CPHI Workshop on Place and Health

SYNTHESIS REPORT
TABLE OF CONTENTS

ACKNOWLEDGEMENTS .................................................................i
ABOUT THE CANADIAN POPULATION HEALTH INITIATIVE ....................iii
STRENGTHENING CANADA'S POPULATION HEALTH RESEARCH INFRASTRUCTURE ....iii
INTRODUCTION ........................................................................1
WORKSHOP DESIGN AND STRUCTURE ...........................................2
SYNTHESIS OF WORKSHOP SESSIONS ........................................2
• Welcome and Introductory Session ...........................................2
• Session 1: Computer Lab Demonstration: Concept Dictionary ..............3
• Session 2: Identifying the Issues ...............................................4
• Session 3: The Conceptual Question .........................................7
• Session 4: The Scale Question ................................................9
• Session 5: The practical Question ..........................................11
• Closing Session ................................................................13
REFLECTIONS FROM THE ORGANISING COMMITTEE .......................15
APPENDICES
APPENDIX 1: LIST OF PARTICIPANTS ..........................................19
APPENDIX 2: SUMMARY OF PARTICIPATING PROJECTS ..................21
• Place and Health in Winnipeg .................................................21
• Predictors of Psychological Distress and Quality of Life in Disadvantaged Socio-economic Populations of Montréal ...........................................23
• Health Profile Inequities and the Living Environment: Underlying Causes and their Interactions ..............................................24
• Urban Structure, Population Health and Public Policy .....................26
• Areal Effects on Health: A Multi-level Study of Montréal Neighbourhoods .................................................................27
• Inventory and Linkage of Databases for Studying the Relationships Between Places and Health in Urban Settings ..................................................28
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And to **all participants** for sharing their impressive projects and for making the workshop an exciting and thought-provoking success.

This workshop report was prepared by:

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ABOUT THE CANADIAN POPULATION HEALTH INITIATIVE

The mission of the Canadian Population Health Initiative (CPHI) is twofold: to foster a better understanding of factors that affect the health of individuals and communities, and to contribute to the development of policies that reduce inequities and improve the health and well-being of Canadians. A Council of respected researchers and decision-makers from across Canada guides CPHI in this work. CPHI collaborates with researchers, policy makers, the public and other key partners to increase understanding about the determinants of health, with the goal of helping Canadians stay healthy and live longer.

As a key actor in population health, CPHI:

• provides analysis of Canadian and international population health evidence to inform policies that improve the health of Canadians;
• funds research and builds research partnerships to enhance understanding of research findings and to promote analysis of strategies that improve population health;
• synthesizes evidence about policy experiences, analyzes evidence on the effectiveness of policy initiatives and develops policy options;
• works to improve public knowledge and understanding of the determinants that affect individual and community health and well-being; and
• works within the Canadian Institute for Health Information to contribute to improvements in Canada's health system and the health of Canadians.

At the foundation of CPHI’s research partnerships are collaborations established with research teams across the country that have received CPHI research funding. Relationships between CPHI and research partners are ongoing. Partnering is also viewed as a capacity-building strategy. CPHI encourages the development of partnerships among researchers and between researchers and policy-makers through multi-sectoral (research and policy) research team membership and sponsorship of networking and theme-based interactions among teams.

STRENGTHENING CANADA’S POPULATION HEALTH RESEARCH INFRASTRUCTURE

Infrastructure is necessary to support CPHI’s strategic goal of knowledge generation through research. Infrastructure is defined by the CPHI to include data resources, information technology and specific technical skills. In this context, infrastructure development can include:

1. The identification of a series of strategic data sets: longitudinal, linked, and cross-sectional, which can be exploited in a coordinated way to most efficiently meet Canada’s population health information needs. These longitudinal person-oriented secondary data descriptions of populations will, when taken together, model the Canadian life course and trace factors at various levels of social aggregation, which affect health and record patterns of clinical care. While several of these data sets are already identified, others may be developed over time to add strategic value.

2. The solving of a series of technical problems in identified data sets in order to exploit them most efficiently. These problems include dealing with inter-jurisdictional issues and policies and standardizing coding measures, analyses and outputs.
3. The creation of a research team with specific expertise in the methods of systematic literature appraisal and review, skills in qualitative and qualitative research methodologies and the coordination and the management skills required to support a complex research team.

4. The development of a pan-Canadian population health research network Consisting of key research nodes, which give status, security, and the opportunity to do quality work to those who have built the strategic data sets and to those who work with them.

5. The development of resources necessary to compare the health status of Canadians with other countries and make valid international comparisons of health status.

This CPHI workshop on Place and Health represents one of the ways in which CPHI is working to facilitate the development of a pan-Canadian, population health research network, consisting of coordinated, research nodes.
INTRODUCTION

In the summer of 2002, researchers Louise Potvin (Université de Montréal) Michael Hayes (Simon Fraser University) and Penny Hawe (University of Calgary), who are funded by the Canadian Population Health Initiative (CPHI), contacted the CPHI to propose a workshop on place and health. They envisioned a meeting that would facilitate the exchange of ideas among CPHI-funded researchers and promote the development of a pan-Canadian network of researchers interested in the spatial analysis of health status in Canadian cities.

Carmen Connolly (Director, CPHI) and Stephen Samis (Manager of Research, Analysis and Infrastructure, CPHI) responded enthusiastically. At the end of November 2002, six groups of CPHI-funded researchers, as well as representatives from CPHI and the Canadian Institutes of Health Research (CIHR), gathered in Banff, Alberta, at the “Place and Health” workshop, funded by CPHI. This document contains the proceedings of that meeting.

