Proceedings of the

International Conference to Advance a Population Health Intervention Research Agenda

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Center for Community Health Development

Texas A&M Health Science Center

Institute of Population and Public Health
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(A list of conference speakers and their biographies may be found in Appendix A.)





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History and Background

On March 26–27, 2012, the Centers for Disease Control and Prevention (CDC) and the Institute of Population and Public Health of the Canadian Institutes of Health Research (CIHR) jointly sponsored an *International Conference on Advancing a Population Health Research Agenda*. The conference was held in Montreal, Canada, and included researchers, policy makers and practitioners from the U.S., Canada, United Kingdom, Germany, Australia, and France. This conference was one of four conferences since 2009 to address theoretical and methodological issues related to community and population health interventions.

The first conference was held in October, 2009, in Chicago, Illinois, The Chicago conference included a wide range of researchers, community representatives, policymakers, journal editors, and funders to: elaborate tensions in the science of community interventions in terms of conceptual frameworks, implementation, and evaluation of their effects; surface conceptual frameworks and key concepts, such as collaboration, related to achieving sustainable community-level impact; and develop ideas for how to promote alternative ways of thinking about community interventions that are responsive to concerns raised in the extant scholarly literature and by community members. The results of this conference were published in the *American Journal of Public Health* (Trickett EJ, Beehler S, Deutsch C, Green LW, Hawe P, McLeroy K, Miller RL, Rapkin BL, Schensul JJ, Schulz AJ, and Trimble JE. (2011) Advancing the Science of Community-Level Interventions. Published June 16, 2011, 10.2105, *American Journal of Public Health*, 300113, PMID: 21680923).

The second and third conferences were held contiguously in Toronto, Canada, on November 29–30, and December 1, 2010, More than 130 researchers, decision-makers, and other experts in the field from Canada, the United States, the United Kingdom, France, Portugal, and Australia attended the *Symposium on Accelerating Population Health Intervention Research to Promote Health and Health Equity*, which included: a series of expert presentations designed to illustrate different perspectives of PHIR; an interactive poster session showcasing examples of PHIR from Canada and other countries; and, frequent opportunities for comment and discussion, both in plenary and small groups. A report on this symposium is available at the CIHR website: http://www.cihr-irsc.gc.ca/e/43787.html.

On December 1, 2010, immediately following the Toronto symposium, approximately 60 researchers from Canada, the U.S., the UK, France, and Australia met in Toronto for a workshop entitled *Stimulating Methodological and Theoretical Innovation in PHIR*. Participants were encouraged to come to an understanding of the range and mix of methods needed to address important questions and to contribute to the development of a consensus statement on the meaning of PHIR. The objectives of the workshop were to: create a forum to contrast, debate, and discuss the different theoretical and methodological underpinnings of PHIR in order to advance the science of population health interventions; and to identify priority areas for theoretical and methodological development in PHIR. The report on the workshop is available on the CIHR website at: http://www.cihr-irsc.gc.ca/e/documents/ipph_workshop_sum_report_2010_e.pdf.

The International Conference on Advancing a Population Health Research Agenda held in Montreal in March 2012, built upon some of the experiences from the previous three conferences/workshops, and had as goals: (1) examining and debating the links between theories and methodologies in population health intervention research; (2) considering sophisticated applications of mixed methods to programmatic population health intervention research; (3) promoting discussion and debate regarding epistemology and knowledge synthesis and transfer; (4) strengthening network ties among international researchers and practitioners with an interest in population health improvement and health equity; and (5) discussing advances in measuring key constructs, throughputs and outcomes of intervening in complex systems such as communities, including emerging issues raised at the conference.

The Montreal conference was built around individual and panel presentations on key topics, as well as group discussions after each of the presentations. Key topics included: first, the nature of community; the nature of interventions; and competing models of practice (community-based participatory research (CBPR), realist, positivist, and constructivist). This framework was based upon the recognition that it is not easy or perhaps even possible to separate community-based research methods from assumptions about the nature of community and the nature of interventions. Thus, panelists first interrogated the concept of community with presentations on the nature of community and the varying interpretations and uses of that term. This was followed by a discussion about how the varying concepts of community may affect choices among research methods, including how community is defined, what knowledge comes from communities, how the concept of agency varies across community definitions, how we represent communities in studies, what process and outcomes are important, and the implications of varying community definitions for research methods.

The second session focused on the nature of community and population health interventions. This was followed by a moderated discussion on the objects or purposes of community and population health intervention research, how the variations in purpose, scale and scope affect our research methods, what processes and outcomes are important, and what are the implications for population health intervention research and practice.

On the second day of the conference, there was a recap of the presentations and discussion during day 1. The objectives for day 2 were also presented. This was followed by four presenters representing a range of paradigms or frameworks used in community and population health intervention research, including community-based participatory research, realist approaches, outcomes research and more positivist approaches, and constructivist models. Each of the presenters on day 2 was asked to address a few critical issues in their presentations, including the underlying assumptions that guide each approach, how those assumptions guide who you work with in a community, how these assumptions influence the kinds of interventions that are used, the knowledge produced, and the research methods that are used.

The conference concluded with an open space discussion on a future agenda for population health research and a brief wrap-up at the end of the day which outlined future directions. Following the close of the meeting, there was a separate meeting sponsored by CIHR focusing on a discussion with journals editors and publishers about how to support population health intervention research.

We want to thank the planning committee for the Montreal conference who are listed, along with their affiliations. Support for the conference was made possible, in part by the Centers for Disease Control & Prevention through grant # 1U13DP003299 and through their Prevention Research Centers Program through cooperative agreement # 1U48DP001924. We also thank the Canadian Institutes of Health Research-Institute of Population and Public Health for their support and contributions to this conference.

*The views expressed in written conference materials and by speakers and moderators, as well as those included in these proceedings do not necessarily reflect the official policies of the Department of Health and Human Services, nor does the mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Day 1, March 26, 2012

Welcome and Introductions

Dr. Nancy Edwards, Scientific Director, CIHR Institute of Population and Public Health

Dr. Kenneth McLeroy, Regents Professor, Social and Behavioral Health, Texas A&M Health Science Center

Dr. Nancy Edwards welcomed participants and thanked the Centers for Disease Control and Prevention (CDC) committee members, the presenters, moderators, and staff.

She said this conference could lead to an ongoing conversation connecting organizations across disciplines, borders, and sectors. Conference participants were researchers, research funders, and other decision makers from diverse countries: Canada, the United States, Australia, Europe, and Africa.

She thanked Dr. Kenneth McLeroy for his role in Chairing the Planning Committee for the Conference. Dr. McLeroy also thanked Dr. Monica Wendel and Ms. Erica Di Ruggiero for their contributions in recruiting conference participants, organizing the conference, and managing conference proceedings.

The primary focus of this conference is on furthering the development of appropriate research methods for population and community-based interventions. Since appropriate research methods depend upon key assumptions about community and the nature of interventions, we will devote the first day of the conference to interrogating key concepts of community, interventions, and methods (see Day 1 agenda). The second day will be devoted to four approaches that we believe represent a range of approaches in the design and conduct of population health intervention research, including community-based participatory research, realist perspectives, clinical trials, and constructivist models. The discussion on the second day will focus on some of the critical issues, including the interconnectedness of concepts of community, interventions, research methods, and knowledge, and possible future directions.

Setting the Stage/Background

Dr. Edison Trickett, Professor, Department of Psychology, University of Illinois at Chicago

Dr. Nancy Edwards, Scientific Director, CIHR Institute of Population and Public Health

Dr. Mark Petticrew, Professor, Department of Social and Environmental Health Research, London School of Hygiene and Tropical Medicine

Dr. Edison Trickett provided an overview of the 2009 PHIR conference in Chicago. He acknowledged the support of the CDC and of Dr. Penny Hawe.

Conference discussions revealed "a variety of issues that reflect tensions in how population health interventions have been conducted." Dr. Trickett cited an over-reliance on individual-level research and a lack of emphasis on community impacts.

Issues dealt with at the Chicago conference included the gap between usage and practice; the use of multiple randomized control trials; the setting of a "gold standard" and associated ethical and logistical

constraints; and the documentation of scientific and practical benefits. The economic issues of efforts to provide incentives and "the unfortunate concept of 'buy-in'" were also discussed.

Dr. Trickett reflected on the origins of the term "gold standard," a phrase that offers connotations of financial stability while precluding flexibility. "The conference was as much about the culture of science as the culture of community," he said. Participants supported a multi-level, pluralistic approach to science methodologies.

Participants recognized how possible networking goals and partnerships were constrained by limitations in funding. Another concern was the gap between PHIR as it is practiced and as it is represented in peer-reviewed journals.

In conclusion, Dr. Trickett noted that the Chicago conference was the first of its kind and served as a starting point for a conversation that was continued in Toronto.

Dr. Nancy Edwards thanked Dr. Penny Hawe for bringing more Canadians into the discussion at the Chicago conference.

Putting the Toronto 2010 conference into context, Dr. Edwards summarized the structural impediments to PHIR. These included "the dominant culture of scientific inquiry; lack of funding and data infrastructure; limited incentives and drivers for population health intervention research; and the absence of a forum that could produce science-driven questions." These factors lead to more funding being allocated to "descriptive rather than intervention research," she said.

Dr. Edwards summarized the objectives, and the workshop themes and questions from the Toronto conference. She presented highlights from the workshop discussions on evaluating effectiveness:

- 1. Experiments and case studies are needed to rule out competing explanations and hypotheses.
- 2. Case studies that could be used as a foundation for PHIR are not used enough.
- 3. The proper counterfactual for causal inference is a long series of pre-intervention observations.
- 4. To develop a science of population health interventions, more intervention studies are required.

Key questions came up in relation to health equity: "How can health equity considerations be embedded in our research designs to study population health interventions?" and "What theoretical and methodological developments are needed to generate the required empirical evidence about how population health interventions effectively reduce inequities?"

Another identified need was for monitoring systems that could reveal health inequities and differential impacts. This would require the "intelligent application of targets and performance indicators and goals that level up, not down."

Dr. Edwards commented that "evidence of health inequalities does not tell us how to reduce those inequalities." Scientific approaches take place in their own context, with a particular set of "values, priorities and other influences in the decision-making context."

Research funders offered recommendations at the workshop reflecting their perspective:

- Put existing PHIR theories and methods to better use.
- Improve understanding of how to optimize impacts on a range of structural changes without widening socio-economic gaps.
- Foster international collaboration to support implementation and uptake of PHIR and strengthen peer review.

Some questions remained for discussion at the end of the Toronto workshop:

- How can we best stimulate and support theoretical and methodological innovation in PHIR?
- How can we better support the study of differential effects of population health interventions? How
 do we bring together different sectors?
- How do we attract the interdisciplinary mix of sciences needed to advance the field?
- What data infrastructure is needed for research in this field and how can we best stimulate its development? How can we hold a conversation about data harmonization that includes the continuum of information from genes to societal policies?
- How can we foster comparative policy research across sectors and borders?
- What international funding partnerships would best support advances in this field?

A participant commented that in terms of reaching across disciplines, it is important to be careful about how we refer to those involved in the conduct of PHIR from other disciplines and fields. Terms such as "researcher," "scientist," or "scholar" have different meanings among disciplines.

Dr. Mark Petticrew addressed the theory, methods, ethics, and economics of complex interventions to promote health at a population level. Complex interventions are discussed in health literature in terms of, among others things, clinical practice guidelines, examples of health systems, and motivational interviewing. Motivational interviewing is a useful tool that helps explain how connections are made and how things unfold beyond research initiatives.

In an ongoing project, Dr. Petticrew and colleagues are tracing how complex interventions are described in health literature. In 100 articles studied to date, the researchers have found that "statements coalesce around several centers of gravity." One focus of attention in the UK was Medical Research Council (MRC) guidance. The articles do not tend to cite other literature on complex systems, but do tend to make strategic use of a specific set of definitions.

Regarding the evaluation of complex interventions, Dr. Petticrew said that he has found that researchers working in International Development face the same challenges as those working in developed countries. The International Initiative for Impact Evaluation is an organization that funds studies on interventions in developing countries. Although the researchers may not use the same terms or read the same literature as PHIR researchers, they deal with the same kinds of issues and as such could contribute to the conversation.

On the topic of methods, Dr. Petticrew said the term "complexity" can be problematic. "The problem is that most papers use 'complexity' strategically to signify, 'my research is quite difficult; therefore I deserve funding." How this complexity relates to methodologies is often not explained.

As a result of the Cochrane Collaboration, a new chapter on Complex Interventions is being added to the next edition of the Cochrane Handbook. Meetings and workshops on complex interventions have led to the publication of papers in the *Journal of Clinical Epidemiology*.

The MRC in the UK is providing researchers with guidance on evaluating population health interventions. Responsibility for public health and community well-being has been shifted to local government councils.

However, changes lead to more questions: "If we want evidence to be generated from other sectors, what is 'evidence'? Terms like 'evidence,' 'evaluation,' and 'trials' are not necessarily understood the same way in other sectors."

Dr. Petticrew listed 12 terms used in evaluation studies that appear in the Cochrane Handbook (such as RCT, Q-RCT, RCS, and HCT¹), noting that terms such as "pipeline designs" that are used in the development field do not appear in the book.

In closing, Dr. Petticrew said currently there are increases in "population health intervention research, complex interventions, funders' interest in evaluation, and knotty problems for discussion."

Dr. McLeroy asked how Dr. Petticrew would differentiate "complex systems" from "complex interventions." Levels of intervention should be defined, because "if everything is now being described as a complex intervention, how useful is it as an idea?" Dr. Petticrew responded that interventions could include interactions between components, or changes made to a system, or much broader changes. He said that an act that is described as a complex intervention, but is done as an end in itself has no value. However, interventions that lead to synergies or feedback in systems do have value. One question is whether there is genuine engagement between the community and the intervention.

A participant commented that thinking of interventions as complex could influence how researchers think about the "why" behind their work. Another participant said that debates in Germany take place "upstream." There, concerns now focus on disparities between classes and the broader economic context.

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¹ RCT – Randomized Control Trial; Q-RCT – Quasi-Randomized Control Trial; RCS – Randomized Control Study; HCT – Historical Control Trial

Framing the Discussion: Community

SPEAKERS

Dr. Jean Schensul, Senior Scientist, Institute for Community Research

Dr. Edith Parker, Professor and Department Head, Department of Community and Behavioral Health, University of Iowa

MODERATOR

Dr. Barb Riley, Executive Director, Propel Centre for Population Health Impact

Dr. Jean Schensul and **Dr. Edith Parker** co-presented a framework for thinking about community, followed by a discussion moderated by **Dr. Barb Riley**.

Dr. Schensul observed that new cultures take time to develop, and that this was only the third conference of its kind. She said most interventions, even randomized controlled trials (RCTs) in schools, are very complex, "because they work through different levels and can't be controlled."

Dr. Parker said their presentation would provide different definitions of community, and describe different resource networks and ways of approaching communities. Dr. Schensul said that, while agencies define the term "community" differently, every definition refers to people. Although a community may be a politically bounded space, political structures do not make for "natural communities."

