Developing a Research Agenda on the Implementation and Impact of Core Public Health Functions in British Columbia

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Core Public Health Functions Research Priority Think Tank
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April 26 & 27, 2007
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BC Ministry of Health: Population Health and Wellness

Report prepared by Marjorie MacDonald, Trevor Hancock, and Heather Wilson Strosher in collaboration with the Core Functions Research Team

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Think Tank Planning Committee

The following individuals are acknowledged for their input and assistance in planning the Think Tank: Marjorie MacDonald, Trevor Hancock, Heather Wilson Stroscher, Jennifer Mullett, Stephen Corber, Michael Pennock, Sabrina Wong, Marilyn Plummer, and Lorna Storbakken.

Think Tank Facilitator

We would like to particularly acknowledge Dr. Jennifer Mullett of Action Research Consulting for facilitating the Think Tank.

Core Functions Research Team

At the time of the Think Tank, the following individuals were listed as members of the Core Functions Research Team; please note that additional members have since been added to this team. This team was involved in planning the Think Tank, identifying preliminary research priorities, and will be responsible for collaboratively implementing a program of research on core public health functions.

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• Lorna Storbakken, Director Core Functions Implementation, Ministry of Health
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- Jennifer Scarr, Project Manager Core Functions, Vancouver Coastal Health
- Geeta Cheema, Project Coordinator, Public Health Evidence to Practice Project, Interior Health
- Shannon Turner, A/Director Public Health, Vancouver Island Health Authority & President, Public Health Association of BC
- Mike Pennock, Population Public Health Epidemiologist, Vancouver Island Health Authority
- Bridey Stirling, Research Consultant, Vancouver Island Health Authority, & Instructor, UVic Schools of Nursing and Health Information Sciences and Island Medical Program (on leave)
- Vicki Farrally, Project Manager Core Functions, Northern Health Authority
- Lydia Drasic, Director, Provincial Primary Health Care & Population Health Strategic Planning, Provincial Health Service Authority
- Tim Shum, Director, Health Protection, Fraser Health Authority
- Lisa Chu, Director, Public Health and Prevention Projects, Fraser Health Authority
- Wayne Mitic, Manager, Chronic Disease Prevention/Tourism, Sports and the Arts, Ministry of Health
- Kelly Barnard, Medical Health Officer, Health Surveillance Project, Knowledge Management & Technology, Ministry of Health
- Russell Fairburn, Manager, Business Operations, Ministry of Health
- Jim Frankish, Associate Director, Institute of Health Promotion Research, and Associate Professor, Health Care and Epidemiology, UBC, Sr. Scholar MSFHR (temporarily withdrawn)
Executive Summary

A Core Public Health Functions Research Priority Think Tank was held on April 26th & 27th, 2007 in Victoria, British Columbia. A major component of public health renewal in BC is the current implementation of a core public health functions framework. The purpose of the Think Tank was to collaboratively develop a research agenda on the implementation and impact of core public health functions in British Columbia.

Thirty-eight participants representing public health researchers, practitioners and decision-makers were involved in the Think Tank. A Team Planning Grant funded by the Michael Smith Foundation for Health Research enabled the formation of the Core Functions Research Team; members of this team include academic researchers and representatives from the Ministry of Health and all six health authorities in BC. This team was joined by provincial, national, and international advisors chosen for their public health expertise and experience.

The Think Tank began with all of the participants, divided into researchers and decision makers, sharing their perspective on research priorities. It was evident that researchers and decision makers share the same research interests, although there were slight differences between the two groups in terms of priorities. This is an important finding as research projects can therefore be designed to incorporate the concerns of both groups, ensuring policy and practice relevance, as well as researcher engagement. By the second day of the Think Tank, the focus of core public health function research priorities narrowed to the following eight themes: Implementation; evidence; context/infrastructure; impact/outcomes/indicators; equity; ethics; data systems; and public health human resources.

Working groups formed to develop more concrete research questions around each of these themes and to consider methodological approaches. Several methodological challenges were identified. Most importantly, the need for methodologies that focus on causal processes, taking into account both context and the complexity of the core programs. Panel and keynote presentations also formed part of the Think Tank agenda. Based on the proceedings of the Think Tank, the Core Functions Research Team will continue to develop a full program of research on the implementation and impact of core public health functions in BC.
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Think Tank Overview

Rationale

In recent years, concerns have been raised about the inability of current public health infrastructures to adequately meet the growing health needs of the population. Several national reports have identified systemic deficiencies in the Canadian public health system and have made recommendations to strengthen it including the Krever Commission (1997) and the Naylor Report (National Advisory Committee on SARS and Public Health, 2003). In BC, the Select Standing Committee on Health (2004) concluded that the public health system in this province needed to be strengthened. The Canadian Institutes of Health Research (CIHR, 2003, p. 4) made several recommendations for public health system improvement, including: defining the public health system, strengthening public health system structures, strengthening supportive elements for effective service delivery, and collaboration to achieve common health goals. One infrastructure element identified as necessary for an effective public health system was *clearly defined essential functions of public health*.

A Framework for Core Functions in Public Health (Ministry of Health, 2005a & b) is a central component of the plan for public health renewal in BC. The Core Functions identify the key set of public health services that health authorities will provide and that will strengthen the link between public health, primary health care and chronic disease management in BC. The main components of the framework are: (a) 21 Core Programs – the services to be provided by health authorities in four broad areas: health improvement; disease, injury and disability prevention; environmental health; and health emergency management; (b) Public Health Strategies – those used to implement core programs: health promotion, health protection, preventive interventions, and health assessment/disease surveillance; (c) Lenses – a population and an equities lens are applied to all elements of the framework to address health disparities and ensure that the health needs of particular groups are met; (d) System Capacity Requirements – a supportive infrastructure to deliver core programs including competent and well trained staff, information systems, and research to support innovation and inform policy and practice improvement.

Core function implementation is being guided by a Performance Improvement Plan (Ministry of Health, 2006), which incorporates a results-based logic model based on the primary health care logic model (Watson et al., 2004). Together with the core functions framework, the logic model and performance improvement plan provide a comprehensive framework to guide development of a research agenda to study implementation and impact of the core public health functions in BC. The core functions framework being implemented in BC is unique in Canada; the implementation of Core Functions thus provides an unprecedented opportunity to study a major policy level population health intervention that is intended to improve both the public health system and the health of the overall population in BC.
Think Tank Objectives

The main goal of the Think Tank was to bring together the Core Functions Research Team with national and international advisors to identify research priorities, reflect on methodological considerations, and develop a research agenda on the implementation and impact of core public health functions in British Columbia.

The intended outcomes of the Think Tank include:

- An expanded list of research issues and questions from multiple stakeholder perspectives;
- A set of priority research questions that can be addressed by the research team;
- Identification of potential approaches/methodologies to address the priority research areas.

Leading up to the Think Tank

The Core Functions Research Team was established as a result of a Team Planning Grant funded by the Michael Smith Foundation for Health Research (MSFHR). Members of this team first met in December 2006 via teleconference; this was an introductory meeting to provide an overview of Core Functions and the MSFHR Team Planning Grant objectives. Initial research priorities were identified, along with potential advisors to invite to the Think Tank. The team held two face-to-face meetings prior to the Think Tank, one at the end of January 2007 and the other in mid-March. The outcomes of these meetings included: a) identifying preliminary research priorities; b) establishing Guiding Principles (Appendix 8); c) planning the Think Tank; and d) developing initial research proposals.

The research team compiled a list of potential Think Tank advisors, which included public health researchers, decision-makers and practitioners representing provincial, national and international organizations. Invitations were sent to the invitees providing a description of the Think Tank (see Appendix 1). The following documents were sent to participants in advance and were also in the reading package provided to participants at the Think Tank:

- Think Tank agenda (Appendix 2)
- List of participants and selected bio sketches (Appendix 3)
- Overview of Core Public Health Functions in BC (Appendix 4)
- Core Functions Implementations: A mid-point update (Appendix 5)
- Implementing Core Functions in Regional Health Authorities (Appendix 6)
- Research Priorities Identified by Core Functions Research Team (Appendix 7)
- Annotated bibliography of related literature was compiled as part of the MSFHR Team Planning Grant (Appendix 9)
Overview of Think Tank Agenda

The agenda was developed by the Think Tank Planning Committee in consultation with the Core Functions Research Team; a copy of the full agenda is in Appendix 2.

The first day began with introductions, followed by a “fishbowl” activity in which all of the participants were invited to share their views on research priorities related to core public health functions. Next, the group was asked to brainstorm a list of themes that had emerged from the fishbowl exercise. The afternoon of day one began with panel presentations; four invited guests identified research priorities and challenges from the perspective of their various organizations. The day ended with working groups developing lists of the most important research questions.

Day two began with a discussion of research priority themes based on the deliberations of the first day. Seven working groups, three in the morning and four in the afternoon, then identified research questions and methodological issues based on the research themes. A keynote presentation by Dr. Bobbie Berkowitz on the US public health initiative, Turning Point, occurred in between the sets of working groups. The day concluded with participants sharing their thoughts on the Think Tank and with closing remarks about the next steps.

Think Tank Participants

Thirty-eight participants attended the two-day Think Tank. This included thirteen invited guests chosen for their expertise in public health, along with twenty-four members of the Core Functions Research Team and the Think Tank Facilitator. Participants are listed below and many of the participants’ bio sketches are available in Appendix 3.

<table>
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<th>Invited Participants:</th>
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<tr>
<td><strong>Jennifer Mullett</strong></td>
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<td>Action Research Consulting</td>
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<td><strong>Michael Goddard</strong></td>
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<td><strong>Tricia Younger</strong></td>
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<td><strong>Gilles Paradis</strong></td>
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Population Health Intervention Research Initiative for Canada & Centre for Behavioural Research and Program Evaluation & Public Health Agency of Canada

Vera Etches  
Sudbury & District Health Unit, Ontario

Christina Chociolko  
National Collaborating Centre for Environmental Health

Tanya Merke Epp  
National Collaborating Centre for Infectious Diseases

Denise Kouri  
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Tracy Conley  
University of British Columbia / BC Centre for Disease Control

Norm Kaethler  
University of British Columbia / BC Centre for Disease Control

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Think Tank Day 1

Introductions

Marjorie MacDonald and Trevor Hancock, co-Leads of the MSFHR Team Planning grant, began by welcoming the participants and giving a brief overview of the agenda and purpose of the Think Tank. Trevor then introduced Dr. Perry Kendall, Provincial Health Officer, BC Ministry of Health.

Dr. Kendall welcomed participants and indicated that he is very interested in the outcomes of the Think Tank. The Ministry of Health is supportive of this process and of research in this area. To be clear, the Ministry of Health is not commissioning an evaluation of the implementation of Core Functions in BC. Rather, the purpose is to identify research priorities from multiple stakeholder perspectives, which will lead to knowledge development, exchange and translation. From the perspective of the Ministry of Health, it will be interesting to see the effect Core Functions implementation has on changing culture and the outcomes and outputs that result.

Marjorie gave a brief presentation to outline the goals and intended outcomes of the Think Tank. Specifically, the goals were to: a) seek advice from provincial, national and international experts on research priorities and approaches related to core functions implementation; and b) ultimately develop a research agenda on the implementation and outcomes of core public health functions in BC. The intended outcomes of the Think Tank included: a) an expanded list of research issues and questions from multiple stakeholder perspectives; b) a set of priority research questions that can be addressed by the research team; c) identification of potential approaches/methodologies to address the priority research areas; and d) a report on the proceedings of the Think Tank. Marjorie also acknowledged the sponsors, invited guests, and planning committee.

Overview of Core Public Health Functions in BC

Dr. Trevor Hancock
Public Health Consultant, Population Health and Wellness, BC Ministry of Health Services

Core Public Health Functions for BC: From Concept to Evidence to Implementation

Trevor Hancock presented an overview of Core Public Health Functions in BC, outlining the components of the framework and the performance improvement process. He indicated that this presentation was part of a larger presentation, which is available upon request.
The key elements of the BC approach are:

1. A core functions framework
2. A set of 21 core programs
3. Reviews of evidence and best practice for each program
4. A performance improvement process
   - A Core Functions Steering Committee
5. Model core program papers
6. Public performance improvement plans
7. Regular public reports on progress
8. A set of provincial-level functions
9. A logic model
10. A website

The above list provided the outline for Trevor’s presentation. He began by describing the elements of the framework. The Core Public Health Strategies are four ‘essential functions’ of public health: 1) health promotion; 2) health protection; 3) preventive interventions; and 4) health assessment and disease surveillance. Note that public health strategies are not always carried out by public health staff and that these strategies are applied to all core programs. The Core Public Health Programs are an organized set of services that address important health concerns. They have measurable health or health related outcomes, therefore can be monitored and they use a mix of public health strategies. There are 21 core programs falling under four categories: 1) health improvement; 2) disease, injury and disability prevention; 3) environmental health; 4) health emergency management. Two Lenses, the inequalities lens and the population lens, are applied to all programs to ensure the health needs of specific populations are addressed. Finally, the Core Public Health Capacities are the organizational functions or capacities necessary to carry out public health programs; these are not unique to public health but are generic to any organization and include such things as funding, education and training, information systems, planning, performance management and research.

Reviews of evidence and best practice are being developed for each of the core programs, as well as one on health inequities. Trevor spent some time discussing the notion of what constitutes evidence, quoting the Canadian Health Services Research Foundation (2005, p.9):

Evidence is information that comes closest to the facts of a matter. The form it takes depends on context. The findings of high-quality, methodologically appropriate research are the most accurate evidence. Because research is often incomplete and sometimes contradictory or unavailable, other kinds of information are necessary supplements to or stand-ins for research. The evidence base for a decision is the multiple forms of evidence combined to balance rigour with expedience – while privileging the former over the latter.
The performance improvement process involves each regional health authority developing performance improvement plans and conducting a gap analysis based on the model core program papers. The performance improvement targets, as well as how the 21 core programs are provided, is the responsibility of each regional health authority. Furthermore, the health authorities report back to themselves and to the public, not to the Ministry of Health. A provincial steering committee with representatives from each health authority oversees the entire process and was responsible for identifying provincial level functions; Trevor concluded his presentation by outlining the provincial level functions:

1. Policy, planning, legislation, funding and accountability
2. Public health human resources
   - Public health human resource needs
   - Public health workforce development—Establishing standards for professional competency
   - Expert consultation and capacity-building
3. Information systems
   - Public health information systems
   - Health data, assessment and surveillance
4. Organizational competency/accreditation
5. Public communications, advocacy
6. Evidence reviews, model program papers
7. Evaluation of provincial public health programs
8. Public health research
9. Reducing inequalities in health
   - Aboriginal
   - Reducing inequalities in access to public health services
10. Links to national-level functions

Fishbowl Activity

Dr. Jennifer Mullett, Think Tank Facilitator, introduced herself and then explained the purpose of the “Fishbowl Activity”. The intent is to allow everyone an opportunity to share their views on research priorities and also offers them a chance to listen to others’ perspectives. Jennifer indicated that at this stage we want to just brainstorm and not worry about the logistics of how the research will actually be carried out.

She then asked the participants to identify themselves as either decision makers or researchers. The decision-makers were asked to come to the front of the room for the first round of the fishbowl exercise. Each person was asked to introduce him or herself and then list their research interests in regards to Core Functions implementation.
Decision makers

The following questions and issues emerged from the thirteen participants who identified themselves as decision makers when they were asked: What are the issues/questions you are interested in having researchers address?:

1. What are the costs and benefits of the process itself? Is it paying off as it’s an expensive process?
2. Will evidence to practice continue beyond the initial evidence reviews?
3. Explore fidelity of evidence versus adaptation.
4. What is the most appropriate program to decrease health inequities?
5. What models of intersectoral collaboration for population health interventions are most effective?
6. How to work intersectorally within health but with other sectors as well (e.g. welfare, education, etc.)?
7. How do decision-makers decide what to implement and are their decisions rigorous?
8. Explore the performance monitoring approach and gap analysis process.
9. How to increase efficiency of collaborative efforts and develop common standards while respecting the value and autonomy of each health authority?
10. Identifying clear indicators for monitoring progress on Core Functions implementation.
11. Comparing the costs and benefits of community level implementation vs. centralized implementation. Which is more efficient?
12. To what extent has Core Functions lead to greater public health awareness? What impact has it had on resource allocation? Outcomes of integration?
13. Core Functions is not limited to the public health system; therefore, how do we effectively collaborate with and influence partners in areas beyond public health such as acute care?
14. How to do the most with the least? Move from universality toward a targeted approach. Could we? Should we? How? Need to rationalize providing more intense services for certain populations, taking ethical/values issues into consideration.
15. In areas with small, spread out communities where there are not enough resources to implement all 21 core programs, how can programs be integrated or clustered into an effective service delivery model?
16. Human resources – what skills does the workforce need to implement Core Functions? Who is responsible for the skill development of staff? Are the skills needed in the workforce being effectively identified and developed?
17. Community development - how to harness the communities’ interest and partner with them because it will not happen from the top down?

18. How to define community development? How does it fit into Core Functions? How are priorities of the community identified?

19. Performance Improvement Approach – what are the system outcomes and population health outcomes? Compare to other provinces (ON – mandatory guidelines, SK- goals and objectives).

20. Conduct a review of the model program evidence reviews.

21. How to increase the efficacy of uptake of evidence identified in the evidence reviews? What is the provincial function regarding research? What is the relevance of research and evidence to frontline staff?

22. Leadership – determine whether Core Functions is taken up at the senior administration level (within vs. outside of PH) versus left at the coordinator level. Compare this across health authorities. Should there be a strategy to influence senior leadership?

23. Surveillance – at which level do we gather, interpret, and report data so that it is meaningful at the community level (e.g. by 100,000 people, by municipality, by school district)? Provincial averages not useful to community. Also within surveillance, there is a need for data on universal versus at-risk approaches; both have merits and as such there is a need for specific indicators for specific populations.

24. Has organizational culture changed? Should there be training incentives to change practice?

25. System capacity – how do we engage other sectors (e.g. mental health, acute, etc.)? How to best increase efficiency? Develop models of collaboration in health authorities? How can frontline staff be effectively engaged in the process?

26. Indicators to measure effectiveness – need to ensure the right things are being measured.

27. How do we determine the cause of incremental change? Not starting from ground zero because public health has been doing a lot of these things all along.

28. Information analysis – how to make best use of indicator data? Is it most effective? What makes it useful to the community? Some of the most disadvantaged communities are the ones we have the least information about. How do we engage them to determine appropriate data collection and what data would be most relevant?

29. Communication – what is the right balance within a health authority? There is a need to provide information to inform and engage yet avoid overwhelming people with too much detail.

30. Strengthening and renewing – to what extent has the position of public health been impacted (e.g. raised the profile, increased understanding of public health issues, resources allocation, status of public health, etc.)?
31. To what extent has Core Functions succeeded? In practice? In population health outcomes?

32. Natural experiment in five health authorities (different leadership, organizational culture, etc.), how does it influence the implementation of Core Functions?

33. Anytime you measure something, you change it; this results in ethical issues around the whole initiative. Core Public Health Functions is creating massive changes – what are they and what is the impact?

34. What is the impact of the continuing education component – how will it be interactive?

35. How to best include other sectors? Clinical practice/primary care provides a lot of public health care, how to best include them in Core Functions implementation?

