranging from 0 – 21% with a median of 3.3% (Allen et al., 1994).

5. Sexual and Reproductive Health

Sexual and reproductive health is a major issue for street youth. Studies by Roy and colleagues in Montreal have documented how street-involved youth are at high risk for addictions, involvement in sex trade, sexually transmitted diseases, unplanned pregnancy, viral hepatitis, and HIV infection (Roy et al, 1998b; Roy et al, 1999; Roy et al, 2000; Roy et al. 2001; Haley et al, 2002). Sexually transmitted diseases are widespread, even among street youth who do not work as prostitutes. Anecdotal reports suggest that pregnancy is common among street youths in Canada; in the United States, 10% of homeless female youths aged 14-17 years are currently pregnant (Greene & Ringwalt, 1998).

6. Assault and Injuries

Violence is a constant threat to the health of homeless people. A survey in Toronto found that 40% of homeless persons had been assaulted and 21% of homeless women had been raped in the past year (Crowe & Hardill, 1993). Homeless men are about nine times more likely to be murdered than their counterparts in the general population (Hwang, 2000). Unintentional injuries are a leading cause of morbidity and mortality, especially among homeless men (Hwang, 2000). Injuries are often the result of falls or being struck by a motor vehicle. Deaths due to an unintentional overdose of opiates, other drugs, and/or alcohol are also common.

7. Mental Illness and Substance Abuse

The prevalence of mental illness and substance abuse among the homeless is difficult to determine precisely, but consistent patterns have emerged from methodologically rigorous studies (Fischer, Drake, & Breakey, 1992). Contrary to popular misconceptions, only a small proportion of the homeless population suffers from schizophrenia. The lifetime prevalence of schizophrenia is only 6% among Toronto's homeless, (Mental Health Policy Research Group, 1998) and U.S. studies have found prevalence rates of 10 to 13% (Fischer & Breakey, 1991; Susser et al., 1993). Affective disorders are much more common, with lifetime prevalence rates in the range of 20-40% (Fischer & Breakey, 1991; Susser et al., 1993).

Alcohol use disorders are widespread, with lifetime prevalence rates of about 60% among homeless men (Fischer & Breakey, 1991). Alcohol problems are 6 to 7 times more prevalent among the homeless than in the general population. Less data are available on the abuse of substances other than alcohol; in U.S. studies, the median prevalence of drug use disorders is 30% (Lehman & Cordray, 1993). Cocaine (especially crack) and marijuana are the illicit drugs most often used by homeless people in Canada (Smart & Adlaf, 1991).

Patterns of substance abuse and mental illness vary across demographic subgroups. Homeless single women are more likely to have mental illness alone, without

any substance use disorder (Fischer & Breakey, 1991). The prevalence of substance use disorders in men is about twice that in single women. Compared to all other subgroups of homeless people, female heads of homeless families have far lower rates of both substance abuse and mental illness (Shinn et al., 1998).

D. Health Care Utilization and Barriers to Care

Over the last 10 years, a growing body of research in the U.S. has focused on health care utilization among homeless people and barriers to obtaining care. Studies have consistently shown that homeless adults have high levels of health care utilization and often obtain their care in emergency departments (Kushel et al., 2002; Kushel, Vittinghoff, & Haas, 2001; Padgett, Struening, & Andrews, 1990; Padgett et al., 1995). Homeless persons are hospitalized up to five times more often than the general population (Martell et al., 1992) and stay in the hospital longer than other low-income patients (Salit et al., 1998). These prolonged hospitalizations result in significant excess health care costs. Unfortunately, homeless patients are sometimes discharged to shelters, even when their ability to cope in such a setting is marginal at best. One solution to this problem is the development of respite facilities that provide homeless people with a protected environment for recuperation after hospitalization (McGuire & Mares, 2000).

Homeless people face many barriers that impair their access to health care (Stark, 1992). Lack of health insurance is a major problem for most homeless people in the United States (Kushel, Vittinghoff & Hass, 2001). Although Canada has a system of universal health insurance, homeless people continue to face barriers to health care that are unrelated to insurance status (Hwang & Bugeja, 2000; Hwang & Gottlieb, 1999; Hwang et al., 2000). Access to appropriate mental health care and substance abuse treatment for homeless persons also remains a crucial issue. While this has been the subject of extensive research in the U.S., few such studies have been conducted in Canada (Wasylenki et al., 1993).

Homelessness entails a daily struggle for the essentials of life. These competing priorities may impede homeless adults from utilizing health care services, particularly

those perceived as discretionary (Gelberg et al., 1997). In addition, many health recommendations regarding rest or dietary changes may be unattainable. In Toronto, 72% of homeless persons with diabetes report difficulties managing their diabetes, usually related to their diet and the logistic challenges of coordinating meals with medications (Hwang et al., 2000).

Investigators should consider how research on homelessness in Canada can make a unique contribution to understanding and addressing these non-insurance-related barriers to obtaining health services. This knowledge would be relevant to the care of homeless people in European and other developed countries that have comprehensive systems of health insurance.