The workshop had three specific objectives:

1. To establish a network of CPHI researchers interested in sharing challenges, approaches, and solutions encountered in their research on the relationship between local environments and health, with a view to using, where possible, common methods and data-collection tools to facilitate comparisons between studies.

2. To exchange information and ideas about the issues of dividing metropolitan territories into local units for the study of health and place.

3. To explore the range of databases available for studying health and place in metropolitan areas.

The research groups came from the Université de Montréal, Université Laval, McGill University, University of Manitoba, University of Calgary, and Simon Fraser University (for a full list of participants, see Appendix 1). The meeting was facilitated by Lillian Bayne, who very graciously donated her services.

This report provides a summary of the workshop sessions and proceedings. Readers will find several presentations in (MS PowerPoint format) online at www.cihi.ca
WORKSHOP DESIGN AND STRUCTURE

The “Place and Health” workshop was designed as an intense, problem-solving meeting. Before the workshop, each group of researchers was assigned three tasks: 1) to provide a synopsis of its program or project for advance circulation; 2) to identify specific issues for discussion in relation to methodological or conceptual issues/challenges (particularly in relation to the workshop’s second objective, above); and 3) to prepare a poster of its research program or project for the workshop. Workshop organizers conducted, via e-mail, extensive consultations with participants to clarify their interests and the particular issues they wanted to discuss. These tasks and consultations helped organizers minimize the amount of workshop time spent reviewing individual project content and maximize the amount of time available for tackling the tougher, “cutting-edge” methodological issues the groups shared.

The workshop itself was loosely structured: once initial introductions and research program/project sketches were complete, discussion focused on the particular synergies between and issues common to the research groups. All participants remained in one large group over the three days. They chose to initiate most sessions with a presenter, who gave a brief overview of the topic or issue or hand, and conclude with a discussant, who provided a 5-10 minute wrap-up. Presenters and discussants were given minimal notice of their roles and therefore had little opportunity to prepare formally. Participants listened, summarized, analyzed, and critiqued each other in an open and respectful manner, creating an environment that proved essential to moving forward the thinking of a diverse group of academics.

SYNTHESIS OF WORKSHOP SESSIONS

Welcome and Introductory Session

Friday, November 29, 2002—7:30 p.m.

This opening session followed an informal gathering during which workshop participants had a chance to read the posters describing each group’s research project or program. Each participating group gave a 15-minute overview of its research program or project. (Posters and presentation slides are included in Appendix 3 of this report.)

Workshop organizers welcomed participants to the meeting and laid out the ground rules. They reminded participants that the workshop was about dialogue, the free exchange of information, and the building of collaborative networks. As most projects or programs under discussion were in the early stages of development, the meeting would focus on the research process, not on research results. They encouraged participants to contribute freely, regardless of their experience or relative seniority within the group. Participants agreed that they were there to learn from each other and to share experiences in conducting spatialized health research. Representatives from the Canadian Population Health Initiative reminded participants of CPHI’s goal: to create research networks and virtual coordinated research “nodes” on specific issues across funded research programs and projects.
Session 1:
Computer Lab Demonstration: Concept Dictionary
Saturday, November 30, 2002—8:30 a.m.

Les Roos, Senior Researcher and Director of Research Data Repository
Ruth-Ann Soodeen, Research Coordinator
Manitoba Centre for Health Policy
University of Manitoba

Ruth-Ann Soodeen took workshop participants through the online Concept Dictionary, a Health Canada-funded project developed by Les Roos and colleagues at the Manitoba Centre for Health Policy (MCHP).

The Concept Dictionary aids health researchers and programmers using administrative data. It is a tool designed to facilitate knowledge sharing, build on previous work, improve efficiency by preventing unnecessary duplication of work, and contribute to greater standardization across research projects based on administrative data.

Concept Dictionary content was developed via discussions with MCHP programmers about what they felt researchers and fellow programmers needed to know for research continuity. It includes definitions of key terms in health research, answers to frequently asked questions, programming advice, statistical code, descriptions of database analysis topics, links to other relevant documents, and contact information for local “experts.” Dictionary terms are organized alphabetically; a meta-index also organizes the concepts according to National Library of Medicine subject headings (MeSH). New concepts and content are added often.

The Web site also provides other research resources, including a step-by-step protocol for conducting research based on administrative data. The protocol takes the reader through the process of planning and carrying out studies using MCHP datasets and includes specific aids for data management and record linkage. Although the specific aids require internal access, much of the general information is available to the general public.

Session 1: Computer Lab Demonstration
Highlight

Computer lab demonstration of the Concept Dictionary, an online aid for researchers using administrative data. The dictionary is available at www.umanitoba.ca/centres/mchp/.
Session 2:
Identifying the Issues
Saturday, November 30, 2002—10:30 a.m.

Introductory Comments

Lise Gauvin, Adjunct Professor
Université de Montréal

Lise Gauvin identified several issues related to the spatial unit of data aggregation as it pertains to neighbourhoods. These issues include:

- the conceptual and empirical definitions of “neighbourhood” (and the appropriateness of homogeneity criteria in the analysis of neighbourhoods);
- the comparability of neighbourhoods that differ according to certain dimensions (e.g., age);
- the differential relevance of neighbourhoods to certain population subgroups (e.g., low-income individuals); and
- the challenge of simultaneously exploring changes in population and changes in neighbourhoods across time.

Looking to the future, Gauvin noted that most existing health databases were not developed with space in mind. She speculated about the extent to which the design of future datasets could take space into account.