36. What is the impact of the current health system context? How do we keep the window of opportunity open?

37. Population health outcomes (ultimate goal) – Has Core Functions been effective in improving population health outcomes? How would we know? Attribution difficult when working in a complex environment.

38. Need to develop a study to identify areas for significant gains in populations with poorer health status.

39. Need to look at different systems – compare models across Canada, are there other models of Core Functions implementation we should be considering?

40. Need to study implementation process; monitor change as it happens. Is it being implemented as intended?

Researchers

Next, the sixteen participants who identified themselves as researchers were asked: What are the research issues you are interested in exploring? They came up with the following questions and issues:

1. What are the most effective policy interventions to decrease health inequities? Promising vs. proven – need to balance and be clear.

2. Knowledge exchange process – how do political strategy issues benefit from research?

3. How do we get the profile of public health raised?

4. Systems perspective – learn from other perspectives. What are the boundaries from a system perspective? Capacity issues? Stakeholder analysis?

5. Context – how to measure understanding? Each health authority could benefit from exploring methodologies needed to understand context of implementing Core Functions.
6. Examining effective leadership, collaboration and accountability within the Core Functions Framework.

7. Evaluation – did we improve the health of BC’s population? Whose health? How? Within the five health authorities, which worked and for whom?

8. External influences – what impeded, what expedited the implementation of Core Functions? Did other things improve as well (i.e. were there unintended benefits)?

9. Tease out influence of Core Functions vis-à-vis the broader context? What else do we need to track and document?

10. Examine the fidelity of implementation process versus adaptation – state of science with state of art.

11. Develop tools that are useable but rigorous.

12. Public Health Strategies in the framework – What skills need to be developed for each strategy? Identify key elements of effective intersectoral collaboration in Public Health Strategies?

13. Inequalities – identify successful implementation for those who need it most.


15. Explore how Primary Health Care and Public Health can work together to reorganize service provision (e.g. Chronic Disease Management, immunization, etc.). Overlap with non Public Health sectors – intersectoral collaboration.

16. What are the human resource capacity needs (e.g. training, continuing education supplementation)? Who do we need to be delivering programs to?

17. Comparison of implementation of Core Functions - look across health authorities, different communities and groups.

18. What are the immediate outcomes we can look at? How do we measure them? How is attribution measured? Consider a logic model.

19. Operationalize the equity lens. Conceptual and theoretical work needs to be done in the area of ethics as well.

20. Equity lens – developing, testing and research looking at how it’s being used (e.g. equity in terms of access, stigma, resource constraints, allocation of resources, etc.). This is a values issue – not the greatest good for greatest numbers but benefiting those who are most disadvantaged (i.e. more from utilitarian to sound justice).

21. Develop models of effective intersectoral collaboration.

22. Integration of Public Health and Primary Health Care – exploring how to reduce inequities.
23. Process of working with communities - how are communities involved in decisions? Ethics in any community but particularly disadvantaged communities – how does it all work out from an ethical perspective?

24. Examine how Core Functions is being implemented/experienced in each health authority: Why? How? Favourably/unfavourably? What is the impact?

25. Compare to other models of implementation (NS, ON, QC, SK) – compare the way public health guidelines are implemented.

26. Examine the framework’s Public Health Strategies and how they are implemented at the local health authority level (e.g. immunization or inspection guidelines are relatively easy to implement, whereas Chronic Disease Prevention is more complex).

27. Explore implementation (e.g. barriers, culture, developing tailored approach to improve knowledge exchange).

28. What is the unique contribution of Core Functions implementation in BC? Is it strengthening Public Health by bringing the best available evidence?

29. Examine the framework from two lenses: Socio-ecological (multi-level/multi-strategy – look at broader context) & Systems Capacity (bring evidence to practice and translating practice to evidence) – fits with the complexity of the framework.

30. How has the culture and infrastructure changed in the BC research and practice communities?

31. Cost effectiveness / benefit analysis. Mathematical modeling of prevention and health outcomes – able to demonstrate benefits of public health and allows decision-makers to be able to play with the numbers.

32. Examine the natural experiment of collaboration and evidence based policy and practice.

33. Core Functions has likely reduced ineffective practices, but has it also reduced innovative practices? What are the unintended consequences associated with Core Functions implementation?

34. Knowledge translation approach to moving research into action – what factors are responsible for affecting change or for moving evidence to practice? Many different factors can impact (e.g. politics, champions, lawsuits, community engagement).

35. How does the Public Health community interact with the care system? Is federal/provincial/territorial system working for Public Health?

36. How does the entire framework as a whole (Core Programs, Strategies, Lenses, Capacity) get implemented?

37. Choosing one or two exemplar Core Programs and looking across health authorities at how they are implemented (note that some are easier to track than others).

38. How is the inequities lens applied within Core Functions implementation? Also look at provincial comparisons related to inequities.
39. How are the Public Health Strategies applied within the framework?

40. How is the System Capacity element of the framework applied? What are the issues related to infrastructure?

41. How are practitioners trained and how is Core Functions implemented by practitioners?

42. Using BC’s framework as a lens to look at other provincial initiatives.

43. What is the impact of the socio-political and socio-ecological context on Core Functions implementation?

44. Is Core Functions having an impact? Identify indicators of performance linked to health outcomes – much broader than just provincial.

45. What influences decision-makers to take things on: a) Has the profile of Public Health increased in the eyes of the public? b) Commitment and support, are the top people in the health authorities on board? c) Are health authorities reallocating money to Public Health? Are others?

There were other issues and concerns that were brought up by researchers during this initial discussion the first morning of the Think Tank, many of these were addressed later on:

- Anxious when you see these long lists – how do you choose what to study? Impacts, process, infrastructure, resources. Need to clearly define the goals and also decide how to define and measure such things as: Capacity, Public Health Performance, Leadership.

- Concern – focusing on a few evidence elements – want to ensure that the complexity is not lost. Need to determine collaboratively what the most important elements to study are and the best methodologies.

- Difficulties with access to data because of privacy and freedom of information, changes are necessary to allow for easier and more timely access to data.

- Use of evidence for decision-making purposes, need to determine the focus (e.g. local/regional, provincial, public policy, public health professionals)?

- Ethical review process in health authorities can be seen as a barrier to research. Impacts: Start time, cost, quality (not incorporating provincial research because of approval from all boards).

- Need for database of public health research that is accessible to others in BC.
The Emergence of Research Themes

Immediately following the fishbowl exercise, the entire group was asked to brainstorm themes that they heard emerging from the questions and issues that were raised by both the decision-makers and researchers. The following themes and sub-themes were listed by the group immediately following the fishbowl activity:

1. **Health inequities/equities**
   - universal vs. targeted
   - ethics
   - Start with community – bottom-up approach

2. **Intersectoral / interdisciplinary collaboration**

3. **Implementation**
   - How?
   - With what effect?
   - Fidelity vs. adaptation
   - Monitoring

4. **Meaning of evidence**
   - Translate into action
   - Action translated into evidence
   - Culture of knowledge development
   - Research process to meet needs

5. **Finances**
   - Cost-effectiveness
   - Measurement
   - Reallocation
   - Evidence of commitment
   - Cost-benefit
   - Targeting groups for greatest value

6. **Context**
   - Leadership
   - Geography
   - Capacity
   - Organizational culture
   - Vulnerable populations
7. Impact and attribution
   - Data
   - Changes in behaviour
   - Changes in health status
   - Changes in program
   - Perception of public health
   - Marketing – public perception

8. Integration of Public Health and local level services

9. Systems
   - Socio-ecological
   - Synergy of different components of the framework

10. Knowledge Development and use of evidence

11. Reorienting research
   - Finding from decision-makers what’s useful

12. Leadership

13. Comparison
   - Across health authorities
   - Across provinces
   - Different approaches/models

14. System Capacity
   - HHR – competencies
   - Money
   - Infrastructure
   - Data

15. Ethics
   - Process
   - Self-determination

16. Conceptualization / solid theoretical definitions
   - Operational definitions
   - Values shift

17. Community – development/capacity/engagement

18. Surveillance/monitoring
Analysis of Fishbowl Responses

The above thematic analysis was an “on the spot” group brainstorming of the key themes and we were concerned that we might have missed some important issues that would have been identified in a more in-depth analysis of the responses. Thus, following the Think Tank, we re-analyzed the responses of researchers and decision makers to ensure that the impromptu thematic analysis did indeed capture the most important issues raised in the fishbowl exercise. We also wanted to do a comparison of the responses of researchers and decision makers to determine what the overlaps in interest were, and whether there were specific priorities that emerged in each group that were not shared by the other group. Overall, as reflected in Table 1 below, it is clear that there was considerable overlap in interests of both decision makers and researchers, although the emphasis within interest areas varied somewhat. The issues that decision makers raised that were not mentioned by researchers related specifically to mandated implementation concerns such as the performance management/gap analysis process and how core programs can be integrated in a service delivery model for smaller communities, particularly those that do not have the resources to implement a stand alone core program. Researchers identified an interest in evaluating specific elements of the Core Functions Framework, including the public health strategies and systems capacity element. They also noted the need to develop useable and rigorous measurement tools and apply theoretical perspectives. Clearly, however, we are all on the same page with respect to research interests.

**Table 1: Analysis of Decision maker and Researcher Responses**

<table>
<thead>
<tr>
<th>Decision makers</th>
<th>Researchers:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intersectoral Collaboration (x 5)</strong></td>
<td><strong>Intersectoral collaboration (x 5)</strong></td>
</tr>
<tr>
<td>HA collaboration (x 2)</td>
<td></td>
</tr>
<tr>
<td><strong>Health inequities (x 4)</strong> (engaging disadvantaged communities, impact of CF on reducing, universal vs. targeted approach)</td>
<td><strong>Health inequities (x 5)</strong> (policy interventions, compare provinces)</td>
</tr>
</tbody>
</table>
| **Impact** of CF (x 5): pop health status, greater PH awareness, resource allocation, change in organizational culture, unique contribution of BC framework | **Evaluation** – impact on pop health status (x 3)  
Impact on profile of public health  
Impact on PH infrastructure and culture in BC  
Unintended benefits or consequences |
<p>| <strong>Implementation</strong> process (x 2) – examine process, community vs. centralized implementation | <strong>Implementation</strong> process (x 3) - barriers, culture, entire framework, develop methodologies, measurement |
| <strong>Natural experiment</strong> in Health Authorities                                    | <strong>Natural experiment</strong> in HAs (x 4)- exemplar Core Programs                  |
| <strong>Compare</strong> to other provinces and models (x 2)                                | <strong>Compare</strong> to other models (x 2)                                            |
| <strong>Knowledge Translation</strong> (x 2) (long-term sustainability of the evidence to practice process, review of evidence reviews, efficacy of uptake of evidence) | <strong>Knowledge Translation</strong> – policy/research (x 2)                            |</p>
<table>
<thead>
<tr>
<th>Impact of current health system <strong>context</strong></th>
<th>Impact of socio-political/ecological <strong>context</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining cause of incremental change – <strong>measurement</strong> complexity (x2)</td>
<td>How to <strong>measure</strong> attribution/outcomes</td>
</tr>
<tr>
<td>Indicators for monitoring progress and effectiveness (x 3)</td>
<td></td>
</tr>
<tr>
<td>Indicators for specific pops/communities (x 2)</td>
<td></td>
</tr>
<tr>
<td><strong>Cost benefit</strong></td>
<td><strong>Cost benefit</strong> analysis – mathematical modeling</td>
</tr>
<tr>
<td><strong>Human Resources</strong> (x 4) (skill development, continuing education component – impact &amp; interactivity, engagement of frontline staff, communication with staff)</td>
<td><strong>Human Resource needs</strong> (x 2)</td>
</tr>
<tr>
<td><strong>Community</strong> development – identifying community priorities</td>
<td>Ethics of working with <strong>communities</strong></td>
</tr>
<tr>
<td><strong>Fidelity vs. adaptation</strong> of evidence (x 2)</td>
<td><strong>Fidelity vs. adaptation</strong></td>
</tr>
<tr>
<td><strong>Leadership</strong> (x 2) (impact of uptake at senior level admin vs. coordinator level, Decision-making process)</td>
<td><strong>Leadership</strong></td>
</tr>
</tbody>
</table>

The topics below were unique to either decision-makers or researchers:

<table>
<thead>
<tr>
<th><strong>Decision makers</strong></th>
<th><strong>Researchers</strong>:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance management / process and outcomes of gap analysis</td>
<td>PH Strategies element of framework (x 3)</td>
</tr>
<tr>
<td>Systems capacity element of framework</td>
<td></td>
</tr>
<tr>
<td>Integration of Core Programs into service-delivery model for smaller communities</td>
<td>Theoretical perspectives - Systems perspective, socio-ecological</td>
</tr>
<tr>
<td></td>
<td>Develop tools that are usable/rigorous</td>
</tr>
</tbody>
</table>
Panel Presentations

Several of the invited guests were asked to prepare a brief presentation (copies of presentation slides available upon request) addressing the following questions from the perspective of their organization:

1. Based on some of the key research efforts in the area of core public health functions implementation:
   a) What are some of the key questions that have been investigated?
   b) What have been some of the challenges in answering them?

2. Based on what you have learned about core public health functions in BC, what are some of the key research questions you think would be of interest/value to public health policy and practice in your jurisdiction?

Dr. Tricia Younger  
Associate Director, Centre for Public Health Excellence  
National Institute for Health and Clinical Excellence

*Using Research to Strengthen Public Health Services: The UK Perspective*

Dr. Younger provided an international perspective by outlining the experience of the National Institute for Health and Clinical Excellence (NICE) in the UK. NICE conducts two types of public health guidance: Programme Guidance and Intervention Guidance. These involve reviewing the evidence to assess effectiveness, conduct economic appraisals and analyze public sector perspective all within a tight timeframe (12-18 months). Recommendations are based on: a) strength and applicability of evidence; b) cost effectiveness; c) impact, including on inequalities in health (noted lack of research in this area); d) risks and benefits; and e) implementability. Stakeholders, including academics, practitioners and community members, are all equal partners in the process; they are all involved in defining the scope and commenting on the evidence and draft recommendations.

*Relevance to Core Functions Research*

Dr. Younger identified the lack of research on inequities as an important gap that needs to be addressed. The strong interest in the inequities lens in the core functions framework provides a focus for us to contribute to reducing this knowledge gap. In addition, the NICE collaborative process for working with practitioners and community members is something that we can emulate because we have not attended to this area to date in our research and implementation planning. This was an area of interest and concern identified by team members in earlier group meetings, and in the fishbowl exercise. Another issue for CF implementation in BC is the need for an ongoing evidence review process to ensure that the existing evidence reviews are updated over time so that they remain relevant. NICE has also developed a process for doing this, as well as for conducting economic appraisals on a tight timeline. Both of these areas of expertise can contribute to our own learning around CF implementation.
Dr. Marie-Claire Laurendeau  
Executive Advisor, Research and Innovation  
Institut national de santé publique du Québec (INSPQ)

**Key Research Efforts in the area of Public Health Functions Implementation: The Quebec Experience**

Dr. Laurendeau presented a summary of public health and public health research in Quebec. She began with a recent historical overview of public health, followed by a description of INSPQ, and a portrait of public health research in Quebec. The successful development of public health is based on: a) Policy incentives for research; b) partnerships and networking; c) strengthening of interdisciplinary research (determinants of health and intersectoral action); d) grounding in practice settings; e) commitment to knowledge transfer and sharing; and f) continuous quality improvement approach. Several challenges were also listed in regards to the development of public health research mainly focusing on expanding the infrastructure and innovation in this area.

**Relevance to Core Functions Research**

The elements of successful public health identified by Dr. Laurendeau are important considerations for us to integrate into our CF Implementation and research agenda. We are already addressing several of these, including the development of partnerships and networks through our CF Team Planning; a commitment to knowledge transfer and exchange through the integral KT process in the CF implementation process and our Knowledge to Action grant proposal to CIHR; and the continuous quality improvement approach through the CF performance monitoring process. We have not discussed policy incentives for research and this may be something that can be taken up by the CF Steering Committee as a provincial level function. Dr. Larendeau also identified several challenges to successful public health research development including: 1) Resources for large scale projects; 2) ongoing evaluative research which integrates the management of change in organizations; 3) development of methodological expertise; 4) research platforms (e.g. geographical information systems, integration of medical and administrative databases); 5) ongoing development of innovation (i.e. strategies for establishing priorities for action, for engaging citizen participation, for integrating social and community concerns in public health and public health concerns in the global health care system; and 6) research on various knowledge transfer strategies and their impact on the utilization of research results and improvement of practice and policy. As a team, we will need to consider how these challenges will influence our research agenda.
Dr. Gilles Paradis
Institute Advisory Board Vice-Chair
Canadian Institutes of Health Research – Institute of Population and Public Health

**Building Population and Public Health Research and Knowledge Exchange Capacity in Canada: Perspectives from the CIHR- Institute of Population and Public Health**

Dr. Paradis provided the perspective of CIHR - Institute of Population and Public Health (IPPH). He began by outlining the mission of CIHR-IPPH, strategic priority areas (2002-2007), and conceptual framework of population health. He outlined the research and knowledge exchange challenges and also the response to these challenges. Dr. Paradis concluded with the lessons learned and ways to move forward highlighting the need to effectively link public health research, policy and practice. CIHR-IPPH is the secretariat for Population Health Intervention Research Initiative for Canada (PHIRIC), which was the focus of the next presenter.

**Relevance to Core Functions Research**

Dr. Paradis identified several priority areas for CIHR’s Institute of Public and Population Health that have implications for our research agenda and that provide hope that our collective priorities fit well with CIHR's research agenda in the coming years. One CIHR priority is analyzing and reducing health disparities. This is clearly a high priority concern of our team, as reflected in the number of times this issue has been identified in early team meetings, and in the fishbowl exercise here. He also commented on the emerging interest in natural experiments as an innovative approach to population intervention research. The proposed CF implementation in BC can be viewed as a natural experiment in that each Health Authority will be implementing the framework in unique ways that suit their own needs, concerns and priorities. This naturally occurring variability provides an ideal opportunity for a “natural experiment.” Finally, Dr. Paradis’ emphasis on the need to link effectively public health research, policy and practice parallels the goals of public health renewal in BC and the goals of the CF framework.

Dr. Barb Riley
Scientist, Centre for Behavioural Research and Program Evaluation, University of Waterloo
Scientific Advisor for Knowledge Development and Exchange, Public Health Agency of Canada
Population Health Intervention Research Initiative for Canada (PHIRIC)

**PHIRIC: Building Population Health Intervention Research Capacity in Canada**

Dr. Riley began her presentation with a fun health promoting exercise to get the participants moving. Her talk brought a pan-Canadian perspective from three organizations but primarily focused on the viewpoint of PHIRIC. The Population Health Intervention Research Initiative for Canada is intended to be a catalyst for creating the conditions for high quality population health intervention research aimed at integrating practice, policy, and evaluation. The differences
between Mode 1 and Mode 2 knowledge production, coined by Gibbons and colleagues (1994), were discussed. PHIRIC is interested in promoting and developing Mode 2 knowledge, the key elements of which include: produced in natural contexts; focuses on problem-based, interdisciplinary research; and is socially and politically accountable. In contrast, Mode 1 knowledge which has been the dominant paradigm, is linear, homogeneous and discipline-driven. In regards to core functions implementation, PHIRIC would want to know: ‘what works, under what conditions, at what costs, borne by whom?’ A challenge is that we don’t currently have the research platforms or data systems to conduct ‘context’ and ‘systems level’ research and evaluation (i.e. to determine what works under certain circumstances).