E. Summary

In summary, homeless persons (and those at-risk) face a host of risk conditions. Although it is clearly beyond the scope of the present paper, we must recognize that the literature suggests a range of risk and protective factors that may be implicated in homelessness. As such, they warrant further research and investigation from a prevention and developmental perspective. Risk factors and conditions include *community environment* (i.e., high unemployment, inadequate housing, high prevalence of crime, high prevalence of illegal drug use); *minority status* (i.e., racial discrimination, culture devalued in society, cultural and language barriers, low educational levels, low achievement expectations; *family environment* (i.e., parental drug dependency, abuse or neglect, high levels of family stress); *constitutional vulnerability* (e.g., physical/mental health problems); and *early or adolescent behavior problems.*

In contrast, *protective* factors include *community environment* (i.e., middle or upper class, low unemployment, low prevalence of neighborhood crime, good schools); *family environment* (i.e., adequate family income, structured and nurturing family) and *constitutional strengths* (i.e., high intelligence, stable and flexible, socially adept and tolerant child). We must also recognize that life conditions present individuals and families with a wide variety of life chances and choices. While there is role for self-

responsibility in health, it remains unclear as to the realistic role of "self-responsibility" of homeless persons in addressing the identified risk factors and conditions. Homeless persons cannot be blamed for failing to be reliant on resources (psychological, social, economic) they don't have.

Key questions for decision makers are a) how do we help homeless persons to be more reliant upon the resources presently available to them; and b) how can we reconfigure society to provide more healthful public policy, supportive environments and accessible, appropriate resources? This leads to our consideration of the role of different potential interventions to decrease homelessness and to improve the lot of homeless persons.

IV. Interventions: Reducing Homelessness and Improving the Health Status of Homeless Persons

A. Introduction

The following section provides an overview and examples of the strategies and interventions that have been undertaken to decrease homelessness and to improve the lives of the homeless. Within the literature, we found a wide array of initiatives on homelessness that included emergency shelters, work skill development programs, social integration and health information programs among others. As an organizational approach, we coded these interventions according to a classification of four clusters of strategies. These clusters are:

1) **Biomedical/Health Care Strategies**: This cluster of strategies focuses on preventive medicine and includes initiatives such as public health programs, street nursing, clinical services, and health surveillance and tracking programs.

2) **Informational, Educational, Behavioural Strategies**: This cluster of strategies revolves around both preventing homelessness and improving the health status of homeless persons through educational programs and behavioural change initiatives. Examples include harm reduction, counselling programs, advocacy, referral services and the promotion of public education and awareness efforts.

3) **Environmental Strategies**: Environmental strategies are intended to 'create supportive environments' and by that enable and facilitate individual and societal change related to homelessness prevention. Examples of homelessness prevention strategies include supportive housing, outreach programs, social support strategies and community development.

4) **Policy/Legislative Strategies**: The final cluster includes issues of harm reduction as it relates to poverty reduction policy, immigration policy, and overall law enforcement. Public health legislation is also a key strategy in this cluster.

The above taxonomy was derived from the available literature, theory and from past experience. It provides a useful tool for organizing and assessing the work that has been done in different areas. For each set of strategies, we provide a description of the

category; examples of initiatives in this area; examples of research undertaken, and; a summary of research gaps and opportunities. It is important to note that these categories are not mutually exclusive and that many strategies have components that could fit into multiple categories, as well as effect change.

B. Biomedical/Health Care

DESCRIPTION: The primary utility of a model of mechanisms linking homelessness and health is to identify leverage points at which interventions can be most effectively applied to improve health status and quality of life in this highly disadvantaged population. It is important to note that improving the health of homeless people, improving their quality of life, and moving people out of homelessness are interrelated but distinct goals. Interventions that provide housing to homeless people are typically associated with improvements in health status and quality of life (Clark & Rich, 2003; Lam & Rosenheck, 2000; Lehman et al., 1995). However, health-care interventions may improve the health of homeless people but fail to address the problem of their homelessness. In many cases, interventions with both health care and housing components may be necessary to significantly improve the quality of life of homeless people.

RESEARCH: A review of the published literature reveals that only a small fraction of research on homelessness and health has involved rigorous evaluation of biomedical or health care interventions. The majority of such studies have focused on providing treatment for homeless persons with serious and persistent mental illness. A number of studies have confirmed the effectiveness of the Assertive Community Treatment (ACT) model, in which a team of psychiatrists, nurses, and social workers follows a small caseload of homeless mentally ill clients, seeking them out in the community to provide high-intensity mental health treatment and case management (Lehman et al., 1997; Wasylenki et al., 1993). Compared to usual care, patients receiving ACT have fewer psychiatric inpatient days, more days in community housing, and greater symptom improvement.