Introductory Comments

Michael Hayes, Associate Professor
Suzanna Dragicevic, Assistant Professor
Nadine Schuurman, Assistant Professor
Simon Fraser University (SFU)

These Vancouver-based researchers raised a point that would recur throughout the workshop: that the design and collection of administrative datasets is guided by an implicit rather than explicit theoretical perspective. Hence, researchers should recognize that even an apparent absence of theory in database design and construct is meaningful and must be investigated. The SFU group also noted that understanding the theory that underlies databases is crucial to conceptualizing space and spatial contiguity. Consequently, researchers must establish relationships with the developers and stewards of administrative datasets, understand the theoretical framework guiding dataset design, and influence data-collection procedures so that they facilitate research and knowledge. A deeper understanding of individual datasets will help researchers recognize a lack of consensus among similarly named attributes in different datasets, and thus has implications for their linkage.

In the context of these issues, the SFU group suggested coupling an ethnographic approach to standardize geographical boundaries with “rasterization” (i.e., the use of “fuzzy” rather than rigid area boundaries) to allow for continuity between areas. Further, they noted that a multi-criteria analysis (MCA) procedure allows for the use of several variables and diverse stakeholder opinions in defining these “fuzzy sets.”
Plenary Discussion

Participants discussed how best to spend workshop time and which issues to prioritize for discussion. To facilitate this decision, organizers presented the following list of topics, submitted by participants prior to the workshop:

1. What sources of data and features of datasets do researchers currently use?
2. What are the technical issues of dataset integration?
3. What types of analyses are researchers conducting?
4. Empirically, what is the appropriate spatial unit?
5. Conceptually, what is the appropriate spatial unit?
6. How can the problem of integrating theoretical and empirical issues be resolved?
7. How can researchers determine whether a factor is contextual or compositional?

To this list, Stephen Samis (CPHI) added the following question:

8. At what point should decision-makers be integrated into the discussion?

Participants confirmed their interest in these issues, and added additional points. In light of evidence that space may matter in ways specific to Canada, they sought specific references to a Canadian context in understanding space and the theoretical linkages between place and health. They also acknowledged that these issues require input not only from health researchers, but also from “place” researchers, such as urbanists. Participants noted the opportunities and limitations inherent in the use of existing administrative datasets. Finally, they commented on the complexities of place - its differential role for different health outcomes, for example, and the direction of the relationship between place and health. The latter issue, they noted, reflects the methodological and conceptual distinctions between context (pertaining to place) and composition (pertaining to individuals within a place).

Based on the above discussion, the organizing committee identified three plenary topics for the ensuing sessions:

1. The conceptual question: How does place affect health? What are the theoretical linkages between neighbourhood context and health? What are the mechanisms by which context produces health?

2. The scale question: How is a neighbourhood recognized? What is the relationship between “fuzzy sets” and the ontology of place? What about homogeneity criteria?

3. The practical question: What data can we use to research the effects of place on health? What are some creative ways to identify, access, and use existing data? Can limitations and opportunities be identified? What about validation of the data and engaging with people who develop the data?
Session 2: Identifying the Issues

Highlights

Administrative datasets implicitly embody a theoretical perspective. Researchers’ understanding of that perspective is crucial as they:

• conceptualize space and spatial contiguity
• seek avenues to participate in and influence the data collection process, and
• integrate and link diverse datasets.

Researchers seek an understanding of space in the Canadian context, especially in light of evidence that space may matter in specifically Canadian ways.

Organizers established three discussion topics for the ensuing sessions:

• the conceptual question
• the scale question
• the practical question
Session 3:
The Conceptual Question
Saturday, November 30, 2002—1:30 p.m.

Introductory Comments

James Dunn, Assistant Professor
University of Calgary

To stimulate discussion of hypotheses that could link neighbourhoods to health outcomes (i.e., the conceptual question), James Dunn provided a list of “neighbourhood effects” theories (e.g., miasma, social disorganization, competition theory) and proximal mechanisms (e.g., behavioural, stress, life chances). He also outlined a template developed by the Université de Montréal and University of Calgary groups designed to serve two purposes: (1) to facilitate the process of inserting theory into research on place and health, and (2) to guide the search for existing administrative data to answer research questions. According to Dunn, this template is anchored by “grand theory” (most general) at one end and “item” (most specific) at the other.

Plenary Discussion

Discussion centred on theory and its application to the place-health relationship. Participants agreed on the need for theory to address this relationship, but observed at least three challenges: (1) existing “grand theories” do not generally incorporate a space dimension; (2) place-health researchers from different disciplines use similar theoretical constructs in different ways, which may hinder the progression from theory to application; and (3) researchers have tended to conduct research within the confines of a Durkheimian (sociological) perspective, which may have limitations for understanding the complexities of place.

Participants agreed that in order to address these three challenges, population health researchers need to clarify relevant concepts, facilitate a common language, and recognize and address the dynamic relationships between concepts (rather than rely on an “adding up” model). Population health researchers must exploit alternative conceptual frameworks (e.g., those from community psychology and economics), and clarify the level(s) at which these frameworks apply (e.g., neighbourhoods, society, etc.). Finally, researchers should endeavour to incorporate into analyses dimensions of social stratification (e.g., gender) that reinforce and are reinforced by space. All these implications relate directly to intervention. In particular, they relate to a capacity to develop viable interventions with sufficient leverage—in a mechanistic sense, but more importantly in an epistemological sense—to have an enduring effect on population health.
Discussant Comments

Kate Frohlich, Adjunct Professor
Université de Montréal

Kate Frohlich summarized this session into several themes:

1. The a-spatial nature of grand theories and the interdisciplinary question of how to make these theories applicable to the study of place and health (some research along these lines is available);\(^1\)
2. The complexity of the place-health relationship (an echo of earlier comments), in particular the recursivity between place and health and the direction of causality, both of which have implications for targeting intervention efforts;
3. The teasing apart of dynamic aspects of context, roles, relationships, and resources (among others) in order to prevent the simplistic “adding up” of contextual attributes that have conceptually distinct roles;
4. The leverage points at which “power actors” influence place, and in particular the question of whether a local focus is made at the expense of broader systems;
5. The need to consider the lived experience of individuals and recognize their embeddedness in many environments;
6. Recognizing the current bias toward sociological theories, the importance of breaking tradition and adopting alternative theoretical tools.