Relevance to Core Functions Research

Dr. Riley’s discussion of Mode I and II knowledge production led many of us to conclude that Mode II knowledge most closely parallels the focus of our proposed research. We are interested in producing knowledge constructed in natural contexts (the organizations and communities within our health authorities), and we are interested in problem-based interdisciplinary research (as reflected in the priorities we have identified and the construction of our CF research team). We aim to be socially and politically accountable by producing knowledge that is relevant for policy and practice. In outlining the kinds of questions that PHIRIC would be concerned about, it is clear that the questions our team has identified fit well with PHIRIC’s questions of “what works, under what conditions, and at what costs?” The Core Functions Implementation, in itself, constitutes what PHIRIC has identified as a policy-level population health intervention.

Working Groups: Priority Research Questions

Participants were numbered off to form five Working Groups. Some of the groups merged to provide a balance of researchers and decision-makers resulting in four groups rather than five. Each group was asked to identify and agree upon the top ten research questions. The notes taken by each group are provided below.

Group 1

Group one comprised of the following participants: Marie-Claire Laurendeau, Marilyn Plummer, Jennifer Terpstra, Bridey Stirling, Geeta Cheema, Tanya Merke Epp and Anne George. This group came up with the following questions as priorities:

1. What is the impact/differential impacts of Core Functions (who benefits)?
2. What are the critical factors for successful implementation and knowledge translation?
   a. Dynamics of collaboration and leadership?
b. What is the critical resource level (human, $) needed for implementation?
c. What models of engagement affect implementation?

3. Compare health outcomes of general population versus targeted population programs?
   • What are the ethical implications of this?

4. Evidence:
   a. What factors influence the use and uptake of evidence?
   b. What affects/creates individual or organizational shifts in use of evidence?
   c. What is evidence?
   d. How do people “interpret” the evidence and how does that effect measurement?
   e. How to engage communities and practitioners in implementing evidence?
   f. What do practitioners use as criteria for relevance of evidence?

Group 2 (originally Group 5)

This team included the following: Gilles Paradis, Barb Riley, Joan Wharf-Higgins, Allan Best, Tricia Younger, and Mike Pennock. The ten multifaceted questions this group came up with are as follows:

1. How is the “inequalities lens” operationalized and applied in health authorities and to what effect?

2. What are the critical contextual variables to measure and analyze to understand the process and outcomes of the initiative?
   • How do they shape “shape” programs (adapt, modify, etc.)? “interaction”

3. What are the key filters (information) decision-makers (other users) need/use to implement “appropriate” and cost-effective functions?


5. What leadership “styles” and decision-making processes predict successful implementation (including inter-sectoral)?

6. Does the Core Functions initiative change the “culture” an “infrastructure” of research and practice communities as it relates to knowledge development and use?

7. What infrastructure and platforms are needed to support evaluation and implementation of the core functions initiative?
8. What is the impact of the Core Functions initiative on local community engagement and participation?

9. Does the degree (or type or scope…) of adaptation of Core Functions at the local health authority level “correlate” with the impact/outcome at the population level?

10. Does the Core Functions initiative lead to increased public health capacity (define capacity), improved public health performance (define) and enhanced integration of public health at the local level?

**Group 3**

Group three included the following participants: Jennifer Scarr, Vera Etches, Steve Corber, Sabrina Wong, Norm Kaethler, and Lydia Drasic. This group identified the following questions as their choices for priorities:

1. What data systems exist and are needed?

2. Implementation:
   a) Compare models in BC and beyond – what are the barriers and levels of success?
   b) What are the immediate outcomes that indicate success?
   c) What informed other model decisions?

3. Evaluation:
   a) What, if any, practices change with implementation?
   b) Why are some changes “uptaken” and not others?

4. Human resource capacity and skill sets:
   a) What does our workforce look like?
   b) What skills and how many staff do we have? How many do we need? What is realistic? What is cost-effective?
   c) How do we motivate personnel to adopt the necessary skills?
   d) What are the best practices to engage our own workers?
   e) How have human resource needs changes because of Core Functions?
   f) Compare human resource changes in health authorities.

5. Impact on money, profile and public health awareness
   a) Did funding and profile increase post implementation? Why?
   b) Has Core Functions engaged other partners/sectors successfully?

6. Inequity:
a) Do traditional public health strategies contribute to inequities?
b) How has “inequities” been integrated into Core Functions implementation?
c) What advocacy initiatives have resulted from Core Functions implementation?

7. Ethics:
   a) What are the ethical implications and considerations to implementing Core Functions?

Group 4

This group included the following people: Marjorie MacDonald, Trevor Hancock, Tim Shum, Bernie Pauly, Wayne Mitic, Tracy Conley and Christina Chociolko. The top ten questions that emerged from their discussion were:

1. How well is evidence transferred to practice?
2. Is there a relationship between evidence and practice?
3. What are the existing practices in the field and are they effective?
4. What capacity/resources do practitioners need to evaluate and generate evidence?
5. What impact do effective practices have on the health of the population (attribution)?
6. Strengthen Public Health:
   - Awareness – public, politicians, healthcare providers,
   - Appreciation of major stakeholders
   - Resource allocation
   - Impact – decrease in health disparities and improvement in population health
7. What factors influence implementation of the Core Functions framework in BC and across health authorities?
8. What is the impact of implementing Core Functions framework on staff (knowledge, attitudes, beliefs, values, quality of work life, behaviour, competencies)?
9. How well do the national core competencies map onto the Core Functions?
Think Tank Day 2

Confirming Research Priority Themes

A sub-committee met at the end of Think Tank Day 1 to conduct a brief qualitative analysis of the top research questions identified by each of the four working groups. This sub-committee included: Marjorie MacDonald, Trevor Hancock, Jennifer Mullett, Heather Wilson Strosher and Marilyn Plummer. The flip chart notes from the four afternoon groups on the first day were analyzed to identify common research priority areas to provide a starting point for summarizing the themes from the first day.

Day two began with a discussion of this analysis to confirm the themes and come to an agreement about the top research priority areas. Jennifer Mullett facilitated a discussion in which the Think Tank participants reviewed the themes, which were projected on a screen for everyone to view. The themes were revised as the discussion took place and the following list was tentatively agreed upon. Given time constraints, the group was not able to come up with a complete list that everyone could formally approve, however, the list below does capture the major themes and revisions discussed by the participants. The questions listed under the themes are the ones that were created by the Working Groups on the first day.

Preliminary Themes & Research Questions

A. Data Systems
   a. What data systems exist and are needed?

B. Implementation
   a. Compare models in BC and beyond.
   b. What are barriers and levels of success? What are the critical factors for successful implementation? Why are some changes taken up and others not? What creates individual or organizational change?
   c. What models of community engagement effect implementation?
   d. What leadership styles and decision making processes predict successful implementation?
   e. Does the degree (or type or scope of) adaptation of core functions at the HA level “correlate” with the impact/outcome at the population level?
   f. How is the implementation done intersectorally? Is real intersectoral collaboration happening and what is the impact?

C. Impact and Outcome
   a. What are immediate outcomes that indicate success?
b. What is the differential impact of core functions programs?
c. What is the impact on dollars and profile (public awareness)?
d. What is the impact of core functions on local engagement and participation?
e. What impact do effective practices have on the population?
f. Does the core function initiative affect the “culture” and “infrastructure” of research and practice communities as it relates to knowledge development and use?
g. Does the core functions initiative lead to increased public health capacity (define capacity); improve public health performance (define); and enhanced integration of public health at the local level?

D. Evidence
   a. What factors influence the use and uptake of evidence and by whom?
   b. How well is evidence transferred to practice?
   c. What is evidence?
   d. How do people interpret and react to the model programs (“evidence informed”) and how does that influence implementation?
   e. Is there a relationship between evidence and practice?
   f. What do practitioners use as criteria for relevance of evidence?
   g. What are the key filters (information) decision makers and other users need or use to implement “appropriate” and cost effective functions?

E. Human Resource Capacity
   a. How do human resource needs change because of core functions?
   b. How do we enhance integration of public health at the local level?
   c. What does our work force look like now? Skills, staff numbers, etc.
   d. How many staff members/workers do we need?
   e. How do you motivate personnel to adopt necessary skills?
   f. Compare HR changes in health authorities.
   g. What is the impact of implementing core functions framework on staff? Knowledge, attitudes, beliefs, values, quality of work life, behavior, competencies.
   h. How well do the national core competencies map onto the core functions?
   i. What capacity/resources do managers and practitioners need to evaluate and generate the evidence?

F. Equity/Inequity
   a. How is the inequities lens operationalized in health authorities?
   b. What public health strategies contribute to inequities?
   c. How has the equity/inequalities lens been integrated into core functions implementation and to what effect?
   d. Is there a differential impact of core functions?
   e. What advocacy initiatives have resulted from core functions implementation?
G. Ethics
   a. What are the ethical implications and considerations to implementing core functions?
   b. What are the ethical implications of targeted versus general population programs?
   c. What are the ethical implications of knowledge transfer strategies?

H. Context
   a. What are the critical contextual variables to measure to understand the process and outcomes of the initiative?
   b. How does the interplay of contextual factors shape programs?
   c. What leadership styles and decision making processes predict successful implementation? (including intersectoral competitive environment).

I. Infrastructure
   a. What infrastructure and platforms are needed to support evaluation of implementation of the core functions initiative? (people, funding mechanisms, context)
   b. Who is the audience? What appropriate filters would help us identify priorities?

J. Indicators
   b. How are indicators defined?
   c. Understanding baseline.

Working Groups: Research Questions & Methodology

This list of ten themes was further collapsed into seven as the group discussion progressed. Participants were asked to choose which theme they would like to discuss based on their expertise and interests. It was explained that the intent was to identify key research questions and to identify potential methodologies and methodological issues. There were three Working Groups in the morning: a) Implementation; b) Evidence; and c) Context/Infrastructure. These were chosen for the morning because they were seen as preceding some of the other themes. For example, implementation comes before impacts. The afternoon consisted of four Working Groups: a) Impact/Outcomes/Indicators; b) Equity; c) Data Systems; and d) Human Resources. There was a combination of researchers and decision-makers in each group. The notes taken by each group are captured below.
Implementation

This area interested the most participants; twelve people chose to be in this group: Steve Corber, Geeta Cheema, Jennifer Scarr, Jennifer Terpstra, Joan Wharf Higgins, Vicki Farrally, Tanya Merke Epp, Lorna Storbakken, Veronic Ouellette, Tim Shum, Bobbie Berkowitz, and Bernie Pauly. Some of the participants pointed out that many of the health authority representatives chose this topic and as such at the time of the Think Tank, it was likely a priority for health authorities.

It should also be noted that another category was originally included, Ethics, and although this was a recurrent theme, only one participant chose this group and hence it was collapsed into the Implementation theme. This group discussed the following in regards to implementation:

**How did it all begin?**
- Provincial – development of Core Functions framework.
- Health Authority – how did implementation begin in each health authority?
- How is Core Functions framework implemented in each health authority?

**Methodology:**
- Case studies
- Second Level – what was the impact on resources?
- How were decisions made? (related to context)

**What variables affect implementation?**
- Provincial decisions/functions
- Steering committee collaboration
- Provincial → Health authority → Health outcomes
- Differential implementation across Core Programs
- Interdepartmental “spread” of Public Health functions across health authorities
- Intersectoral “spread” outside of health authorities
- What are the “boundaries” of implementation – compare difference Core Programs
- To what extent is Core Functions implemented? Why? - Compare with Ontario Mandatory Guidelines.
- What were the unintended outcomes?
- What are the ethical concerns that health authorities and other stakeholders have had in implementation?

**Methodology:**
- Stakeholder analysis (focus groups, interviews)
- Document review
- Case studies
  - compare across health authorities
Successful implementation?
- What is successful implementation
- What are the objectives?
- What are the stages of implementation?
- What is the “tipping point” of intensity/dose in order to be successful?
  - How is this defined in different health authorities?

Methodology:
- Network analysis (how organizations are linked) - collaborative relationships
  - Across Core Programs
  - Across Health Authorities
  - Within a Health Authority
- Stakeholder analysis
- Cost benefit analysis of implementation process (value for money, tracking resource use)
- Marginal cost analysis (what are the marginal gains?)
- Policy analysis – “priority-setting” using criteria with health authority input to inform decision-making framework
- Implementation research to inform outcome evaluation
- Participatory / Collaborative / Action data analysis – consider “implementation theory”

Evidence
This group had six people who chose to discuss the theme of evidence; this included the following participants: Trevor Hancock, Mike Pennock, Shawna Mercer, Wayne Mitic, Tricia Younger, and Christine Chociolko. This group came up with the following:

Theme:
What is the relationship between evidence and practice (can include policy) as it related to the implementation of the Core Functions framework?

Researchable Questions:
- How is evidence used to inform practice and how does that change over time?
- How is practice used to inform evidence and how does that change over time?
- What can we learn about the relationships evidence and policy/practice from studying, observing, and intervening in the implementation of Core Functions?
Specific Questions:
1. What translation and exchange processes facilitate the use of evidence in practice (and practice to evidence) and how does this vary by:
   - Capacity within in health authorities
   - Resources
   - Local context
   - Local needs
     Inter-sectoral
2. What functions and processes facilitate the generation of evidence from practice?
3. How is evidence currently gathered from practice and how can it be improved?

Methodology:
1. Comparing approaches in translating evidence to practice between health authorities
   - Mentorship / champions
   - communities of practice
2. PHAC funding for training Public Health Workforce Development
3. Need some common measures viz PHDE EG.

Context / Infrastructure

This group also had six members, including: Marjorie MacDonald, Allan Best, Gilles Paradis, Lydia Drasic, Michael Goddard, and Marilyn Plummer. The group discussed the following elements:

Content Analysis and the Implementation of BC Core Function Initiative

Why?
- Context determines implementation, implementation changes context
- Social ecological/systems theory require understanding problem and process
- Need to understand context to implement effectively, influence performance and contribute to renewal.

Question:
- What are the critical contextual variables to understand process and outcomes (and their interplay) of the initiative and its contribution to public health renewal?

Sub-questions:
- How do these variables influence…?
- What is the relative importance of these factors in different health authorities?
- What are the common critical factors across all health authorities?

Design Considerations:
- Theory and reality based
- Mix of qualitative methods leading to qualitative/quantitative over time
- Work from specifics (diversity of health authorities) to a generalizable model and tools for context analysis
- Must provide feedback to stakeholders at multiple levels (Ministry, Health Authorities Executives, Program Staff etc.) on roles and responsibilities

Design:
- Multi-level case study - the “case” is the health authorities
- Develop a conceptual framework to guide data collection
- Use participatory action framework that includes researchers and stakeholders for Core Functions initiatives
- Blend of interviews, observations, document review and innovative methods for data collection

Keynote Speaker

Dr. Bobbie Berkowitz
Alumni Endowed Professor of Nursing, University of Washington

Turning Point: Collaborating for a New Century in Public Health

Dr. Berkowitz was invited to present on the US Public Health Initiative, ‘Turning Point’, funded by the Robert Woodcock Johnson Foundation. She directed the National Program Office for Turning Point from 1998-2006. The mission of Turning Point was to transform and strengthen the public health system in the United States by making it more community-based and collaborative. The purpose of Turning Point was to:

- Improve and transform public health infrastructure through collaborative models
- Build relationships and create a planning and improvement environment
- Improve public health accountability
- Improve population health outcomes
- Impact health policy
- Increase public health technology effectiveness
- Build the public health research base
- Enhance the public health workforce and leadership

Similar to BC’s Core Functions framework, Turning Point identified core public health services, functions, and capacities. Another major component of Turning Point was Performance Management, the practice of actively using performance data at the program, organization, community, and state level to improve the public’s health. The goal is continuous performance and quality improvement; activities should be integrated into routine public health practices and all components should be driven by the public health mission and organizational or systems strategy. All of the products that were developed as part of the Turning Point initiative are available for free on the Turning Point website: www.turningpointprogram.org
Working Groups: Research Questions & Methodology

Following Dr. Berkowitz’s presentation, the participants once again chose which of the four remaining research themes they would like to discuss: a) Impact/Outcomes/Indicators; b) Equity; c) Data Systems; or d) Human Resources. The afternoon working group discussion notes are below.

**Impact / Outcomes / Indicators**

There were eight people who chose to join this group: Trevor Hancock, Shawna Mercer, Bridey Stirling, Jennifer Terpstra, Steve Corber, Lydia Drasic, Geeta Cheema, and Christine Chocoilko. This group identified the following questions and issues:

**Questions:**
1. What were the intended, the emergent and the unexpected impact/outcomes
   - From varying perspectives frontline up to politicians: community, health authorities, provincial to national
   - How has your practice changed (attribution)
   - Range of outcomes (See below) – program outcomes, system outcomes

   **People**
   - **Frontline**
     - Knowledge
     - Action
     - Beliefs
     - Behaviour
     - Values
     - Practice
     - Quality of Work Life
   - **Politicians**

2. What has been the impact of the implementation of Core Functions on:
   - Health Authority Staff
   - Organization
   - Funding/resources
   - Services/programs
   - Health Outcomes
   NB: see Logic Model

3. Has impact varied across health authorities? If so, why?

4. What are the gaps in collecting indicators relevant to intended impacts and outcomes? What indicators/measures need to be common across health authorities?

5. What indicators are needed to “incentivize” the different players and stakeholders in the BC public health system?
Equity

Six of the participants chose this theme: Bernie Pauly, Marilyn Plummer, Paul Pallan, Vera Etches, Joan Wharf Higgins, and Tricia Younger. This group suggested the following questions and methods:

**Broad Question:**
- How does the Core Functions framework impact the health of the most disadvantaged in BC?

**Systems Questions:**
- How is the equity lens apparent within the Ministry of Health and health authorities with regards to intersectoral collaboration, citizen engagement, strategic plans and policy?
- What were the factors within health authorities and other agencies that facilitated explicit action to improve the health of the most disadvantaged?

**Consumer Impact Questions:**
- How does the Core Functions framework impact the health of Aboriginal people in BC? Homeless people? New immigrants?
- How are these population groups involved in program development and research?
- How does evidence inform programs and the actions taken?

**Design:**
- Participatory Action Research
- Policy analysis
- Document review
- Statistical analysis (i.e. maternal morbidity/infant mortality)
- Community-based health needs assessment

Note: tailor research ethics to meet the needs of each population group.

Equity Lens – Designated people and special groups needed to create agreement on how to apply the lens and sustain use (so that it doesn’t become routinized).
Data Systems

Again, there were six people who chose this topic: Allan Best, Gilles Paradis, Sabrina Wong, Michael Goddard, Barb Riley, and Norm Kaethler. This group came up with the following:

What Data Systems do we have? …need?

Public Health Surveillance

Evidence & Knowledge

Decision

Evaluate

Action

Outcome

Context

Informs

Questions:
- How can we align our data systems with PHAC (Public Health Agency of Canada) initiatives?
- What type of data system do we need in order to collect variables on context (e.g. PHLO?)
- Do data systems exist that would capture/describe implementation of Core Functions in Canada?
- What are the measures of implementation (standard, different)?
- How do we link the data for Core Functions to something like HELP data?
- What are the useful public health data variables?