The ACCESS (Access to Community Care and Effective Services and Supports) project was an ambitious study of the effectiveness of improving the integration of services for homeless people with severe mental illness (Randolph et al., 2002). From 1994 to 1998, 18 sites in U.S. cities were funded to establish ACT programs for homeless people. Nine randomly selected intervention sites underwent improved integration of the service system to strengthen linkages with other organizations to provide psychiatric care, medical care, substance abuse treatment, housing and income support, and employment assistance to their clients. The nine control sites operated ACT programs but did not receive any intervention to improve the integration of the service system. Health and housing outcomes were compared among more than 7000 clients at the intervention and control sites. Both the intervention and control sites were quite successful in terms of improving health status and housing outcomes (living in stable housing) among clients one year after enrollment. Although clients living in cities with greater integration of services had better housing outcomes, the ACCESS program's experimental intervention to increase service integration did not have a significant effect on health or housing outcomes (Rosenheck et al., 2002). One plausible interpretation of these findings is that even an aggressive and well-funded intervention to improve integration of the service system may not increase integration enough to have an appreciable effect on client outcomes (Goldman et al., 2002).

A recent example of a combined housing and health service program is the New York-New York Housing Initiative (Metraux, Marcus, & Culhane, 2003). This program made resources available to create 3,300 housing units and social services support for person who had been homeless and who had a psychiatric diagnosis. During a two-year follow-up period, persons placed in the program stayed in shelters an average of 128 days fewer than persons in a control group.

GAPS AND OPPORTUNITIES: There is a moderate body of high-quality evidence regarding the treatment of substance abuse in homeless persons. A recent comprehensive review of the literature is available (Zerger, 2002). Length of time spent in treatment is strongly correlated with positive outcomes, but retaining homeless people in treatment

programs is very challenging. Drop-out rates are consistently lower in programs that provide housing. Modified "therapeutic communities" have been shown to be effective in homeless persons. Studies of outpatient treatment models, such as day treatment programs, case management, and contingency management, have yielded mixed results. Few studies have examined the effectiveness of hospital-based inpatient treatment.

In Canada, there has been significant interest in "harm reduction" programs that seek to minimize adverse health impacts among homeless substance users rather than focusing exclusively on avoidance of substance use. Examples of such programs would include needle exchange programs and "safe injection sites" for drug users, and shelter-based controlled drinking programs in which residents are provided with alcohol on a metered schedule. A significant body of research has already examined the effects of needle exchange programs (Hahn, Vranizan, & Moss, 1997). Research evaluations of other types of harm reduction programs aimed at homeless people have been initiated.

There have been relatively few rigorous research studies of health care interventions for homeless people outside of the specific areas of mental health and substance abuse treatment. There are many strong opinions but little high quality evidence regarding the most effective models of primary care delivery for homeless people. Nurses play a major role in the delivery of health care to street youth homeless people in the U.S. and Canada; most of the published literature on this model is descriptive in nature.

C. Informational/Educational/Behavioural Strategies

DESCRIPTION: The second cluster in our classification of strategies for reducing homelessness and improving the health and quality of life among the homeless is termed informational/educational/behavioural strategies. One set of strategies in this category is aimed at preventing and reducing homelessness. These efforts generally focus on providing both education on and referrals to various services on housing and tenants rights. Initiatives may also provide advocacy on behalf of individuals to find

accommodation. Examples include groups such as the Safe Homes for Youth in Ottawa, which provides education and support to prevent youth homelessness, and Toronto's Open Door Rooms Registry, which provides services for homeless individuals and families who are hoping to find permanent accommodation (Canada Mortgage and Housing Corporation, 1995).

Alternatively, educational initiatives may focus on increasing public and government awareness of homelessness issues. For example, Alberta's provincial homelessness framework includes an objective to "promote public understanding of the diverse nature of the homeless problem in individual communities" (Alberta Community Development, 2002). In Ontario, the province initiated a public awareness campaign to aid the public in assisting homeless persons (Ontario Provincial Task Force, 1998). Numerous advocacy groups exist in Canada that work to promote government policy change to reduce homelessness. These include groups such as the Canadian Housing and Renewal Association, the Centre for Equality Rights in Accommodation and the Housing and Homelessness Network in Ontario (Homelessness Action Group, 2003).

A second set of strategies in this cluster is aimed at efforts to improve the health of homeless persons, and/or reduce the risk of further health problems. As previously discussed, homelessness is associated with a number of negative health outcomes. In response, informational and educational strategies can usefully support important behaviour change. These strategies include training in harm reduction, counselling, referral services, continuing education of health care workers, risk management programs and professional workshops. For example, the Streethealth Coalition in Ottawa provides prevention and education on infectious diseases and other health conditions often found in the homeless population (Canada Mortgaage and Housing Corporation, 1995), while the Federation of Non-Profit Housing Organizations of Montreal promotes education on a range of basic life skills. Ontario's urban Aboriginal homelessness strategy includes culturally appropriate programs, such as cultural counselling and programs, and employment services (HRDC, 2003).