Dr. Parker described "Glocalized" communities—"community as a localized geo-social setting"—a geographically bounded space in which community members share a name and a history. Members do not necessarily share a lot in common or do things together, but "they know they live in that community." She explained communities of identity as "self-defined groups that have a specific ethnic, cultural, or national identity." Although these communities usually spring up independently, they can be created through interventions: "People may forge an identity around a purpose."

Dr. Parker said communities are defined in relation to interventions through settings, targets, resources, and agency. Dr. Schensul said that, although there is some lack of clarity around the term "levels," they can provide "a handy rubric to figure out how to bound the system." She said there should be a focus on groups that experience inequities. Communities could be looked at "through the lens of housing and the availability of health services," for example.

In the context of ongoing processes in communities, Dr. Schensul and Dr. Parker said it would be useful to consider community assets and capacities. PHIR organizations should be building on those assets. In order to successfully diffuse interventions through networks and communities, Dr. Schensul said "adapters," "adopters," and "rejecters" must be understood. "They have to be studied ethnographically and structurally. We don't necessarily know what the relationships are unless we know about the nature of the relationships."

Discussion

Dr. Barb Riley thanked Drs. Parker and Schensul and invited participants to take part in a conversation on community. As noted previously, the key questions guiding this discussion were to interrogate the concepts of "community" and "intervention" with a particular focus on the various ways in which they are used across frameworks, methods and countries.

A participant asked, "What distinction do you make between different definitions of community and populations?" Dr. Schensul answered that people probably use different words to describe similar things. "Everything depends on positionality: where we sit, the demands, constraints, and resources of our particular institution or organization."

Another participant asked which definitions relating to community intervention were most pertinent to her. Dr. Schensul replied that she was most committed to the term "agency," preferring that term to "setting." Projects with a setting-based approach tend to leave a dearth of resources in the implicated community over the long term.

Another participant said that some practitioners who work with a settings approach see their projects as being contained within a community, and Dr. Schensul agreed with this point.

A participant who is preparing a program for a new quasi-federal organization said, "They hit the term 'stakeholder' over and over again. Do you define that as someone who has something to gain or lose in an in intervention?" Dr. Schensul answered that "stakeholder" is a neutral term for people who have an interest in a project, even if that interest is not apparent at first. She recommended talking to as many stakeholders as possible. "Make sure you hear from people who are going to be affected by the new system."

A participant had a two-fold comment, starting with the acknowledgement that "community as agency is quite important." However in some communities, some people have to manage two or three interests at once, as can be the case for people such as shopkeepers who have business interests within a community.

Dr. Schensul responded, "We probably do present an idealized view [of community agency]. One of the challenges of working in communities is to take different identities and forge a common solution. There are competing views." She referred to a diversity task force in a city with a mostly white population that has seen a recent influx of Latinos and African Americans. "I found it impressive that they had addressed the issue of agency and had set up inclusion tools, and were thinking ahead to see how to include these groups. There are ways to define common ground."

Dr. Schensul described a mixed level international study on the effects of tobacco on pregnant women and the marketing of smokeless tobacco. "It became clear that the shop owners were being persuaded to sell smokeless tobacco to make money in a poorer neighbourhood. Researchers said: a) people won't stop using it, and b) the tobacco shops won't stop selling it." Yet an ethnographer found out that a group of women had tried to convince the shop owners to stop selling it. Dr. Schensul concluded, "There will always be competing economic interests, but sometimes there's a shift in perspective" when the community is engaged.

Dr. McLeroy drew the conversation back to differences in definitions, commenting that he would like to hear how "community" is used in different countries.

A Canadian participant said that although he used to think he was a community researcher, his experience in public health probes belied that idea. The "complex adaptive systems lens" colours the definition of community.

Another participant commented that the definitions of community provided by Drs. Schensul and Parker described "a group of humans that exists in an objective way. It is some entity that exists outside the scientist's or scholar's definition." However, for public health programs, "the community is a population that is grouped together for specific experimental purposes." Public health campaigns to help reduce smoking have inadvertently created a definition of a type of person or population. Many people are, without their choosing, being defined by public health interventions.

Dr. Riley suggested that this comment could segue to a broader conversation with the whole group. She said the goal was not to build consensus but to open interrogations.

Dr. Parker spoke to the issue of imposed community: "There are communities of exclusion, such as refugee camps, and we also identify groups based on historical circumstances. When we don't think about communities of exclusion, we exclude them from interventions." Another participant said that the presentation "created a sense of discomfort." Researchers face a two-fold problem. First, the assumption that individuals gather steam and become a group does not work in terms of RCTs. "Big community does not equal population." Second, defining community as a "setting," or "target" assumes that researchers have control over their intervention, but they do not. When an intervention goes out into a larger population, "it is almost a black-box approach."

Of particular note in the discussion was the distinction between the concepts of "community" and "population" as used in the United States, Canada, the United Kingdom, and elsewhere. Researchers face a two-fold problem. An American participant said that in the United States, working on the assumption that communities have agency, there was a sense that, "if we work with enough disadvantaged communities, this will address health disparities." In the United States it is not politically correct to take that approach, he said. "It's compensatory. But the effects upstream are actually quite limited."

An epidemiologist suggested a consideration of the differences between population and communities in terms of strategic approach. In the United Kingdom, the change in government in 2010 had also brought a shift to a local, community-based approach.

A participant suggested considering "the wider social and political context in which we are having this discussion." The creation of "community work" as a definition amounts to the social construction of a whole field of work. Responsibilities are being devolved down through the levels of power, so this issue cannot be divorced from the political economic context.

A participant from the United Kingdom commented that communities organize themselves through government and voluntary agencies. While getting health on the agenda is difficult, health promotion can be accomplished through community agencies such as school communities.

Dr. McLeroy summarized some of the points made so far: "Do we start with problems or communities? When we start with problems, then we have the difficulty of engaging people with the issues. When we start with communities, the difficulty is that the communities have little control over the issues we are trying to address." But could these two approaches benefit each other?

A participant suggested that to stipulate either community- or population-based interventions creates a false distinction. The participant cited interventions made in Harlem, adding that it is not necessary to focus solely on deficits. "If we get too problem-focused we can lose sight of some important successes," such as the success of immigrant health in United States.

Another participant said, "We might think a little about places where we are creating dichotomies." Regarding the question of whether to start with communities or problems, she said, "Some communities have defined starting points already. Communities experience the impacts of social policy in very specific, contextual ways. There are specific manifestations of larger processes. If we start with community, it doesn't mean we stay there."

Dr. Riley said that "big community" and "population" are not the same. She asked, "How local is a community?"

A participant commented, "Remember, the term 'population' coincided with the development of the political economy," and suggested drawing on Habermas' term, "lifeworld."

Dr. Louise Potvin, noted that given the assumption that PHIR should be a multidisciplinary field, bridges would have to be built with other disciplines. "From a French perspective, 'community' is a bad word. On the basis of community, you *exclude*." In terms of methodology, interventions are dynamic: they work with expanding boundaries and moving targets.

A participant welcomed the reference to Habermas' lifeworld and added that the discussion had been missing a social analysis. "Lifeworld is not constructed by an external observer, but for an individual's own construction. If you use that perspective you will get more clarity. If you see social structure as fixed, you miss the most important thing, which is that life is fluid and flexible. If you take a more properly sociological approach to this, many of these problems cease to be problems." This approach takes into account communities of exclusion.

A participant spoke about a meeting of practitioners, researchers, and representatives from different communities in the Yukon. When discussing the meaning of community, the researchers did not set the agenda or the process. There are challenges: where does the intervention start; who defines the research process; and how does that affect your understanding of the community? First Nations have been excluded from the process for so long, it has become a very political issue. The meetings in the Yukon were about food safety, "a messy, multi-level topic," and included people outside the health field, such as farmers and food producers. The community will define the intervention over the coming year. In the Yukon, "the community includes the nature of the place, the animals and the plants, the people, the interdependence between them, and both First Nations people and non-First Nations people."

Dr. McLeroy added, "We have not yet talked about how populations are moving through time. And we have individual and cohort effects." Communities, nations, and networks are in transition, he said. "We need to be tracking those trends."

A participant said although poverty was added to the public health agenda relatively recently, "there have always been people struggling with poverty." People in the anti-poverty community now feel as though their agenda has been hijacked by large institutions. The lifeworld of people living in poverty and the lifeworld of researchers are very different. There is a stalemate between community groups and the institutions who also want to end poverty. The people advocating for poverty reduction in Saskatchewan describe themselves as "Firstvoice."

Riley asked whether participants thought that some communities are well represented by research, and which ones are not well represented.

A participant said, "A political scientist would say that power is the ability to influence others. For public health people, our objective *is* to influence others, often with resistance. We don't need to invite the political scientists here, but we should be at *their* meetings." Another participant said that universities should also be included.

A participant asked which communities are involved in PHIR. In Canada, Aboriginal communities are, "but only after great distress as objects of 'helicopter research." The Canadian Institutes of Health Research (CIHR) has made changes to include Aboriginal health issues, and there have been changes in ethics guidelines respecting the conduct of research with and for Aboriginal Peoples². However, more time and funding could be spent on research into community assets to find out, for example, why young people do *not* commit suicide or smoke. "It would be wonderful to fund research into positive assets and learn from that."

A participant turned to the topic of structural barriers: "There is a discourse barrier: I have the sense that talk about the gold standard, for example, is exclusionary to many social sciences such as anthropologists." This kind of language could exclude disciplines and people who should be involved.

Another participant said that there is a fundamental epistemological problem with the muddling of methods of analysis in public health. Although the level of analysis may rest on individual measures such as weight or health, relational issues are important when it comes to power issues. Membership in a group "isn't simply a descriptor; it's about relationships with other groups and competition for scarce resources." Failing to distinguish individual measures from group measures reveals power issues as understood by sociologists as opposed to political scientists.

The previous participant agreed. "Social capital is relational. If you belong to a club, you don't enhance that club by including more members. There is a major issue if you don't talk about the relational aspect of power."

² Canadian Institutes for Health Research Guidelines for Health Research involving Aboriginal Peoples are available at http://www.cihr-irsc.gc.ca/e/29134.html and have been integrated into the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans available at http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/Default/

Health issues are not solely about power and economics. In the United States, "even for those with the most access to health care, their health isn't that great, either. These are nationwide problems. Power is important, but it's not the only thing going on."

Another participant said it is true that power is not the only consideration, "but that which gets measured gets addressed. We don't have enough anthropologists in our science, and no political scientists. We are missing the boat. There's a huge gap on what data we collect. Until we address those gaps; until we create funding mechanisms to include multi-sector, multidisciplinary research, let's recognize where we have no data, otherwise we'll keep meeting without making any progress."

Commenting on methodology, Dr. Schensul said: "The work of epidemiology is very important. Without it, we don't have the aggregated information we need to think about what kind of action needs to be taken." Ethno-epidemiology has an important role to play in developing understanding of community assets.

"If you want constructive change, real innovation is going to be bottom-up," said a participant. "It's communities that get creative. . . . What's missing in this room is the top-down people. We've only got half of the equation here."

A participant introduced the term ontology to address the construction of PHIR work. "The idea is to work out some plausible model of causation. How do all these bits fit together? If you have an outcome, why does it happen? How does context link in? Ontology provides coherence to what is otherwise disparate data."

Dr. Trickett underlined the need for coherence, saying that one issue with the top-down perspective is the idea that "one theory fits all". He said that the possibility of localizing includes the possibility that there may be multiple theories within a community.

A participant cited Canadian government-funded work on HIV risk in Vancouver, which showed ethnography is also relevant. This work "offers a means of addressing relationality and a broader political perspective."

Dr. Riley concluded the discussion, saying, "There is space for difference here, as well." The morning's discussion would feed into a later discussion on intervention.

Panel Discussion: The Nature of Interventions

SPEAKERS

Dr. John Frank, Director, Scottish Collaboration for Public Health Research and Policy; Chair, Public Health Research and Policy, University of Edinburgh; Professor Emeritus, University of Toronto, Canada

Dr. Penny Hawe, Population Health Intervention Research Centre, University of Calgary, Canada

MODERATOR

Dr. Louise Potvin, Professor, Department of Social and Preventive Medicine, Université de Montréal; Director, Centre Léa-Roback sur les inégalités sociales de santé

High-level Policy Interventions are Sometimes Critical to Improving the Health of the Public

Dr. John Frank said a "most profound experience" made him realize the importance of high-level policy interventions in public health. As a Professor at the University of Berkeley from 1997 to 2001, he documented the perspectives of injured workers seeking compensation in California. He described California's compensation system, with its 300 private insurers, as the "most evil system in the Western world." He said workers needed to hire lawyers to receive compensation, but that ultimately most workers' cases were refused, and even for those accepted, very little compensation was paid.

Dr. Frank said, "We need some teeth in public health." Legislative action is required to improve public health because voluntary compliance is unlikely, particularly in what Frank called big business areas, such as big tobacco, big food and drink (trans fats, high sodium, high calories), and big toxic business (such as asbestos mining in Quebec).

This is especially true for addressing health inequalities, which may worsen if practitioners rely on clinical preventive interventions geared to individuals, such as lifelong exercise and drug treatments for people with chronic disease risk factors.

Reducing "unwitting" exposure to chronic disease risks (second-hand smoke, alcohol, salt, trans fats) is just as important as occupational and environmental hazard control. Public health should consider the interests of the various groups involved in these cases, by asking, "Who benefits? Who suffers? Who pays?"

Dr. Frank said Scotland's coronary heart disease rates have declined rapidly over 50 years to rival the rates of Northern European countries, such as Finland and Denmark. He noted, however, that although socio-economic status rates have also changed, they have not done so proportionally. The relative index of inequality has in fact gone up, said Frank. Heart disease is more and more concentrated every year by social class.

High-level policy measures against tobacco use are still weak in the United Kingdom. Dr. Frank said, "Tobacco is far too cheap and still too easy to get for under-aged buyers at every corner store." He said Scottish data shows that the gap in smoking rates between poorer and better-off groups is widening—

smoking rates in poorer communities are more than five-fold above the rich-area rates. He said this is also true for Aboriginal communities in Canada. "And advice not to smoke is not appreciated."

Twenty years ago, a huge smuggling epidemic, initially thought to have begun in Aboriginal reserves and later shown to have been encouraged by the tobacco industry, led the government, worried about violence in the area, to drop the tobacco tax. Soon after they slashed the taxes, there was a rapid spike in youth smoking. Dr. Frank called this a "great example of what not to do."

He described a famous study by Hugh Tunstall-Pedoe that measured the overall impact of individual-level clinical interventions on blood pressure. These "free" interventions were less effective than hoped. "The way you are treated and the likelihood that you will listen or even comply are all linked to social class."

Dr. Frank said there are advantages to bold and aggressive population health interventions. For example, the strong legal penalties imposed by Scotland on tobacco smoking in public spaces have worked. Since the controversial 2006 smoke-free legislation, there has been a systematic decline in coronary disease, asthma hospitalizations in children, and pre-term births. Dr. Frank said, "Sometimes there are all kinds of benefits that you didn't fully expect." In the benefit distribution (who benefits, who suffers, and who pays), the people selling tobacco lost very little, the pubs actually increased business, and overall public health improved.

Dr. Frank said another public health victory was the Sri Lankan ban on pesticides. The high-level policy regulating pesticide imports caused a sharp drop in suicide rates in Sri Lanka, where suicide by pesticide poisoning was prevalent among poor farmers.