Method:
- Recommend a consensus process on indicators for public health functions.
- Needs to be pan-Canadian.
- Develop a conceptual framework for the kinds of data needed and how to orchestrate.
  - “Lit review”?
  - “Logic Model”?
Human Resources

This was the smallest group with four members: Marjorie MacDonald, Jennifer Scarr, Marie-Claire Laurendeau, and Lorna Storbakken. The group initially spent some time discussing the need to engage senior leadership in both the health authorities and the academic institutions in setting public health education priorities, and in promoting the need for building the public health infrastructure. It would also be important for us to link with current and ongoing public health human resources initiatives across Canada (e.g., PHAC core competencies project). The group identified the following human resources questions as priorities:

1. How do the newly developed core competencies for public health map onto the competency requirements for core functions?
2. How well are current/existing programs in the various public health disciplines preparing people now to work in public health?
3. What needs to change in public health professional education to support core program implementation?
4. What models of inter-professional practice do we need to support core program implementation?
5. What continuing education is necessary for the existing public health workforce to enable them to meet core competencies needed for the core programs?
6. Are schools of public health the answer to public health workforce needs? Or, would discipline specific programs with enhanced public health content be more cost effective and acceptable to the different disciplines?
7. How can we build public health practicum capacity for student public health practice experience?
8. Is there a relationship between having core PH competencies, and effective implementation and impact of core functions?

Much of this work is descriptive in nature, so descriptive/exploratory methodologies would be most appropriate for these questions.
Closing Remarks

At the end of the day, Jennifer Mullett asked participants, “what was it about the Think Tank that stood out for you?” Responses were very positive and ranged from an appreciation for the richness of the discussions to looking forward to what comes out of the process. Many commented on the potential of future collaborations and partnerships. Some of the invited advisors commented on being excited about what other jurisdictions will be able to learn from BC’s experience. Many enjoyed the wide scope of perspectives and ideas. One of the participants remarked on how the interests and language of the researchers was surprisingly similar to that of the decision-makers and practitioners. The most common reflection was on the magnitude of research potential and on the resulting opportunities and challenges.

Trevor Hancock and Marjorie MacDonald both thanked everyone for sharing their insight. They indicated that they energized about the next steps, which will start out small and expand to encompass many of the research priorities that were identified here.

Summary

This exciting two day process culminated in the identification of several priority areas for research on Core Functions implementation and impact. The priorities identified during the Think Tank both confirmed and expanded on research priorities and interests identified by the researcher-decision maker team members prior to the two day meeting. Perhaps the most important outcome of this Think Tank is the clear recognition that researchers and decision makers share the same research interests, although there may be slight differences between the two groups in terms of priorities among the shared interests. There are also some variations in emphasis between the two groups within shared themes. What this means, however, is that any given research project can be readily designed to incorporate the interests and concerns of both groups, thus ensuring both policy/practice relevance, and sustained interest by researchers. In fact, any given proposal can incorporate questions in more than one theme area.

Questions of implementation, equity, and knowledge translation/exchange were clearly of very high priority among both groups and proposals in these areas are already underway. Research questions related to public health human resources also surfaced as important throughout the process. Another important concern was the need for appropriate data systems as a foundation for Core Functions research. In fact, the questions identified by the group that discussed data systems issues are less researchable questions than they are issues related to creating an appropriate research infrastructure and providing the foundation for answering many of the other research questions. These are, however, important considerations in developing our research agenda because they are pre-requisites for the kind of research we are proposing. We may want to consider making some recommendations to the Core Functions Provincial Steering Committee in relation to these, to be addressed by those responsible for provincial level core functions – particularly the research function.
Early in the think tank, and even prior to the two day meeting, questions related to economic evaluation, cost benefit and cost-effectiveness of core function implementation were identified as important by several team members. These types of questions, however, seemed to move out of focus during the latter part of the Think Tank. It is not clear that this is because these kinds of questions are not of high priority to the team, or because team members with these interests were not present for the two day meeting to ensure that these maintained a high level of priority. This will be an important issue to explore with the team when we meet to confirm our research agenda.

With respect to research methodologies, we probably did not get to discuss and make recommendations on methodologies to the extent we had hoped for in the Think Tank. What is clear is that there are several methodological challenges. The kinds of methods appropriate for many of the questions identified by participants as most important are not necessarily those most likely to be funded by a national granting agency. Participatory action research, for example, is a difficult research approach to be funded. The challenge of making attributions for observed changes was also discussed extensively. We need methodologies that focus on causal processes while at the same time moving away from the traditional experimental designs that do not work well in real world settings where random selection and assignment, and manipulation of an intervention are not appropriate. The Core Functions research agenda is ripe for innovative methodological development. There is also a need for methodologies that can take into account both context and the complexity of the core programs. Again, the methods may not yet be developed. For now, much of what we need to do will rely on sophisticated case study designs, but these are not always easy to get funded and the question of attribution will remain a challenge. Clearly, we have our work cut out for us but it was evident that there is a great deal of energy and commitment to “dig in and get the work done.”

Next Steps

Because the range of research possibilities within this focus is almost limitless, the goal of the Think Tank was to identify priorities from the perspective of public health researchers, decision makers, and practitioners. As anticipated, numerous research questions materialized - not all of which can be explored. Based on the numerous themes and research questions that emerged from this Think Tank, the Core Functions Research Team will collaboratively select a set of priority research questions and develop plans to explore each. As outlined in the Guiding Principles of the Core Functions Research Team (Appendix 8), the role of this team is to oversee research related to Core Functions; this involves: a) developing a research agenda; b) proposing and conducting research projects; c) providing guidance to research teams; d) coordinating research related activities; e) facilitating support for research projects; and f) sanctioning research projects to be conducted under the auspices of the team. Many of the activities are well underway and members of the team look forward to examining various aspects
of the process and impact of the implementation of core public health functions in BC. In fact, at least two research proposals have already been submitted, and one or two more are under consideration and development.

In June, we submitted a proposal to the CIHR Knowledge to Action Strategic Initiative with Marjorie MacDonald and Allan Best as co-principal investigators. This project incorporates several of the KT or evidence-related research questions identified during the think tank. The purpose of this project is engage in a participatory research approach to study the Knowledge-to-Action process reflected in the knowledge exchange elements of core program implementation. An opportunity for a “natural experiment” exists because each health authority has its own knowledge exchange processes and performance improvement plans. Three health authorities (VIHA, VCH, and IH) are participating in this and the Ministry and VIHA have provided a cash contribution to the project while IH and VCH are providing in-kind contributions. If this proposal is successful, it will provide support for Jennifer Terpstra to complete her doctoral dissertation research.

More recently, Bernie Pauly submitted a proposal to the CIHR Operating Grant competition to examine how current public health policies impact the health and well-being of one vulnerable and marginalized group - homeless women who may be experiencing problematic substance use. The overall goal is to contribute to the development of an equity focused public health system in BC that addresses the needs of vulnerable and potentially marginalized groups. This proposal addresses several of the research questions identified in the Think Tank related to ethics, equity, and the engagement of vulnerable populations in the CF process. If this proposal is successful, it will provide support for Marilyn Plummer to complete her doctoral dissertation research.

Joan Wharf Higgins and Steve Corber are developing a proposal for the CIHR Healthy Living/Chronic Disease Prevention special competition for Population Intervention Research. In this proposal, they will explore some aspect of the implementation of the Healthy Living core program in at least two health authorities, with a particular focus on what healthy living might mean for disadvantaged populations.

We will also be submitting a Team Startup proposal to Michael Smith Foundation to build on the current Team Planning work we have begun. This would provide some infrastructure support for the team to flesh out the research agenda and develop and submit several additional research proposals. Other proposals will be considered at the next team meeting to be held in September.
References


Appendices

Appendix 1: Letter of Invitation

Re: Invitation - Core Public Health Functions Research Priority Think Tank

When: April 26 & 27, 2007, 8:30am-5:00pm (Reception April 25, 7:00-10:00pm)
Where: Day 1: Marriott Hotel, 728 Humboldt Street, Victoria BC
        Day 2: Executive House Hotel, 777 Douglas Street, Victoria, BC
        Executive House Reservations: 1-800-663-7001 (rooms under “Core Functions”)
Contact: Heather Wilson Strosher at hlwilson@uvic.ca or (250) 598-5368

As Co-Principal investigators, we would like to invite you to a two-day Think Tank to be held April 26 & 27 at the Executive House Hotel in Victoria, BC. There will also be a wine and cheese reception the evening of April 25th at the same hotel in room 1706. The purpose of this Think Tank is to develop a research agenda on the implementation and outcomes of core public health functions.

We have received a Michael Smith Foundation for Health Research team planning grant, with additional contributions from the BC Ministry of Health and the Public Health Agency of Canada, which will fund the Think Tank. The overall goals of the team-building project are:

1) to bring together a team of researchers, decision makers and advisors to set research priorities for public health in BC as they relate to the core functions framework;
2) to develop a research agenda around the core functions implementation and impact in BC;
3) to plan a coordinated and integrated program of research that provides synergistic opportunities for knowledge development to inform public health policy and practice that will ultimately improve population health in BC and beyond.

As you may know, a Framework for Core Functions in Public Health (Ministry of Health, 2005) is a central component of the plan for public health renewal in BC. The main elements of the framework are: (a) Long term core programs – the services to be provided by health authorities in four broad areas: health improvement; disease, injury and disability prevention; environmental health; and health emergency management; (b) Public Health Strategies – those used to implement core programs: health promotion, health protection, preventive interventions, and
health assessment/disease surveillance; (c) Lenses – a population and an inequalities lens are applied to all elements of the framework to address health disparities and ensure that the health needs of particular groups are met; (d) System Capacity Requirements – a supportive infrastructure to deliver core programs including competent and well trained staff, information systems, and research to support innovation and inform policy and practice improvement. Twenty-one core programs have been identified and evidence reviews are being developed for each (along with a review on reducing inequities). Model programs are being developed for which each of our health authorities will develop public performance improvement plans and progress reports.

The Think Tank will bring together the research team with advisors who have national and international perspectives to assist us in identifying research priorities, establishing a research agenda, and advising on methodologies. An agenda and background reading will be sent to all participants prior to the Think Tank.

Please contact our Research Coordinator, Heather Wilson Strosher at hlwilson@uvic.ca or (250) 598-5368 if you have any questions or need assistance with your travel arrangements. We hope that you will be able to attend and look forward to the insight you have to offer.

Sincerely,

Marjorie MacDonald & Trevor Hancock
Associate Professor Public Health Consultant
School of Nursing BC Ministry of Health
University of Victoria
Appendix 2: Think Tank Agenda

**Core Public Health Functions Research Priority Think Tank**  
**Day One Agenda**

**Thursday, April 26, 2007  8:30am-5:00pm**  
**Marriott Hotel, 728 Humboldt Street, Victoria BC**

- **800 - 8:30**  
  Continental Breakfast will be provided prior to the meeting

- **8:30 - 9:00**  
  Introductory Comments

- **9:00 - 9:30**  
  Overview of Core Programs Progress

- **9:30 - 10:45**  
  Fish Bowl: Decision-makers  
  - What are the issues/questions you are interested in having researchers address?

- **10:45 - 11:00**  
  Break

- **11:00 - 12:00**  
  Fish Bowl: Researchers  
  - What are the research issues you are interested in exploring?

- **12:00 - 12:30**  
  Synthesis – common research issues/questions

- **12:30 - 1:30**  
  Lunch

- **1:30 - 3:00**  
  Panel – Visiting Researchers/Decision-makers

- **3:00 - 3:15**  
  Break

- **3:15 - 4:45**  
  Small Groups  
  - Task: Identify the top 10 research questions that should be examined by the research team

- **4:45 - 5:00**  
  Closing Remarks
**Core Public Health Functions Research Priority Think Tank**

**Day Two Agenda**

Friday, April 27, 2007   9:00am-4:30pm  
Executive House Hotel, Banquet Room (lower Level), 777 Douglas Street, Victoria BC

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>8:30 - 9:00</td>
<td>Continental Breakfast will be provided prior to the meeting</td>
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<tr>
<td>9:00 – 10:00</td>
<td>Synthesis of research questions &amp; priorities based on previous days small groups</td>
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| 10:00 – 12:00 | Small groups – each group discuss the approach to addressing one of the top 5 questions (methodologies, challenges and solutions, etc.)  
Please take a break at your convenience over the next two hours |
| 12:00 - 12:30 | Keynote Presentation: Turning Point  
Dr. Bobbie Berkowitz |
| 12:30 - 1:30 | Lunch |
| 1:30 – 3:30 | Small groups – each group discuss the approach to addressing one of the next 5 questions (methodologies, challenges and solutions, etc.)  
Please take a break at your convenience over the next two hours |
| 3:30 – 4:30 | Final Plenary – Closing Comments |
Appendix 3: Biographical Sketches of Participants

**Biographical Sketches**

**for a number of Invited Participants**

**Bobbie Berkowitz,** Ph.D., RN, CNAA, FAAN, is currently the Alumni Endowed Professor of Nursing at the University of Washington School of Nursing and Adjunct Professor in the School of Public Health and Community Medicine. Dr. Berkowitz also directs the NIH/NINR funded Center for the Advancement of Health Disparities Research at the UW School of Nursing. From 1998 through 2006 she directed the National Program Office for the RWJF funded Turning Point Initiative. She was Chair of the Department of Psychosocial and Community Health at the UW School of Nursing from 1998 through 2004. She joined the faculty at the University of Washington in July 1996 after having served as Deputy Secretary for the Washington State Department of Health and Chief of Nursing Services for the Seattle-King County Department of Public Health. Bobbie has served on the Washington State Board of Health and the Washington Health Care Commission. She serves on the Editorial Boards for Public Health Nursing, and the American Journal of Public Health, as Senior Associate Editor of Policy, Politics, and Nursing Practice, and as Associate Editor of Nursing Outlook. She serves on the boards of the American Academy of Nursing, the Washington Center on Nursing and is the Vice-Chair of the Board of Directors of QualisHealth and Vice-Chair of the Board of Trustees for Group Health Cooperative. Bobbie is a Fellow in the American Academy of Nursing and a member of the Institute of Medicine. She holds a Ph.D. in Nursing Science from Case Western Reserve University and Master of Nursing and Bachelor of Science in Nursing from the University of Washington.

**Dr. Vera Etches** was appointed as the Associate Medical Officer of Health for the Sudbury & District Health Unit in September 2005. Dr. Etches completed her Royal College Fellowship in Community Medicine in 2005, through the University of Toronto. She is passionate about inter-sectoral work to strengthen healthy communities by addressing social determinants of health. As the Director of the Public Health Research, Education and Development Program within the teaching health unit, she works to promote a strong foundation of evidence that impacts public health practice.

**Denise Kouri** is Lead of the National Collaborating Centre for Public Policy and Risk Evaluation (NCC-PR) at the Institut de santé publique du Québec (INSPQ). She is a policy analyst, evaluation consultant and adult educator. She has an inter-disciplinary background, with a Bachelor of Science degree in Mathematics and a Master of Arts in Sociology and Social Studies.

Ms. Kouri’s career includes previous positions with the Government of Saskatchewan, the University of Saskatchewan and the University of Regina. She has also worked with non-governmental organizations, including the Saskatchewan Teachers’ Federation and CUSO. She is the former Executive Director of the Canadian Centre for Analysis of Regionalization and Health (CCARH). CCARH was a policy research centre that studied health care regionalization and supported a network of decision makers and researchers interested in this area. She has experience in international development, most recently working with a health promotion project in Mozambique, and is a former member of both the board of the North-South Institute and of CUSO. Her publications include articles and reports on health care, governance, leadership, evaluation and social development.
Marie-Claire Laurendeau, holder of a Ph.D. degree in Psychology from University of Quebec in Montreal, has been working for 25 years in the Quebec public health system. From 1994 to 2003, she headed the Human and Social Eclogy Unit at the Montreal Public Health Department. Throughout her career, she has led numerous projects in prevention and health promotion, research and evaluation, on which she has published extensively. She has also served on major governmental committees responsible for policy planning both in the fields of mental and population health. On leave for teaching and research purposes, she was an invited scholar at the Psychology Department at University of Montreal and associated researcher at the Liaison Center for Psychosocial Intervention and Prevention, a Quebec evidence-based center for knowledge transfer in the psychosocial domain. She is presently Executive Advisor in charge of research and innovation at Quebec’s National Institute for Public Health.

The Institut national de santé publique du Québec (INSPQ) is a government organization founded in 1998 by legislation, to support the Minister of Health and the Regional Health and Social Services Agencies in the fulfillment of their public health responsibilities, and to foster the development, progress, sharing and use of expertise in public health.

Shawna L. Mercer, MSc, PhD is the Director of the Guide to Community Preventive Services (Community Guide), in the National Center for Health Marketing at the U.S. Centers for Disease Control and Prevention (CDC). The Community Guide works with its partners both inside and outside of CDC to conduct systematic reviews of the effectiveness of community, environmental, population, and healthcare system interventions in public health and health promotion. These systematic reviews form the basis of recommendations for public health practice, policy, and research that are made by the Task Force on Community Preventive Services—an independent body of leaders in public health practice, policy, and research, convened by the US Department of Health and Human Services and appointed by the CDC Director.

Previously, Dr. Mercer served as Senior Advisor and Health Scientist on the Science Vision and Alliances Team in CDC’s Office of the Chief Science Officer where she led a number of initiatives aimed at bridging gaps between research and practice by exploring the appropriate use of a wider range of study design options for effectiveness and translation research, and considering how to increase the quality and use of evidence-based recommendations for policy and practice. Prior to coming to CDC, Shawna worked at the Institute for Clinical Evaluative Sciences in Toronto, and at the University of Toronto as an investigator and research associate on numerous research grants and research projects in the areas of participatory research, research dissemination and translation, cancer screening, physician and patient education, support for cancer and AIDS patients, health education, and health behavior change.

Tanya Merke Epp is the Program Manager for the National Collaborating Centre for Infectious Diseases (NCCID). She graduated with a Masters in Public Administration from the University of Manitoba/University of Winnipeg in 2005 while working as a research assistant and project leader for the Province of Manitoba’s Department of Energy, Science and Technology, Life Sciences Branch. In that role she focused on supporting the economic development of Manitoba’s Life Sciences Industry and was responsible for coordinating the Province’s delegations to BIO; the largest international biotechnology convention and exhibition. Prior to this Tanya gained several years of experience acting as a liaison with industry, federal and provincial governments, and post secondary research institutions and over 8 years of experience as a manager of office administration.

Tanya first joined the International Centre for Infectious Diseases (ICID) in April 2006 as the Project Leader responsible for the provision of Common Services to the six National Collaborating Centres
Jennifer Mullett, Ph.D. (*Think Tank Facilitator*) is a Community Psychologist in private practice, Director of Action Research Consulting and an adjunct professor at the University of Victoria. Her former positions include: Research Scholar in Community Based Research supported by the Michael Smith Foundation for Health Research and Director of Research and Evaluation for the Ministry of Health in British Columbia. Involved in several community projects, her main expertise is Community Based Research or Collaborative Action Research applied to the development of healthy communities. Her current research activities range from the reorganization of mental health services for children to the implementation of evidence based programs in communities and assisting community groups to design research methods appropriate for action research.