RESEARCH EXAMPLES: There is little evaluation research that has been undertaken on health education programs for the homeless (May & Evans, 1994). However, implications for planning informational/behavioural strategies can be found in the environmental scan and needs assessment research that has been undertaken. These have generally focused on providing the prevalence and a profile of risk behaviours. For example, Roy et al. (2003) investigated the amount of injection drug use among street youth in Montreal, while Smart and Adlaf (1991) explored more general substance abuse issues among Toronto street youth and attempted to provide both the prevalence of substance abuse, as well as health indicators and service utilization. Similar efforts have been undertaken among HIV where investigators examined both the participants' knowledge of risk factors, as well as health concerns and needs (Dematteo et al., 1999). Information from these studies can direct and guide appropriate educational and behavioural program planning by providing a picture of service needs and utilization.

Studies of interventions in this area have been limited and generally provide only basic program information, rather than in-depth descriptions or implementation information. At a national level, Canada Mortgage and Housing Corporation (1999) and Canada Mortgage and Housing Corporation (1995) have created an inventory of many Canadian initiatives around homelessness, but there are no similar documents focusing specifically on health education efforts in this population. In the United States, May and Evans (1994) provide an excellent example of an intervention description and evaluation of a health education program for the homeless.

RESEARCH GAPS AND OPPORTUNITIES: The primary gaps for educational/behavioural research centre around a lack of evaluation research. Many authors of the cited studies have noted the need to examine how treatment can be more accessible and effective for the homeless population. Evaluation research can provide recommendations and information to ensure accountability and positive outcomes for programs. As noted earlier, there is also a lack of in-depth descriptions of interventions, including process information around their development. A full documentation of such information could provide a valuable resource for service providers wanting to begin

similar initiatives. There is also a lack of conceptual research on health education and behaviour initiatives in the homeless population. An example of research opportunities can be found in the work of McCormack and Gooding (1993), who examined homeless persons' meanings of health. This qualitative inquiry provides a framework for exploring how health conceptions influence health behaviours.

There is also a need for an integrative approach to research on behaviour change among the homeless (and those who work with them). Green and Kreuter (1991) suggest that achieving maximum, positive behaviour is dependent on three highly interrelated sets of factors. First, people (e.g., the homeless) must be motivated or predisposed toward change. This change is created by altering knowledge, attitudes, beliefs and values. There remains a high need for research on the knowledge, attitudes, beliefs and values of decision leaders, the public and the homeless regarding how best to intervene to reduce homelessness. Second, motivated individuals must be enabled to take action. Enabling factors include skill building and the availability and accessibility of supportive resources. Research is needed on how to best build the skills of homeless persons and those who work with them. Further work is needed is also need on the accessibility of appropriate health and social services. Recent work at the University of British Columbia clearly shows that while resources may be 'available' they may not be socially, economically, culturally or psychologically accessible to marginalized groups. Finally, individuals (i.e., homeless persons and service providers) who take positive action around homelessness must be rewarded or reinforced. At present, it is unclear is there are any social or personal incentives for positive change. Changes that are not reinforced will not endure on either an individual or a social level.

D. Environmental Strategies

DESCRIPTION: The third cluster contains environmental strategies. Environmental strategies include deliberate attempts to alter the social, cultural, economic or physical environment in a given setting or locality. These strategies focus on *creating supportive environments* and through this, enabling and facilitating behaviour change related to

homelessness. They serve to highlight the reciprocal, bi-directional relations between behaviour(s) and the environment. Clearly, positive or negative behaviours may have an impact on the surrounding environment. Similarly, the environment or context in which homelessness occurs may enhance or limit specific behaviours. For example, the presence of needle exchanges may alter patterns of IV drug use and have a dramatic impact on use of shelters and subsequent homelessness.

The development of emergency shelters and/or supportive housing would be one area of environmental strategies. For example, the Lookout Emergency Aid Society in Vancouver provides both short-term shelter, as well as long-term supportive housing for adult men and women who cannot meet their basic daily needs (Canada Mortgage and Housing Corporation, 1999). Another area of environmental strategies involves the creation of collateral social services, such as skill/capacity building or community development. A macro-level example of these strategies is the Government of Canada's Supporting Community Partnerships Initiative (HRDC, 2001). This federal contributions program supports a broad range of activities to address homelessness by "providing communities with the tools and resources needed to set their own course of action" (HRDC, 2001). At the individual level, environmental strategies may focus on skills or capacity building such as those found in Street City in Toronto, where employment and job training is provided to homeless persons (Canada Mortgage and Housing Corporation, 1995). Other examples include social integration strategies, outreach programs and peer support programs.

