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Local evidence-based planning in Atlantic Canada

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Local evidence-based planning in Atlantic Canada



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Cathy Donovan

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Agatha Hopkins

Madonna MacDonald

Rhoda Manuel

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Public sector managers make daily choices to allocate limited resources. When their decisions and interactions with stakeholders are based increasingly on local evidence, evidence-based planning allows for three things to happen: decisions can be made more rapidly based on local realities, a demand-driven public health system replaces a supply-driven top-down approach and this strengthens the infrastructure for community involvement. This in turn leads to better value from public health investment, since resources can be focussed in areas where they are most needed.

In Canada, despite the availability of large volumes of high quality linkable and geo-indexed data, local and provincial public health managers often find themselves without the information they need to increase the impact of their programs. Hard evidence is needed about what works and what does not work, about how people perceive services and what needs to be done to improve the effectiveness and efficiency of services. It is widely recognised that, for all its merits, our existing health information system does not lend itself to rapid decision taking, it does not easily address issues of impact and the evidence it produces is predominantly service-based. The existing system allows for little community participation and it does not really have the flexibility to shift its focus to match the shifts in planning priorities.

Local evidence-based planning implies that local decision takers have increased local capacity to plan strategically, they have better access to existing data and they have the abilities to obtain and to use local evidence. Each region needs to pursue its own priorities and to resolve its own needs for evidence, but in a way that permits eventual aggregation to provincial and national level.

Adapting the CIET methods for local evidence-based planning in Atlantic Canada, the LoPHID project attempted to support a form of public health planning that is more interactive between policy makers, service providers and users. Over the period 1998-2000, a total of 19 research cycles were carried out on different priority health issues in five health regions in the Atlantic provinces: Eastern Region Nova Scotia, Northern Region Nova Scotia, East Prince Health Region (Prince Edward Island) and Eastern Region Newfoundland and Labrador. Each region pursued its own focus and timing of fact-finding, building on its own strengths. A population-weighted sample and a standards-referenced approach to questionnaire design and analysis facilitate eventual aggregation to provincial level.

LoPHID was intended to give planners and program managers increased access to quantitative and qualitative data from communities for local action, while building systematically the community voice into planning through several mechanisms:

CIET methods in evidence based planning

CIET methods adapt epidemiology, usually used to identify causes of disease, to a broad range of planning concerns.

These methods build public health surveillance capacity at the local level to prioritise public health issues, to obtain evidence on them and to precipitate informed decisions.

They combine quantitative and qualitative methods to enrich hard data with cultural and experiential insights.

They promote community voice through participation in fact-finding, analysis of evidence and the ensuing action.

1. representation of all social groups in indicators, not just those who have access to public services;
2. community participation in fact-finding;
3. dialogue and participation in the search for solutions based on evidence; and,
4. community-informed development of intervention strategies.

In the short term, the participating regions got local evidence to guide the strengthening of services in priority public health areas, as well as raising public awareness of these health issues. The process used to generate these data also involved communities and health workers, stakeholders and community members in the design of solutions to health problems in their communities. In the course of two years, regional and local public health staff were trained over four research cycles. By its conclusion in March 2000, capacities were in place to sustain local evidence-based planning without extensive external technical support.

As part of increasing skills and the capacity to sustain evidence-based planning in the health regions, an eight-week intensive residential course was funded by Health Canada and hosted by CIETcanada and the University of Ottawa. The course, given for the first time in Canada in 1999, has been offered since 1987 at CIET's training centre in Mexico. Over 600 public health managers and researchers from 58 countries have attended the CIET course in evidence-based planning to date.

The 1999 Colloquium on Evidence-based Planning was held during the last three days of the course (14 -16 July 1999). Practitioners and other experts were invited to discuss and share information related to their own experiences, current theoretical thinking and day-to-day challenges in creating a Canadian public health system where planning is based on timely, local evidence used for local as well as provincial and national health policy and programs.

“There are some questions we really haven't answered yet. These questions are: Is LoPHID effective in developing skills? Which elements are most effective? To what extent is the approach affordable and sustainable on a large scale. Which elements constitute the most effective approach? What are the priority needs? ... Which classes of staff should we be focusing our efforts on? What instructional methods are effective and cost effective? ... We will scrutinise what has been done in LoPHID...”

*Deborah Jordan
Associate Director
Office of National Health Surveillance
Health Canada*

This is an edited summary of panel discussions during the three-day Colloquium. Quotes and speeches have been kept as close as possible to the original material and, where possible, they have been transcribed word for word. Where a word for word transcription was not possible, the editor made every effort to summarise faithfully the essence and intention of the speakers.