Gilles Paradis, MD, MSc, FRCPC, FACPMT, FAHA, is Associate-Director for population health and preventive medicine of the McGill University Health Center (MUHC) Research Institute, 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 is also 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 also is the vice-chair of the CIHR Institute for Population and Public Health Advisory Board. 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. He was Secretary-General of the Organizing Committee and chair of the Scientific Program Committee of the 4th International Conference on Preventive Cardiology in Montreal in 1997.

Barbara Riley is a Scientist at the Centre for Behavioural Research and Program Evaluation (CBRPE) and a Research Assistant Professor in Applied Health Sciences at the University of Waterloo. She is also Scientific Advisor for Knowledge Development and Exchange at the Public Health Agency of Canada through an Executive Interchange agreement. Dr. Riley did her Master’s training in Health Studies at the University of Waterloo (MSc), and her doctoral training in Social Geography at McMaster University. Dr. Riley is the recipient of the Dr. Andres Petrasovits Fellowship Award in Health Policy Research (2004-07) – jointly offered by the Heart and Stroke Foundation of Canada and the Canadian Institutes of Health Research. She brings to this award over 15 years of experience as a health promotion consultant specializing in program evaluation and policy analysis. Dr. Riley’s career focus is on building capacity – at a system level – to better bridge research and evaluation with population interventions. She aspires to a prevention system in Canada that fully integrates research and evaluation with population level interventions. To this end, Dr. Riley is building a program of ‘system science’ that is done on behalf of prevention system architects and that enables continuous improvement of the prevention system itself.
Tricia Younger is an Associate Director in the Centre for Public Health Excellence at the National Institute for Health and Clinical Excellence (NICE). NICE provides national guidance for England and Wales on the promotion of good health and the prevention and treatment of ill health.

The Centre for Public Health Excellence was established in April 2005 and is responsible for evaluating the most effective and cost effective public health interventions and programmes and for producing national guidance for the health service, local government and wider public health audiences. Currently the Centre is working on 15 topics, ranging from guidance to the Highways Agency on environmental improvements to increase physical activity, for employers in small and medium sized businesses to support smoking cessation in the workplace, and for schools to improve children’s mental health and well-being.

Tricia joined NICE in 2005 from the Health Development Agency which superseded the Health Education Authority (HEA) in 2000. She was Head of the Children & Young People Programme and led the Agency’s work on partnerships and primary care development. Her work on unintended teenage conceptions for the HEA became government policy in 1997. Tricia has a wide range of experience in public health gained in the National Health Service, local government, further education and the private and voluntary sectors. Her first degree is in nutrition. She is a registered professional nutritionist and a State Registered Dietitian, a qualification she gained in Canada, at Montreal General Hospital.

Biographical Sketches
for a number of Core Functions Research Team Members

Allan Best is Senior Scientist in the Centre for Clinical Epidemiology and Evaluation, and Director of the Community Partnerships for Health Research program in the Vancouver Coastal Health Research Institute. The program is a unique research and training initiative built upon and uniting four essential cornerstones:

- Systems thinking, which studies the complexity of systems, focusing on the interplay between programs and policies;
- Partnerships between research producers and research users, to maximize relevance and utilization of results;
- Transdisciplinarity, which brings together researchers and policy makers from diverse backgrounds and disciplines to forge new ways of approaching health system problems;
- Knowledge exchange processes designed to strengthen the links among research, policy and practice communities.

Allan's academic, research and corporate consulting activities have earned him a reputation as a world leader in health promotion and organizational health. He currently is President of the Canadian Association for Health Services and Policy Research. He served as the founding Chair of the Department of Health Studies at the University of Waterloo, the world's first interdisciplinary department integrating the biological and behavioural sciences to study health promotion. He has been elected Fellow for outstanding research contribution by the Canadian Academy of Health Sciences, Canadian Psychological Association, Society of Behavioral Medicine, American Psychological Association, and American Academy of Health Behavior. Allan was awarded the 1996 O. Harold Warwick prize by the National Cancer Institute of Canada (NCIC) for outstanding contributions to cancer control, and he currently
serves as a member of the NCIC’s senior Committee on Research. Over his career, Allan has directed over $25 million in research grants and contracts using multidisciplinary teams.

**Geeta Cheema** is the project coordinator for the Public Health Evidence to Practice Project, Interior Health’s approach to implementing the Core Functions initiative within the regional health authority. Having been educated in public administration, Geeta has previously worked in health sector communications and planning, but considers her current role as her comprehensive education in public health.

**Lisa Chu** is a Director, Health Promotion and Prevention Services in Fraser Health. She is responsible for the public health prevention programs and services in the communities of Surrey, TriCities, New Westminster, and Burnaby. In addition she is the lead director across Fraser Health for Healthy Living strategies, HIV/AIDS, Smoke Free Premise Policy Implementation, and core programs process. Prior to joining Fraser Health in 2002, Lisa was a policy consultant for the former Health Association of BC. She has an undergraduate degree in dietetics and nutrition from UBC and a Masters in Business Administration from SFU.

**Steve Corber** is presently Associate Professor in the Faculty of Health Sciences at Simon Fraser University. His interests are in the practice of Population and Public Health and Global Health, particularly disease prevention and control.

Dr. Corber has been practicing public health for 30 years. Prior to joining SFU, for 10 years, he was head of the Disease Prevention and Control programs of the Pan American Health Organization. The mandate was to help countries of Latin America and the Caribbean improve their capacity to measure, eliminate, prevent and control infectious and chronic disease. Previously, he was the Medical Officer of Health for the Ottawa-Carleton Health Department overseeing the application of a wide range of public health programs. During that time as well he was Clinical Associate Professor in the Department of Epidemiology and Community Medicine at the University of Ottawa and from 1991-1995 was also the Scientific Editor of the Journal of the Canadian Public Health Association. He has been involved in a number of Canadian advisory boards including the National Advisory Committee on Immunizing Agents, the Medical Council of Canada’s Preventive Medicine Test Committee and the Ontario Ministry of Health Advisory Committee on Communicable Diseases.

**Vicki Farrally**, MA, MSc. (Praxis Management Inc.) has been a health management consultant since 1997. Her clients have included both provincial and federal government ministries, the BC Office of the Auditor General, research and policy organizations, professional associations, and a wide range of health service delivery organizations, in both Canada and the UK. Recent projects include support of Northern Health’s primary health care quality improvement initiatives, project management of Northern Health’s Core Functions in Public Health Review process, review and redesign of the provincial Hemophilia Service for the BC Provincial Laboratory Coordinating Office, acute care service planning for Fraser Health Authority, and facilitation and support of the BC Medical Association’s primary health care initiatives.

Vicki has extensive experience in strategic and operational planning, policy development, health human resource planning, and health system accountability, including the development of performance frameworks and indicators, operational reviews, and program evaluation. She previously served as Assistant Deputy Minister of Health in both BC and in New Zealand, and as both Assistant Deputy
Minister of Transportation and Superintendent of Motor Vehicles in BC. She currently is an Affiliate with the Centre for Health Services Policy Research at UBC.

**Anne George**, Assistant Professor, UBC Department of Pediatrics, is the first appointee of the Northern Child and Youth Research Unit, an emergent research group being set up to address population-unique health issues of northern BC children and youth. Her academic background is health promotion and she has interest in population health. Her research interests focus on the health of children from immigrant and refugee families, and the reduction of specific health issues (e.g., injury) in aboriginal populations.

**Dr. Trevor Hancock (Co-Principal Investigator)** is a public health physician and health promotion consultant who has worked for local communities, municipal, provincial and national governments, health care organizations and the World Health Organization. His main areas of interest are health promotion, healthy cities/communities, healthy public policy, environmental health, health policy and planning, and health futurism. He is currently a Public Health Consultant at the Ministry of Health in British Columbia, where he is working to implement core programs in public health, to increase preventive services in primary care, to foster a population health promotion approach, and to develop a comprehensive self-care strategy.

**Marjorie MacDonald, RN, PhD (Co-Principal Investigator)** is Associate Professor and Associate Director of Graduate Programs in the School of Nursing at the University of Victoria. Her graduate education is in community health and health promotion and her research interests include public health policy and practice, health services research related to the public health system, adolescent health promotion, smoking and drug use prevention, and adolescent health literacy. Currently, she is co-lead (with Trevor Hancock) of a team of researchers and decision makers funded by the Michael Smith Foundation of Health Research to develop a research agenda on the implementation and impact of the Core Public Health Functions in BC.

**Paul Pallan** is Consultant to the Core programs process—involved in facilitation of the various working groups created to develop the Model Core Program papers and providing overall strategic advice on development of the core programs process. For the past two years, as Vice-President of Hollander Analytical, Paul has worked as a consultant on a wide range of projects in health care, education and children’s services.

Paul’s previous background positions are as follows: Children’s Commissioner for BC (1999-2003); Assistant Deputy Minister of Education (1993-1999); Assistant Deputy Minister of Cabinet Operations (1993); Assistant Deputy Minister of Health (1992-1993); Executive Director of Continuing Care Division (1989-1992); & Executive Director of Policy, Planning, Legislation and Research (1985-1989).

**Bernie Pauly, RN, PhD**, is an Assistant Professor in the School of Nursing at University of Victoria. Prior to this she was a post doctoral fellow with the Canadian Institutes of Health Research (CIHR) Ethics of Research and Health Policy Training Program in the Department of Bioethics at Dalhousie University. She is a past recipient of a B.C. Michael Smith Health Research Doctoral Award. She is a member of the UVic/UBC Nursing Ethics Research Team conducting research on leadership for ethical policy and practice in nursing. She is a Board director of the Victoria Cool Aid Society and a member of the advisory committee for the Victoria Homeless Needs Survey. Bernie's research and publications focus on health inequities, harm reduction, ethical practice in nursing, moral distress, the socio-political context of health care, and equity in access to health care for those experiencing homelessness and addiction.
Mike Pennock is the Population Health Epidemiologist and Co-Director of the Population and Public Health Observatory at the Vancouver Island Health Authority. The PPHO is a nine-member unit that is responsible for community health assessment and disease surveillance within the Office of the Chief Medical Health Officer. Mike came to VIHA in 2005 from the BC Ministry of Health where he was the performance measurement specialist in mental health and addictions. Prior to joining the MOH, Mike spent ten years as the Research Director of the Population Health Research Unit at Dalhousie University and, prior to that, spent many years as the Executive Director of the Hamilton-Wentworth Social Planning and Research Council.

Mike’s primary research interests are health inequities and the relationship between public policy and population wellness. During the fall of 2006, Mike and his wife Martha spent three months at the Centre of Bhutan Studies in Thimpu Bhutan, where they assisted in the development of a population survey of Gross National Happiness. Mike is a frequent collaborator with GPI Atlantic and is a member of the Advisory Council on the Canadian Index of Wellbeing.

Jennifer Scarr is presently in the position of Policy Consultant, supporting the work of Vancouver Coastal Health's newly formed Population Health Team. In this role she is responsible for the implementation of the Core Public Health Functions Framework. As a nurse she has had the opportunity to experience public health in a variety of ways. She has worked as a community health nurse in both rural and urban settings, previously held the position of clinical educator for UBC School of Nursing, and most recently provided clinical education support for the Vancouver Community Health Promotion and Prevention program.

Tim Shum, Dip. Env Health, CPHI(C), B.Sc., FBA., MHSA., has been the Regional Director, Health Protection for Fraser Health Authority since 2002. Past positions include: Director, Environmental Health Services, Simon Fraser Health Region (1997 - 2002); Chief Environmental Health Officer, City of Burnaby (1993 - 1997); and Assistant Director, Environmental Health Services, Calgary Health Services (1988 - 1993).

Jennifer Terpstra is a 1st year doctoral student at UBC in the Individual Interdisciplinary Graduate Studies Program. She is pursuing a PhD in Health Promotion drawing from 4 disciplines: Healthcare and Epidemiology, Organizational Management, Public Policy, and Psychology. She has a Bachelor of Psychology from the University of Lethbridge, and a Master of Public Health, specializing in Health Promotion, from San Diego State University. Jennifer is a doctoral trainee with the CIHR strategic training grant, Partners in Community Health Research. Until recently, her research activities primarily involved community-based behavioural interventions, particularly in vulnerable populations. Her current research interests lie in the development and evaluation of theory-based public health interventions, as well as the role that interdisciplinary/intersectoral teams play in successful implementation of the interventions.

Joan Wharf Higgins, Ph.D. is a Canada Research Chair in Health & Society, an Associate Professor in the School of Physical Education and a Scientific Advisor to the BC and Yukon Health and Learning Knowledge Centre. Joan’s areas of research include the social determinants of community and population health and physical activity; health literacy and healthy communities; and, the application of social marketing theory and strategies to facilitate social change.
Heather Wilson Strosher, M.A. is coordinating the activities of the MSFHR Team Planning Grant, *Developing a Research Program on the Process and Impact of Implementing Core Public Health Functions in BC*. Heather is also a Research Associate with Action Research Consulting where she works closely with Dr. Jennifer Mullett on several community research and evaluation projects. Heather received her M.A. in Educational Psychology from the University of Victoria in 2003 and her B.A in Psychology in 1997 from the University of Calgary. Her primary research interests include health promotion, positive child development and comprehensive school health.

Sabrina Wong is a nurse and health services researcher that completed her PhD at the University of California, San Francisco and a health services post-doctoral fellowship at the Institute for Health Policy Studies. She is currently an assistant professor at the University of British Columbia, School of Nursing and core faculty member at the Centre for Health Services and Policy Research. Sabrina's research focuses on patient experiences from diverse ethnocultural groups in the primary health care sector. She also teaches population health and health policy in the nursing program. She is particularly interested in inequalities in health and delivery of health care services amongst vulnerable populations. Sabrina has expertise in survey development, using large datasets, measurement, and using both qualitative and quantitative methods.
Appendix 4: Overview of Core Public Health Functions in BC

Note: To be inserted
Core Functions Implementation: A Mid-point Update

March 31st 2007

A. CORE PUBLIC HEALTH FUNCTIONS IN BC – THE BASIC APPROACH

1. The development and implementation of core public health functions is a performance expectation within the Health System Performance Framework that requires health authorities, including the PHSA, to participate in the core functions process and to prepare public performance improvement plans for each core program.

2. The implementation of core public health functions in BC is undertaken as a performance improvement process developed by the Ministry of Health in partnership with the health authorities. This performance improvement process is predicated upon the mutual interest of the Ministry, the health authorities and BC’s public health professionals in providing the best public health services possible. At the same time, recognising that the public’s needs and the system’s capacity varies between and even within health authorities, each health authority is expected to tailor its performance improvement plan to local conditions and priorities.

3. Each health authority is responsible for developing a public performance improvement plan for each program, within one year of its approval by the Steering Committee. From the Ministry’s perspective, the system performance that is being sought is that the plan exist and that it include some basic elements common to all plans, as noted below, including performance improvement targets. However, the choice of both on what program components the plan focuses and what level of improvement is targeted is left to the discretion of the health authority, and will reflect local priorities and circumstances. Moreover, a health authority is free to determine that no program improvement is warranted, as long as it can establish and defend such a position.

4. While the Ministry does expect that every program will have a performance improvement plan, it does not require that all components of the model program be addressed, and does not require that the performance targets and, later, the progress in achieving those targets, be reported to the Ministry. Rather, these targets and performance improvement reports are intended to be used for the health authority’s own continual quality improvement process, and for a transparent accountability of the health authority to its own community and professional stakeholders.
5. Because the plan is submitted to the Ministry in order to be in compliance with the performance expectation that there be a plan, the Ministry has the ability to review the plan and raise any concerns it may have directly with the health authority. Because the plan - and later, the performance report - are public, the Ministry also has the ability to review these public documents. If for any reason the Ministry has a concern, either provincially or with respect to one or more health authorities, it has the ability to select specific programs, program components or performance measures and include them in the Health System Performance Framework, or make them the subject of some other form of accountability, as it may choose. In such a situation, and only in such a situation, would a health authority be accountable to the Ministry for a specific program, program component or performance measure.

6. **The key elements of the core public health functions approach in BC are:**
   - A core functions framework
   - A set of 21 core programs
   - Reviews of evidence and best practice for each program
   - A Core Functions Steering Committee
   - Model core program papers
   - Public performance improvement plans
   - Regular public reports on progress
   - A set of provincial-level functions
   - A logic model
   - A website

These are described in more detail below.

6.1. **A core functions framework**, approved in March 2005 after consultation with the health authorities and the public health field in BC. The Framework defines the public health function as primordial (or upstream), primary and early secondary prevention and identifies three broad categories of public health functions:

- **Public health programs**, which are organised sets of services and activities intended to achieve specific health outcomes.
- **Public health strategies**, which are ways of working (health promotion, health protection, preventive services, health assessment and disease surveillance), a selection of which may be used by any program.
- **Public health capacity, or infrastructure**, which are the set of organisational resources (human, physical and fiscal) and arrangements that support the development and application of public health programs.
In addition, the framework includes two 'lenses', one for populations and one for equity, that are intended to be used so as to ensure that core programs are tailored to significant population groups, where appropriate, and that in developing these programs, the health authorities and the Ministry identify where inequities exist and work to reduce them.

6.2. **A set of 21 core programs**, also approved in March 2005, organised in four broad groups:

- Health improvement
- Prevention of disease, disability and injury
- Environmental health
- Health emergency management.

The 21 programs are informed by the available evidence and knowledge of best practice, and are those that a health authority will provide in a renewed and modern health system.

6.3. **Reviews of evidence and best practice** for each program. These reviews may draw from a number of sources, including scientific studies circulated in the academic literature, and observational or anecdotal reports recorded in community-based publications. By bringing together multiple forms of evidence, these reviews aim to provide an evidence base through which public health workers can focus their local and provincial programs and services. They should be seen as a guide to understanding the scientific and community-based research, rather than as a formula for achieving success. The evidence presented for a core program will inform the health authorities in the development of their own priorities, but these priorities will be tailored by local context.

6.4. **A Core Functions Steering Committee** with representatives from the Ministry of Health and the six health authorities. This Committee is responsible for defining the scope and overseeing the development of the project, approving model core program papers and performance measures, identifying provincial level public health functions and related system performance measures, and ensuring the proposed performance improvement measures and processes are reasonable.

6.5. **Model core program papers** developed by joint Ministry and health authority workgroups and approved by the Steering Committee following review by the health authorities and the Ministry. The approved model program paper is a resource to the health authorities that they can use to develop their core program.

Each model program paper includes:

- A set of key program components that are based on the reviews of evidence and best practice and informed by the knowledge and experience of the public health professionals on the workgroups.
• A set of suggested performance measures that could be used to monitor performance. These could be measures of input, activities, outputs or outcomes (especially those immediate outcomes that might be most directly attributable to the program), as well as measures for maintaining surveillance and monitoring of broad health determinants or outcomes to which the program is ultimately aimed, or that might help determine or re-direct program aims and objectives.

• Each health authority determines which performance measures it will use - it can choose to use some, all or even none of those suggested by the core program working group. However, it is hoped - and will be encouraged - that over time, through ongoing collaboration between the health authorities and the Ministry, some common indicator sets will be developed to allow for comparison across health authorities for at least some key program components.