Dr. Frank also gave the example of Finland's sharp reduction of alcohol taxes in 2004, after which alcohol consumption rose by 12% and alcohol-related mortality increased by 16% in men and 31% in women. Falling prices increased alcohol-related mortality, with a disproportionate impact on the unemployed.

Dr. Frank said the next target of legislation would likely be trans fats, which have already been banned in New York City and Denmark. He said there are likely to be few complaints, as the cost for the food industry is simply a question of changing suppliers and "no one will have a negative health effect from banning trans fats."

Dr. Frank said high-level policy interventions can be the most effective, efficient, and egalitarian public health interventions for reducing exposures to hazards—not only for traditional environmental and occupational toxins, but also for "hidden lifestyle exposures." However, citing water fluoridation and immunization programs, he said it is virtually impossible to guarantee that no individual or group will suffer some negative health or economic consequences. Public health usually cannot achieve Pareto improvement, where no one suffers.

The existence of special interest groups, such as big tobacco in the case of smoke-free legislation, ensure that incontrovertible epidemiological evidence of net health benefits from high-level interventions is essential.

The Nature of Interventions

Dr. Penny Hawe described ways of strengthening the theory of interventions at the community and wider population levels. She described James S. House's three essential perspectives on intervention (1991): technological, political, and cultural. The technological perspective includes vaccinations, reminder cards, lesson plans in school, and electronic prompts. The political perspective deals with negotiations to change the status quo and involves conflict and compromise. The cultural perspective addresses the way insiders receive outsiders who have designed an intervention.

Dr. Hawe said research tends to focus on the technological aspects of an intervention rather than the political and cultural implications. She quoted Dr. Trickett who picked up on this type of thinking:

When preventive intervention programs are described, they tend to focus on the technology of the intervention without informing us about how the context in which it was implemented affected the technology. We learn little about the many compromises, choice points, and backroom conversations that allowed it to take the form it took.³

Dr. Hawe also cited Judith Ottoson who, in her article *Knowledge-for-Action Theories in Evaluation: Knowledge Utilization, Diffusion, Implementation, Transfer and Translation,* ⁴ says that adaptation of interventions is essential in evaluation. Many different aspects must be addressed in evaluation, such as dissemination, knowledge transfer and translation (the language lens), and whether people are changing or thinking about changing their ways. Knowledge is co-produced at the outset. There are dynamic system trajectories inherent in the processes and methods used. "They perform the [role of] red rag to the bull."

Start by theorizing the context, or system, into which the intervention is introduced, said Dr. Hawe. Then consider the intervention as an event, or series of events, in the system that either leave a lasting footprint or wash out, depending on how the dynamic properties of the system are harnessed.

As new trajectories emerge, examine the way an intervention couples with context:

- Is it reflected in the money that went to people for staff training?
- Has it displaced activities and effort?

Look at how it changes relationships (more equal or unequal).

- Are new relationships forged?
- How does the system redistribute resources?

³ Trickett, E. (1998) Toward a framework for defining and resolving ethical issues in the protection of communities involved in primary prevention projects. Ethics and Behaviour, 8, 321-337.

⁴ Ottoson, J. M. (2009), Knowledge-for-action theories in evaluation: Knowledge utilization, diffusion, implementation, transfer, and translation. *New Directions for Evaluation*, 2009: 7–20. doi: 10.1002/ev.310

How does it change access to goods and services or economic policy?

Dr. Hawe described the obesity prevention project launched in Australia. She said the Government of Victoria enlisted the help of celebrity chef Jamie Oliver to "build a prevention system" that would address the rising levels of obesity in the country. Through a community-focused program, the high-profile chef teaches basic cooking skills and the importance of good nutrition and a healthy lifestyle to non-cooks, regardless of age, demographic, or ethnicity. "It didn't cost that much to bring him in," said Dr. Hawe, but he "was a huge splash with his community-level kitchens."

Dr. Hawe presented the example of Dauphin, a community in Manitoba that became the testing ground in the 1970s for a guaranteed minimum income. Although it was eventually cancelled, the program, entitled Mincome, had some positive impacts, such as lower high-school dropout rates, fewer hospital visits, and improved marital satisfaction. Dr. Evelyn Forget, a researcher at the University of Manitoba, is now studying the experiment's impact on the community. Perhaps the redistribution of resources was actually worth it, said Dr. Hawe.

To illustrate the impact of resource distribution on people's lives, Dr. Hawe discussed Australia's proposed carbon tax, which will be imposed beginning July 2012 on the biggest carbon producers in Australia—the mining companies. However, much of the cost is expected to be passed on to the consumer through increased prices. Dr. Hawe said the labour government would use the revenue to compensate vulnerable, lower-income groups.

An article by Dr. John Ashton in *The Guardian* in February 2012 discusses the conservative government's slashing of health care services in the United Kingdom. Dr. Ashton's father was a diabetic who decided to have children only because of the United Kingdom's good health care services. Dr. Hawe said, "This is resource distribution that leads to transformation." All systems differentially distribute in ways that change dynamics. Researchers must be conscious of an intervention's reach, which can be amplified or diluted through networks over time. By thinking and talking about interventions in this way "you can standardize interventions by functions and principles rather than particular form."

Dr. Hawe praised the work of Drs. John Øvretveit, Laura Leviton, and Gareth Parry who "have taken our idea and used it in the area of quality improvement." In their article, *Increasing the generalizability of improvement research with an improvement replication program,* 5 they are "not asking what is the best thing to do, but what is the best thing to do within this context." Testing improvements in different settings helps hold the interventions to proof of concept rather than experiential approach.

As students, researchers are taught to ignore causal questions and unknown authors. Dr. Hawe said there are "pockets of mono culture" with arrogance, ignorance, prejudice, and dominance. Decades of not being heard, understood, or valued has affected the quality and capacity of debate. The way scholars think about an intervention determines their research and methods. Dr. Hawe said we require

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⁵ John Øvretveit, Laura Leviton, Gareth Parry (2010), Increasing the generalizability of improvement research with an improvement replication program. *BMJ Qual Saf*2011;20:i87-i91 doi:10.1136/bmjqs.2010.046342.

various methods (such as qualitative, quantitative, observational, experimental, participatory, and cross-cultural) to best capture the process and range of outcomes.

Many people do not like the "pushy and intrusive" language of PHIR. As PHIR practitioners move away from their silos and the rule-based, one-size-fits-all ways of interpreting evidence, Dr. Hawe said they require more expertise and justification for the work they are doing.

"We will lose the framing battle in our own field if we don't move in concert, quickly," said Dr. Hawe. She described how obesity and bullying in schools illustrate how pharmaceutical solutions are taking over public policy solutions. Good role models and research, such as mapping the best and worst school situations, could prevent bullying. She said the science in the popular media on centre stage today tends towards biological explanations for social problems.

Discussion

A participant asked Dr. Frank whether legislation would be more effective if coupled with community-level interventions. Dr. Frank replied that legislation is effective for those "unwitting exposures," when people are placed in harm's way by others who feed them fries or smoke beside them. However, legislation is unlikely to affect what people do in their own homes. He said that it could be construed as culturally inappropriate to "tell people to change the very thing that gets them up in the morning."

A participant referred to a study that revealed a workplace smoking ban actually drove male workers home to smoke in privacy and exposed their families to more smoke. Dr. Frank said that the public smoking ban created a subtle shift in awareness, actually leading people to want to protect others.

Another participant referred to a comment during the morning session about the purpose of interventions to improve population health. He said the goal might not necessarily be population level improvement, but rather dissemination of programs. Systems change is a legitimate outcome and can help to conceptualize what needs to be in place for change to occur in the community.

Sometimes trivial changes in individual health result in incredible changes in population health, said another participant.

Moderator **Dr. Louise Potvin** asked participants, "What are the methodological issues related to these types of population health interventions? What is it that you have done in your own work that can help us to clarify?"

One participant was interested in learning more about where the 10% attributed to evaluation, actually came from and whether it was possible to build some statistics on true evaluation costs.

Another participant said the traditional definition of intervention leads to a "dangerous approach" because it lies with an expert outside of community rather than with emerging ideas and actions.

A participant supported Dr. Hawe's idea to increase research publications with similar approaches but in different communities. He warned, however, that the abstract must clearly convince the editor and reader of this new research's merit.

In response to a participant's query about increasing the minimum rate for alcohol, Dr. Frank said many people thought that "they should not have to pay more for their hard-earned drink." In Scotland, alcohol is a part of every social function, considered an "essential pleasure of life, a right." Although people are aware of the costs to society in terms of increased crime, health consequences, and broken families, many do not feel responsible for others' actions. Dr. Frank said no one is certain whether the recommended tax increase will deter beginning drinkers or affect heavy drinkers, and the Scottish electorate is "pushing to reject the bill." Referring to the Scottish government's efforts to get voluntary restrictions in high fat, salt, and sugar in foods, Dr. Frank said, "It's amazing to me that they think that would work."

The minimum price on alcohol has revealed that young drinkers migrate to cheap forms of alcohol, said one participant. There is no evidence that the minimum price has an impact on the moderate drinker. The English strategy proposes the increased rate as a public order measure, to prevent binge drinking among young people, rather than as a health measure.

There are no simple interventions. This situation is complex because it may lead to an expansion of imported black market alcohol, as in the case of cigarettes.

PHIR should not be limited to a single definition. "We'll use whatever language works" in order to get funding.

It is difficult to intervene into a system from the outside, said a participant. "You can't think the thoughts in another person's head." There is no chance to direct the way a system will react. A system adapts to something that happens in the environment.

"Tell me your methodology and I will tell you how complex your intervention is." Complexity is in the way a person sees the issue.

"And the more eyes that are looking, the more complex it's going to be," said the moderator.

Researchers should "show and tell," rather than list principles or definitions of interventions.

Beware of middle class morality inherent in PHIR. What we identify as problematic may be essential to someone's purpose in life. She also asked whether targeted interventions with moderate-risk rather than high-risk groups "give you the bigger bang for your buck."

Dr. Potvin asked whether practitioners were avoiding the idea of defining intervention. "We are far from having this conversation. Why? When does an intervention start? When does it become an effect and not context?"

A participant referred to the Nuffield Council on Bioethics' intervention ladder, which helps to conceptualize the different ways a public health policy can affect people. For example, will the benefits of an intervention be enough to justify the interference in people's lives and the financial cost? How likely is it that the intervention will achieve its goal? She said interventions that are higher up the ladder are increasingly intrusive and therefore need more justification. "Although probably not complete, [the intervention ladder] is a good place for starting the discussion."

The participant used Montreal's Bixi bikes to illustrate her point. The Bixi bicycle-sharing system was set up in Montreal in 2007 to reduce automobile dependence. The project was based on a model that has existed in Western Europe for many years. Proponents were uncertain of the outcomes and began cautiously with a survey of population behaviours and the production of a public service announcement. Bike lanes were set up and bikes made available. However, "you can't make them get on the bikes." Various incentives with varying degrees of restrictions to a person's freedom can be used to promote behaviour change, such as discounts or tax credits for being physically active or changing the default side dish at restaurants to a salad rather than fries.

A participant mentioned another intervention ladder developed by the late Donella Meadows, entitled *The Twelve Leverage Points to Intervene in a Complex System*. Meadows' theory was that small changes in one place could have a large impact everywhere else. Knowing where these changes are and how to use them could potentially solve many of the world's problems. Based on Meadows' framework, Dr. Diane Finegood and her research team developed a five-level intervention framework to prevent obesity. These levels are stepped like a ladder from easiest to most difficult, least to most effective, dealing with structural elements at the base and a paradigm shift in deepest held beliefs at the top. These ladders help us to "think differently about the outcomes we are trying to achieve."

A participant cautioned that public health is "raiding others' ideas but only taking it so far." There has been much discussion of the relative stability of systems, but the world is headed towards unpredictable social and environmental changes, he said. He referred to Canadian ecologist Buzz Holling, who wrote about the trade-off between resilience and stability.

Partnership with the people in the community was the most complex part of an intervention project. "The hardest thing to do is to get in touch with the people who are actually initiating the project, to agree on what the project is, and to define the boundaries of the project."

Following up on the Bixi bike example, one participant said he was working on a very complex event, an evaluation of the 2012 London Olympics. The intervention could be said to start at the opening of the event, or traced back to its planning phase back in 2002. He said an intervention that spans 10 years is about particular moments of the intervention.

One participant used the example of Australia's school change, which starts with population feedback, connects with the community, and works to change the trajectory of a system to meet new demands.

A participant said that research involves understanding how a system works, responding to the prods, and determining what needs to be done to produce change. "We need to think about the nature and extent of systems change" and frame systems outcomes using a model such as Meadows' to determine where and how to intervene.

PHIR scholars assume they "know what's better." Public health intervention is not a mechanical process, but a co-production. It is about learning how to engage and empower people to improve a certain situation. If people are empowered to become conscious of the choices they are making, in most cases people will make a choice based on what is better for them.

Another participant suggested that an intervention is complex because it is constructed in an artificial world and then placed in the real world. He said an intervention is an irritant, much like a hurricane, that cannot be controlled, only watched as it plays out.

Day 2, March 27, 2012

Opening Remarks

Dr. Amy Schulz, Professor, University of Michigan School of Public Health

Dr. Amy Schulz reviewed the conference objectives and summarized the Day 1 dialogue. She said she was delighted by the discussions held the previous day and looked forward to continuing them.

On Day 1, Dr. Ed Trickett and Dr. Nancy Edwards had provided an overview of the Chicago and Toronto conferences. The Chicago conference examined theories of change, taking participants beyond relying on individual theories of change toward conceptualizing communities as complex systems and recognizing relationships between human agency and social structures. The Chicago conference also explored the implications of these conceptualizations for the methods that build a body of knowledge about community change.

Dr. Schulz said the Toronto Conference "picked up on some of these same themes, grappling with structural impediments to what in the Canadian context is referred to as population health intervention research and its use." Participants discussed challenges related to the dominant culture of scientific inquiry, lack of diversity in funding instruments, challenges related to infrastructure, limited incentives and drivers, and the absence of forums for generating the "big questions" about change to promote community or population health.

Both of these conferences led directly to Montreal conference priorities, namely to consider the assumptions that underlie PHIR in communities and to better understand community change.

Yesterday's spirited conversations, following Dr. Edith Parker and Dr. Jean Schensul's presentations about community definitions and dimensions, revealed the conference participants' passion about issues that have profound implications for intervention design:

- Social relationships;
- The influence of geographic space on the relationships of people who share that space (including conflicts and inequalities);
- Identities that link people to multiple communities or groups and that may shape their actions in interesting ways;
- Differences in political power; and
- Communities as dynamic systems.

The discussion focused on starting points, relative power and influence, social processes of inequality and exclusion, and the engagement of community members throughout the research process. "Starting with community does not mean ending with community," said Dr. Schulz. The issues identified by communities are local expressions of broader public health issues, and – once identified can provide a mechanism for community decision makers and policy makers to work with public health practitioners to influence broader policy decisions. Dr. Schulz stressed the importance of continuing to question social process of inequality and exclusion as well as their implications for community change.