*Neil Andersson
Ottawa, July 2000*

Scientific aspects of local evidence-based planning

Discussant: Anne Cockcroft

Panelists: Marie McCully Collier, Rhoda Manuel, Eileen Woodford and Khalid Omer

The art and science of evidence-based planning

Marie McCully Collier, supervisor of public health nursing in the region of Northern Nova Scotia, described the art and science of evidence-based planning as a rigorous and strategic process where quality control needs to be part of every step. She also stressed the confusion that a change in day-to-day practice brings at first:

"When we first started this process a year ago the word 'confuzzlement' came to my mind but over the last year the technical support in combination with the learning of the past eight weeks, we really are beginning to understand the full potential of the process and why we're doing what we are doing."

She explained that a regular evidence-based research cycle starts with framing a priority public health issue. An analysis of existing data is then carried out before design and pretest of data collection instruments for a cross-design field survey. Once data entry has been completed, a preliminary analysis identifies some first findings that are taken back to the communities and stakeholders for qualitative feedback. This happens promptly after the fact-finding has been completed. The feedback is used to enrich the data. A more thorough analysis phase follows and a communication strategy is designed to get the findings back to partners and participating communities for action.

With four research cycles planned under this initiative to build local public health infrastructure, two have been completed to date. A repeat cycle on a particular topic is usually carried out to measure impact of local action.

Some important aspects of the design process are:

- *clarifying the contrast*: what's the difference between a mother who breastfeeds her child and a mother who doesn't breastfeed her child? How can this difference be explained?
- *identifying actions, outcomes and conditioners*: what may be affecting the choice of that mother's breastfeeding choice, e.g. age, relationship status, how many children she has, what hospital she went to, etc.
- *creating a design plan*: what kind of a sample will be used and in what way, how will impact, coverage and cost be included in the fact-finding?
- *designing the questionnaire*: what will we ask? Can we use standardised questions to facilitate comparison and aggregation with other data?
- *doing a peer review*: working in partnerships with communities and with colleagues to get external input to the research topic/public health issue.
- *piloting instruments before use*: trying out the data collection instruments beforehand to estimate interviewee reactions to questions and to fine-tune them.

She also talked about the need to set clear objectives from the outset, and to use a measurement framework that reduces selection biases and information biases among respondents. While selecting the measurement framework, causal inference and effect modifiers should be kept in mind. It is also important to allow for a big enough sample to be able to draw conclusions. In the CIET methodology, large samples are usually selected. For example, in the second research cycle in Northern Nova Scotia, around 2,400 children and their parents were interviewed.

"From the very beginning, we have clear objectives to guide us through the research process, determine what we are going to do and how we are going to do it. We continually go back and look at these objectives."

Getting good data

Panelist Rhoda Manuel, research analyst in the Eastern Newfoundland health region talked about the importance of training interviewers and focus group facilitators to ensure quality during data collection and data entry.

During the first research cycle in the Eastern Newfoundland, looking at risk and resiliency among youth, systematic data collection was carried out through self-administered questionnaires with youth in grades seven to twelve. All field teams received the standard CIET training. In the household survey carried out for the second cycle on the topic of perinatal care, personal interviews were carried out with women who had a baby in the past three years. Interviewers were trained and divided up into teams, supervised by team leaders.

For both cycles, key informant interviews were carried out. Focus group discussions with youth and mothers added qualitative data to the preliminary findings. For the cycle focusing on youth risk, a specially trained youth mobiliser was brought in to get the youths' qualitative input on issues such as drug use, unprotected sex and other risk factors.

Training of focus group facilitators, interviewers and team leaders included: an introduction to the project and topic, a review of goals and objectives, overview of data collection methods, interviewing and facilitation techniques, review and practice with the questionnaire, pilot testing of the questionnaire, roles and responsibilities including codes of conduct, and confidentiality issues.

The CIET methods use double data entry as a standard measure to ensure quality control. This is particularly important when data is entered manually and personal interpretations of questionnaire answers may differ among data entry personnel.

Scanning was used as a method for data entry during the first cycle in Eastern Newfoundland as well as in several other regions. When questionnaires are scanned as a method for data entry, each questionnaire needs to be carefully cleaned to make sure that it is entered correctly in the scanning process.