6.6. Public performance improvement plans for each program, developed by each health authority in the year following program approval. The plan, which is developed based on the model program paper, but is tailored to regional and local needs and priorities and to the capacity of the health authority, is expected to contain the following generally accepted components of any such plan:

  o Planning context
  o Baseline assessment
  o Needs assessment / gap analysis
  o Performance targets (or justification if no change is intended)
  o Key strategies, including initiatives, resources, etc.
  o Reporting process.

6.7. Regular public reports on progress in implementing the performance improvement plans and moving towards or achieving performance improvement targets. Each plan is made public in a way that ensures that the health authority is accountable to its community and professional stakeholders with respect to its own performance improvement plans and targets. How health authorities make these public is an issue for the HA’s and not the MoH, although the expectation would be that HA’s follow their own practices for doing this.

6.8. A set of provincial-level functions, approved by the Core Functions Steering Committee in March 2007. The Ministry, the health authorities - particularly the PHSA - and other relevant provincial organisations will work together to develop performance improvement plans for these provincial-level functions by September 2008.

The priority provincial-level functions are:
• Strategic public health planning and legislation
• Public health human resources
• Public health workforce development
• Public health information systems
• Health assessment and disease surveillance
• Public health research

Additional provincial-level public health functions include:
• Evidence reviews, model core program papers and evaluation
• Organizational competency / accreditation
• Public communications and advocacy
• Reducing inequalities in health
• Links to national initiatives.

6.9. A logic model to guide evaluation of the overall process.

6.10. A website that will make information and resources, including all evidence reviews and model program papers, available to public health professionals and the wider public in BC, nationally and internationally.

7. In its stewardship role, the Ministry
   o Provides leadership for the project by development of the framework and establishment of the core functions improvement process;
   o Provides targeted or global funding to support the health authorities in their involvement in the process and resources to support implementation activities, and
   o ensures accountability through inclusion of core functions as a priority performance improvement project in the Performance Framework and establishment of expectations through the monitoring process.

The Core Public Health Functions project is supported within the Ministry of Health by a public health medical consultant, a Director of Core Functions Implementation, and a small advisory group from within Population Health and Wellness (PHW), Health Authorities Division and Knowledge Management and Technology Division. In addition, model program workgroups are usually chaired by the appropriate Executive Director from within PHW, and supported by program consultants and others from within PHW (and occasionally from other Divisions within the Ministry) with the requisite technical expertise.

8. It is expected that the health authorities will participate in the Steering Committee and in specific working groups to develop the model program papers. They are encouraged to exercise their accountability function through the gap analysis process.
and resulting performance improvement plans. As well as being active on the Steering Committee, each regional health authority has assigned resources to the role of project coordinator for core functions. Although the model of implementation varies across health authorities, all have participated in the working groups, conducted gap analysis and are developing or have developed performance improvement plans related to the approved model core program papers. The health authority coordinators have regular communication to share approaches and learning from the core functions work, to strategize on solutions to issues and to encourage collaboration between health authorities.

B. THE CURRENT SITUATION – AS OF MARCH 31ST 2007

1. The core functions framework remains essentially unchanged. However, some minor modifications have been made:
   - ‘Problem substance use’ has been separated from ‘prevention of mental disorders’ and is a program in its own right
   - ‘Mental health promotion’ and ‘prevention of mental disorders’ may be treated as a single program.
   - ‘Disability prevention’ may be combined with ‘reproductive health’.
   - ‘Community sanitation and hygiene’ has been renamed ‘Community environments’
   - There is some concern about placing licensing programs within the ‘healthy communities’ program as ‘healthy community care’.

2. The evidence and best practice reviews are nearing completion. In addition to the evidence reviews for each program, two additional evidence reviews have been commissioned; one on the evidence with respect to public health practice in reducing inequalities in health, and one on how to apply an ‘aging’ population lens.
   - 14 reviews have been completed and accepted by the Ministry.
   - Of these, 11 have been reviewed and approved by model program working groups.
   - It is anticipated that all of the remaining evidence reviews will be completed by June 30th 2007

3. Half of the core programs have been approved or are under development. As of March 31st 2007:
   - 6 model programs have been approved (air quality, food safety, food security, health emergency management, dental health, health assessment and disease surveillance).
   - 3 are essentially complete and awaiting approval, which should occur within the next couple of months (healthy communities, healthy living, water quality).
• 2 are under development, with a first draft complete and a second workgroup meeting being scheduled (prevention of unintentional injury, prevention of problem substance use).

• 1 is at the point of initiation, with workgroups being established (communicable disease prevention and control).

4. The first set of public performance improvement plans have been developed. Four of the health authorities have developed plans for the core programs of food safety, air quality, food security and health emergency management. One has posted to their website. Two health authorities state they continue to be in the planning phase. PHSA expressed the desire to incorporate a response to provincial and province wide needs expressed in the regional health authority plans. Further details will be provided once all plans have been developed.

5. A position of Director, Public Health Planning is being established in Population Health and Wellness to lead the process for identification and development of provincial-level core public health functions and to lead the division’s public health human resource planning and workforce development activities.

6. Work is underway with the PHSA to identify their potential role and contribution with respect to provincial-level public health functions. The PHSA’s role, in keeping with its links to the Universities and its commitment to research, education and service, may include work in the areas of workforce development, public health research, health assessment and disease surveillance, public health information systems, ongoing reviews of evidence and best practice, public communications, and provision of expert advice, among others, as well as its role as a service provider at the provincial level.

7. Work is already underway on several priority provincial-level functions:

• The Public Health Improvement Project (PHIP) is based upon the Canada Health InfoWay project to develop a national information system for communicable disease control. The BC Ministry of Health has expanded this work to include development of an information system for the Family Health component of iPHIS, which otherwise will be compromised by Panorama (the new CDC information system), and to develop a new environmental health information system that will meet the needs of core programs. Consideration has been given to the need to develop additional information systems to cover the remaining core program information system needs, and preliminary planning is underway. Steps are also being taken to strengthen the public health information system team within PHW.

• The Ministry has been working with the Public Health Association of BC (PHABC) and the BC Academic Health Council (BCAHC) to develop two project proposals for the Public Health Agency of Canada. The first, now completed, was to examine the core competencies that are beginning to be identified through the Core Programs process with the nationally-developed set of core public
health competencies. The second proposal, if funded, will provide resources (approx $200,000 annually for three years) to develop training programs and tools, in collaboration with the health authorities, to enhance core program-related competencies.

- The recently approved core program in health assessment and disease surveillance stressed the crucial importance of a provincial strategy/framework in this area. Preliminary steps are underway to develop this work.

- PHW has recognised the importance of research to examine the Core Functions process and to learn from the experience of implementing core public health functions in BC. The lessons to be learned will be of interest not only in BC but nationally and even internationally. Accordingly, PHW has supported and is participating in the development of a university-based research team and the creation of a research agenda. Initial funding has been received from the Michael Smith Health Research Foundation to support this process.

- The Ministry has recently established a Research Committee, and PHW and the Provincial Health Officer are actively engaged in the work of the Committee. Particular emphasis is being placed on both population and public health research and health systems research, both of which are highly relevant to public health functions.

8. A comprehensive website to support the development and implementation of core public health functions has been under development for some time. The website will provide access to key background materials, the evidence reviews, approved model core program papers and related materials, and will provide a link to all the health authority performance improvement plans that are posted to their websites. The Core Functions website also provides extensive links to other relevant resources provincially, nationally and internationally. The website has received provisional approval by Knowledge Management and Technology Division of the Ministry with respect to content and is awaiting approval from the Ministry's Public Affairs Branch with respect to design and other public communications issues.

C. THE NEXT PHASE

As the implementation of core functions reaches the mid-point in terms of model program approval, several challenges and issues have been identified. These relate variously to the content of the core programs framework, the strengths and weaknesses of the process that is being used, the new opportunities and/or threats that have emerged since the process was initiated, and the timelines to completion. Since the core functions process is itself an evolving process from which we need to learn, and since it too needs to be subject to performance improvement, the time is right for a mid-term review that can make any needed course corrections and guide the final half of the development process.
1. A mid-term review has been scheduled for a special meeting of the Steering Committee on June 1st 2007. At this meeting, the Steering Committee will review a number of issues that have been identified (and others yet to be identified), including:

- The updating of evidence reviews
- Possible changes to the set of core programs (e.g. merging some programs)
- The workgroup process for developing model program papers
- The process for developing performance measures, and the types of measures to be developed
- The possible need for a minimum standard set of provincial performance measures common to all health authorities, and how such a standard set can be developed
- The performance expectations, especially with respect to the content of the performance improvement plans and the meaning of ‘public’, including what level of detail to include in the public plan, and how it should be made public
- The role of PHSA with respect to provincial-level functions, and the identification of those areas where PHSA should take a lead role
- How to identify and develop those issues where province-wide action is needed, involving the health authorities (including the PHSA), the Ministry and other provincial players. How to organise and fund such action.
- Means for public health staff to effectively engage other sectors of the health care system in performance improvement planning related to the core public health programs that exist outside the traditional public health sector (e.g. healthy care facilities, prevention of adverse effects of the health care system)
- Concerns related to strengthening public health funding to meet the enhanced expectations created by the articulation of core programs, in light of other pressures in the health care system.
- How to best incorporate public health planning into other strategic planning initiatives at the health authority level.
- How to develop planning tables to address the province-wide issues arising out of the model core program papers and working group discussions.


- As the final evidence reviews are completed the focus will shift to dissemination of this evidence both provincially and nationally to public health stakeholders.
- An additional four or five working groups will be formed to develop the model core program papers this year, with the remainder in the following year.
In addition to completing the two programs already well under way (prevention of unintentional injury and prevention of problem substance use), the programs provisionally scheduled for 2007/08 are communicable disease prevention and control, reproductive health and prevention of disabilities, mental health promotion and the prevention of mental disorders, and healthy infant and child development.

In addition to the completion of any programs started in 2007/08 and still incomplete, the programs planned for development in 2008/09 are prevention of adverse effects of the health system, chronic disease prevention, healthy child and youth development, and prevention of violence, abuse and neglect.

Each year brings its own complexity. The first year it was an entirely new process on which we were embarking with the need to be flexible; this year we face development of the more complex and resource dependent public health programs such as the prevention of communicable disease and infant and early child development; and next year we will be fully engaged in developing the programs where public health staff have not been the traditional leaders.

Work will continue on coordination with and further development of initiatives arising out of the core functions process, including:

- application of the inequities lens
- developing the research agenda
- public health competencies and health human resource planning
- improving public health information systems
- Linkage with other key government priorities such as Aboriginal Health Planning.

Attention will be paid to the creation of a process to best utilize the information gained in developing and implementing the performance improvement plans to inform and advance individual core programs and public health capacity.

Health authorities will not have completed their first performance improvement plans for all programs until 2009/10, and their first public reports for all programs will not be completed until 2010/11 at the earliest.

Three articles on core public health functions are being developed as part of a planned Supplement to the Canadian Journal of Public Health to be published in the fall of 2007. One article describes the Framework, one the process of performance improvement, and the third, authored by the Core Program Coordinators from IHA and VCHA, describes the process from their perspective.

Finally, we are working at the national level to try to ensure that a process is put in place for reviewing regularly and updating the evidence and best practice in public health, thus sparing individual provinces the need to repeat this task on their own.
Appendix 6: Implementing Core Functions in Regional Health Authorities

Implementing Core Functions in Regional Health Authorities

Geeta Cheema¹ and Jennifer Scarr², April 30, 2007.

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Abstract

Regional health authorities in British Columbia are responsible for implementing the Core Functions Improvement Process, a public health renewal initiative that relies on the development and application of evidence-based core functions. Within this process, improvements are being made to 21 core public health programs through a series of performance improvement stages. The implementation experience in Interior Health and Vancouver Coastal Health illustrates the opportunities and challenges of this process as a means to strengthen the public health functions of a health authority.

Introduction

Regional health authorities in British Columbia are responsible for implementing the Core Functions Improvement Process, a public health renewal initiative that relies on the development and application of evidence-based core functions. The Core Functions Improvement Process intends to articulate public health core functions¹ within a reformed healthcare system, encompassing core functions provided provincially and by the 5 regional health authorities. While performance improvement mechanisms are currently being identified for priority provincial public health functions², to date, the Core Functions Improvement Process has emphasized the role of the regional health authorities (RHAs) as the entities accountable for delivering public health services to local populations.

As outlined in the Performance Agreement between the Ministry of Health and the health authorities, active participation in the Core Functions Improvement Process is a requirement. For the RHAs, participation in the initiative requires representation on the Core Functions Provincial Steering Committee and each provincial core program Working Group, as well as regional application of the performance improvement stages. While the main stages of the performance improvement process have been established provincially, RHAs have approached the task of coordination and implementation in various ways. These different approaches are partially reflective of variations in the organizational structure of public health within RHAs, preferences of senior leaders, and resources allocated to the initiative. While diverging somewhat, the RHAs have, in many instances, worked together to share strategies and tools and to troubleshoot arising issues.

¹ As defined in the Core Functions Framework, public health core functions include four dimensions: core programs; public health strategies; population and inequality lenses; and, public health system capacity [reference T. Hancock article].
² Provincial level functions include those provided by the Ministry of Health, the BC Centre for Disease Control and the Provincial Health Services Authority, as well as functions carried out province-wide through shared accountability.
This article describes the implementation of the Core Functions Improvement Process as it has occurred within Interior Health (IH) and Vancouver Coastal Health (VCH), two of the regional health authorities in British Columbia. The information within this article is based on the experience of the IH and VCH project coordinators as learned through 18 months of the implementation process. Despite differing structures and approaches, IH and VCH have shared similar challenges and opportunities in implementing the Core Functions initiative.

Public Health Core Functions in Interior Health and Vancouver Coastal Health

Organizational Overview of Public Health within IH and VCH

Interior Health (IH) is a regional health authority that serves over 700,000 residents within an area greater than 200,000 square kilometers in the southern interior of BC. In IH, Public Health is a centrally managed corporate department, led by the combined position of Chief Operating Officer / Senior Medical Health Officer and a region-wide leadership team.

Vancouver Coastal Health (VCH) spans nearly 60,000 square kilometers and serves over 1 million residents (25% of BC’s population). While the majority of these residents reside within Vancouver, VCH also includes other significant urban, rural and remote areas. The authority for Public Health falls within the auspices of the Chief Medical Health Officer, whose Office is responsible for coordinating regional standards and policies in the areas of Communicable Disease, Environmental Health, and Population Health. Service delivery of programs is decentralized to local public health leadership teams within VCH’s geographic Health Service Delivery Areas.

While differing in structure, both IH and VCH have explicitly identifiable organizational units dedicated to the work of public health. But as close reading of the Core Functions Framework [reference T. Hancock article] makes apparent, public health functions are not only limited to Public Health departments. For instance, of the twenty-one core programs in public health [reference T. Hancock article], six programs are administered outside of the Public Health department in Interior Health (e.g. programs related to health emergency management, mental health and adverse effects of the healthcare system). Moreover, many core programs explicitly require involvement from multiple sectors within the healthcare organization (e.g., the Healthy Communities core program encompasses ‘healthy hospitals and care facilities’). In defining public health in this way, the Core Functions Improvement Process challenges prescriptive notions of the ‘public health functions’ of a health authority. However, while public health has been offered broad conceptual space, RHA representatives on the Core Functions Provincial Steering Committee are limited to staff of Public Health departments.

Approach to Core Functions within IH and VCH

In order to successfully meet the objectives of the provincial Core Functions Improvement Process, both Interior Health and Vancouver Coastal Health have developed structures and processes to engage health authority staff in the initiative. These processes have relied on leadership endorsement, widespread staff awareness among staff involved in public health core programs, and full time management by a project coordinator.

Within IH, the Core Functions initiative is implemented through the Evidence to Practice Project. Establishing this regionally specific name served to highlight the organization’s commitment to applying evidence as a basis of programming, as well as to recognize unique local processes developed to support the initiative, such as the use of Evidence Review Teams. Originally developed to strengthen the evidence review process and ensure appropriate health
authority representation at provincial meetings, Evidence Review Teams have become a foundational structure to implement the successive stages of the performance improvement process within Interior Health. Composed of a core program leader (who provides official IH representation to the provincial core program Working Group), a Medical Health Officer, and other staff members with expertise in the core program area, the Evidence Review Teams have the advantage of coordinated, multidisciplinary response to provincial requests for input. Procedural tools have been developed to support the Evidence Review Teams with their specified tasks.

In Vancouver Coastal Health, the Core Public Health Services Review is guided by a Steering Committee comprised of HSDA Directors, and Directors of Primary Care, Environmental Health, and Population Health. Existing Regional Committees or specially developed Reference Groups have been utilized to support the implementation of the performance improvement stages. These groups are composed of staff across Health Service Delivery Areas that have core program expertise, and participants include front-line staff, managers and Directors.

Instrumental to the success of VCH’s Core Public Health Services Review is its basis in a philosophy of community development, which encourages groups to establish their own goals and to take steps to achieve positive change. The project’s collaborative approach has invited staff at all levels of the organization to actively participate in all aspects of the project activities. In this way, VCH is supporting staff to take ownership and influence core public health functions and programs. By taking a community development approach, it is believed that the implementation of the Core Functions Framework will be sustained and applied to areas both inside and outside of the traditional public health arena.

**Stages of Core Functions Implementation**

While the Core Functions Framework includes four domains, core programs are foundational to the Core Functions Improvement Process. The other three domains (public health strategies, lenses and capacity) have been addressed with varying approaches, and in varying depth. Since the bulk of efforts have been dedicated to core program-based improvements, this section will focus on the stages of core functions implementation as related to core programs.

Advancing in clusters of three or four, each of the twenty-one identified public health core programs will eventually progress through a series of performance improvement stages. Earlier performance improvement stages (referred to here collectively as ‘Phase I’), are led by the Ministry of Health, with participation of the RHAs. Later performance improvement stages (‘Phase II’) are implemented independently by each RHA as determined by its preferred approach to health system planning and implementation. Figure 1 illustrates the stages of core functions implementation within Interior Health’s Evidence to Practice Project.
Currently, there are several core programs engaged in activities at each performance improvement stage. Each stage of implementation is described below, with examples from the IH and VCH approach.

PHASE I: PROVINCIAL DEVELOPMENT OF MODEL CORE PROGRAMS

Critical Review of Evidence Papers

The Ministry of Health has contracted the development of an evidence paper for each core program. Evidence paper contractors may be independent researcher/writers, or may be associated with an academic research unit, the provincial public health association, or provincial health authority (e.g., BC Centre for Disease Control). Referencing information from systematic reviews of research or primary literature documented in scholarly journals, the evidence paper describes current best/better practice interventions that have been shown to improve health outcomes related to a core program.

Health authority representatives provide feedback on the evidence paper, as the background document upon which model program papers will be based. IH Evidence Review Teams develop Interior Health’s feedback through a process based on the ‘Evidence Review Template.’ The Template prompts reviewers to critically assess the evidence paper for comprehensiveness, bias, and inclusion of interventions suited for vulnerable populations, among other factors. In VCH, the provincial core program Working Group representative is engaged in a similar process; guiding questions are used to review the evidence paper and provide feedback.