RESEARCH EXAMPLES: The research undertaken in environmental strategies has primarily taken the form of environmental scans, intervention research or needs assessments. For example, two major reviews documented and categorized unique and innovative Canadian homelessness intervention programs and projects, many of which included environmental strategies (See: Canada Mortgage and Housing Corporation, 1995; 1999). These reports included a documentation of the program/project's history, funding, objectives and partners. Selection criteria for initiatives included involvement and empowerment of homeless persons in the program, as well services which respond to

the unique range of the needs of homeless persons. Other studies have looked at the needs and experiences of those who utilize environmental interventions. Such research provides valuable information on the service and health needs of homeless persons, as well as pathways to homelessness. Examples of these studies include profiling the demographics, experiences and service needs of emergency shelter users (See: Acorn, 1993; Eberle, M., Kraus, D., Pomeroy, S. & Hulchanski, D., 2001). While others have examined the needs of specific groups such as women (Reutter, Neufeld & Harrison, 2000), Aboriginal persons (Beavis et al., 1997), and immigrants/refugees (Mattu, 2002).

A number of projects have also provided examples of community development processes in the homeless population. For example, Tolomiczenko and Goering (2000) outlined the lessons learned while conducting community based research on homelessness in Toronto, while Boyce (2001) looked at factors that restrict or facilitate community participation by disadvantaged persons.

GAPS AND OPPORTUNITIES: The data-focused research undertaken to date provides valuable information for planning and organizing responses to homelessness (Quantz and Frankish, 2002; see www.bchhrn.ihpr.ubc.ca). There have been numerous contributions to homelessness research literature in this area that have guided program and policy development. Potential next steps could focus on further research on evaluating environmental strategies. In-depth research evaluation would provide a mechanism for ensuring that programs have measurable outcomes.

On a conceptual level, research can also assist in organizing and framing environmental strategies. For example, Whitzman and Hierlihy (2003) developed three different ways to consider service integration and coordination including interagency coordination, multiple approaches, and case management approach. In the end, research on environmental strategies must look at all phases -- the planning, implementation, process and outcomes of supportive services or programs.

E. Policy/Legislative Strategies

DESCRIPTION: The final cluster contains policy and legislative strategies and is similar to the Ottawa Charter strategy of 'healthy public policies'. It is clear that a variety of policy, regulatory, legislative and political factors create a climate for homelessness and its management. Initiatives within this cluster of strategies focus on policies to reduce homelessness, including poverty reduction policies and social housing programs.

There are a number of current examples of policy initiatives and these are often found in the form of a provincial or regional strategy framework. For example, the government of Alberta (Alberta Community Development, 2002) recently approved a framework that outlined several policy responses to homelessness including housing and support services, local capacity development and governmental coordination. The Vancouver Agreement framework was negotiated in 1999 and is an example of collaboration between government at the federal, provincial and municipal levels. The Agreement's first focus is on economic, social and community development in Vancouver's Downtown Eastside area where homelessness is a chronic issue.

Finally, policy may also focus on efforts to improve the health of homeless persons through public health legislation. For example, several urban areas have already implemented, or are considering legislation around safe-injection sites, needle exchange programs and other harm reduction policies (See: Brickner et al., 1993).

From our perspective, and from our document review, this cluster of strategies is clearly foundational to all others. The absence of a strong policy and legislative approach to homelessness will seriously limit and undermine efforts in other areas. There is a strong need for work examining the role of various health and social policies and their direct and indirect impacts on homelessness and the lives of homeless people. For example, many service providers are concerned that changes in welfare may have a dramatic, negative impact by reducing access to social assistance. The Canadian Centre for Policy Alternatives and others (i.e., the United Way of Toronto) have undertaken important work in this area. Their work could be expanded upon. There is also potential

for a cross-government review of the impact of all government program and policies and their relative impact on reducing health disparities. Such a review was recently undertaken by the UK government. Importantly, it was championed and led by the finance ministry, not the health sector.

RESEARCH EXAMPLES: As with the other clusters, research information can provide direction for policy planning and for assessing existing policies. For example, Serge, Eberle & Brown (2002) conducted a pilot study of the links between policies and practices in the child welfare system that may contribute to youth homelessness. A number of other studies have also examined the implications of social policies around youth and made several policy recommendations from the results (See: Kufeldt, 1991; Appathurai, 1991). The funding of policy research initiatives from government sources is also a sign of recognition that "good public policy depends on good policy research" (Novac, Serge, Eberle,. & Brown, 2002). For example, a federal government call for proposals around Young Women at Risk, led to a project which examined young women and homelessness in Canada. The results of this research provided information on the causes and experiences of homeless women, as well as a review of policies in this area and concurrent programs and services (Novac, Serge, Eberle & Brown, 2002).

A number of studies also conducted policy comparisons between countries with varying health and social policy approaches in order to assess Canada's efforts against homelessness. Glasser et al. (1999), for example, compared the effect of social assistance programs, including housing and income assistance, on homelessness between Quebec City and Hartford, Connecticut. Similarly, Daly (1990) provided an analysis an comparison of homelessness policies in Great Britain, Canada and the United States. Also contributing to policy research on a national level, Eberle, Kraus and Serge (2001) examined policies towards homelessness in British Columbia, Ontario, Quebec and Alberta.