Analysis for action

The need to set clear objectives of the research cycle and to plan in advance how these objectives fit into planning was underlined by Eileen Woodford, director for public health services in the Eastern health region, Nova Scotia. In planning for the analysis, actions, outcomes and conditioners need to be taken into account, as well as impact, coverage and costs of each intervention. These factors determine the design of the study from the very beginning.

"With impact we mean: what difference does a particular health intervention make? The coverage: who are the people who get the service? The cost: not only to the organisation but also to the individual and the community as a whole. The long-term cost of not providing a service also needs to be taken into account."

CIET's concept of mesoanalysis means linking data from the community level with data from the service level. This is of particular importance since it is on the service level where decision-taking happens. An example in Eastern Nova Scotia was the services from a public health nurse and a new mother's breastfeeding decision.

Some considerations in analysis for action are:

- *frequencies*: how often something happens.
- *interaction of variables*: e.g. is a woman who attends prenatal class more likely to breastfeed her child?
- *investment*: what is the most cost-effective option that can realistically be implemented?
- *gains*: what number of cases could be prevented or saved by a particular intervention?
- *individual risk*: client options for informed decision-making about his/her own health.

"We learned that it is really important in epidemiological analysis that just finding an association is not enough. The search for possible explanations must be systematic and exhaustive. Only when you exclude all other possible explanations for an association can you be sure that it is valid."

Methodological challenges: evidence-based planning in a developing country setting

Dr Khalid Omer (CIET in Pakistan) said CIET has completed three cycles in each of the four provinces in Pakistan since 1996. The topics were the gender gap in primary education, community response to sanitation risks and the bond of mother-child care and its effect on child malnutrition.

Although the basis of the CIET method applied in Pakistan is the same as in the Canadian context, the situation in Pakistan is very different. While Canada is blessed with highly accurate and recent population data, the most recent equivalent in Pakistan was from the Bureau of Statistics in the 1981 census. Scientific data is most often disregarded in planning in Pakistan where coordination gaps and political bottlenecks are common in the planning structures.

Special measures therefore had to put into place to:

- ensure adequate representation of all social groups in the evidence;
- ensure the quality of data collected; and,
- ensure a stakeholder communication process that facilitates evidence-based action.

“We have heard how this approach works in Pakistan, we know about the work of CIET in Mexico, and it works here in Canada. I think there is a great opportunity to look at this in an even larger context as a system strengthening approach that we can work together to explore both in Canada and internationally.”

Kate Dickson

International Affairs Directorate, Health Canada

The cluster sampling technique usually applied in the CIET methods, selects entire communities rather than individuals. This was useful to make up for the shortcomings in the outdated census data. This way, each household, whether included in the census or not, was visited within the selected area. The sample was also adjusted using additional recent information. Intense training of field workers and supervisors helped to ensure quality of the data collected.

"In Pakistan, it provided us with a good opportunity to initiate dialogue on evidence-based planning and the need for relevant data for policy and social program implementation. The two lessons learnt that required extra effort were to ensure the representativeness of the sample by all means possible and to ensure the quality of the data gathered."

Conclusion and discussion: Scientific aspects of evidence-based planning

Dr Anne Cockcroft, CIET Senior Research Fellow, concluded the panel with a discussion on the concept of quality in research for planning, and the importance of clearly defined objectives.

"I think the issue of quality can be discussed within two different contexts. First, in making sure that we get the facts right so that any information used and disseminated is as close as possible to the real truth. That is a moral obligation. Public health practitioners have a responsibility to ensure the quality of their practice and to do something that is going to help them serve the health of the public. As Prof Miettinen said earlier, it's unethical to put an intervention into a community and then evaluate it afterwards to see how much harm or good was done. We need to know that the intervention has the desired effect before it is started, and I think our regional examples from this morning clearly demonstrate this desire to get the facts right before starting an intervention. That's why we need reliable data and quality instruments developed through a detailed design process.

The second context for quality has to do with setting clearly defined objectives. The reason for carrying out the research should *not* be just to find out something interesting about a group of people, or in order to be published in a really good journal. The studies we've heard about from the regions this morning are of such quality that they *could* be published in a good journal, but that was not the reason for carrying them out. The reason for carrying them out and the reason for getting things right and getting data of high quality is that these findings are going to matter in the planning process afterwards. If research is carried out wrongly, for the wrong reason or in a biased way, wrong or biased answers are obtained. The ethical obligation is to serve the community, not ourselves."