Development of Model Program Papers

Based on the evidence paper and input from health authorities, a model program paper is developed which describes the best/better practice interventions, performance indicators, and where possible, benchmarks to guide RHA improvement of a core program. The model program paper is written by a consulting firm hired by the Ministry of Health. As members of the provincial core program Working Group, RHAs provide feedback on the paper using means similar to the evidence review process. Once a model program paper has gone through several
rounds of feedback, it is tabled for approval at the Core Functions Provincial Steering Committee. Approval is granted through consensus of Ministry of Health and health authority representatives.

PHASE 2: HEALTH SERVICE PLANNING AND IMPLEMENTATION

Gap Analysis and Performance Improvement Planning

Once a model program paper has been approved provincially, the provincial core program Working Group is disbanded, and the health authorities embark on regionally-specific gap analysis and performance improvement planning. Gap analysis is a process used to identify the variation between model program key components and current service delivery in the health authority. The identified gaps are considered within a locally relevant priority setting process to inform the objectives within the performance improvement plan.

To date, four core programs – Air Quality, Health Emergency Management, Food Safety and Food Security – have gone through gap analysis and performance improvement planning. IH and VCH used similar processes for gap analysis, utilizing worksheets developed by the IH project coordinator. In performance improvement planning, the IH and VCH processes and products have varied somewhat, relying on the Evidence Review Teams in IH and a combination of Reference Groups, Regional Committees and project Steering Committee members in VCH.

As a mandated component of the Core Functions Improvement Process (stipulated in the Ministry of Health’s Performance Agreement), health authorities are required to make the core program performance improvement plans available to the public. IH and VCH have fulfilled this requirement by posting plans on the health authority’s website.

Performance Improvement Plan Implementation, Monitoring and Reporting

In Interior Health, primary responsibility for implementation, monitoring and reporting will remain with the Director with the closest associated portfolio duties. Yet to be determined, however, is the extent to which performance monitoring will be coordinated across core program areas, and how program level performance monitoring will intersect with monitoring of population health determinants and outcomes.

In VCH, it is the responsibility of the Health Service Delivery Area Public Health Directors and the Office of the Medical Health Officer to determine which aspects of the plans will be implemented, and to identify the resources required to put these initiatives into practice. In addition, opportunities identified in the performance improvement plans will help to inform and support the work of the Population Health Team. VCH is currently establishing the role the Health Assessment Data Group will have in monitoring and reporting the performance improvement plans.

A year beyond the development of a performance improvement plan, health authorities are required to report publicly on implementation of the plans. The first public reports are due March 31, 2008.

Challenges and Opportunities in Implementation

Throughout regional implementation of the Core Functions Improvement Process, challenges and opportunities have emerged. Some of these are outlined below.
Challenges

Unsurprisingly, resource and capacity challenges have been and remain the most significant issue in implementation of the Core Functions Improvement Process. While this initiative was supported early on by the Ministry of Health with sufficient funds to hire a coordinator in each region, resources to support ongoing staff participation, and implementation of performance improvement plans are lacking. Consequently, centrally involved staff members face fatigue, and sometimes cynicism about the prospects for creating sustainable improvements.

A further implementation challenge is skills-related; in IH and VCH, representatives to the provincial core program Working Group are selected for their current or prospective leadership role in a core program area. These proficient subject experts may not have the full range of skills needed to lead a core program through the performance improvement stages, such as skills in critical review of evidence, group facilitation, development of indicators, and health service planning. Thus, involvement of RHA staff in the Core Functions initiative offers an opportunity to build transferable skills and knowledge. Where required and to the extent possible, support from the project coordinators and specially developed tools have been applied to assist these core program leaders.

The Core Functions Improvement Process also provides challenges to effective resource allocation in RHAs. In the interim until all core programs have undergone the improvement process, health authority leadership may find it difficult to balance resources between existing programs and the resource requirements of performance improvement plans. The 21 intersecting and overlapping core program areas add further complexity to determining appropriate resource allocation and providing integrated service delivery. Moreover, neither evidence papers nor model program papers identify the relative impact of any best practice intervention; health authorities would have to invest in further analysis of the evidence to determine how to most effectively apply scarce resources.

Shared accountability is another major challenge related to Core Functions implementation. As noted earlier, many core program best practice interventions require cooperative work across the health authority, engaging sectors that do not necessarily recognize that they perform ‘public health functions’. Active collaboration with other healthcare sectors and external partners will require recognition and acceptance of this public health role, ultimately requiring a philosophical shift in the notion of responsibility for public health. Within RHAs, this will require leadership endorsement and substantial resources, such as staff time and ability to undertake cross-sectoral partnerships.

Finally, as an admittedly developmental process, implementation of the Core Functions initiative has relied heavily on the RHAs to develop tools, processes and procedures to interpret and apply the performance improvement stages. While the Ministry of Health’s collaborative, flexible approach to implementation has provided some advantages for tailoring implementation within each RHA, the costs have included lack of clarity and consistency regarding expectations, duplication of efforts, and potential for varying outcomes across the province. The RHA project coordinators have established regular meetings in order to address some of these challenges.

Opportunities

The Core Functions Improvement Process also provides opportunity. Perhaps foremost is the opportunity for provincial discussions on public health that engage HA staff from front line
workers to executives. This focused dialogue and the requirements for gap analysis and planning bring concerted attention to program areas, including some that have not historically been well developed (e.g., air quality). In addition to identifying gaps, health authorities have had the opportunity to recognize and celebrate accomplishments already being achieved in core program areas. The improvement process has encouraged the establishment of new regional committees, has focused the work of existing regional committees, and has provided an opportunity to ensure multidisciplinary involvement within core programs.

The widespread recognition of Core Functions within Public Health has had spin-off effects. Evidence papers have provided a basis for engagement with related areas of work and in some cases have assisted in the decision-making process for resource investments in programs directed to improving population health. The Core Functions initiative has also led to the development of the Core Functions Research Team, a group of academics who have joined with members of the Core Functions Provincial Steering Committee to develop a research agenda related to Core Functions. The Core Functions initiative is providing direction to the BC Public Health Information Project, which aims to improve public health surveillance technology in the province. There is also a link developing between Core Functions and the Public Health Agency of Canada’s Core Competencies project.

Summary

RHAs have devised structures and processes to implement the stages of the Core Functions Improvement Process. Substantial efforts have been applied by health authority staff in contributing to the development of provincial model program papers, and regional performance improvement plans. Although the Core Functions Improvement Process is considered a valuable methodology for ensuring evidence-based public health core programs, the process itself requires ongoing reflection and improvement in order to retain its credibility. The balance of experience, though, shows that the Ministry of Health is responsive to implementation challenges raised by the RHAs, and that there are rewards to reap in the effort.

It is apparent that the Core Functions Improvement Process has achieved widespread recognition within public health, and offers a means to raise the profile of public health in the broader healthcare community. Through its encompassing definition of public health, the Core Functions initiative provides a means to move beyond discipline-based public health into a broad population health perspective. While many challenges remain to be resolved, Core Functions is ultimately a shared effort to better structure and resource public health functions in British Columbia.
Appendix 7: Research Priorities Identified by Core Functions Research Team

Identified Research Priorities
Core Functions Research Team

Prior to the Think Tank, the following research questions/research issues were identified by the Core Functions Research Team. These were identified during three team meetings occurring since December 2006. Members of the Core Functions Research Team include academic researchers, Health Authority and Ministry of Health representatives who are involved in the implementation of the Core Functions in Public Health.

As outlined in the team’s Guiding Principles, the team: considers, values, and respects multiple research paradigms and methodologies, and is committed to ensuring that research is relevant to their stakeholders and has the ability to influence decision-making in a timely manner.

The identified research questions have been categorized in relation to the four elements of the Framework for Core Functions in Public Health.

Core Programs

- Particular program research – looking at one or more Core Programs as an exemplar and tracking the implementation and impact to see how well it is working.
- Examine the cost/benefit of individual Core Programs.
- Some of the core programs are blended into various areas and some work more independently. How well have the framework elements been integrated? Will evidence be utilized by all of the different areas?

- Health Improvement Programs
  - No questions identified

- Disease, Injury and Disability Prevention Programs
  - Examine the prevention of adverse effects of the health system.

- Environmental Health Programs
  - No questions identified

- Health Emergency Management Programs
• No questions identified

Public Health Strategies

➢ Health Promotion
  • No questions identified

➢ Health Protection
  • No questions identified

➢ Preventive Interventions
  • No questions identified

➢ Health Assessment and Disease Surveillance
  • No questions identified

The Lenses

➢ The Inequities Lens
  • Have there been changes in service delivery, access, or outcomes for disadvantaged populations?
  • Have health disparities improved?

➢ The Population Lens
  • How will or how has Core Functions implementation impacted specific populations?
  • Investigate the applicability to specific communities – related to targeted versus universal programs.

System Capacity

➢ Public Health Information Systems
  • Will required data be available to researchers?

➢ Human Resource Development
• How do we prevent health care providers or caregivers from doing the things that evidence demonstrates aren’t working?

➢ Program Planning and Management Capabilities

• How to best build up system capacity?
• How do we increase efficiency through coordinated efforts? How do we create structures that identify common elements of Health Authorities that will decrease duplication while at the same time ensuring autonomy?

➢ Ability to analyze and implement public health policy

• Does providing a high degree of flexibility in the performance improvement process result in more or less investment? Interesting to compare with a centrally driven, prescriptive approach.
• Has Core Functions influenced corporate culture and moved beyond public health?
• Provide evidence base for how to strengthen: a) quantity of public health services; b) quality; and c) consistency/rigour. All related to increasing investment.
• Cost/benefit analysis – is Core Functions leading to improved health and decreasing pressure on the acute system? Is money being saved from elsewhere in the system?
• What are the benefits of purchasing positive outcomes?
• How do we mobilize partnerships and integration at the large scale provincial/federal level?
• Has this process (Core Functions) influenced broader decision-making and reallocated funds?
• If gaps have been identified within Core Programs and evidence has been provided, have resources been shifted around to cover those gaps?

➢ Research and Evaluation (contributes to Quality Management)

• How do we build public health research capacity
• How do we develop generalizable tools and methodologies that the Ministry of Health and the Health Authorities can use to examine their own data?
What is the most effective service delivery option for implementing elements of the framework? How can community be most effectively involved?

- **Quality Management, includes monitoring & performance assessment**
  - How well does this process actually improve performance?
  - Has Core Functions implementation resulted in changes all the way to the program level?
  - Has Core Functions resulted in true public health renewal or simply resulted in several small program changes?
  - Has it improved public health indicators?
  - Has it improved both the quality and quantity of overall services?
Appendix 8: Guiding Principles - Core Functions Research Team

Guiding Principles
Core Functions Research Team

Preamble:
Members of the Core Functions Research Team include academic researchers at UVIC, UBC (one of whom is located in the Northern Medical Program housed at UNBC), and SFU, along with Health Authority and Ministry of Health representatives who are involved in the implementation of Core Functions in Public Health.

The role of this team is to oversee research related to Core Functions; this involves: a) developing a research agenda; b) proposing and conducting research projects; c) providing guidance to research teams; d) coordinating research related activities; e) facilitating support for research projects; and f) sanctioning research projects to be conducted under the auspices of the team.

There is also a larger network of individuals interested in the work of the team but who do not participate in team meetings and are not governed by these principles. The term 'partners' refers to: the Ministry of Health, the six Health Authorities, and other academic researchers. The following principles are subject to change as the team evolves.

Guiding Principles

1. The team commits to a collaborative, inclusive process, recognizing the contributions of each member. All members are respected, valued and treated equitably.

2. The team considers, values, and respects multiple research paradigms and methodologies.

3. The team strives to support the goals of all partners involved while simultaneously recognizing potential constraints. The team will strive to reach a consensus regarding research priorities, and projects endorsed by this team must fall under the team’s agreed upon research priorities.

4. The team commits to ensuring that the research\(^3\) is relevant to our stakeholders and has the ability to influence decision-making in a timely manner.

5. The team honours transparency and declares conflicts of interest where appropriate.

6. The team supports capacity building in partner organizations, and encourages active student participation in the research to enhance their learning.

7. The team strives to be a model for effectively linking policy, practice, and research.

8. Team members commit to attend meetings regularly or to send a representative. If this is not possible, team members agree to send their regrets to the chair and to review the minutes to follow up on decisions.

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\(^3\) We use a broad definition of research, which includes participatory and action research approaches, and evaluation.
Authorship Guidelines

Preamble:
We anticipate that there will be publications based on the overall work of the team and in this case all members will have the opportunity to participate and be listed as authors if they wish to be, and if they meet the criteria outlined below.

Additionally, all members have the opportunity to take the lead on particular projects and publications, with the agreement of the team. All other members will have the opportunity to volunteer to be part of that process.

Criteria for authorship:

1. All authors must make a substantial contribution to the conception, design, analysis, or interpretation of data;
2. All authors must be involved in writing and revising the manuscript for intellectual content;
3. All authors must approve the final draft and be able to defend the published work.

Other considerations:

• Authorship will be explicitly discussed at an early stage of developing a publication.
• Not all team members will necessarily have to be involved in all publications. With a large research team, an extensive list of authors can be cumbersome and interfere with timely publication. Such a publication is at risk of being seen as including “honorary” rather than substantive authors. At the same time, all team members who want to be part of a publication will have the opportunity to do so.
• All team members will be given the opportunity to review and comment on findings prior to publication or presentation. Any members of the team may further analyze, publish or present findings resulting from the project with the agreement of the other team members and the principal investigators.
• Permission of an individual or organization must be sought prior to acknowledging their contribution in a publication.
• A team member or organizations may choose to include a disclaimer if they do not agree with the content or views presented in a publication, or they may decline to be an author on such publications.
• The team member who has taken the lead and made the major contribution to the paper is entitled to be first author. The order of other authors will be negotiated among the authoring team, based on the extent of their contributions to writing or analysis. In the case of equal contributions by all authors, the order of authorship will be alphabetical and this will be noted in the manuscript so that it is evident to readers. The principal investigators may not necessarily be authors on some publications, and will only be listed as authors if they meet the above criteria.
Appendix 9: Annotated Bibliography of Related Literature

Developing a Research Program on the Process and Impact of Implementing Core Public Health Functions in BC:

An Annotated Bibliography

Prepared by Marilyn Plummer on behalf of the Core Functions Research Team

April 2007

Principal Investigators:

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School of Nursing
University of Victoria

Trevor Hancock
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BC Ministry of Health
Developing a Research Program on the Process and Impact of Implementing Core Public Health Functions in BC

A Framework for Core Functions in Public Health (Ministry of Health, 2005a &b) is a central component of the plan for public health renewal in British Columbia. The Core Functions identify the key set of public health services to be provided by Health Authorities and to strengthen the link between public health, primary health care and chronic disease management in BC.

The range of possibilities for research within the focus of public health is limitless. Therefore, it is important to identify priorities from the perspectives of public health researchers, decision makers, and practitioners. A team of key stakeholders will be brought together in April 2007 to identify research priorities for public health in BC as they relate to the core functions framework.

In preparation for the two day “think tank”, a review of relevant literature was conducted. The academic and grey literature was scanned and an annotated bibliography developed.

In an effort to streamline the information, a table summarizing the literature is provided. The literature is divided into Canadian sources, sources from the United States, and international sources. The table includes reference information, a brief summary of the methodology used by the authors, and a summary of the priorities identified. The final column identifies the public health core function discussed in the document.

The research team would like to acknowledge Michael Smith Foundation for Health Research for funding this process through a team planning grant, as well as funding provided by the BC Ministry of Health.
## CANADIAN SOURCES