In the afternoon of Day 1, Dr. John Frank addressed the importance of legislation and policy interventions to improve public health, particularly where voluntary compliance by groups with vested interests, such as the food and tobacco industries, is unlikely. Understanding the interests of various groups (who will benefit, who will lose, and who will pay) is critical to the success of such initiatives.

Dr. Penny Hawe outlined three ways of framing interventions: technological, political, and cultural, each with different implications for scholars' research. She had said that researchers tend to focus on the technological aspects of intervention research, and to minimize discussion of the political and cultural aspects.

The ensuing discussion focused on the transfer and exchange of knowledge from scholars to communities and policy makers versus knowledge co-production, which involves community engagement from the outset. Participants discussed the start and end points of an intervention, methods for capturing processes and outcomes that unfold over time, and the need to understand the context before designing an intervention.

Dr. Schulz said a key objective for Day Two was to further explore the ways "we think about communities, research designs, measurement approaches," and knowledge building. She asked participants to build on their conversations about how these assumptions implicitly or explicitly inform PHIR.

Since appropriate research methods depend upon key assumptions about community and the nature of interventions, we devoted the first day of the conference to interrogating key concepts of community, interventions, and methods. The second day was devoted to four approaches that represent a range of frameworks for the design and conduct of population health intervention research, including community-based participatory research, realist perspectives, clinical trials/outcome evaluation, and constructivist models.

Panel Presentation:

Research Approaches and Their Perspectives (Part I)

Community-Based Participatory Research (CBPR): Underlying Assumptions and Implications for Interventions, Knowledge Produced, and Research Methods Used

Dr. Barbara Israel, Professor, University of Michigan School of Public Health

Dr. Barbara Israel explained that her Southern and Jewish roots as well as her academic training with Dr. Guy Steuart led her to choose a community-based participatory research approach to research. Her hometown of Greensboro, North Carolina was the site of the famous Woolworth sit-ins, a series of nonviolent protests in the 1950s that led to Woolworth's reversing its policy of racial segregation. These sit-ins were a crucial precursor to the civil rights movement. She recalled the segregated water fountains, theatres, and hospitals and credited her parents for instilling in her a devotion to social justice issues.

The Chair of the Department of Health Behavior and Health Education at the University of North Carolina at Chapel Hill where Dr. Israel completed her doctoral (Dr.P.H.) degree was Dr. Guy Steuart. As noted by Dr. Israel, Dr. Steuart emphasized the importance of community as identity and solution "long before it was the 'in' thing." He promoted community control in the decision-making process, community-centred rather than community-oriented projects, and the role of researchers as facilitators rather than experts. He also focused on social change rather than solely on individual change.

One contributor to community health disparities is exposure to stressors in the physical and social environment that are associated with poor physical and mental health outcomes. These stressors include lack of access to meaningful employment, exposure to violence, unfair treatment and discrimination, poor air quality, and lack of spaces for physical activity. There is a disproportionate burden of disease borne by low-income communities and communities of colour.

When interventions are not tailored to the concerns of the community and when community members do not actively participate throughout the entire process from design through implementation and evaluation, research can actually harm rather than benefit the community. An example of such research, referred to by some of Dr. Israel's community partners as "drive-by research" or the "parachute model," is the Tuskegee Syphilis study, conducted between 1932 and 1972 in Tuskegee, Alabama, to study the natural progression of untreated syphilis. The study subjects were poor, rural black men who thought they were receiving free health care from the U.S. government. This resulted in an understandable distrust of, and reluctance to participate in, research. The communities most affected by health inequities are the least likely to be involved in the research process.

Dr. Israel said there have been increasing calls for more comprehensive and participatory approaches to understand and address health inequities. She defined CBPR as a partnership approach to research that involves community members, organizational representatives, and academic researchers in all aspects of the research process. Researchers can find in community members an extensive set of skills, strengths, and resources to address stressors and promote health and well-being. CBPR enables all partners to contribute, enhances a common understanding, and integrates knowledge gained with interventions and policy change.

CBPR aligns itself with a constructivist paradigm. The researcher and community together control the inquiry process, develop strategies that use the results for community interests, and collaborate in social action. CBPR defines community as a unit of identity with a common language, similar goals and interests, and a sense of emotional connection. Communities of identity may be geographic or made up of multiple communities. CBPR builds on community strengths and resources, recognizes skills and social networks, promotes collaborative and equitable partnerships, and facilitates co-learning and capacity building.

CBPR also balances research and action for the mutual benefit of all partners. Researcher claims of neutrality "really are supporting the status quo." Participatory approaches involve value structure and a commitment to action. Dr. Israel said she always co-presents with a community member. CBPR is about "power-sharing, being able to communicate in different ways." Depending on the audience, the community member is "more credible than I could ever be." CBPR is necessarily a long-term process and

a commitment to develop relationships, partnerships, and actions that extend far beyond any one funding period.

Dr. Israel then described her work in Detroit as a member of the Healthy Environments Partnership (HEP). Established in 2000, HEP examines how the social and physical environment has contributed to racial, ethnic, and socio-economic disparities in cardiovascular disease in Detroit. It identifies local stressors and examines potential protective factors to improve heart health in the community. HEP addresses health issues from an ecological perspective at multiple levels. It works to enhance physical activity and safe places for these activities and meets with policy makers at the state and federal levels to discuss food access and air quality.

HEP also disseminates its findings to the broader community through multiple forms of communication, such as fact sheets, policy briefs, posters, scientific journal articles, and social media.

"One of the most important things to know about CBPR is it is an approach by which research is conducted." It has no specific method or research design, and can involve both qualitative and quantitative methods as well as multiple research designs.

A Brief Introduction to the Realist Approach

Dr. Geoff Wong, General Practitioner and Senior Lecturer, Queen Mary, University of London, UK

Dr. Allan Best, Managing Partner, InSource Research Group, Vancouver

Dr. Geoff Wong provided an overview of the realist approach. The realist paradigm reflects the shift from merely observing outcomes to trying to explain why they occur. There are many 'tribes' in realism and there is at present no set view of realism. Based on original works by Roy Bhaskar, the British philosopher who developed critical realism, Ray Pawson has developed two realist approaches: realist evaluation (theory-driven evaluation or primary research) and realist synthesis (theory-driven systematic review or secondary research). Goals of realism predominantly focus on explanation and understanding, rather than judgment and summation.

Dr. Wong put the realist approach in context. He said many public health interventions are not simple "black boxes"; rather, they have many interactive components that do not act in a linear fashion. They target all sorts of groups or organizational levels and rely on "those pesky people" to carry out the intervention. "They never do what you want them to do," said Dr. Wong. The outcomes can be completely unintended and are highly dependent on the context in which they take place.

Dr. Wong stressed the importance of "digging deeper" below surface observations to the various layers of a complex intervention that can influence change. The realist approach identifies, understands, and explains causation through generative mechanisms. For example, although we cannot see gravity, we can see its effects. Wong said, "We infer and believe it to exist, because we see the outcomes." The assumption is that a specific mechanism or generative force causes an outcome, but there may be many mechanisms interacting to bring about an outcome. One mechanism may be more predominant than the other. The context influences the mechanism, and controlling the context may be neither possible nor desirable.

Dr. Allan Best illustrated the realist approach in practice with the example of the Saskatchewan "large system transformation project." "This is a story about the political meeting the cultural," he said. The sense of community, connectivity, and collaboration in Saskatchewan is very strong. The province, one of the first in Canada to invest in universal health care, is working to transform the old system to make it more relevant, by promoting organizational collaboration and multi-level strategies. Seeking better integration within this complex health care system, the province invited scientists to synthesize the available information on large system transformation to help inform and facilitate the kind of systemic changes required.

Using the realist model, scientists developed a structure to enable the blending of research, theory, and practice: a steering committee, synthesis team and expert panel, learning forum, and consensus network. A small group of organizations and experts dealing with similar transformation work help validate their findings. Scientists identified several requirements for systemic change:

- Top-down, bottom-up distributive leadership;
- Feedback and reporting;
- Historical context;
- Engagement and power; and
- People-centered transformation.

A clear mission and vision communicated to people at all levels of the system will set the system's direction and priorities. Dr. Best said a model based on "everyone working toward a common goal" is more effective than a model built on compliance. Leadership must engage staff at all levels of the system.

Panel Presentation:

Research Approaches and Their Perspectives (Part II)

Effectiveness of Population Health Interventions, Positivist Approach

Dr. Slim Haddad, Professor and former Chair, Department of Social and Preventive Medicine, University of Montreal

Dr. Slim Haddad, a physician who specializes in public health, presented the positivist approach focused on clinical trials and intervention effectiveness. Dr. Haddad conducts research primarily in developing countries in Africa but some interesting parallels exist with high-income countries, such as Canada, the United States, and the United Kingdom.

As a "positivist," Dr. Haddad said he is interested in the relevance of effectiveness studies, appropriateness of outcome evaluation based on observational data, and better use of heterogeneity as a source of knowledge. He said, "I often hear of the need for evidence on the impact of public health interventions." People are curious to know whether the outcomes can be transposed to other places. He asked whether global action researchers could afford to ignore the outcomes of public health interventions. Evidence must be provided to those who invest time and money in interventions but "not

everyone is convinced of the need for evidence of outcomes." He said knowledge production and dissemination of outcomes are crucial.

Dr. Haddad worked in Burkina Faso, where anyone "can come and suggest a new community intervention to fight disease." He said public health interventions as a "business" is a problem "rooted in the lack of evidence on outcomes." The power imbalance between large agencies versus local communities is a principal reason for the need for evidence on outcomes. An understanding of the transposability of outcomes is important for global health. Community-level decision makers, who often cannot read English nor understand a scientific paper, need to know whether an intervention in Burkina Faso can work in Mali. They "can't afford to just experiment."

Dr. Haddad then described the impact of an intervention in two districts in Burkina Faso to promote women's access to health services and, more specifically, assisted deliveries. The local communities were not interested in the differences between the two communities; rather, they were interested in the changes over time in their own community.

Researchers investigated whether the intervention addressed cost distribution across households before and after the program's introduction, whether the intervention helped to reduce poverty (the first Millennium Development Goal) in Burkina Faso, and whether household impoverishment was linked to illness. An outlier approach rather than a mean effect approach was used to determine to what extent the absence of a social security system contributes to the impoverishment of a population. Researchers are interested to see the effects on the treated rather than the average effects but people want mean effects and distribution.

In terms of intervention theory and design from a positivist approach, Dr. Haddad listed three evaluation questions: Could it work? Does it work? How does it work?

He said outcome researchers would never think in terms of "does it work?" but rather in terms of why it works and link this to outcomes and processes. Using experimental trials, they will not consider context, which they will see "as a nuisance." In comparison, the empirical world (natural interventions) is immersed in context and emphasizes practical effectiveness. These two worlds are distinct in purpose and have different responses to different questions, but "they are not opposed; they are just different."

Dr. Haddad said that, contrary to what researchers were traditionally led to believe, natural observations are not second-best. He referred to the Campbell and Stanley hierarchy of study design that deemed outcome evaluation based on observational data to be second-best, with biased estimates, selectivity, and time-related bias.

Dr. Haddad said he does quasi-experimental design because it better responds to his questions. Although this is a different approach, it can provide relevant information. Quasi-experimental design

could in fact produce good quality research. He referred to excellent reviews by Deaton and Angriest⁶ as well as by Shadish and Cook⁷ on the renaissance of field experiments.

Contemporary evaluations, which are based on quasi-experiment designs, are more credible and are often valid estimates of effects. Dr. Haddad said there is a narrower gap in internal validity between observational studies and experiments. After 30 years of progress, better data and processes for data collection now exist. Observatories are an excellent source as they follow thousands of individuals in health care over many years. There are also more sophisticated, multi-component designs that are now far removed from Campbell and Stanley's archetypes. He has observed the extremely interesting advances in quantitative approaches that have "changed our ways of doing analysis" today. He pointed to techniques that have helped counter some flaws of quasi-experimental design, with many changes in statistical methods and pooled time series analyses.

Dr. Haddad said the use of heterogeneity—variability between studies in estimates of effects—as a source of knowledge has also become "an extraordinary tool for conducting analysis." Traditionally considered a nuisance, a focus on heterogeneity challenges the assumptions of the potential outcome model but it often takes more time to incorporate in outcome evaluation. Dr. Haddad referred to Dr. F. Davidoff, who said: "Heterogeneity is ubiquitous in complex systems; suppressing it exacts a heavy price."

Heterogeneity can be used to understand sources of change and the reasons a given effect does or does not appear. According to leading microeconomist Angus Deaton, we can make use of this knowledge as long as we are ready to take advantage of it. However, this is not always feasible. Dr. Haddad suggests isolating the effects rather than the intervention (control for selectivity). Once the context is considered, "is what remains effective?" This approach helps determine what works and whether this is due to design or implementation.

Another approach is to move beyond the isolation of effects towards internalizing natural diversity; to think in terms of interactions rather than covariates; to forget about controls that do not provide much and instead use comparators (multiple case studies), which are "extremely useful." Dr. Haddad also said scholars should forget the logic model of the intervention and build analysis on expected responses and patterns of change rather than expected impacts. In terms of point estimates of effect size, use estimates of sensitivity to change and consistency of predicted patterns of change.

⁶ Joshua D. Angrist & John-Steffen Pischke, 2010. "The Credibility Revolution in Empirical Economics: How Better Research Design Is Taking the Con out of Econometrics," *Journal of Economic Perspectives*, American Economic Association, vol. 24(2), pages 3-30, Spring.

⁷ Shadish, W.R., and Cook, T.D., 2009. "The Renaissance of Field Experimentation in Evaluating Interventions," *Annual Review of Psychology*. 60: 607-629.

Dr. Haddad said there is no need to model heterogeneity in the early stages of an intervention. He quoted Deaton: "Heterogeneity is not a technical problem but a symptom of something deeper, which is the failure to specify causal models of the process we are examining."

Dr. Haddad concluded with some ideas for using heterogeneity as a source of knowledge. He suggested an assessment of an intervention's maturity and identification of possible sources and types of heterogeneity (intervention, context, and people, between and within units). In some cases, heterogeneity is so great it is not possible to have a meaningful analysis of how implementation and impacts are related.

A Short Introduction to Constructivist Approaches

Yvonna S. Lincoln, Distinguished Professor, Higher Education and Educational Administration, Texas A&M University

Dr. Yvonna Lincoln provided a short history of constructivist or natural inquiry. She said three distinct forms of inquiry could be pursued in such a model: research, evaluation, and policy analysis. She said the important thing is to understand that for each of these forms, there are different purposes, audiences, and outcomes, but the methods and processes can be used equally well with all three.

Community-based approaches are constructivist approaches and constructivist approaches are always community-based, never experimental or laboratory-based.

Dr. Lincoln said constructivist inquiry is the other half of science. Experimental models, though extremely useful in some cases, "do not answer 100% of the questions we have." Individuals, scientists, and social scientists "do not act on the world as it is but rather on how they themselves socially construct it." Any one of these approaches is only one perspective. She said, "A piece of the whole picture that contains truth about the whole picture is not the whole picture by any means."

Dr. Lincoln suggested using multiple approaches for multiple views because interventions are complex and context-grounded processes. Outcomes of interventions are shaped by values, attitudes, beliefs, hopes, aspirations, prejudices, interactions with others, information/misinformation, and all the other shapers that make up individuals. How people act depends on the context. She said, "Change the context, time, and place, and you are likely to change the behaviour."