GAPS AND OPPORTUNITIES: Most, if not all, government frameworks on homelessness desire an accountability to ensure that activities undertaken as a result of policy frameworks match the corresponding priorities and targets. Research can provide essential information in evaluating the activities of these programs through performance measures. At present, there is very little available research in evaluating policy.

V. CONCLUSIONS AND POTENTIAL STRATEGIC DIRECTIONS

A. Introduction

Canadian research in the area of homelessness and health faces a number of challenges and opportunities. The amount of high-quality Canadian research on homelessness is quite low: fewer than 25 original research papers on homelessness and health have been published in first- and second-tier biomedical and social sciences journals in the last decade. Few Canadian studies have involved sites in multiple cities or examined the effectiveness of interventions using rigorous methodologies. Issues related to research capacity and research funding have contributed to this situation. Given the relatively small number of Canadian investigators active in the area of homelessness and health, one method of increasing research capacity would be to create collaborative networks of researchers within regions and across the country.

The majority of the literature on homelessness and health comes from the U.S. Researchers in other counties need to consider how differences in demographics, culture, health care systems, and social systems may limit the generalizability of U.S. studies to their own country. However, even if the published literature is felt to have limited applicability to the local setting, researchers need to carefully weigh the costs and benefits of conducting studies similar to those already completed in the U.S. In the case of studies of large-scale multi-site interventions for homeless people, researchers must carefully consider whether the requisite resources are realistically available.

B. Implications and Potential Strategic Directions

Our descriptive review of the available literature and evidence regarding homelessness and the lives on homeless people yield several strong conclusions. First, the problem of homelessness and its reduction holds a philosophical, values-based attraction to many practitioners and an increasing number of funders and policy makers. The complexity of homelessness is a double-edged sword. It demands the involvement of decision leaders across levels of government and all ministries. Policy makers must also work with service providers, health professionals, community groups and the homeless. This diversity of stakeholders yields a related complexity in terms of values, beliefs and perspectives on homelessness. There is an urgent need for public, open discourse around the level and causes of homelessness in Canada. There is also a need to engage the Canadian media and public in viewing homelessness as a societal embarrassment and a public health disaster that demands the same attention given to recent events such as SARS, West-Nile virus or bioterrrorism.

Second, there is no clear, consensus definition of homelessness and many existing definitions are relatively general and non-specific. Third, there are few, if any, well-validated measures of the health status homeless persons, their use of health and/or social services and their quality of life. By well-validated, we include credible, trustworthy qualitative efforts that are often highly community-relevant as well as more traditional, quantitative health research. Fourth, the vast majority of homelessness initiatives have not been evaluated. Those evaluations that exist are modest in their quality. Many program or policy initiatives, particularly at a community level, lack key elements (i.e., resources, time, personnel) that would allow for a robust evaluation. Finally, it remains difficult to assess relations between the process of intervening in homelessness and the impact of such interventions.

More important, there is little solid research (qualitative or quantitative) that links homelessness programs or policies in a causal way to improved health or quality of life among the homelessness. This is due to several factors. First, homelessness is an exceedingly complex phenomenon to evaluate. We need to better understand its

constituent elements. Second, it is unclear as to which elements of homelessness are most open to change and how best to change to them. It is likely that homelessness research may benefit from adopting the collaborative approach typical of many of HRDC's community-based initiatives. Third, even if specific elements of homelessness can be changed through program or policy interventions, it is difficult to causally attribute positive changes to a specific intervention. There is a need for development of appropriate evaluation models that recognize the challenges in conducting community-based evaluation of a complex issue such as homelessness.

The above cautions should not deter or diminish current interests and efforts around homelessness initiatives in Canada. Rather, they point to a series of challenges for service providers, practitioners, community groups, funders and policy makers. If we are serious about valuing changes in homelessness, then we must recognize that better definitions and measures of homelessness will not create themselves. Equally, better evaluations of homelessness-related efforts will require an investment of human, practical and fiscal resources. Below, we discuss several potential strategic directions and some of the implications of placing renewed energy and resources toward understanding the nature of homelessness and evaluating the processes and impacts of related program and policy initiatives.

C. The Need for More Research

Policy makers, program planners, service providers and other groups who work on homelessness often need to access evidence or research for a variety of uses. For the purposes of this paper, we developed a six-part taxonomy of different 'types' of research that is needed on homelessness. We recognize that the six research types are neither independent nor mutually exclusive.

Conceptual research refers to research that examines the definition and meaning of homelessness. Considering the diversity and broad nature of homelessness, clear definitions are a vital tool for advocacy groups and policy makers alike. A lack of clarity and/or inconsistent use of definitions may also result in policy difficulties.