Frohlich noted that rather than selecting one “ideal” theory the preferred practice involves understanding several theories, which can then be used as tools for interrogating particular problems.

A short discussion followed. Participants emphasized the need to keep in mind researchers’ reliance on existing administrative datasets, and the need to maintain dialogue between the theoretical and empirical ends of the process.

Session 3: The Conceptual Question

Highlights

The place-health relationship is highly complex, encompassing questions of how to account for a time dimension (including individual life-course development), the recursive nature of the place-health relationship, and the lived experience of individuals embedded in multiple contexts.

These questions have implications for interventions and their epistemological leverage for influencing population health.

Researchers need theory to understand these complex issues, but recognize that existing grand theories tend to be a-spatial. Researchers have tended to rely on a Durkheimian perspective, and now need to break out of this tradition and use alternative theoretical perspectives to increase understanding of the place-health relationship.

Session 4:  
**The Scale Question**  
*Saturday, November 30, 2002—3:30 p.m.*

**Introductory Comments**

Robert Pampalon, Associate Professor  
*Université Laval*

Robert Pampalon addressed the scale question using as an illustration his research with Maria De Koninck on three sectors (urban, suburban, and rural) in the Quebec City region (see Project Summaries in Appendix 2). Pampalon introduced three approaches for subdividing sectors into neighbourhoods:

- the *historical* approach, based on how different groups (e.g., school boards, parishes) have divided the sectors;
- the *socio-economic* approach, which uses criteria of homogeneity to collapse enumeration areas with similar socio-economic status; and
- the *perceptual* approach, which asks local actors to locate “neighbourhoods” on a map.

Pampalon noted the desirability of integrating these three approaches, and highlighted the importance both of obtaining data at the smallest unit possible, and of situating health events based on six-digit postal codes in order to maximize flexibility in defining the neighbourhood unit.

**Plenary Discussion**

The discussion centred around the conceptual and empirical definitions of a neighbourhood unit, and the implications of imposing boundaries. Participants talked at length about the definition of “neighbourhood”: Is it best conceptualized as a source of exposure? A locale for lived experience? An anchor for everyday life? Further, how can population health researchers define a neighbourhood based on these conceptualizations? For example, in a *perceptual* approach to neighbourhood definition, whose perceptions must be considered? And how can researchers systematize the knowledge of relevant actors to best use their perceptions of their territories of action?

Participants generally recognized that the sum total of people’s experience cannot be reduced to a single spatial unit. Rather, researchers must account for a multiplicity of dimensions that are likely to operate both inside and outside the defined boundaries. Further, the nature and relative importance of those dimensions will vary according to the particular research purpose or question. One example of a challenging dimension is *urbanicity*: are there ontological differences between rural, suburban, and urban spaces, and can these differences improve understanding of the relative ways in which people define and perceive space? Another example is *time*. Some attributes are fairly stable over time and others are not, and those that change over time do not necessarily do so in a linear manner.
These conceptual complexities translate into empirical challenges. Participants expressed general concern that any boundary definition would introduce error, and that an observed contextual “effect” is likely to depend on the scale at which it is measured. In light of these issues, it may be appropriate to accept some degree of error in measurement (but how much?) and to shift the focus to developing multi-level theories about the relevant constructs and pathways for understanding a particular health outcome or exposure. When considering the complexity of boundary definition and the myriad of relevant dimensions, it is helpful to differentiate issues of measurement (those concerned with defining the spatial unit and the relevant indicators) from issues of analysis (e.g., dimensions of gender and time may be taken into account using statistical interaction terms).

Discussant Comments

Charlyn Black, CPHI Council member

Charlyn Black suggested that the importance implicitly awarded to context has created several challenges related to boundary definition. When a “context as everything” mindset is taken, researchers inevitably get caught up in trying to attain “ideal” boundaries. Black reminded participants that boundaries are simply an apparatus designed to interrogate the social world, a place in which to study existing data. There will be many unmeasured concepts, she noted, and theory can help situate them. Multi-level theories are needed to help identify relevant concepts at the individual and group levels, and to help drive the research agenda. Awareness of relevant theory will also help to build flexibility into datasets. This awareness is intimately linked with the project, described earlier by the SFU researchers, of developing relationships with dataset developers and stewards in order to understand the frameworks guiding dataset development and influence future dataset design. If researchers can build flexibility into datasets, interrogation potential can be maximized. Black concluded with a reminder of the importance of the distinction between “neighbourhood” as a unit of analysis and “neighbourhood” as a source of influences.

Session 4: The Scale Question

Highlights

“Neighbourhood” can be defined several ways. Obtaining data at the smallest unit possible affords the greatest flexibility in selecting an appropriate definition.

Empirically, researchers are quite concerned about the potential for introducing error that arises when imposing area boundaries. To achieve balance, researchers may need to accept some degree of error and develop multilevel theories to tackle particular research questions.

To further research agendas, there is a need to build flexibility into administrative datasets. This process will be aided by recognizing the constructed rather than objective nature of datasets, and by developing relationships with dataset developers to increase understanding of the frameworks guiding data collection.
Session 5:
The Practical Question
Sunday, December 1, 2002—9:00 a.m.