As human beings, we cannot escape values and how they impinge on the assumptions we make.

Constructivist research is derived from hermeneutical phenomena. Reality is constantly being interpreted, updated, elaborated, bridged, and extended by experience, new information, shifting contexts, changing actors in communities and "made to fit for today's context whatever that may be." Reality comprises the physical measureable world as well as the mental mechanism by which people make meaning of the physical and social, interactive world.

Knowledge is judged by the extent to which it is considered credible and believable to those inside and outside the context. Dr. Lincoln said, "Knowledge is not very useful if no one wants to act on it, people are offended by it, or it bores them to death." The researchers and the research participants must both find the knowledge credible or "you might as well start all over again."

Knowledge is derived from the context in which it is applied. Knowledge is a deeper understanding of how context and groups shape activity, including why interventions might work in some communities and not in others.

Constructivist theories are usually local or mid-range theories that are rarely generalized because of their deep reliance on context and community. Communities are groups of people who share some or many aspects of some constructed reality. Constructivists define communities because they are interested in that shared constructed reality. Constructivists are also interested in the kinds of constructs that people do not share. Dr. Lincoln said Professor Egon G. Guba used to say that positivists are interested in similarities between units, while constructivists are interested in the differences as well as the similarities.

Constructivist methodology is primarily qualitative, but also quantitative when appropriate. Dr. Lincoln said constructivists have never denied the extreme utility of quantitative methods, which have a serious place in science; however, there has been some criticism that quantitative methods are not cumulative and cannot be subjected to meta-analysis. Dr. Lincoln argued that there are systematic ways to accumulate the results of similar case studies, join them under a common rubric, and learn across case studies.

Dr. Lincoln said values play a huge role in constructivist inquiry. Values shape research questions, how communities receive interventions, how much preparation is done, and whether communities act in concert with or resist interventions.

Because inquiry is both hermeneutic and dialectic, value conflicts exist and not all value conflicts can be resolved. Dr. Lincoln said, "We can't assume that people in a community will all be on one side. In the pluralistic societies that we work in, we have to assume that there is conflict that is open or hidden and we have to look for it."

No matter how elegantly designed an intervention, its success depends on human engagement. Dr. Lincoln said it is therefore important to understand how "those pesky people, as Wong referred to them earlier," groups, and communities "construct" the intervention, as well as what prevents interventions from being successful.

Dr. Lincoln presented a circular diagram to illustrate a constructivist approach at its best. Research enables the intervention design, implementation takes place in the community context, and then further research or evaluation is based on the result of research. In this iterative process, a policy analysis helps identify the successes, failures, and barriers and helps determine whether an intervention needs to be redesigned or whether there is a problem with the implementation. Dr. Lincoln said, "Perhaps we don't want to lower taxes on alcohol or perhaps we decide to re-enter the community in a slightly different way, with a different perspective." She said all good science proceeds in this iterative fashion.

Discussion

A participant asked Dr. Lincoln whether she thought that communities in themselves have a set of values, or whether it is simply the individuals within the community. She replied, "Both. They share a

social construction." Individuals have values but there are also shared values within a community. The smaller the community, the more likely people will share values. For instance, she said she lives in a conservative community with very few democrats where people share strong values of conservatism. Even within the conservative groups, people share radically different viewpoints on what conservatism is.

Another participant noted that much of the research done ends up educating other researchers and sometimes changing worldviews. She asked Dr. Lincoln to describe her experiences within a constructive perspective. Do things improve over time?

Dr. Lincoln agreed that while constructions are elaborated, refined, and clarified, the principal audience for research is researchers. She also said that fieldwork "changes you in ways you can't possibly hope to predict."

Perspectives: Epistemology, Ontology, and Methods

Mike Kelly, Director, Centre for Public Health Excellence, National Institute for Health and Clinical Excellence, England

Dr. Mike Kelly served as a discussant and commentator on the four frameworks discussed above. Of particular note, he was asked to comment on how epistemology, ontology, and teleology affect the kinds of research methods employed by the various frameworks. Dr. Kelly said many of the ideas discussed today could be traced back to Greek times and at least to the German philosopher Immanuel Kant and Scottish philosopher David Hume who had already thought about ideas of rationalism and empiricism. For these philosophers, empiricism was about what can be observed, but they acknowledged the fallibility of both the observer and the observation techniques. They saw observation as a social construction, with a distinction between the knower and the known. Dr. Kelly said observation requires interpretation—the "mystery ingredient" in the scientific discourse.

Dr. Kelly said rationalism is the relationship between and manipulation of ideas to serve one's own purposes. It is a perfect model derived principally from Newtonian philosophy with assumed causal pathways. He said, "If I know x and I have sufficient knowledge, I can predict an outcome y." However, the path from x to y is a complex one and can go off in many directions. Dr. Kelly said these pathways are not linear, but rather iterative. He suggested working backwards from y to x, and exploring a range of alternative hypotheses, just as a detective starts with the discovery of a dead body and works backwards to discount the various suspects and determine the real killer.

A more nuanced understanding of causal patterns is necessary for this kind of research. Dr. Kelly said, "Our subject matter is the world as it is and not the world as we would wish it to be." The community must be met on its own terms rather than on some rationalist model in advance. The community is not just a social experience but also the mediator/moderator of stressors. Dr. Kelly referred to Alfred Schultz, the phenomenologist who used the term lifeworld to emphasize the importance of cognitive phenomena as well as the physical and social reality. Dr. Kelly said, "We need to see the lifeworld from within rather than from outside." As community researchers, we need population and individual levels of explanation. "They are important and distinct and we need both."

Kelly contrasted Zeus' two sons, Apollo and Dionysus. While Apollo represents order, discipline, predictability, and rationalism, Dionysus, who in stark physical contrast to Apollo is a "rather languid looking fellow with curls," represents disorder, drunkenness, complexity, empiricism, and spontaneity. Kelly suggested a move away from these two gods and the tendency to contrast the qualitative and quantitative.

Open Space Discussion

An Introduction to Open Space Methodology

Dr. Michael T. Wright, Professor, Research Methods, Catholic University of Applied Sciences, Berlin

Dr. Michael Wright described the importance of the afternoon Open Space session. He said that in preparing for the conference, committee members "thought a lot about format, not just content." To supplement the panel presentation format, which does not always provide much time for discussion, Dr. Wright said the Open Space session aims to stimulate participants to define topics of importance together and determine how to proceed.

The Open Space technology was first developed by the American Harrison Owen in the mid-1980s to engage groups in organizational change processes. Open Space belongs to a growing family of participatory methods for engaging groups in change processes, these include World Café and Town Hall Meetings.

The conference objectives include setting an agenda for the future. Dr. Wright said, "We want to do this together." The Open Space method is a good format for working together on a common question. He said participants would divide into groups, put forward topics based on the overall theme—Where do we go from here in order to advance population health research?—and then discuss the topics in breakout sessions.

Dr. Wright described the ground rules for Open Space: Open Space meetings are "open" in two characteristic ways: No agenda is set before the beginning of the meeting and participants are free to come and go during the breakout sessions. The latter is determined by what Owen calls the "Law of Two Feet," which constitutes the primary ground rule for the meeting. When a participant feels s/he is no longer learning anything from a conversation (breakout group) or that s/he has nothing further to contribute, s/he leaves the conversation and moves to the next group. Informal conversations between participants outside of breakout group sessions are also a central element, acknowledging the importance of spontaneous one-on-one encounters. In practice the Law of Two Feet results in maintaining a high level of engagement among the participants, a more efficient application of participants' knowledge, and a concentration of participants' energies in the areas which are of most interest.

Dr. Wright said those who suggest the topics become the facilitators of the afternoon breakout group on that particular topic. He said the facilitators are responsible for writing a very brief report with a brief narrative description of the topic, the findings of the group in bullet points, as well as a prioritized list of

recommendations. Facilitators would briefly describe the topic and the top three recommendations in the afternoon session.

Dr. Wright reminded participants of the informal nature of the session. He said, "Please feel free to change your group at any given time; make sure you are sitting where you feel you can contribute or learn."

Participants decided on the following 11 topics, which were addressed in 11 separate breakout groups as follows:

Breakout Groups:

Where Do We Go from Here to Advance Population Health Intervention Research?

- Group 1: Mixed Methods (Ed Trickett and Laurence Moore)
- Group 2: Greater Visibility and Resources/Strategic Positioning (Scott Carvajal)
- Group 3: Working Together—Meeting Participants (Allan Best)
- Group 4: Capitalize on Our Strengths (Doug Manuel)
- Group 5: Sustainable Funding for Intervention Research (Cameron Willis)
- Group 6: Theorizing Interventions (Margaret Cargo)
- Group 7: Diversity versus Common Definitions (Blake Poland)
- Group 8: Influence on Funders and Journals re: Peer Review/Reporting on Studies (Nancy Edwards and Carol Herbert)
- Group 9: Continuum of Research: Basic to Applied (Kerry Robinson and Lindsay McLaren)
- Group 10: Enhancing Disciplinary Linkages (Lyndal Bond)
- Group 11: Cultures of Evaluation in Research, Policy and Practice Communities (Barb Riley)

Group 1: Mixed Methods

FACILITATORS: DR. ED TRICKETT AND LAURENCE MOORE

The group discussed perceptions of analytical judgments, judgments based on empirical senses, and judgments based on inferences. Analytical judgments are hard to debate or contradict since they are based on self-evident truths.

A participant noted that using mixed methods as opposed to solely qualitative or quantitative studies to meet research aims is still a very new approach. He asked whether there were limits in terms of capacity: Do researchers have the capacity to use mixed methods on their own well, or should they team up with other resources? Although students are now proposing mixed methodologies in their thesis projects, "doing one kind of study is demanding enough."

Later in the discussion, a participant suggested research paradigms might be "a form of territorialism." He asked, "Is it about exclusion?" If the primary concern and focus is the problem, do questions about the value of different methodological paradigms matter?

Another participant responded, "I think it varies. In some areas in the social sciences there are dominant ways of doing things that don't seem to change."

The facilitators summarized the discussion, which centred around three questions to help focus research: What is the problem (rather than the discipline)? How can it be solved (team science and leadership; resources for mixed methodologies)? What are the risks (dysfunction)?

Group 2: Greater visibility and Resources / Strategic positioning

FACILITATOR: DR. SCOTT CARVAJAL

The facilitator said that the question of how to increase the profile of PHIR in the United States was a tall order.

A participant said that he thought that it would be difficult to increase visibility as long as progress was managed by public health workers. He described how in France, communities are provided with funding so that they can approach researchers for help, advice, or methodologies for their particular issues. "It's far easier to have people go to researchers," as opposed to having initiatives imposed on a community. The participant added that funding for this could be provided from sources outside public health; from municipalities for example. Currently in France, only a small amount of funding comes from cities. Another participant said that the WHO offered a similar kind of funding. The French participant referred to a program aimed at increasing physical activity among youth. To make this program happen, communities need to find additional partners to top up government funds.

Participants thought that using a similar approach on a larger scale could result in continuous funding, although there were questions as to whether the public had the understanding to pursue this kind of initiative. Said one group member, "The problem is people have no clue about population health."

However, community-based initiatives could create champions. "The spinoff would be the public awareness. Most people do not know what population health is. Our goal is to have the public understand population health. It's more than disease outbreaks."

A group member commented that with this approach, "You're switching the flow, the accountability, and who will demand evidence." Another added, "It will increase demand for PHIR research. It's a push-pull thing."

The participant from France thought that community committees would invite researchers to join their programs. "My concern is this: how do you get groups to work on housing and social cohesion, not just narrow, health-related issues?" As a result of the riots in France most cities now have health and city workshops. "We saw that something had to be done about these vulnerable populations. It's not just about health, it's about employment." "And racism," another participant added.

Another participant suggested considering public relations (PR): "Do we have a PR issue? Is there a communication issue?" and Carvajal asked, "A PR issue with whom? Officials pulling strings on funding, or everyone?"

A participant from Boston said she felt she had PR issues in her efforts to communicate the value of PHIR with researchers in other disciplines, who may not understand why it is "good to think about social determinants in health."

The difficulty lies not only in lack of information about the benefits of PHIR, but also in a widespread fear of "the nanny state." For example, in the United States, the press response to a \$10 million grant for food and environment was, "Great, our government just spent \$10 million to tell us to exercise and eat more fruit and vegetables." The participant said, "That's why we have to have the skill sets to deal with accusations of being a nanny state."

Another participant noted, "People don't pick up on the message because they don't want to face the real social determinants."

Group 3: Working together—Meeting participants

FACILITATOR: DR. ALLAN BEST

The group's recommendations included using online media such as YouTube as a means of maintaining communication. A protected peer review should be used as a model. Concerted efforts should go into getting a team grant for multinational communication and as a means of cross-pollination and solidification.

Group 5: Sustainable Funding for Intervention Research

FACILITATOR: CAMERON WILLIS

The facilitator asked whether, from a researcher's perspective, "we are setting things up so that the same rants are going to keep coming up?"

A participant commented, "I like it when funding agencies stir the pot, because it gives new participants coming into the field a chance."

Another said that new researchers "just coming out of the gate," may lack guidance from experienced mentors. "Are they going to get tenure in a field of research for which they are not trained?"

Participants compared the situation for researchers in different countries. In the United Kingdom "they do stir the pot to help refine research questions."

A participant described a U.S. foundation now in its third year that funds evaluations of programs working on different kinds of community projects. In terms of stirring the pot, the program is bringing together 10 practitioners, all researchers of colour. A challenge is that people are unaware of how to apply for funding and how to create partnerships that would allow them to have their projects evaluated.

Participants said timing is crucial when it comes to making partnerships and applying for funding. In some cases, projects must begin before partnerships can be formed.

The facilitator said that from Allan Best's talk he understood that the Canadian Institute of Health Research (CIHR) relies on health ministers to determine questions for research. A Canadian participant said that there is an exchange component for small research grants.

A participant described efforts to increase communication between researchers and policy makers. "There's a pervasive sense of ignorance of what research can be done. And vice versa, researchers don't understand politicians' reasoning." He described an exchange program at Cambridge for policy funders and researchers. "Researchers spend a few months in a cabinet office. We argue that it will make them better researchers." Although there is no definitive proof that it does, the results so far have been positive. Another participant said that a similar program exists in the United States.

A participant asked whether clinical scientists were included in the Cambridge exchange. Only junior scientists are participating at this point.

A participant noted that in the research culture of the United States more academics work outside of academia.

Another participant said that the dynamic in Canada was determined by its large, spread-out geography and small population. As the community is smaller, "You pretty much know everyone."

In Canada, there has been some support for "embedding" researchers with policy makers.

The group recognized the challenges of connecting policy making and research.

Group 6: Theorizing Interventions

FACILITATOR: MARGARET CARGO

One participant asked how program theory could guide operational procedures, given the lack of a clear definition of population health intervention. "How can we situate interventions from a program theory perspective?"

Another participant said a conceptual answer is not necessary but that questions must be geared to determining typologies, or the theories required for a specific type of intervention. A complex intervention can be within or outside the health sector. It may be a policy or a program. We may have no predefined notion of theory. Policy makers do not necessarily have a theory in mind when developing a policy. Researchers should determine the emerging aspect of an intervention.