<table>
<thead>
<tr>
<th>Reference</th>
<th>Methodology/Process</th>
<th>Summary of Priorities</th>
<th>Core Functions Themes</th>
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</table>
| BC Women’s Hospital and Health Centre. (2006). *Women-centered health research. A strategy for BC Women’s.* Vancouver, BC: BC Women’s Hospital and Health Centre. | Ongoing consultation with researchers and clinicians at BC Women’s and UBC, and with researchers, policy makers, women and providers associated with the Women’s Health Centre, BCCEWH, Health Canada, BC Ministry of Health, PHSA and BC and Canadian universities and health research organizations. | • Aboriginal women’s health and international women’s health;  
• Addictions; Health through the life cycle (bone, breast, heart and mid-life health, continence);  
• Conception and pregnancy; Maternity care and birth; high risk and complex pregnancy;  
• HIV/AIDS; Mental health; Violence and sexual assault. | Health improvement (reproductive health, healthy living, mental health promotion). Injury prevention. Building research capacity. |
• Disease Patterns Research;  
• Emerging Communicable and Infectious Disease Research;  
• Immunology and Vaccine Research; Disease Specific Research;  
• Social Marketing Target Messages Research;  
• Enterics Research;  
• Knowledge Translation Research;  
• Genomics Research. | Disease, Injury, and Disability Prevention Core Programs (communicable disease prevention and control). |
| Ciliska, D., Clark, K., Thomas, H., Valaitis, R., & VanBerkel, C. (2006). National Collaborating Centre: Public health methodologies and tools environmental scan. Ontario: Public Health Research Education and Development Program. | Environmental scan: Grey literature search; key informant interviews; Delphi survey. | The primary conclusion of the environmental scan was the following top five work activities:  
- Create a support structure for sharing of information across health units, agencies, and institutions;  
- Strengthen leadership to support the use of evidence in practice and policy;  
- Create user-friendly summary statements from systematic reviews;  
- Create an online resource of evidence for public health practice;  
- Integrate front line practitioners. | Building research capacity. |
| CIHR and PHRED. (2002). Building public health research, education and development in Canada: A five site consultation. Ottawa: CIHR. | Consultations were conducted with approximately 35 PHRED staff members from the 5 Ontario sites, as part of a provincial PHRED strategic planning meeting in order to define key success factors and challenges for the Ontario PHRED Program. Key informant interviews were also conducted with 53 individuals from across Canada. |  
- Facilitate a national dialogue and action plan to foster infrastructure development.  
- Provide funds to enhance the university/practice linkages.  
- Support practice sector representation on pertinent peer review committees.  
- Allow sufficient funding and time for research programs to develop.  
- Support the development of research proposals after accepting letters of intent and streamline reporting requirements.  
- Ensure that funding criteria require partner involvement.  
- Provide evidence from existing well-established processes and initiatives to all partners.  
- Identify knowledge and skills required to foster an effective, dynamic workforce  
- Support public health professionals to use research evidence to inform their practice. | Building research capacity. |
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<th>Source</th>
<th>Summary</th>
<th>Key Goals</th>
<th>Result</th>
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| CIHR-Institute of Population and Public Health. (2003). *Building a sustainable public health research infrastructure in Canada*. Ottawa: Canadian Institute of Health Research. | A process of dialogue about public health research capacity in Canada brought together a diverse group of 80 public health leaders from research, practice, community and policy-making arenas. | • Facilitate on-going dialogue;  
• Identify a national public health agenda;  
• Nurture linkages;  
• Implement communication & education strategies;  
• Develop sustainable funding infrastructure;  
• Create infrastructure to support public health. | Building research capacity. |
• Management of the healthcare workplace;  
• Timely access to quality care for all;  
• Managing for quality and safety;  
• Understanding and responding to public expectations;  
• Sustainable funding and ethical resource allocation;  
• Governance and accountability;  
• Managing and adapting to change;  
• Linking care across place, time, and settings;  
• Linking public health to health services. | Building health services capacity. |
• Increased population-level intervention research to understand and address the determinants of healthy eating, physical activity and their relationship to healthy weights;  
• An integrated system for knowledge development and exchange. | Health improvement (healthy living). Building research capacity. |
| --- | --- | --- | --- |
| Government of Ontario. (2000). *Setting the agenda: The Ontario literacy research strategy*. Toronto: Publications Ontario. | The Ministry sought to obtain advice from the literacy field, identify research-related needs, determine key research topics, and propose strategies. | • Adult learners and adult learning;  
• Program design, instructional content, and effective practices;  
• Practitioner training and professional development;  
• Learner assessment and the impact of adult literacy programming; and  
| Indigenous Peoples’ Health Research Centre. (2001). *Research themes*. Retrieved 02/06/07, from: [http://www.iphrc.ca/research-initiatives/research-themes.htm](http://www.iphrc.ca/research-initiatives/research-themes.htm) | Community-based research and consultation with Indigenous communities. | • Chronic diseases, nutrition and lifestyle: recognizing that more work is required in the determinants and causes of behaviors and how they can be changed;  
• Indigenous Healing, addiction (FAS), mental health and the judicial system: Need to look at the strengths of a culture and promote healing through those attributes;  
• Health Delivery and Control (includes ethics, community development and governance): Issues of culturally-sensitive program;  
• Prevention and environmental health: drinking water, sanitation, housing, immunization programs, exercise, nutrition, education, and economic opportunity. | Aboriginal health. Health improvement (healthy development, healthy communities, healthy living, mental health promotion). Environmental health. |
- Greenhouse gas emissions (climate change);  
- Biodiversity loss;  
- Water shortage;  
- Decline in fisheries;  
- Deforestation;  
- Increasing poverty;  
- Financial instability (capital markets);  
- Digital divide;  
- Taxation (tax havens, transfer pricing);  
- Food (In)security;  
- Tourism and human migration;  
- Trade in health-damaging products (tobacco, arms, toxic waste);  
- Governance; war and conflict. | Health improvement (healthy communities, healthy living, food security).  
Communicable disease prevention and control.  
Environmental health. |
| --- | --- | --- | --- |
| A consulting firm gathered data from Statistics Canada that would provide a high-level overview of key funding and performance trends, including historical trends in health R&D for key sectors. | A consulting firm gathered data from Statistics Canada that would provide a high-level overview of key funding and performance trends, including historical trends in health R&D for key sectors. | Develop a vision for the health research in Canada;  
Identify the range of multiple policy impacts expected from health research;  
Align and integrate the funding mechanisms, structures and governance;  
Improve the level, length and overall arrangements for health research funding;  
Convey key policy messages to governments, policy-makers, research community, media and the public. | Building research capacity. |
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<td>Manitoba Health Research Council. (2006). <em>Manitoba Health research strategy: A provincial consensus executive summary 2006-2011</em>. Winnipeg, MB: Government of Manitoba.</td>
<td>Stakeholders from academia, health services, non-governmental organizations, industry and government came together at the <em>Creating our Future Summit</em> conference to develop a vision and identify strategic actions.</td>
<td>• Establish the MHRC as a coordinating body for a comprehensive and inclusive health research agenda that leads to improved health and increased economic opportunities for the Province of Manitoba. • Identify, develop, recruit and retain the best researchers and provide sustained support to facilitate their growth. • Facilitate networks, linkages and communication throughout the Manitoba health research enterprise and beyond. • Move research evidence to practice.</td>
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<td>Northern Ontario School of Medicine. (2005). <em>Creating a sustainable health research industry in northern Ontario</em>. Thunder Bay, ON: Lakehead University.</td>
<td>Information not available in document.</td>
<td>• Develop niche expertise in clinical research and the provision of health care services, such as rural and remote health care delivery; clinical research; clinical trials; First Nations health care; and environmental/industrial medicine. • Take a leadership role in facilitating critical local, regional, national, and international partnerships. • Take strong steps to publicly value, promote and implement a technology commercialization focus.</td>
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<tr>
<th>Source</th>
<th>Information Available</th>
<th>Priority Areas</th>
<th>Core Programs</th>
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<tr>
<td>The Ontario Tobacco Research Unit. (2006). <em>Research priorities identified by OTRU in support of Ontario’s tobacco control strategy.</em> Toronto, ON: Ontario Tobacco Research Unit.</td>
<td>The principal investigator team began a research plan to identify tobacco control questions and issues of priority that can be addressed through OTRU's intra and extramural research programs over the next 3-5 years. Feedback from the 2005 Investigator Survey also informed this process.</td>
<td>Smoke Free Ontario Campaign; Measuring the impact of interventions at the individual, community, and school level; Burden of illness; Tobacco pricing; Understanding the smoker; and Next generation of tobacco control strategies.</td>
<td>Health improvement core programs (healthy living). Environmental health core program (air quality).</td>
</tr>
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<td>Patrick, D. M., Remple, V. P., Kendall, P., &amp; Brunham, R. C. (2006). Needs, gaps, and opportunities for infectious disease research in British Columbia: A perspective from population and public health. <em>Canadian Journal of Public Health, 97</em>(suppl3), S24-S32.</td>
<td>The study was organized in three phases: an environmental scan to describe current research activity in BC; a consultation to identify needs, gaps and opportunities with those conducting research (key informants) and the end users of research results (stakeholders); and a prioritization of the research needs emerging from the consultation.</td>
<td>Efficacy and Cost Benefit Research; Disease Patterns Research; Emerging Infectious Disease Research; Immunity and Vaccine Research; Disease Specific Research; Health Promotion and Communications Research; Safe Food and Water Research; Knowledge Translation Research; Genomics Research.</td>
<td>Disease, Injury, and Disability Prevention Core Programs (communicable disease prevention and control; chronic disease prevention). Environmental Health.</td>
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<td>Author</td>
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<td>Approach</td>
<td>Research Areas</td>
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| The Public Health Research and Knowledge Translation Network. (2005)  | Background documents for public health research priorities in Atlantic Canada. Halifax: Atlantic Health Promotion Research Centre, Dalhousie University. | An inventory of public health research activities was developed from key informants, department of health web sites for the four Atlantic provinces, Atlantic Canadian university web sites, web sites from funding agencies, a search of the Canadian Journal of Public Health, and abstracts from the 2005 Atlantic Networks for Prevention Research forum. | • Population health assessment;  
• Health surveillance;  
• Health promotion Disease and injury prevention;  
• Health protection;  
• System infrastructure (organizational capacity, workforce issues, information and knowledge systems). | Health improvement.  
Disease and injury prevention.  
Environmental health.  
Building research capacity. |
| Saskatchewan Health. (2004) Health research strategy. Saskatoon, SK: Saskatchewan Health Research Foundation. | Saskatchewan Health Research Foundation conducted widespread consultations involving participants from the research and education communities, health delivery organizations, health charities, government, community groups, and the private sector. | • Specific population groups, including Aboriginal people and seniors;  
• Rural and remote health care delivery;  
• Health systems and policy research;  
• Determinants of health status, including early childhood issues and chronic disease prevention;  
• Public health, water safety, and food safety; and  
• Synchroton-based health research. | Building research capacity & knowledge transfer.  
Aboriginal health.  
Health improvement (healthy living, healthy communities, healthy development, food security). | Building research capacity. |
• Garner support for the full costs of research;  
• Strengthen research infrastructure;  
• Improve resources for faculty recruitment;  
• Increase number of graduate scholarships at competitive rates;  
• Provide ongoing support to enhance capacity to engage in knowledge transfer and commercialization;  
• Encourage, recognize, and reward research excellence. | Building research capacity. |  

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<th>Reference</th>
<th>Methodology/Process</th>
<th>Research Priorities</th>
<th>Core Functions Themes</th>
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| Bonder, G., Maclean, H., McGregor, B., Oldham, G., Randriamaro, A., & Sicchia, S. (2004). *Globalization and health: The gender dimension*. Atlanta, GA: National Institute of Health. | CIHR and the NIH sponsored an 18 month scoping study. Criteria were determined. Each member of the team used these criteria to prioritize the list of 19 issues. The collective scores were then used to identify 5 issues considered to be of high priority for further research, research training, and policy action. | • Mental health;  
• Violence (including human trafficking);  
• Occupational health and safety;  
• Infectious disease (including HIV/AIDS, TB, Malaria and other neglected communicable diseases); and  
• Addictions (alcohol, tobacco and illicit substances). | • Disease, injury, and disability prevention. |
| Center for Disease Control and Prevention. (2005). *Developing the CDC’s Public Health Research Agenda*. Retrieved March 15, 2007 from [http://www.apha.org/membergroups/newsletters/sectionnewsletters/comm/winter06/2360.htm](http://www.apha.org/membergroups/newsletters/sectionnewsletters/comm/winter06/2360.htm) | The process went public with a series of 4 meetings around the country to gather input for CDC’s research agenda from stakeholders, researchers, and representatives of partner organizations invited to attend along with the public-at-large. | The six different areas of research interests that reflect CDC’s new organizational structure are:  
• Infectious Diseases;  
• Health Promotion;  
• Environmental and Occupational Health and Injury Prevention;  
• Health Information and Services;  
• Global Health;  
• Community Preparedness and Response. | • Disease, injury, and disability prevention.  
• Health improvement core programs.  
• Health emergency management core programs. |
| Centers for Disease Control and Prevention and Agency for Toxic Substances and Disease Registry. (2006). *Advancing the nation’s health: A guide to public health research needs, 2006-2015*. Atlanta: U.S. Public Health Service U.S. | CDC has developed the Research Guide with extensive input from its staff and a wide range of partners and stakeholders, including external researchers, other federal agencies, state and local health departments, professional associations, universities, non-governmental organizations, and industry. Research priorities for prevention and control of infectious diseases include:  
• Emerging and Re-emerging Infectious Diseases;  
• Pandemic and Seasonal Influenza;  
• Infectious Disease Surveillance and Response;  
• Vaccines and Immunization Programs;  
• Behavioral, Social, and Economic Research in | | • Communicable disease prevention and control.  
• Health emergency management core programs. |
| Department of Health and Human Services. | organizations, business and worker organizations, community groups, American Indian and Alaska Native governments, tribal leaders and organizations, and the public-at-large. Each research theme candidate was evaluated and ranked on four standardized criteria. | Infectious Diseases;  
- Host-Agent Interactions;  
- Special Populations and Infectious Diseases. |
| Doll, L., & Binder, S. (2004). Injury prevention research at the Centers for Disease Control and Prevention. *American Journal of Public Health, 94*(4), 522-524. | Information not available in document. | The CDC Injury Research Agenda lays out NCIPC research priorities for the next several years, such as:  
- Be aware of changing opportunities and expectations related to accountability for the expenditure of federal funds;  
- The need for openness during the conduct and dissemination of research findings;  
- Increasing investment in addressing crosscutting issues;  
- Stimulate research on the effectiveness of modifying community level factors to reduce violent outcomes;  
- To be an active participant in the global community committed to injury prevention and control. |
| Lenaway, D., Halverson, P., Sotnikov, S., Tilson, H., Corso, L, & Millington, W. (2006). Public health systems research: Setting a national agenda. *American Journal of Public Health, 96*(3), 410-413. | The Center for Disease Control and Prevention was called upon to lead a collaborative consensus-based process to define public health research priorities. The process included a brainstorming session to solicit input from CDC researchers; engaging national partners to refine the draft of broad research themes; a national agenda setting meeting was conducted; and the research agenda was disseminated. | • Disease, injury, and disability prevention core programs.  
• Building research capacity. |
- Behavior/activity patterns and exposure to the pollutants in the microenvironments of older adults;  
- Changes in absorption, distribution, metabolism, and excretion with aging;  
- Alterations in reserve capacity that alter the body's ability to compensate for the effects of environmental exposures; and  
- Strategies for effective communication of risk and risk reduction methods to older individuals and communities. | Environmental health. |
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<th>Source</th>
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<td>System-wide performance management is the active use of data to measure and improve performance across all areas, including:</td>
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<td>• human resources development;</td>
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<td>• data and information systems;</td>
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<td>• consumer focus and satisfaction;</td>
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<td>• financial systems;</td>
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<td>• management practices;</td>
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<td>• public health capacity; and</td>
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<td>• Quality Management.</td>
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<td>• Public Health Information Systems.</td>
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<td>• Human Resource Development.</td>
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<td>• Program Planning &amp; Management Capabilities.</td>
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<td>• Research and Evaluation.</td>
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<td>Methodology/Process</td>
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<td>Angulo, A. et al (2006). <em>Priority Setting for Health Research: Toward a management process for low and middle income countries</em>. Geneva: Council on Health Research for Development.</td>
<td>A think tank consultation, initiated by COHRED, bringing together research managers from Brazil, South Africa, The Netherlands, The Philippines, the private sector, the Pan American Health Organization, the Global Forum for Health Research, and COHRED.</td>
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• Using the best available evidence, prioritize one strategy - delivery in primary-level institutions (health centers), backed up by access to referral-level facilities. | • Reproductive health.  
• Healthy development;  
• Healthy communities.                                                                                                                                  |
• Strategies for mental health and well being in the community;  
• Explore feasibility of coping skills education in school to decrease mental health issues in later life;  
• Determine mental health resilience and coping skills in daily life;  
• Increase improve adolescent self esteem & reduce harm;  
• Examine community programs to reduce family stress, marital breakdown and child abuse. | • Health improvement (healthy community; mental health promotion; healthy living).  
• Disease prevention (violence prevention, abuse, neglect).                                                                                                    |
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<td>This paper explores the possibility of integrating knowledge mapping into a conceptual framework that could serve as a tool for understanding the many complex processes, resources and people involved in a health system, and for identifying potential gaps within knowledge translation processes in order to address them.</td>
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<td>Not identified.</td>
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<td>Literature review and a questionnaire was developed to elicit firsthand and up-to-date information on national vulnerability assessment, adaptation strategies, policies and measures in EEA member countries.</td>
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<td>• Europe’s natural environment and associated services, its production systems are under pressure from environmental change and socioeconomic development.</td>
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<td>• Projected changes in climatic conditions are expected to have wide ranging impacts on natural and human systems in Europe.</td>
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<td>• South-eastern and the Mediterranean are likely to be Europe’s most vulnerable regions.</td>
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<td>Cross-sectional surveys in 8 former Soviet countries with representative national samples of the population 18 years or older.</td>
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<td>• Smoking rates in these countries remain high and are the highest in the world.</td>
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<td>• Smoking rates among women have increased from previous years and appear to reflect transnational tobacco company activity.</td>
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<td>• Environmental health (air quality).</td>
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<td>• Healthy living (chronic disease prevention).</td>
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<td>The Swedish National Institute of Public Health and the Swedish Council for Working Life and Social Research produced a government sponsored evaluation report on research in public health.</td>
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| **Jaffar, S., Govender, T., Garrib, A., Welz, T., Grosskurth, H., Smith, P. G., Whittle, H., and Bennish, M. L. (2005).** Antiretroviral treatment in resource-poor settings: public health research priorities. *Tropical Medicine and International Health, 10*(4), 295-299. | **Commentary.** | **A high priority is to identify care models for Africa that will increase coverage of HAART safely and effectively: key issues are**  
• Whether nursing staff or non-clinically qualified staff can take the major role in the treatment program and reduce the workload of physicians;  
• Whether treatment and monitoring can be delivered through peripheral health centers or through home visits and achieve better adherence and be more cost-effective than delivery at hospitals;  
• Which clinical algorithms used by nursing or non-clinically qualified staff will be effective for screening, diagnosing and managing treatment-related side-effects and medical problems being incurred. | **Communicable disease prevention and control.** |
| **Mock, C., Quansah, R., Krishnan, R., Arreola-Risa, C., & Rivara, F. (2004).** Strengthening the prevention and care of injuries worldwide. *The Lancet, 363*(9427), 2172-2179. | **Literature review.** | **• Strengthen the capacity of national institutions to do research on injury control;**  
• **Design and implement countermeasures that address injury risk factors and deficiencies in injury treatment;**  
• To assess the effectiveness of such countermeasures.  
• **Attention is needed in less-developed countries where injury rates are especially high in the most vulnerable sections of the community, including those of low socioeconomic status.**  
• **Injury control activities should, therefore, be undertaken in a context of attention to human rights and other broad social issues.** | **Disease, injury, and disability prevention core programs (unintentional injury prevention; prevention of disability).** |
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<th>Author(s)</th>
<th>Source</th>
<th>Comments</th>
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| National Public Health Partnership. (1998). *National Directions for Research and development in public health*. Melbourne, AU: Department of Human Services. | The paper has been reviewed by the NPHP Group, and several other public health experts have been invited to read it. Their comments have been incorporated in the present version, which is intended for wider distribution as a discussion paper. | • Research needed to understand the distribution and causes of public health problems;  
  • Research needed to determine the action to be taken and estimate the potential health gain;  
  • Research needed to improve implementation.  
  • Support research transfer;  
  • Set a national R&D agenda based on burden of disease and cost effectiveness;  
  • Research that identifies new interventions;  
  • Research needed to understand the distribution and causes of public health problems;  
  • Research needed to improve implementation.  

  • Building research capacity. |
  • Immunize more people against more diseases;  
  • Introduce a range of newly available vaccines and technologies;  
  • Provide a number of critical health interventions through immunization.  

  • Communicable disease prevention and control. |
| WHO Task Force on Research Priorities for Equity in Health, & the WHO Equity Team. (2005). Priorities for research to take forward the health equity policy agenda. *Bulletin of the World Health Organization*, 83, 948-953. | WHO’s recommendations regarding research priorities for health equity are based on an assessment of what information is required to gain an understanding of how to make substantial reductions in health inequities. | WHO recommend that highest priority be given to research in five general areas:  
- Global factors and processes that affect health equity and/or constrain what countries can do to address health inequities within their own borders;  
- Societal and political structures and relationships that differentially affect people’s chances of being healthy within a given society;  
- Interrelationships between factors at the individual level and within the social context that increase or decrease the likelihood of achieving and maintaining good health;  
- Characteristics of the health care system that influence health equity;  
- Effective policy interventions to reduce health inequity in the first four areas. | • Health improvement core programs. |
| --- | --- | --- | --- |
| WHO-IFPMA Round Table WHO/Industry Drug Development Working Group. (2001). *Working paper on priority infectious diseases requiring additional R&D*. Geneva: WHO. | To establish a working list of infectious diseases and review disease burden as a pointer to priorities. The criteria used for assessing disease impact included, in addition to disability adjusted life years (DALYs): mortality, societal costs, likelihood of treatment and forward trends. The next stage was to review existing interventions on the basis of availability and any limitations of medicines. | For many infectious diseases, such as HIV/AIDS and sexually transmitted diseases, there is currently a substantial level of R&D activity underway.  
- Major diseases which present scientifically tractable targets but have had insufficient product R&D are malaria and tuberculosis.  
- A second tier of diseases requiring additional drug R&D include: African trypanosomiasis, Chagas disease, leishmaniasis, lymphatic filariasis, onchocerciasis and schistosomiasis.  
- While the acute respiratory diseases, in particular those caused by the pneumococci, and the diarrheal diseases remain major causes of morbidity and mortality, the tools to prevent and or treat both groups are at hand. | • Disease, injury, and disability prevention core programs (communicable disease prevention and control). |