Introductory Comments

Les Roos, Senior Researcher and Director of Research Data Repository
University of Manitoba

Les Roos works in Manitoba, the province with one of the most advanced administrative dataset linkage and access. He introduced the practical question—How can we research the effects of place? What data is available to do so?—and reiterated the importance of developing long-term relationships with dataset developers in order to establish confidence and facilitate communication. Roos noted that diversity within a research team can be an advantage in developing such relationships: different data suppliers may respond to different needs. Roos also emphasized the necessity of maintaining objectivity and clarity in documenting the processes of data access. He noted common problems with administrative data, including changes to surveys that, over time, introduce complexities for analysis, and technical and political challenges inherent in trying to link two or more datasets. Roos offered to make available a document on tools for working with administrative data.2

Plenary Discussion

The discussion centred on problems that participants had encountered while using administrative datasets in their research. Technical problems included misclassification of individuals - for example, due to a mismatch between postal code and enumeration area or neighbourhood unit. Fieldwork is often necessary to solve such problems. Personal mobility is often not well identified in administrative datasets, and obviously introduces a challenge to studying the impact of place. Participants uniformly expressed frustration with lack of common boundaries across datasets. They also noted a lack of population-based data on mental-health outcomes.

Some problems were common to many workshop participants. Others were province- or city-specific. For example, access to crime data in Vancouver is difficult because the city uses non-standardized boundaries. In Montréal, on the other hand, police ensure comparability by taking into account various criteria when they draw their territory units.

This session also provided an opportunity for workshop participants to exchange information about existing datasets. For example, the Montréal Public Health Directorate has a list of datasets that they use.3 Participants expressed much interest in private-sector data; these resources are seen as potentially valuable but perhaps especially difficult to access.

Participants indicated general support for partnerships to facilitate knowledge of and access to data.

Finally, participants expressed concern about the implications of emerging privacy legislation in Canada. Some believe this legislation will translate into even greater difficulty in accessing relevant data. Emerging legislation, however, could also open up opportunities for agency-led initiatives to address other issues related to data collection (e.g., the ethics of data access, non-standardization in the characterization of neighbourhood units).

3 www.santepub-mtl.qc.ca and www.omiss.ca
Participants strongly supported the need to strike a balance between the protection of privacy on one hand and the obligation of public health to inform the public about health and its determinants on the other. Community-university partnerships may contribute to this balance.\(^4\)

**Discussant Comments**

**Nadine Schuurman, Assistant Professor**
**Simon Fraser University**

In her summary, Nadine Schuurman emphasized several key points:

- **Partnerships are needed to facilitate the “social” activity of administrative data collection.** Partnerships may allow for greater understanding of the data-building process and, ultimately, for researcher input into this process. Partnerships may also be essential in gaining access to private-sector data (likely a valuable resource), and for enhancing relationships with key individuals in communities whose information researchers seek.

- **Researchers must consider the ethical implications of information that is carried back to the communities under study.**

- **Researchers must consider the ethical responsibilities of privacy, and its implications for research.** Privacy regulations for data access are already in place in Europe and the UK. Researchers must take a proactive approach in considering how such policies will affect research in Canada.

- **Researchers must be alive to conceptual and empirical issues of data quality and the integrity of data linked together from diverse sources.** Dataset linkages introduce “black boxes” (unknowns) that must be investigated—not ignored.

Participants noted the significant challenges inherent in understanding and deciding how to validate administrative data and dataset linkages, and how to take uncertainty into account. Throughout this summary, Schuurman emphasized the constructed rather than objective nature of datasets, and the suitable role of ethnography in helping researchers understand the process of dataset construction.

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**Session 5: The Practical Question**

**Highlights**

Accessing administrative data is a complicated process that requires long-term relationships with dataset developers. The processes involved in accessing administrative data may, however, also facilitate opportunities to influence data collection.

Imperfections in administrative data are common; researchers must often rely on fieldwork to verify information in databases. Researchers must also make “black boxes,” (unknowns) introduced by linking datasets, a focus of investigation.

Partnerships between researchers, government agencies, and the private sector facilitate the sharing of information and data. Partnerships will likely become increasingly important as regulations concerning data privacy are enhanced.

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Closing Session
Sunday, December 1, 2002—11:00 a.m.

In this session, CPHI and CIHR representatives spoke on funding and policy issues. In addition, all participants commented on their impressions of the three-day workshop.

Closing Comments

Stephen Samis, Manager of Research, Analysis, and Infrastructure
CPHI

Stephen Samis described a recent shift in CPHI’s research program. CPHI launched its Request for Proposals (RFP) in July 2000. Since then, it has provided approximately $11 million in funding to research teams, supporting 44 population health research and infrastructure development programs and projects. Since the launch of CPHI’s initial RFP, new funding opportunities in population health research have emerged, notably CIHR. Hence, CPHI has decided to close its original RFP.

- CPHI will continue to support population health research, analysis, and infrastructure by
- synthesizing and analyzing population health research findings from Canada and internationally;
- commissioning policy-relevant research to answer the questions of “What works? What doesn’t work?”;
- commissioning “state-of-the-evidence” reviews and synthesis of research to address issues of “what we know” and “what we don’t know” on key population health issues; and
- collaborating with other funders to support the generation of new knowledge on the determinants of health and to build capacity and infrastructure for population health research in Canada.

Samis also noted that CPHI will continue to support opportunities, such as the “Place and Health” meeting, that bring researchers together to strengthen Canada’s population health research capacity and facilitate specific research “nodes” on key population health issues.