Data integration, aggregation and comparisons

Discussant: Ora Kendall

Panelists: Agatha Hopkins, Hope Beanlands, Cathy Donovan

Comparability across regions

Agatha Hopkins, a nurse manager at public health services, Eastern Nova Scotia, showed how local data from several regions can be compared and aggregated to guide local and provincial planning. She also stressed that a national network for health information needs to be built from the bottom up, since the level of detail generated through local data gathering is needed for regional programming.

Health impact from breastfeeding was identified as a priority issue in all participating regions in Atlantic Canada. Standard questions were used wherever applicable to facilitate comparison and aggregation of data, for example on breastfeeding initiation and cessation.

The number of mothers who initiated breastfeeding varied between regions: 49% in Eastern Nova Scotia, 65% in Northern Nova Scotia, 60% in Labrador, 47% in Eastern Newfoundland. Asked how many women stopped breastfeeding before the recommended four months, 52% of those who initiated breastfeeding in Eastern Nova Scotia did so, 51% in Northern Nova Scotia, 33% in Labrador and 44% in Eastern Newfoundland.

Graphs showing the ideal breastfeeding profile accentuated these differences in breastfeeding patterns between regions as compared with the WHO ideal model. The graphs were used in the feedback phase to create discussion among public health staff and stakeholders around the current local situation, what the ideal picture should look like and what could be done locally to make that happen. Geographic Information System (GIS) maps were also used to stimulate discussion and talk about population trends in the different parts of the province and Atlantic Canada.

Ms Hopkins pointed out that “top down” data, aggregated federally or provincially, do not have the level of detail required for comparisons within the service area, local decision-making or inter-regional comparison due to the small sample size from each region in the national or provincial sample. Consequently, surveys designed to give just a provincial or national picture often fail to provide the regions with a detailed baseline to measure progress in a timely manner.

"These methods for evidence-based planning are very useful for a close look at where we are, where we are going and what we need to do right now in public health programming in the region. Using standard questions, the data can then be aggregated to provincial and even national level. But the system needs to be built from the local level upwards.

Timing is another key issue. The last Statistics Canada regional survey took four years from data collection until the final report, compared to some of our recent experiences when we had the findings within six months, using the CIET methods.

Everybody talks about data liberation these days and that is a good thing. We also want it liberated and without cost. But we also want to liberate all the data that we manually collect in our practice on a day-to-day basis. Right now that information is stored away in stacks. We want it liberated in a way that we can use it and together with CIET we are looking at ways to do that now. We're getting there. Whether the LoPHID initiative lives or dies, I don't think you can stop us."

Data integration: Newfoundland

In Newfoundland, a provincial referral and management system has been created for data integration. This was presented by Dr Cathy Donovan, regional Medical Officer of Health for Eastern Newfoundland.

The Newfoundland/Labrador Centre of Health Information was created a couple of years ago to help aggregate and integrate health data at the provincial level. The purpose of the centre is to increase access to already existing data that have previously been inaccessible to planners. This includes putting together basic regional profiles, using census data and morbidity/mortality data for comparison purposes.

A couple of databases have also been developed for provincial surveillance of communicable disease. Regions input their data continuously with provincial roll-up on a weekly basis to allow for timely response to outbreak of disease.

"Timeliness and cost were two big issues in relation to health data in our region. We used to pay Statistics Canada for data that never came back to the region after it was collected. The information was available to us four or five years later, against pay and were all that we had for accurate planning."

The client and referral management system (CRMS) evolved out of these efforts to integrate data and develop a framework for health information that can be accessed and employed widely. It is a system that is regionally based, dependent on input from individual practitioners. The expectation is that eventually every public health professional, social work practitioner, addictions counselor or environmental health officer will be inputting data on their clients; whether it is an individual, family, group or community. In this database will be included: child health clinics, addiction information, environmental health issues and community profiles. The database is foreseen to help with workload management, as well as workload assessment. To date, about 20,000 clients have been added into the system. Access is available from one site in every region. There are 500 users that have been trained on the system in Newfoundland.

Challenges include the budget for hardware, software and some privacy and confidentiality issues. Of particular concern regarding confidentiality are the areas of mental health and addictions. There are also some challenges with the clients who fall outside of standard record keeping, vulnerable groups and communities.

This information system is being developed separately from the capacity building and fact-finding taking place under the LoPHID initiative. However, since the information system is designed to be regional with provincial roll-up and the research cycles for evidence-based planning provide regional data, there is a comfortable fit between these two initiatives, for use and for interpretation of health information.