One participant said the realist approach has some ambiguity. The evaluator or researcher is making up the theory, although they might get ideas from participating communities and a model of causation based on realism. The researcher is interested in what drives change and in defining what an intervention does in the causal model.

Another participant said she had done a realist synthesis but not an evaluation. Realist synthesis gathers evidence on the success or otherwise of interventions, as they make the journey from policy makers' ideas, through practitioners' work, to the hearts and minds of members of a target community.

Synthesis should be done with community. For instance, if intervention deals with obesity prevention, the general framework and outcome pathways may be similar, but communities will be at different stages of readiness.

Another participant said the realist and constructivist perspectives are contradictory. In contrast to the CBPR approach, which emphasizes community-controlled and community-oriented interventions, a realist's perspective is that perhaps the community thinks it knows what is best for itself when in fact it may be wrong. Because CBPR aligns itself with a constructivist paradigm, realists would be considered anti-constructivist.

The importance lies in what is actually occurring, said the participant, not in the different perspectives. In the CBPR model, researchers have evidence. This is a good way to integrate research expertise with local knowledge. In obesity prevention intervention, communities are at different stages with different contexts and local staff are responsible for implementation. Different communities must tailor the development principles to suit their situation.

There are two levels of theory—the national level policy and the local level, where communities take abstract theories and implement them according to local context. For example, different topography, climate, and overall logic will affect the success of the intervention. A gap in translation between multiple levels of theory is a challenge in examining local interventions. The problem with traditional program evaluation is that we act as if the relevant theory is the higher-level public health logic model when in fact this is not actually true. The issue is a methodological one, concerned with what people actually do, not what they say they do. If all you do is interview people, you may not know what is actually going on. Data is limited.

One participant said current definitions of population health interventions are insufficient. Understanding the logic of difference is important. Intervention theory is a concept; intervention implementation is completely different. Only the community is able to implement what it has understood. "The system produces and interpretation of the intervention, and we can only observe it."

Another participant suggested that researchers have a responsibility to tailor an intervention properly and that it is irresponsible to "just let it go." Although the system will act by itself, research can make the system more intelligent about the intervention being implemented within a particular environment—organized reflexivity.

One participant said population health interventions could be more destructive than constructive. He said, "If I provide the system with knowledge and I select the knowledge that I want the system to digest then I am manipulating the system."

Another participant likened population health interventions to psychotherapy. He said a doctor can inform a patient of their illness and the reason for their illness, but the patient can choose to ignore the information. The theory is the doctor's and the patient may not accept it.

Another participant said population health intervention is more like introducing knowledge to a child.

Communication is a problem and different systems have different languages of interpretation, said a participant.

Another participant said PHIR needs an image that everyone can recognize as much as improvement or direction in research. "Maybe we still need some umbrella term so that everyone can see themselves in the mirror."

One participant said some of the discussions today were too abstract to be applied to practical research or to make a difference in public health.

Another replied that theory is relevant in guiding empirical work. He said, "There is nothing more practical than a good theory." Rooted in the sociological, real data is used to construct a theory about a particular place and political context.

A key recommendation from this group was to develop explicit definitions for key terms and PHIR concepts, such as population health, population health intervention, complex intervention, intervention features, causality, intervention theory, and community.

The group also recommended the development of typologies that would capture heterogeneity, different behavioural theories, and different dimensions specific to health and intervention research studies.

Group 7: Diversity versus Common Definitions

FACILITATOR: BLAKE POLAND

PHIR is necessarily about addressing health inequalities. Practitioners are concerned about health disparities. When tackling the issue of obesity, are we addressing inequality?

One participant said, "We are confusing public health intervention with population health intervention research."

For another participant, gender mainstreaming and analysis are very important, as is the need to focus on and work with the population. She said an intervention is not just "press a button on a computer." Public health intervention means engaging with the vulnerable or at-risk population in multiple ways.

One participant asked whether the issue of water fluoridation could then be considered a public health intervention because the community is not necessarily being engaged.

This is very complicated, said another participant. There are different levels of intervention and maybe this should be part of the definition—working at the community, policy, or health system level.

The definition must be broad-based and inclusive, said another participant. Without a core definition, it is difficult to obtain funding or to attract reviewers.

Participants agreed that population health intervention research is not clinical research or a clinical trial. They agreed that community engagement and participatory action were core features.

Group 8: Influence on Funders and Journals re: Peer Review/Reporting on Studies

FACILITATORS: DR. NANCY EDWARDS AND CAROL HERBERT

A research team should comprise knowledge users, academics, and recognized community members with a background on the issue. Research should examine uptake within a community, ability to transpose to other situations, and sustainability of an intervention.

Participants discussed funding issues and the limited amount of participatory research.

A participant asked whether journals require detail about methodology. Another replied that, given the limited space of a journal article, providing detailed information about work methods, context, and approach is difficult. A member of a peer-reviewed, quarterly journal said that online appendices are used to address the question of space. He said any important resource that does not fit in the print journal is made available online.

A participant asked whether these supplemental resources would be peer-reviewed as well. It is difficult to review an article without the appendices.

A participant described one journal that identifies a pool of reviewers who are comfortable reviewing mixed resources and who can provide consistent and high quality reviews. The reviewers' work is also reviewed and those who score well are used more often.

Participants agreed that it is important to acknowledge the work of reviewers. One participant said he had very much appreciated receiving a certificate from the Canadian Medical Association Journal. Participants also suggested the development of training and tools for reviewers of research through workshops, boot camps, webinars, and even a spa.

When submitting a PHIR article to a journal, the article is earmarked as such. A different set of criteria comes up, with a different structured review and standardized templates for qualitative reviews. Some talented people however have said they feel terribly constrained if the review criteria are too structured. Participants agreed that a series of guidelines would be helpful and less constraining than a template. One participant said they appreciated receiving a series of questions to help guide their review.

Participants said that publicly funded research should be made publicly available. Articles that address the process of community engagement rather than outcome might be interesting.

Another participant said that most outlets and reviewers want outcomes. Participants suggested that more emphasis be placed on lessons learned (from both the failures and success stories). What is it about the context of this intervention that is absolutely necessary for the intervention to work in another context? Certain important messages of population health interventions are unreported, including content, mechanisms, and process.

Group 11: Cultures of Evaluation in Research, Policy and Practice Communities FACILITATOR: DR. BARB RILEY

The group discussed the power dynamics that come into play when researchers in the academic community feel that they "are lowering themselves" when they are evaluated. A participant said that this should be addressed through the language used around evaluations. Another questioned whether it was really necessary to distinguish intervention research from intervention evaluation.

A participant said that in Quebec, evaluations are associated with the decision of whether or not to continue research. The perception was that evaluation "does contribute to knowledge, but it's not the end goal."

Dr. McLeroy said, "Good information is generally better than no information. But the problem with assigning value is that it is not data, it's a judgment process. What is the counterfactual for a program? When we make a value judgment, we can say this is what we are doing now, and this is why."

In the evaluation process, it is possible to shift back and forth between the roles of researcher and evaluator at a certain point.

Dr. Riley said, "In Canada there is a deliberate attempt to create a distance between the evaluation community and researchers."

A participant said, "People don't like to participate in evaluation because they think of it as judgment." Dr. McLeroy responded, "It depends on how you frame it. We try to provide the norm that consumers need. If we try to do that, we have to define ahead of time what information they need. You simply provide them with the information they need to make their decisions, while giving voice to as many perspectives as possible."

Open Space Discussion Part II: Reports Back

In Group 1's discussion of **mixed methods**, participants were united in wanting to address "not just why, but what works, for whom, and under what circumstances." Secondly, the group identified the need for "an investment in team science and leadership. We should make sure resources are available for building skill sets." A textbook with a mixed methods perspective could highlight the importance of mixed methodologies. "We need to chill out and relax and be prepared to invest some time in understanding other people's perspectives and building on what we've learned previously. "

Group 2, discussed **Strategic position.** "We started out with a very ambitious question: How do we raise the visibility of population health interventions to contribute to societies meaningfully?" The group identified problems with PR, the public, communities, science, the medical professions, health funders, and other governmental bodies. The group also identified a problem with "multiple intersections of accountability and shared responsibility." An infrastructure that would provide a steady flow of support should be created, and the debate should be re-framed to respond to counterfactuals.

The group discussed promoting positive stories in the media about PHIR; and identifying whom they are trying to influence, and to what purpose. They concluded that they should "look for natural allies among government funders who don't normally work together."

PHIR practitioners should look for win-win answers in social interventions that work across social strata: for the rich, the poor, and the middle class; and step in when opportunities for interventions arise from political and economic crises.

Group 3 combined topics originally assigned to both groups 3 (Working together—Meeting participants) and 4 (Capitalize on our strengths). They discussed firstly how they could build on the conference proceedings and their assets and secondly how conference participants could "work better between meetings."

"We assumed that we are an emerging community and that others will want to join in. Holding a meeting every two years will not be enough to change the field and accelerate momentum in population health research." The group agreed that this work should be transnational as well as multidisciplinary. They made four key recommendations:

- Produce a report with guidelines and details of how PHIR practitioners synthesize across fields and work across agencies.
- Create a website and produce a wiki glossary to provide public access to information about PHIR and to engage communities.
- Create a secretariat and seek support that would enable the conversation among PHIR practitioners to continue between conferences.
- Produce textbooks and a syllabus to develop competencies in the field.

Group 5's discussion on **Sustainable Funding for Intervention Research** covered existing funding landscapes, sources of funding, and the trade-offs of different forms of funding. The group made several key recommendations:

- Create a forum to learn how to leverage funding opportunities together and discuss what works and what doesn't.
- Build up the profile of population health research; create a journal to publish PHIR work.
- Hold knowledge sharing meetings.
- Create PHIR champions. This would support a drive to demonstrate the legitimacy of PHIR as science.

Group 6, **Theorizing Interventions**, discussed the need for theories in academia, management, behavioral theories, and in research practices. Among the key terms the group thought ought to be reconsidered were: health, complex intervention, causality, theory and/or intervention theory. "Community" was added to and removed from the list several times, since it is not consistently used in PHIR. The group would like to see the development of specific typologies and different behaviour theories, and of specific content for classified PHIR studies.

Group 7, **Diversity vs. Common Definitions**, "had a small but lively discussion." The topic centred around tension caused by diversity within the field. Participants' first recommendation was for greater reflexivity. The second was for recognition of how diversity is both a strength and a liability. Finally, they recommended that the field should be defined by naming its main features and identifying what it is not.

Group 8, Influence on Funders and Journals re. peer review/reporting on studies, was a large group made up of funders and researchers. They made several recommendations:

- Create better incentives for interdisciplinary work.
- Develop training opportunities for reviewers. (The group was divided on whether that training should take a "spa" or a "boot camp" approach.)
- Enhance documentation so as to cover both what does and does not work in PHIR.
- Support grants that take greater risks.
- Set up an international society for intervention health research and have it publish its own journal.

Group 9, **Continuum of Research: Basic to Applied**, had disbanded following the "law of two feet" for Open Space discussions.

Group 10, **Enhancing Disciplinary Linkages**, recommended developing and facilitating a shared vision. This would be done by establishing trust across disciplines and by mentoring students. The group also recommended that rewards for cross-disciplinary work should be increased, and methods and opportunities for cross-disciplinary work should be facilitated. For instance, if there is a public health goal of reducing depression, schools could be involved, since that would be one of their goals as well.

Group 11, **Cultures of Evaluation in Research, Policy and Practice Communities**, which included representatives from three countries, had found that there were distinct differences in academia from one nation to another. However, overall, "evaluation is often perceived as a second class science: It's just evaluation, not research." Evaluation studies are not considered legitimate dissertation topics. Within academic communities, they are often considered a luxury.

The group discussed how the research and the evaluation communities are divided, and "recognized that the language we use includes or excludes people, whether intentionally or not." They summarized recommendations:

- Describe the cultures of evidence.
- Increase the emphasis on valuing of and mechanisms for ongoing learning.
- Increase awareness, valuing, and contribution from research and evaluation communities however they are defined. "There is more overlap than divide in these communities."

^{*}For a complete report of the Open Space Discussion, please refer to Appendix B.

Closing Remarks and Next Steps

Dr. Kenneth McLeroy, Regents Professor, Social and Behavioral Health, Texas A&M Health Science Center

Erica Di Ruggiero, Associate Director, CIHR-Institute of Population and Public Health

Dr. Robert Kaplan, Director, Office of Behavioral and Social Sciences Research, National Institute of Health

Dr. Gilles Paradis, Scientific Director, Quebec Population Health Research Network, Scientific Editor of The Canadian Journal of Public Health

Dr. Thomas Abel, Professor for Health Research, University of Bern, Switzerland Editor-in-chief, International Journal of Public Health

Dr. Kenneth McLeroy thanked the participants for taking part in the conference and thanked the organizers.

Erica Di Ruggiero prefaced her closing remarks with some of her observations as a research funder, stating, "In my view, consensus is not desirable. 'Me-too' science is not necessarily positive." Rather, plurality and should be encouraged. She asked, "Are we defining interventions prematurely? Are we making assumptions about the wrong things? As funders, how can we allow for risk?" She suggested there was a need to find ways to help applicants define the context of their projects. Perhaps applications should be primarily based on context, rather than the problem.

She recommended building international partnerships and cross-disciplinary studies, building on the basic research science, and continuing the conversation between meetings. An investment should be made in theoretical and methodological development and a review process should be set up.

In terms of taking action that would bridge different academic communities, she asked, "How do we get screens developing in other conferences, so that we aren't just speaking to ourselves?"

Future meetings should "focus on a couple of concrete examples of how PHIR is playing out in different settings." The PHIR community cannot rest on its laurels. Its real value has to be demonstrated.

Dr. Robert Kaplan put the National Institute of Health (NIH) in context with PHIR. NIH's mission statement supports "science in pursuit of fundamental knowledge," and relates to PHIR. The NIH funds 3,000 institutions, and 85% of NIH funding goes to population health initiatives. The institute as a whole includes over 20 departments and funds a wide range of research with a \$3.53 billion budget. Dr Kaplan said that at the conference he had sensed a lot of defensiveness, and the underlying assumption that "they don't care about our science." Yet in NIH News, "most of our stories are about Behavioral and Social Sciences."

New directions for the NIH include recent developments in data measurement and analysis methods, and a shift to a new era in health care. In the United States health care eras have reflected Americans' scientific thinking, with the first era resting on germ theory and the second era (in which we are still engaged) focused on prolonging life. Now, due to advancements in science, we are moving towards an "age of complexity," a third era that will be "all about complex systems and life course pathways."

The goal of the first era was to save lives; in the second era, it was to prolong life and reduce disability. The goals of the third era will be centred on primary prevention, health promotion, and community integrated initiatives. The problem is, "we're not ready for it. We're going into DOS 3, we have all these apps, but we don't have it up and running, yet."

Regarding data analysis, Dr. Kaplan presented Google flu charts, saying that both Google and Twitter provide very useful data on flu seasons. As flu season hits, the number of Google searches for topics like "flu" jumps.

As changes in population health come into play and new masses of data are accessed, "we have to rethink how people are trained. PhD programs will have to teach different methodologies. . . Medical schools need more behaviour and social sciences."

Dr. Gilles Paradis offered his perspective on which next steps should be taken from the point of view of a local national journal.