Closing Comments

Erica Di Ruggiero, Assistant Director
Institute for Population and Public Health (IPPH)
CIHR

Erica Di Ruggiero commented that many of the issues raised in the workshop also arose at cross-country consultation meetings of researchers, policy-makers, and other stakeholders held in 2002 in collaboration with CPHI. As a result of the latter meetings and input from the Institute’s Advisory Board, a number of priorities were established. Erica highlighted two of relevance to the workshop’s discussion: (1) building research capacity, and (2) understanding and addressing the impact of the social and physical environments on health.
In line with these priorities, CIHR has developed two initiatives: (1) a Summer Institute for doctoral and postdoctoral students on interdisciplinary partnered health research, and (2) a Request for Applications (RFA) to support centres for research development focused on the impacts of physical and social environments on health. In addition, CIHR has recently launched, with the Institute of Health Services and Policy Research, an RFA on “Advancing theories, frameworks, methods and measurement in health services and policy, population and public health research and knowledge translation.” She noted that this RFA can provide new opportunities for advancing theoretical thinking and for pursuing sub-studies related to place and health research.

Discussion

Discussion focused primarily on CPHI’s potential role in facilitating the objectives of establishing research networks and facilitating the exchange of ideas set out for the “Place and Health” workshop. CPHI held a national meeting in 2002, and plans its next national meeting in 2004. Participants expressed enthusiasm for meetings such as this workshop, and suggested that they be held more often and include opportunities for mentoring students. They suggested that, with enough advance notice, research groups could take advantage of similar national meeting for networking opportunities. Deliverables arising from such meetings could include data infrastructure development and sharing of resources.

Participants suggested that given the recent emergence of IPPH, CPHI must clarify its role. They suggested that one solution is for CPHI to support research infrastructure of the sort that cannot necessarily be taken on by IPPH.

In relation to this potential role for CPHI, participants expressed concern about dealing with Statistics Canada. In particular, they noted difficulties and inefficiencies of accessing data within an “umbrella agreement.” Participants suggested that CPHI may be well placed to help improve the efficiency of such processes through its ability to bring people together.

Concluding Comments

Participants generally indicated high levels of satisfaction with the workshop. Individuals reported learning a lot from others, being pleased to know about research going on elsewhere in Canada, relief at learning that fellow researchers experienced problems similar to their own, and pleasure at having had the opportunity to network with others with similar interests.
REFLECTIONS FROM THE ORGANIZING COMMITTEE

Meeting organizers noted that to their knowledge, this workshop was the first attempt to bring together Canadian research teams to discuss issues in researching place and health. The organizing committee felt that both the intensity of our discussions and the richness of the content were remarkable—a feeling echoed by the highly positive comments participants made in the closing session and on the evaluation sheets they later completed. Participants unanimously asked for a follow-up to this event. This synthesis document is a first step in that direction. In addition, the organizers offered their reflections on some questions that might provide insights to other groups or research agencies.

Why was the workshop successful?

First, participants were invited to attend on the basis of their involvement in a CPHI-funded research team working on issues of health and place. Representatives of six projects were invited. Each project was represented by at least three people. This program/project-based structure allowed for an interesting mix of personal and group contributions.

Second, posters played a key role in structuring the discussion. Each research team prepared a poster describing its research project or program, and all posters were fixed to the walls throughout the workshop. Although participants were given time to read each poster before the introductory session, no other formal presentation of their content occurred during the conference. This arrangement had several outcomes that organizers felt contributed to the success of the workshop:

1. The posters provided the content basis for our discussions. The organizing committee did not prepare a rigid agenda of discussions, but rather counted on common, structuring themes to emerge from a first plenary discussion session, which they did.

2. The arrangement allowed each group an efficient means of sharing information about its project, but made it clear that the focus of the workshop was not on specific research findings but on the research process - the concerns and difficulties common to all participants. While participants referred to their research during sessions, the informal nature of the discussions allowed for an open, less defensive exchanges of ideas.

3. Third, the entire workshop unfolded as a plenary discussion, allowing the group to build together an understanding of the issues at hand based on its own history and shared experience. This structure created a genuine continuity and coherence in the discussion. Indeed, some participants remarked on how rare such a conversation was among scientific researchers. Organizers noted that conducting a conversation among 30 people is no easy feat. They observed that the guidance from the facilitator, whose senses of discipline and flexibility and knowledge of the content, was invaluable.

Finally, the workshop was diverse. Participants included seasoned and more junior researchers, from a variety of disciplines, from different institutions across the country, francophone and anglophone, with balanced gender representation. No one participant or research group had all the answers. Nobody used authority to impose solutions. No single discipline could claim a majority among participants, and no group dominated.
What are the main conclusions?

Early in the workshop, participants jointly identified three themes to guide discussions: the conceptual question, the scale question, and the practical question. These themes were simultaneously broad enough to generate rich discussion and focused enough to allow the conversation to come to closure on key issues. They also encompassed the broad issues affecting research on place and health by including questions of theory, methodology, and practical data use.

The following key conclusions emerged from the workshop:

1. The complex question of health and place should be discussed in the context of broad theories, despite the fact that existing grand theories tend to be a-spatial.

2. Several ways of defining local areas could be relevant to a variety of health problems. Researchers design and define boundaries as an apparatus for specific interrogation of the social world. Each definition of boundaries, however, can lead to unforeseeable errors that arise from a lack of a good understanding of the mechanisms by which place affects health. To help account for such errors, and to explore the variability of the errors generated by boundary definitions, flexible boundary definitions should be built into databases.

3. Administrative datasets are not created in a vacuum. Their structure and content reflect the social activity of the organizations that produce and use them. As a result, datasets and information that initially appear similar may in fact contain hidden discrepancies. Researchers must develop strong working partnerships with producers and stewards of such data, not only to better assess the information but also to improve the overall quality of that information.

Clearly, a lack of critical dialogue between the processes of theory building and the empirical exploration of the links between health and place hinders capacity to progress significantly in understanding the spatialization of health.