'Environmental scan' research documents the extent of homelessness, as well as issues related to homelessness. Such scans are useful but they remain primarily descriptive in nature, and there is a need to link these rich descriptions in a causal manner to concrete, measurable outcomes that can reasonably be attributed to increased program or policy interventions. *Methods* research focuses on the development of new tools for studying homelessness. Our review found a small but growing number of such measures. What is lacking is precise, psychometric research that evaluates the measurement qualities of each scale or tool. At present, it remains unclear as to what many measures actually measure, whether they measure the same 'thing' across different groups, and whether they are reliable. *Needs assessment* research focuses on the needs of the homeless communities as expressed by community members, policy makers, program planners or service providers. A variety of needs assessments have been undertaken in relation to homelessness. None have been well linked in a systematic way to specific objectives and then to a well-evaluated intervention with measurable outcomes.

Intervention research examines the development and implementation of programs, services or interventions for addressing homelessness. Implementation research is important because interventions often fail because they are poorly executed. This may be particularly true when dealing with community groups that have limited resources and capacity. Any subsequent evaluations may be misleading. Perhaps one of the most vital types of research, *evaluation* research, describes the process and effectiveness of programs or services related to homelessness. Surprisingly, there are relatively few research projects of this type. In summary, each of our research 'types' warrants further development. There is also a need to develop these different forms of research in concert so that one type can inform and complement the other.

Several other points can be made regarding the need to strengthen our understanding of homelessness. First, there must be significant community involvement in any work on homelessness and its conceptualization, measurement and change. While this may seem self-evident, it ironically raises the reality that many community groups often have limited capacity for engagement in homelessness efforts. Steps must be taken to ensure that communities are able to contribute to, and participate effectively in, the

study of homelessness and the subsequent use of homelessness research. Primarily, the need is to build capacity to allow communities to initiate their own research or work more equitably with government and/or academic partners. Resources must be made available to both promote research among various community groups and to teach research skills such as proposal writing and research design. Potential strategies include workshops, access to research courses at academic institutions, the development of easy-to-use research information, and financial support to allow community members to participate in these activities.

The issue of dissemination also remains a key challenge in relation to homelessness research. The question is how can we best 'capture' and communicate the lessons, experiences and best practices of dealing with homelessness. How can this information be communicated in a variety of forms and media that are appropriate to their target audiences? Again, significant barriers exist including time, personnel, research capacity and resources.

The behaviour of interest is the involvement of various key constituencies (i.e., academics, service providers, practitioners, policy makers, funders and lay persons) in homelessness initiatives and their evaluation. The outcomes of interest are more effective homelessness policies, programs and practices that could result from increased and more effective homelessness research. Changing the current situation will require three things: a) changing knowledge, attitudes and beliefs to motivate people to engage in homelessness initiatives; b) enabling motivated individuals or groups to take action on homelessness by building skills and providing supportive environments and resources; and c) rewarding or reinforcing practitioners, policy makers and funders who engage in homelessness initiatives and related research. One potential form of reward lies in creating supportive networks such as the nascent, community-based, BC Homelessness and Health Research Network.

- Collaboration between health researchers and social scientists, and the use of more sophisticated analytic methods, may improve our understanding of the causes of homelessness at the individual and societal levels.

- An extensive body of research, conducted primarily in the United States, describes individual risk factors for homelessness and health conditions among homeless persons. Before pursuing further research of this type, researchers should consider whether local conditions are distinct enough to warrant such efforts.

- Given the current state of knowledge, additional cross-sectional descriptive research may have a limited ability to advance knowledge, practice, and policy related to the health of homeless people. Intervention studies would be very welcome, but are extremely complex and costly to conduct. Investigators should factor these considerations into their plans for future research.

- Previous rigorous studies of interventions in homeless people have focused primarily on individuals with severe mental illness and, to a lesser extent, on the treatment of substance abuse. Discussion would be welcome as to whether future research should continue along these lines, or broaden its focus to include issues such as models of primary care delivery and treatment of medical conditions, and interventions for homeless parents and children.

- Investigators should consider exploring the unique opportunities for research on homelessness within the environment of Canada's system of universal health insurance.

- The research community should discuss the potential role of collaborative networks of investigators focused on homelessness and health either within regions or across the country, and what research progress would be expected to arise from such collaborations.

D. Conclusion and Implications

Our overall conclusion is that homelessness research is an area that is attractive to communities and government alike. It is also an area that is sorely in need of greater development, specificity, measurability and application. Increased focus on the nature of homelessness, and on the process and outcomes of homelessness programs and policies as a strategy for building population health would have several probable implications. These include:

- A renewed focus on homelessness could lead to new approaches to funding of population health and health promotion initiatives, and the consideration of new approaches to preventing illness and promoting health among at-risk populations.

- Health professionals, services providers and policy makers may need to develop new capacities and skills that address issues of working with (and doing research with) homeless communities.

- A renewed focus on homelessness (and homelessness research) may contribute to a new 'culture' in the health sector and greater support for health promotion and community development approaches to reducing health disparities..

- New forms of management for health and social services may emerge from a renewed collaborative focus on homelessness (research).

- The 'population health system' may take on new or refocused functions in order to address the targets and goals suggested by a renewed focus on homelessness.

- Adoption of a renewed focus on homelessness may lead to the creation of new goals for the health sector. It may also lead to an examination of the role of all government ministries in addressing health disparities.