The Canadian Journal of Public Health is an 80-page, bimonthly publication with a circulation of 800. The journal publishes short manuscripts and two to four supplements made up of six to 10 manuscripts, mostly centred on Canadian research. Readership includes PHIR practitioners and the research community, and 15% to 20% of the submissions they receive are about PHIR. As a small NGO with limited funding, the journal is not open access. Articles can be accessed online six months after publication. The journal has a couple of part time staff and the editorial board is made up of volunteers.

Dr. Paradis said that practitioners want to educate their audience about PHIR; while researchers want to educate the public about how to read and use research. "Researchers want to support the development and sustainability of PHIR. But how?" The journal's strategic priorities include PHIR, ethics, public health practices, and global health.

In closing, he said that the journal is developing a series of invited manuscripts and is looking for critical reviews and systematic reviews.

Dr. Thomas Abel said that key terms in the field of PHIR had to be more clearly defined. "Publishing in a journal today is first of all a competition over limited space. I think everybody who is in population health has to keep this in mind. I look more closely at two out of 10 papers. That's how tough the competition is." Two questions serve as his selection criteria: does he understand what the paper is saying, and would it make a unique contribution?

Over the course of the conference, he observed that many key concepts, including community, complexity, and health inequities, were not sufficiently well defined. To make progress on those three issues, these terms would have to be defined, shared, and explicitly used by those working in PHIR, keeping potential reviewers in mind. "The meaning of those terms should serve your purpose. Make it explicit: what are the contributions your field can offer?"

"To increase your chances of publishing, you think you have to bash other approaches. This sounds confrontational and it is, and it leads me to my next comment.

"As a second step: join forces. Fight for new ground for population health initiatives to stand and grow. If public health is our field, we need to acknowledge and consider that this is by no means a neutral field where all disciplines are welcomed. It is not a sandbox. It's a field where several players compete for resources."

Dr. McLeroy returned to the podium and asked for questions.

A participant asked whether there was a plan to produce the information covered at the conference in a publication. McLeroy responded that, yes, conference proceedings would be disseminated and an article about the Montreal conference is being planned.

He thanked the participants for their time and effort and closed the conference.

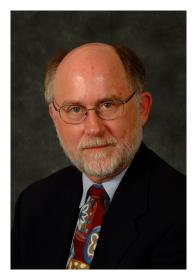
Appendix A: Speaker Information

DAY ONE — MONDAY, MARCH 26, 2012

8:30am — Welcome & Introductions



Nancy Edwards, RN, Ph.D., FCAHS, was appointed Scientific Director, Canadian Institutes of Health Research, Institute of Population and Public Health in July, 2001. She is also a Full Professor in the School of Nursing, with a cross-appointment to the Department of Epidemiology and Community Medicine, University of Ottawa; Principal Scientist, Institute of Population Health; and Senior Scientist, Élisabeth Bruyère Research Institute. Dr. Edwards obtained her undergraduate nursing degree from the University of Windsor and completed graduate studies in epidemiology at McMaster University and McGill University. She is the holder of a Chair Award in Nursing from the Canadian Health Services Research Foundation and the Canadian Institutes of Health Research (2000-2012). The focus of her award is "Multiple Interventions in Community Health Nursing Care". Dr. Edward's research interests are in the fields of public and population health. She has conducted health services, policy, knowledge translation and clinical research both nationally and internationally and was the inaugural Director of the Population Health PhD program at the University of Ottawa.



Kenneth R. McLeroy, PhD, is a Regents Professor in the Texas A&M School of Rural Public Health. He currently serves as: (1) Principal Investigator on two research centers, including a CDC-funded Center for Community Health Development, a Prevention Research Center, and the National Institute for Minority Health and Health Disparities Export Center on Rural and Minority Health Research; and (2) Editor for the Department of Framing Health Matters for the American Journal of Public Health, Editor of Social Health for the American Journal of Health Promotion, and Associate Editor for the Journal of Primary Prevention. He has published extensively on social ecology, program evaluation, and community-based interventions. His awards and honors include serving as Research Laureate and Fellow of the American Academy of Health Behavior and a Samuel Roberts Noble Foundation Presidential Professorship at the University of Oklahoma. He previously served as Senior Health Systems Analyst at the Research Triangle Institute in North Carolina, Assistant/Associate Professor at the University of North Carolina at Greensboro, Professor and Chair at the University of Oklahoma College of Public Health, and Professor and Associate Dean for Academic Affairs at the Texas A&M School of Rural Public Health.

<u>9:00am — Setting the Stage/Background</u>



Edison J. Trickett, Ph.D, is Professor of Psychology and Chair of the Community and Prevention Research Division in the Psychology Department at the University of Illinois at Chicago (UIC). He received his Ph.D. in Psychology from the Ohio State University, was a post-doctoral fellow at Stanford University, and held faculty positions at Yale University and the University of Maryland before joining the UIC faculty. Throughout his career, his research has focused on the development of an ecological perspective within his field of community psychology for conducting community research and intervention. His writings have emphasized the role of culture, social context, and collaboration in conducting respectful community-based work. During the past 20 years his focus has been on the role of public schools in the acculturation and adaptation of immigrant and refugee adolescents and families. He has published over 140 books, book chapters, and scholarly papers, has served as President of Division 27 of the American Psychological Association, received its award for Distinguished Contribution to Theory and Research in Community Psychology, and has served as Editor of that field's primary journal, the American Journal of Community Psychology.



Mark Petticrew, BA, PhD, is Professor of Public Health Evaluation in the Department of Social and Environmental Health Research in the Faculty of Public Health and Policy at London School of Hygiene and Tropical Medicine. His research has involved primary research on the health effects of housing, urban regeneration, transport and employment interventions. He has also worked on systematic reviews of the effects on health and health inequalities of employment, housing, transport and tobacco control policies. He is one of the conveners of the Cochrane/Campbell Health Equity Group, and is an editor of the Cochrane Public Health Review Group.

<u>10:00am — Framing the Discussion: Community</u>



Jean J. Schensul, Ph.D. (Minnesota, 1974) a medical anthropologist, is Founding Director (1987-2004) and full time Senior Scientist (2005 ongoing) at the Institute for Community Research, an independent community-based research organization based in Hartford, CT. where she continues to guide its community research program. Her many NIH and other federal awards that have supported community based research in the U.S and India. Her research and intervention interests focus on structural and social factors affecting health, prevention of substance use across the lifespan and globally, and the democratization of science through PAR for social advocacy. She has received two career awards: the Solon T. Kimball Award (with Stephen Schensul), and the 2010 Malinowski award for social science contributions to human problems, has been president of the Council on Anthropology and Education and the Society for Applied Anthropology, and is a member of the Executive Board of the American Anthropological Association. Her publications include nearly 90 peer reviewed articles, book chapters and journal special issues, several books and the sevenvolume Ethnographer's Toolkit (1999/2010/2012. Dr. Schensul is the qualitative methodologist for the Yale Center on Interdisciplinary Research on HIV and co-directs the University of Connecticut Center for Clinical and Translational Science (CICATS) Community Engagement Core.



Edith A. Parker, Dr.P.H., is a professor and head of the Department of Community and Behavioral Health at The University of Iowa College of Public Health. Her research interests include the development, implementation, and evaluation of community-based participatory interventions to improve health status. Her research portfolio includes studies focused on women's and children's health, childhood asthma, environmental justice, and environmental risk communication. She received a master of public health degree and a doctoral degree in public health from the University of North Carolina Gillings School of Global Public Health. Dr. Parker has published more than 50 peer-reviewed articles and numerous book chapters. She has directed or co-directed studies funded by health agencies such as the National Institute of Environmental Health Sciences, Centers for Disease Control and Prevention, and the National Center for Minority Health and Health Disparities.

11:00am — Facilitated Discussion



Barbara (Barb) Riley, PhD is the Executive Director of Propel and is cross-appointed as a Research Associate Professor in Applied Health Sciences at the University of Waterloo. In her role at Propel, she provides leadership for strategy development, performance management and initiatives with organization-wide significance and impact – such as the CIHR training program, evaluation services, strategic publications, and priority setting with Propel's founding partners (Canadian Cancer Society and the University of Waterloo) and other collaborators. Barb trained at McMaster University (PhD in Social Geography) and the University of Waterloo (MSc in Health Studies). Dr. Riley's career focus is knowledge exchange: accelerating the generation and use of relevant evidence to inform policies and programs at a population level. She uses a systems lens to understand and influence complex interventions in complex environments. Her current focus is on systems to support linking evidence and action that contribute to continual improvement of programs and policies, and the science of research capacity building for population health interventions. She is a Co-Principal Investigator and Director of the CIHR Training Grant in Population Intervention for Chronic Disease Prevention: A Pan-Canadian Program, and serves on numerous national committees, including the Population Health Intervention Research Initiative for Canada. Barb also serves as Co-Chair for the External Advisory Committee on Knowledge Development and Exchange for the Public Health Agency of Canada.

1:30pm — Framing the Discussion: Interventions



Penny Hawe, MPH, PhD, was recruited from Australia to the University of Calgary in 2000 to take up the foundation Markin Chair in Health and Society and the position of Professor in the Department of Community Health Sciences. She became a Health Scientist of the Alberta Heritage Foundation for Medical Research in 2007, having previously been an AHFMR Senior Scholar. Her undergraduate degree is in community psychology from the University of New South Wales. She has an MPH from the University of Sydney and a PhD from the University of Melbourne. She was a Visiting Scholar at the University of California, Berkeley, School of Public Health in 2009. In 2004, Penny received funding from the Canadian Institutes of Health research to establish the Population Health Intervention Research Centre (PHIRC). She was the Director of PHIRC from 2004-2010. She was the Markin Chair in Health and Society from 2000-2010. From 2006-2010 she was the Co-Chair of the Population Health Intervention Research Initiative for Canada, representing the Institute Advisory Board of CIHR's Institute of Population and Public Health. Since July 2011, she has been a Visiting International Scholar at PHIRC, supported by Alberta Innovates-Health Solutions. Her research interests include complex community-level interventions to promote health; social network analysis; theory of population health interventions; whole school approaches to mental health promotion; and methods and ethics in population health. Her main work is in the theory and methods of complex systems thinking in population-level policy and program interventions.



Professor John W. Frank trained in Medicine and Community Medicine at the University of Toronto, in Family Medicine at McMaster University, and in Epidemiology at the London School of Hygiene and Tropical Medicine, after serving in Mbeya, Tanzania as a Medical Officer and Instructor of Medical Assistants from 1976 to 1979. He has been Professor (now Professor Emeritus) at the University of Toronto, in the Department of Public Health Sciences (now the Dalla Lana School of Public Health), since 1983. He was the founding Director of Research at the Institute for Work & Health in Toronto from 1991 to 1997. In 2000, Dr. Frank was appointed inaugural Scientific Director of the Canadian Institutes of Health Research - Institute of Population and Public Health. In July 2008, he became Director of a new Edinburgh-based Unit, funded by the Medical Research Council and the Scottish Chief Scientist Office: the Scottish Collaboration for Public Health Research and Policy. Prof. Frank also holds a Chair at the University of Edinburgh in Public Health Research and Policy. His broad research and professional interests concern the determinants of population and individual health status, and especially the causes, remediation and prevention of socio-economic gradients in health. His scientific publications include 25 books, monographs and book chapters, over 140 peer-reviewed journal articles, and 65 other scientific publications. He has been principle or co-investigator for \$CDN14 million in direct research grants, and had oversight over \$50 million in flowthrough grants, in the last decade.

2:30pm — Facilitated Discussion



Dr. Louise Potvin, PhD, completed her doctorate in Public Health and post doctoral training in program evaluation from the Université de Montréal. She is currently a professor in the Department of Social and Preventive Medicine, Université de Montreal and Scientific director of the Centre Léa-Roback sur les inégalités sociales de santé de Montréal. In 2001, she was selected in a national competition for one of only two CHSRF/CIHR Chairs in Health Services Research in public health intervention. She currently holds the CHSRF/CIHR Chair on Community Approaches and Health Inequalities. Her main research interests are the evaluation of community health promotion program and how local social environments are conducive of health. Louise was a member of the WHO Working Group on the evaluation of health promotion. She participated to several Federal-Provincial-Territorial committees related to population health. She is a globally elected member of the Board of Trustees of the International Union for Health Promotion and Education and a Fellow of the Canadian Academy of Health Sciences. She helped develop Canadian policies to address health inequalities and the strategy for knowledge translation for public health practice.

DAY TWO — TUESDAY, MARCH 27, 2012

8:15am — Opening Remarks



Amy Schulz, Ph.D., is professor in the Department of Health Behavior and Health Education at the University of Michigan School of Public Health. She is also Associate Director of the Center for Research on Ethnicity, Culture, and Health and Co-Director for the NIH funded "Promoting Ethnic Diversity in Public Health." Dr. Schulz received her Ph.D. in Sociology and her M.P.H. in Health Behavior and Health Education from the University of Michigan. Current research efforts involve community-based participatory research approaches to understanding social determinants of health in urban communities, the contributions of social and physical environmental factors to racial and socioeconomic disparities in cardiovascular disease, and the development, implementation and evaluation of multilevel interventions to promote health equity. She is Principal Investigator for the Healthy Environments Partnership (www.hepdetroit.org), a community-based participatory research partnership focused on etiologic research on social and physical environments and cardiovascular disease, and on the development, implementation and evaluation of multilevel interventions to promote cardiovascular health in Detroit. In addition, Dr. Schulz has been involved in projects concerned with: the effects of colonization on the health of American Indians; the evaluation of community partnerships for health promotion; and the role of environmental activism in addressing issues of environmental degradation and economic development.

8:45am — Panel Presentation: Research Approaches & Their Perspectives (Part I)



Barbara Israel, Dr.PH, MPH, is a Professor in the Department of Health Behavior and Health Education. She received her Doctorate in Public Health and Master in Public Health degrees from the University of North Carolina at Chapel Hill. Her research interests include: the social determinants of health; the relationship between stress, social support, control and physical and mental health; community empowerment and health; and community-based participatory research (CBPR). Dr. Israel has extensive experience conducting communitybased participatory research in collaboration with partners in diverse ethnic communities. She is Principal Investigator of the Detroit Community-Academic Urban Research Center, funded initially in 1995 through the Centers for Disease Control and Prevention, and presently funded by the Skillman Foundation and the University of Michigan. Dr. Israel is involved in several of these CBPR efforts focusing on: an examination of the social and physical environmental determinants of childhood asthma and intervention strategies aimed at reducing these determinants; diabetes management and prevention; the relationship between psychosocial and physical environmental and biological factors and cardiovascular disease and strategies for addressing these factors (e.g., interventions aimed at increasing access to healthy foods and physical activity spaces); and building capacity for and engaging in policy change aimed at eliminating health inequities. Dr. Israel received the Excellence in Teaching Award at UM SPH in 2007.