Actions and next steps

As the research programs and projects that provided the content for the Place and Health workshop progress, the organizing committee will identify recommendations for next steps to CPHI staff.
APPENDICES

APPENDIX 1: LIST OF PARTICIPANTS

APPENDIX 2: SUMMARY OF PARTICIPATING PROJECTS
### APPENDIX 1: LIST OF PARTICIPANTS

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APPENDIX 2:
SUMMARY OF PARTICIPATING PROJECTS

Place and Health in Winnipeg

Les Roos
University of Manitoba

This poster described two studies on place and health in Winnipeg. The first involved a factor analysis of several ecological variables (socioeconomic index, housing index, social programs, recreational programs, green space, crime rates, health status) across Community Centre Areas in Winnipeg. The socioeconomic, housing, crime, and health indices (except osteoporosis) loaded on Factor 1, which explained 50% of overall variance. Social and recreational programs and osteoporosis (marginal) loaded on Factor 2, which explained 18% of overall variance. The lack of association between social/recreational factors and health factors was highlighted. Factors were similar whether Winnipeg was divided into 72 Community Centre Areas or 23 Neighbourhood Clusters. Future plans include multilevel analysis of these ecological variables along with individual-level data from the 2001 Canadian Community Health Survey.

In the second study, the Winnipeg group replicated a multilevel analysis of mortality conducted in Nova Scotia (Veugelers et al. 2001) using Manitoba data. These two provinces are similar in terms of access to basic health and social services, but differ substantially in size, ethnic mix, and history. Despite differences in survey procedures, results were similar between the two provinces: there was no evidence for an independent effect of neighbourhood-level socioeconomic characteristics on mortality. The relationship between individual socio-economic position and mortality, however, was stronger in advantaged than in disadvantaged neighbourhoods. This finding supports the position that contextual effects are smaller in Canada relative to other industrialized countries (e.g., the United States and United Kingdom).
Les Roos et al (Manitoba)

Summary

Research questions
• Do community-level resources and indicators of disadvantage and health status cluster together statistically?
• Does level of aggregation matter in analyzing the effects of place on health?
• Are contextual socioeconomic effects on mortality similar across Canadian provinces?

Spatial units
• Community Centre Areas (defined by Winnipeg Council of Community Centres for programming purposes)
• Neighbourhood Clusters (defined by Winnipeg Regional Health Authority for research purposes)
• Community Areas (defined by Winnipeg Regional Health Authority for administrative purposes)
• Manitoba Census Enumeration Areas

Data used
• City of Winnipeg data on housing, crime, social programs, and green space (1997-2000)
• Manitoba Centre for Health Policy Population Health Data Repository (2000)
• National Population Health Survey and Manitoba Health (1996/7)
• Canada Census (1996)
Predictors of Psychological Distress and Quality of Life in Disadvantaged Socio-economic Populations of Montréal

Jean Caron
Douglas Hospital
McGill University

Very limited data are currently available with which to study mental health in the Quebec population. Existing surveys (e.g., *L’enquête sociale et de santé* and *L’enquête sur la santé des collectivités canadiennes*) are not designed for analysis at a local level. They are more often concerned with risk factors and negative aspects of mental health than with protective factors and positive aspects of mental health (e.g., resilience, well being). With funding from CPHI, Jean Caron and colleagues overcame some of these limitations by creating their own database based on interviews with individuals living in disadvantaged communities in Montréal. Informed by the social vulnerability hypothesis, an aim of this study was to better understand the specific associations between social support, psychological distress, and quality of life among individuals living in disadvantaged circumstances.

Five groups participated in the study. Two groups emerged from a random sample of 416 welfare recipients living in southwest Montréal: one with psychological distress (Group 1) and one without (Group 2). A third group comprised 49 disadvantaged individuals who were receiving psychiatric treatment (Group 3). Two final groups were created from 112 individuals from the general population who were divided into a group with psychological distress (Group 4) and a group without (Group 5). Multiple analysis of variance (MANOVA) indicated differences among the five groups on questionnaire measures of psychological distress, social support, and quality of life, to the particular detriment of the disadvantaged individuals receiving psychiatric treatment (Group 3). Multiple regression analyses indicated that the best predictors of psychological distress were variables pertaining to social support and attachment.

Jean Caron et al (Douglas Hospital, McGill)

**Summary**

**Research question**
- What is the nature of associations between social support, mental health, and quality of life among economically disadvantaged individuals with and without mental health problems in Montréal?

**Spatial unit**
- “Quartiers” in Montréal (residential units defined by the former Montréal Urban Community)

**Data used**
- Interview data, including self-report questionnaires
Health Profile Inequities and the Living Environment: 
Underlying Causes and their Interactions

Maria De Koninck and Robert Pampalon
Université Laval

This study is based on the recognition that macro-economic organization and social 
stratification underlie differential life conditions and health circumstances. It aims to understand 
why regions with comparable socio-economic circumstances can differ in health status, or why 
regions with contrasting socio-economic circumstances can have similar health status. One 
hypothesis is that the degree of social cohesion or social capital can explain such contrasting 
patterns. The objectives of this project are to identify and quantify the primary factors that 
contribute to health inequalities, and to understand the interaction among these factors 
and their impact on health.

Initially, three pairs of areas (urban, suburban, and rural) in the Quebec City region were 
selected based on their health and socioeconomic contrast. However, a validation exercise 
revealed that the observed contrasts were the result of statistical artefacts due to undetected 
presence of a private seniors’ residence in one instance, mismatch of units from which health 
and socio-economic data were drawn in another, and missing deprivation-index data among 
relatively advantaged localities in the third pair of areas. Based on these problems, researchers 
reconsidered the selection of study territories. Three “typical” areas (urban, suburban, and 
rural) that were found to show good contrast on demographic, socio-economic, and health 
dimensions were chosen. These areas correspond to both municipal administrative entities 
and health districts, and are, therefore, appropriate for investigating the role of public 
and private facilities.