- New objects of interest (e.g., foci for process and outcome evaluation) are likely to result from a renewed focus on homelessness (research).

- Adoption of a renewed focus on homelessness (research) could lead to the creation of new partnerships and broader intersectoral collaboration around the determinants of health.

- A renewed focus on homelessness could contribute to a demand for new resources. It may also help to identify existing resources that can be applied through innovative programs and policies.

- Professionals and service providers may need to adopt new or different roles. These new roles may require new skills, training and capacity-building.

- New and additional stakeholders from diverse sectors of government and society may become involved in the planning, implementation and evaluation of homelessness services, programs and policies.

- A new definition of success and standards of acceptability (e.g., effectiveness, efficiency) for population health may emerge from a renewed focus on homelessness (research).

- Creation of new partnerships and the involvement of more diverse stakeholders may contribute to the creation of new structures in the population health sector.

- Examination of a renewed focus on homelessness (research) may lead to new targets for community (health) services and programs.

- Emerging technologies (e.g., Internet) may offer new strategies and resources for decision-making around a renewed focus on homelessness.

In addition to the above issues which have broad implications for societal efforts to improve health, researchers who are engaged in the study of homelessness face a number of specific practical challenges:

- Collaboration between health researchers and social scientists, and the use of more sophisticated analytic methods, may improve our understanding of the causes of homelessness at the individual and societal levels.

- An extensive body of research, conducted primarily in the United States, describes individual risk factors for homelessness and health conditions among homeless persons. Before pursuing further research of this type, researchers should consider whether local conditions are distinct enough to warrant such efforts.

- Given the current state of knowledge, additional cross-sectional descriptive research may have a limited ability to advance knowledge, practice, and policy related to the health of homeless people. Intervention studies would be very welcome, but are extremely complex and costly to conduct. Investigators should factor these considerations into their plans for future research.

- Previous rigorous studies of interventions in homeless people have focused primarily on individuals with severe mental illness and, to a lesser extent, on the treatment of substance abuse. Discussion would be welcome as to whether future research should continue along these lines, or broaden its focus to include issues such as models of primary care delivery and treatment of medical conditions, and interventions for homeless parents and children.

- Investigators should consider exploring the unique opportunities for research on homelessness within the environment of Canada's system of universal health insurance.

- The research community should discuss the potential role of collaborative networks of investigators focused on homelessness and health either within regions or across the country, and what research progress would be expected to arise from such collaborations.

In conclusion, we suggest three major strategic directions and next steps toward better understanding homelessness and appraising the planning, implementation and evaluation of efforts to reduce homelessness, and to improve the lives and quality of life among the homeless. First, there is a need for a national, construct validation effort to achieve a core, consensus definition and set of indicators related to a) the nature and level of

homelessness; b) the health status of homeless (and at-risk) populations; c) the use of the health and social services by the homeless, and d) the relations between homelessness and the broader, nonmedical determinants of health (i.e., income, education, employment, social support, gender, culture, etc). This work could become an integral part of major measurement efforts such as the work of the Canadian Institutes for Health Information and the Canadian Community Health Survey.

Second, there is a need for research infrastructure. This includes the active development of funded, demonstration projects that can reliably collect data on the above 'core' indicators of homelessness. Surveillance systems should be created around the measurement of homelessness, the health status of homeless (and at-risk) populations; and their use of health and social services. This data and the related systems need to be given the same attention and weight as systems that presently collect health-systems data. There is a need to renew efforts to include measures of homelessness and other community-level indicators in the Canadian Community Health Survey and similar data collection initiatives. The creation and collection of core data must not preclude communities from collecting additional locality-specific data of local interest and value.

Finally, government-funded projects that purport to address either the processes or outcomes of homelessness should be subjected to an 'evaluability' assessment. Groups such as the Canadian Consortium for Health Promotion Research could assist Health Canada, HRDC (and other relevant federal departments) in determining whether current projects and programs are evaluable. We suspect that many projects and programs presently lack the necessary and sufficient conditions to be properly and fairly evaluated. More importantly, it could move research toward a model of program evaluation that sets realistic expectations in terms of the measurement of limited and specific aspects of homelessness, and one that provides sufficient time and resources to allow for appropriate assessment of homelessness interventions and their effects.

Communities cannot be reliant upon resources and capacities that they don't possess. The task of addressing homelessness and promoting population health is two-

fold: to help communities become more reliant upon the capacities they possess, and to help communities build on their existing capacities. Allocation of public resources in support of these efforts demands greater accountability and attention to understanding the nature of homelessness, and to the measurement and evaluation of programs or policies that claim to reduce homelessness or improve the lives of the homeless.

We encourage the investment of the needed resources toward the science and application of research on homelessness. Building on its traditions in health promotion and its strengths in the area of population health, Canada is well placed to become a world leader in intervention research on homelessness as a vehicle for building community health and improving Canadian society. Reducing homelessness is essential for the health and quality of life of all Canadians.

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