Allan Best, Ph.D. is Managing Partner for InSource, a Vancouver-based health services and population health research group with expertise in knowledge translation and exchange, systems thinking, and communications. InSource serves health systems decision makers at the regional, provincial and national levels, offering innovative "whole systems" research, planning, and evaluation tools to support large-scale organizational change. Services include: rapid reviews for putting evidence into policy and practice, concept mapping, network analysis, and system dynamics modelling. Allan also is Associate Scientist in the Centre for Clinical Epidemiology and Evaluation, Vancouver Coastal Health Research Institute in Vancouver, British Columbia, Canada. His research focuses on systems thinking and organizational change, creating the teams, models, structures and tools that foster effective knowledge to action for health policy and programs that improve the health of the population. Allan completed his PhD in Clinical Psychology at the University of Waterloo in 1973. He served as the founding Chair of the Department of Health Studies at the University of Waterloo in Canada, the world's first interdisciplinary department inte-grating the biological and behavioral sciences to study health promotion. Allan served on the inaugural Board of the Canadian Association for Health Services and Policy Research as President-Elect and was President from 2005-2007.

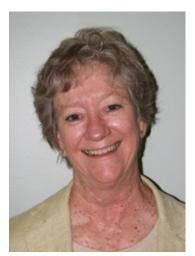


Dr. Geoff Wong gained his medical degree from the University of Cambridge and the United Medical and Dental Schools of Guy's and St Thomas' Hospital, in the United Kingdom. He trained as a General Practitioner (Family Physician) and is a Member of the Royal College of General Practitioners. His doctoral thesis was a realist review of the use of the Internet in medical education and he was supervised by Professors Ray Pawson and Trish Greenhalgh. He is Senior Lecturer in Primary Care at the Centre of Primary Care and Public Health at Queen Mary, University of London. He continues to work as a General Practitioner in London, United Kingdom. His current research interest involves the use and development of realist research methods to make sense of complex social interventions/ programmes. He is the lead researcher funded by the United Kingdom National Institute of Health Research Health Services and Delivery Research Programme that aims to develop quality and reporting standards as well as training materials for realist syntheses and metanarrative reviews – the RAMESES Project.

<u>10:00am — Panel Presentation: Research Approaches & Their Perspectives (Part II)</u>



Dr. Slim Haddad, MD, PhD, is a physician specializing in public health (Université d'Aix-Marseille, France); he holds a PhD in health economics from Université Claude Bernard, in Lyon, France. Dr Haddad is Professor and former chair of with the Department of Social and Preventive Medicine, University of Montreal. He was the chairman of GAVI's Monitoring and Evaluation Advisory Committee and member of the International Advisory board of the Institute of Population and Public health (CIHR). Dr Haddad is active in Global Health Research. He is Senior Researcher with the Centre de Recherche du Centre Hospitalier de l'Université de Montréal where he leads the Teasdale-Corti Research team on "Vulnerability, Poverty and Health in West Africa"; a partnership involving a network of African and Canadian Universities supported by the Canadian Global Health Research Initiative. His areas of expertise include intervention research and evaluation in Global Public Health. In the last 20 years, he led numerous studies in low- and middle-income countries. His work has focused particularly on evaluating the impacts and analyzing the distributive effects on health of structural adjustment programs, malaria and immunization programs, and community financing mechanisms. Dr. Haddad teaches Planning and Evaluation in public health, Health Economics, and Health Equity Analysis.



Yvonna S. Lincoln, MA, Ed.D., is a Distinguished Professor of Higher Education and Educational Administration at Texas A & M University. She earned her doctor of education degree from Indiana University. She joined the faculty of Texas A&M in 1991. She currently holds the Ruth Harrington Chair of Educational Leadership, a position she has held since 2001. Over the course of her career, Dr. Lincoln has published approximately 117 scholarly pieces, including 16 books, 62 chapters or monographs, and 39 articles. She serves as coeditor of the *American Educational Research Journal* and *Qualitative Inquiry*, and as an editorial board member for *Educational Researcher*. She has formerly served as president of the American Evaluation Association and is the recipient of many prestigious awards.

11:00am — Framing the Discussion: Summary



Mike Kelly, PhD, is Director of the Centre of Public Health Excellence at the National Institute for Health and Clinical Excellence (NICE) in England. He leads on the development of public health guidance. He is a public health practitioner, researcher and academic. He was educated at the universities of York, and Leicester, and undertook his PhD in the Department of Psychiatry in the University of Dundee. Before joining NICE he was Director of Evidence and Guidance at the Health Development Agency. Professor Kelly has previously held academic posts at the Universities of Leicester, Dundee, Glasgow, Greenwich and Abertay. He now holds visiting posts at the Universities of Cambridge, Manchester, Sheffield, Salford, the City University and the London School of Hygiene and Tropical Medicine. He is a Fellow of the Faculty of Public Health and an Honorary Fellow of the Royal College of Physicians. Professor Kelly's research interests are in evidence based approaches to health improvement, methodological problems in public health research, evidence synthesis, coronary heart disease prevention, chronic illness, disability, physical activity, health inequalities, social identity and community involvement in health promotion. From 2005-2008 he was the co leader of the Measurement and Evidence Knowledge Network of World Health Organisation's Commission on the Social Determinants of Health. He has published more than two hundred papers in medical, social scientific and public health journals and is author/editor of seven books. In 2010, he was awarded the Alwyn Smith Prize of the Faculty of Public Health for his work on cardiovascular disease and alcohol misuse prevention.

11:15am — Open Space Discussion: Introduction



Dr. Michael T. Wright, LICSW, MS, has been involved in community-based health initiatives since 1984 in the United States and Germany, having served as a psychotherapist, program manager, clinical supervisor, researcher, workshop leader, and consultant. He is also trained in public health (Harvard University). Wright was formerly the Director of International Relations at the Deutsche AIDS-Hilfe, the national German AIDS organization, and coordinator for the research areas HIV/AIDS and participatory research in the Research Group Public Health at the Social Science Research Center Berlin (WZB). He is currently Professor for Research Methods at the Catholic University of Applied Sciences Berlin and heads both the German Network for Participatory Research and the International Collaboration for Participatory Research.

4:55pm — Next Steps



Dr. Thomas Abel, Ph.D. is currently a professor of Health Research and Head of the Division of Social and Behavioral Health Research at the Institute of Social and Preventive Medicine at the University of Bern where he is a member of the steering committee and cofounder of the university's inter-faculty Graduate School for Health Sciences. Dr. Abel received a M.A. and Dr.phil in Sport Science from Justus Liebig-University, his Ph.D. in Sociology from the University of Illinois at Urbana Champaign, and his Med. Habil at Philipps -University. Dr. Abel has served as the editor in chief of the *International Journal of Public Health* since 2000 and has more than 100 scientific publications in peer reviewed journals and books. His major areas of research and teaching include medical sociology, empirical methods in public health, health and risk behaviors, and problems of social stratification. Dr. Abel is also a member of the steering committee for Global Health Behavior Surveillance, a member of the scientific board of Health Sociology Switzerland, a reviewer for the Swiss National Science Foundation and the German Ministry for Research and Technology, and the EUPHA section chair of Health Promotion.



Gilles Paradis, MD, MSc, FRCPC, FACPM, FAHA is the Scientific Director of the Quebec Population Health Research Network (www.santepop.qc.ca), and the Director of the Quebec Public and Population Health Research Training Program. He is also a full-professor in the Department of Epidemiology, Biostatistics and Occupational Health of McGill University and medical consultant to the Public Health Institute of Quebec. He holds a CIHR Chair in Applied Public Health Research. He is the Scientific Editor of the Canadian Journal of Public Health. He completed his MD at Université de Montreal and a specialty in community medicine and a MSc in epidemiology at McGill University. After a two-year fellowship at Stanford University he returned to Montreal and has conducted community-based CVD prevention research in low-income populations and aboriginal communities as well as research on the epidemiology of CVD risk factors particularly in children and adolescents. He is the principal-investigator of a large trial of dissemination of best practices for CVD prevention in Quebec and is involved in studies of the metabolic consequences of obesity in children and of the natural history of the development of nicotine addiction in novice smokers.



Robert M. Kaplan, Ph.D., is the Director of the Office of Behavioral and Social Sciences Research at the National Institutes of Health (NIH) and NIH Associate Director for Behavioral and Social Sciences Research. Kaplan came to NIH from the University of California, Los Angeles, where he was distinguished professor in the department of health services at the School of Public Health and the department of medicine at the David Geffen School of Medicine. He has also served as principal investigator of the UCLA/RAND CDC Prevention Research Center and director of the UCLA/RAND Health Services Research training program. Prior to his UCLA appointment, Kaplan was professor and chair of the department of family and preventive medicine at the University of California, San Diego School of Medicine. Kaplan earned an M.A. and Ph.D. in psychology at the University of California, Riverside. His research interests include behavioral medicine, health services research, health outcome measurement and multivariate data analysis. In December 2010, he completed his term as editor- in-chief of the journal Health Psychology. He received the American Psychological Association division of health psychology's annual award for outstanding scientific contribution as a junior scholar in 1987 and as a senior scholar in 2001. He also received the Society of Behavioral Medicine's National Leadership Award in 2004 and Distinguished Research Mentor Award in 2006. He is a member of the Institute of Medicine of the National Academy of Sciences.



Erica Di Ruggiero, MHSc. RD, PhD (c) is the Associate Director with the Canadian Institutes of Health Research-Institute of Population and Public Health (based at the University of Ottawa). She has 20 years of experience in government, academic, research funding and nongovernmental sectors. In her current position, she collaborates on the development and evaluation of research, capacity building and knowledge translation initiatives to address population and public health research priorities such as health equity and population health intervention research of national and global importance. She is the chair of the Canadian Public Health Association Board of Directors and Honorary Vice-President, American Public Health Association. She is a long-standing member of the Global Health Research Initiative Steering Committee, and chair of the Pan-Canadian Public Health Human Resources Task group. She is the recipient of several awards, including the Award for Excellence in Medicine and Health from the Canadian Cancer Society. She is a registered dietitian, holds a Bachelor of Sciences with specialization in Nutritional Sciences (with a double major in human biology and French), and a Masters of Health Science (community nutrition) both from the University of Toronto. She is also a part-time doctoral student (interdisciplinary stream) at the Dalla Lana School of Public Health (Toronto). Her current research interests include global labour policy and policy agenda setting processes, global governance, and multi-sectoral interventions.

Appendix B: Open Space Report

Advancing Population Health Intervention Research: An Agenda for Action

Report from the final session of the Third International Conference on Advancing a Population Health Research Agenda, 26-27 March 2012, Montreal

Michael T. Wright

Where do we go from here in order to advance population health intervention research? This question was posed at the final session of the Third International Conference on Advancing a Population Health Research Agenda held from 26-27 March 2012 in Montreal. The session was intended to give participants the opportunity to set a common agenda for an ongoing collaboration and was conducted using the Open Space method. Open Space is particularly appropriate for generating new ideas to address an issue of common concern stated in the form of a question. The results of the meeting are most commonly written up as a plan for future action, as presented here.

Defining Population Health Intervention Research

An issue of primary concern is formulating a common definition for population health intervention research (PHIR). It was recognized that PHIR is a diverse field comprising several disciplines of research and practice, both within and outside of the health sector. As a result, a variety of research methods and intervention planning strategies are used. The diversity of approaches increases when considering differences across countries. Heterogeneity is a strength of PHIR and should be taken into account in arriving at a common definition. The definition should not only name the primary features of PHIR, but also clarify differences between PHIR and other fields of research and practice. On the basis of a review of current trends (e.g. through systematic literature reviews and/or expert consultations), issues and terms can be identified which need to be included in the definition. In order to reflect the diversity in the field, a core definition should be augmented by a typology of the various approaches. The typology may have multiple dimensions, such as intervention type (level of intervention), research approach and forms of evidence. In order to define the dimensions, focused studies may need to be conducted, for example, to describe the cultures of evidence in academic and non-academic groups most pertinent to population interventions.

Making the Case for Population Health Intervention Research

The relevance of PHIR is not always apparent to potential stakeholders, including the general public, researchers, and policy makers. The contribution of PHIR in addressing current health and social issues

¹ The systematic review could be linked to the work of the Cochrane Public Health Review Group and/or Equity Group.

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facing several countries needs to be specified. By formulating joint position papers on key topics, those involved in PHIR can better assert their role in practice and research communities. The topics to be addressed include:

- Specifying the contribution of PHIR in alleviating the multi-sector crisis (economic, environmental, social) currently affecting many countries;
- Clarifying the position of PHIR in relation to social welfare and health care structures;
- Identifying win-win situations for potential stakeholders in PHIR;
- Building the profile of PHIR in ways that are appealing to potential stakeholders, including funders, professional associations, specialized peer reviewed journals, etc.;
- Identifying and supporting 'champions' of PHIR among practitioners, scientists, policy makers, and members of civil society; and
- Establishing PHIR as an endeavor which is equally rigorous and valuable as traditional approaches to research and practice.

Promoting Interdisciplinary Work

PHIR is a multi-disciplinary field; however, current structures for research and practice in several countries discourage interdisciplinary work. In order to build PHIR capacity, it is important to address these barriers and to create new opportunities for cooperation. These include:

- Creating better incentives for interdisciplinary work;
- Involving knowledge users (policy makers, practitioners, civil society) in PHIR;
- Developing shared vision and language across disciplines to define and promote PHIR (see above);
- Creating opportunities for cross disciplinary mentoring and teaching;
- Providing for the physical co-location of disciplines in university and practice settings;
- Developing forums for identifying common goals, issues, and strategies/solutions; and
- Removing disincentives and creating rewards in academic structures to facilitate working across
 disciplines; e.g. through changing tenure procedures and grant mechanisms, valuing multiple
 authorship, and promoting a culture among journals and peer reviewers which values cross-disciplinary
 research.

Developing Sustainable Funding

Sustainable funding is necessary in order to establish the field of PHIR nationally and internationally. Current funding structures often do not recognize the value of the multi-disciplinary, multi-issue, multi-method approaches necessary for PHIR. In order to address this issue, forums should be established nationally and internationally which bring together funding agencies in a learning environment that fosters an exchange of ideas on how to best support and innovate in the area of PHIR. This includes finding ways to support riskier grants, such as those using disruptive forms of innovation or other unconventional approaches to practice and research.

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Developing New Ways of Dissemination

The usual means for disseminating research results are inadequate for effecting change at the population level. New means for dissemination need to be explored, including:

- Going beyond a one-way, linear dissemination paradigm of communicating results and instead
 encouraging interactive presentation forms which emphasize learning and adaptation, especially
 regarding how population interventions can be effective in different contexts (time and place);
- Creating criteria for PHIR reporting in journals which define the key components to be communicated; these criteria can also be used in training graduate students;
- Enhancing documentation by making explicit the under-reported aspects of PHIR, particularly the
 interaction between context, mechanisms, and process, thus uncovering the messiness and complexity
 of PHIR; and
- Developing training opportunities for reviewers of PHIR research protocols, grant proposals, and manuscripts.

Building an Infrastructure

In order to address the issues named thus far, it is necessary to create an infrastructure for building an international community of PHIR practice. This should include:

- A PHIR journal characterized by specific reporting guidelines, a means for conducting knowledge syntheses, and an ongoing collaboration between public health organizations to refine and report on core competencies;
- A website providing the following: ways to share key papers, a Wikiglossary on key terms, public
 access to specified materials, video material (TED talks), Internet conferencing (including webinars),
 and links to other important websites;
- A central office with secretarial support;
- · Teaching materials on PHIR; and
- An International Society for Population Health Intervention Research.