These areas will be further subdivided into territorial units of approximately 5,000 people 
on the basis of their socio-economic characteristics, using cluster analysis of indicators 
of social and material disadvantage among enumeration areas, which include 750 people 
on average. The geographical boundaries of these neighbourhood units will be verified to 
even that they are comparable for demographic, socio-economic, and health data. A focus-
group approach will be used to validate the units, in collaboration with local stakeholders 
in the economic-development and health sectors. The roles of community, family, and working 
environments on health will then be investigated in these neighbourhood units, using both 
quantitative and qualitative methodologies, to understand the fundamental issues underlying 
social inequalities in health.
Summary

Research question
• Do interactions among health determinants (in community, family, and working environments) vary among local areas within urban, suburban, and rural sectors in Quebec City?

Spatial units
• Health Sectors (one urban, one suburban, one rural; the urban and suburban sectors corresponded to boroughs, and the rural sector corresponded to a regional municipality)
• Enumeration Areas
• Neighbourhoods/Territorial Units (clusters of Enumeration Areas within Sectors)

Data used
• Canada Census
• Death Registry
• Med-Echo
• Quebec Health Insurance Board
• Communauté urbaine de Québec
• Régie régionale de la santé et des services sociaux de Québec
• local data from school boards, police services, occupational health services in CLSCs
• questionnaires and interviews (telephone survey)
• observation and field work
Urban Structure, Population Health and Public Policy

Michael Hayes
Simon Fraser University

The regionalization of health services has created a need for information about the distribution of health status across local populations, but a lack of appropriate data has hindered this task. In Vancouver, the Census Metropolitan Area (CMA) is administratively divided into two health regions that lack the infrastructural capacity to integrate health information across regional boundaries. Consequently, a “big-picture” view of health across the Vancouver urban area is not available to policy-makers. Empirical analysis of regional variation in health status is further restricted by fragmentation of data sources and the lack of a centralized research board.

A goal of this research program is to create an integrated database for the Vancouver CMA, which will be based on census data, a number of local data sources, and the British Columbia linked database, which contains individual-level data. This integrated database will be used to investigate the distribution of health status at the intra-regional level, to develop neighbourhood profiles with which to better understand the “texture” of everyday life with respect to health status, and to explore theoretical and practical questions relating to data integration and spatial analysis. The program will also enable ongoing research to assess the distributive impact on health status of municipal and provincial public policies.

Michael Hayes et al (SFU)

Summary

Project goal
• To create an integrated database that enables the study of distribution in health status across Vancouver, and the development of neighbourhood typologies

Spatial units
• Health regions
• Municipalities (as defined by Federation of Canadian Municipalities)
• Census tracts
• “Planning neighbourhoods”

Data used
• Canadian census data
• Canadian Community Health Survey
• Roadmap Initiative
• Cadastral (land use) data from municipal governments, Greater Vancouver Regional District, and provincial government (Integrated Cadastral Initiative)
• Vital Statistics (births, deaths)
• Ministry of Health (BC linked database)
• BC Assessment Authority (land value data)
• Police Agencies (crime data)
• Environmental agencies
Areal Effects on Health: 
A Multi-level Study of Montréal Neighbourhoods

Nancy Ross  
McGill University

Nancy Ross’ research team is carrying out a five-phase study of neighbourhoods and health within the Montréal metropolitan health region. In phases 1 and 2, neighbourhood units were identified based on residential maps produced by the City of Montréal (n=89) and census subdivisions that comprise the Montréal Health Region (n=28). Enumeration areas were then fitted into each of these 117 “natural neighbourhoods.” In phases 3 and 4, individual respondent data from the Canadian Community Health Survey data will be situated within these neighbourhoods, and neighbourhood health profiles will be developed. Using multilevel modelling analyses, neighbourhood- and individual-level correlates of health status and behaviours will be determined. In Phase 5, results obtained using these “natural neighbourhoods” will be compared with analyses conducted based on census tracts as the neighbourhood unit.

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Nancy Ross et al (McGill)  
Summary

Research questions
• Is it possible to define “natural neighbourhoods?”
• Do spatial effects on health outcomes differ when analyzing natural neighbourhoods versus census tracts?

Spatial unit
• Census subdivisions
• Enumeration areas
• Montréal “quartiers” (residential units defined by the former Montréal Urban Community)

Data used
• Canadian Community Health Survey
Inventory and Linkage of Databases for Studying the Relationships Between Places and Health in Urban Settings

Louise Potvin
Université de Montréal

Penelope Hawe
University of Calgary

Drs Potvin and Hawe have an infrastructure grant from CPHI enabling the coordination of two independently established programs of research (in Montréal and Calgary) on context and health. The dual-site research team is deliberately interdisciplinary and prioritizes both conceptual and empirical dimensions. The program aims to pool expertise and learning across the two sites in order to achieve two objectives:

1. Outlining an efficient and comprehensive process for cataloguing and ultimately linking existing databases, and
2. Assembling a multidisciplinary database of the published literature relevant to the relationships between place and health.

To achieve these goals, two working groups have been established across the two sites. The Data Working Group is responsible for creating an inventory of the existing databases at each site, and gathering information about the different units of aggregation in use. Alternative definitions of “neighbourhood” will be considered and examined. Ultimately, this group will develop linkage algorithms for using multiple data sources to build “model” databases, and will conduct an economic costing study of this process. The Conceptual Development Working Group is responsible for developing a system for coding and classifying the literature on place and health. The program deliverables include a resource package about data collation and synthesis and a literature appraisal for dissemination, which other researchers will be able to use supplement.

Summary

Project goals
• To mobilize a dual-site research team in developing a process for compiling and linking existing administrative databases, and to assemble and classify a collection of the published literature on place and health.