Provincial and national roll-out: a new vision for Public Health

Hope Beanlands, coordinator of public health promotion at the Nova Scotia Provincial Department of Health, discussed the wider applicability of local evidence-based planning and the need for a new vision for public health in order to spread these methods across the country.

"It has been an incredible experience for me to work on this in collaboration with our regions and CIET. I see it as a new direction in public health and something that can cause a paradigm shift to the way we are operating. People want to see local data, their own information and they want to be able to base their decisions on what is real to them. I think that this whole process has really challenged us to think of a new vision for modern public health practice."



Hope Beanlands, Nova Scotia Dept of Health, receives a copy of the authorisation for CIET to run its MSc in epidemiology in Canada. Dr Cruz Ramirez is Rector at Universidad Autónoma de Guerrero, Mexico, where CIET's main training institute is located. Eleven Canadians are enrolled in the courses, providing MSc and PhD qualifications in evidence-based planning.

This new vision for public health should, according to Ms Beanlands, be built on:

- determinants of health: to facilitate a clear understanding of population health and effective health promotion
- an inclusive approach: to allow people who normally do not have a voice at the table to be heard, instead of just responding to the needs of a vocal minority
- principles of epidemiology: to generate new, correct information that allows for detailed analysis and segmentation of the most vulnerable population groups who normally fall between the cracks
- knowledge and evidence-based decision-making: to feed information and informed decisions up through the system, starting from the local level
- both quantitative and qualitative information: to involve communities in the interpretation and discussions around preliminary findings to get a fuller picture
- policies based on practical information and scientific knowledge: to allow for practitioners to present the facts
- the needs of the community: no intervention is justified just because decision-makers may think so; what does the community think?
- capacity-building: to allow for people to use their own information to make their own decisions. Tools and skills must not stay centralised at provincial or federal level but should be decentralised to local/regional decision-takers.

Ms Beanlands said one of the main challenges for this new vision will be a shift from a "charity" model to a "capacity" model. By this, she meant moving away from public health practice where the predominant attitude is "we know what's best, we'll fix you up", to one that allows for capacity-building for informed decision-making where people take control over their own lives. In a capacity model for public health practice, local planners are active players in policy formulation, using local evidence. They also share this evidence with their clients in a transparent way.

"There is going to be a major power shift in access to information and the capacity to use it. When our communities have the information they need, they will not be prepared to sit back and accept other people's solutions to their problems."

She acknowledged that managing this "power shift" will, at first, generate a lot of scepticism and arguments against the process of local evidence-based planning and a new vision for public health practice.

"Some will say it is too costly, but this should be kept in proportion to the cost of surveys that only have limited local use. Others will ask if it can be sustained. This is easy to answer for us, because we are the people who will sustain it with our skills. There will be many different agendas involved and a fair amount of resistance from within the health system is to be expected. In our province there is still a credibility issue around speaking up about health without having MD or PhD attached to your name. But the CIET methods give us the scientific rigour that we need to defend it.

Some people wondered why I was so insistent in having such a big group from Nova Scotia going through this training. The answer is that I believe the only way we can make any change in practice is to have the critical mass to do it and to transfer skills further to other staff.

One important issue for the future will be to eliminate similarities and differences. There are currently quite a few people in Nova Scotia, from regions that did not participate in LoPHID, who believe that they are already doing evidence-based planning and need no further training. Yes, they use as much information as they can for local planning, but the empowerment process is not the same and we need to package our experiences in a way that explains the different components and their advantages.

I have been in public health for many years and after all the different approaches and techniques I've seen, I believe the CIET process is unique in the way it packages skills and knowledge, concepts and theory in a way that is so meaningful to public health.

If, as Professor Miettinen said in his keynote address earlier, the introduction of national health insurance was the first big development in public health in the post World War II era – then this is the second."

Conclusion and discussion: Data integration, aggregation and comparisons

Ora Kendall, chief of the data development division, Health Canada, summarised and commented on the panel presentations.

"One of the things that interested me in this project and the CIET methodology was that it was rooted in public health practice and was very action oriented. I did my public health education in the United States and particularly chose a school that claimed to be less theoretical and more rooted in public health practice. I loved epidemiology but always used to think it was too academic and far away from practice.

When CIET came into the picture I started to regain some of that excitement about using scientific methods to improve health and improve health practice. But at the same time I felt some queasiness about the rapidity and readiness to come up with findings and conclusions in a very short time span. I see a continuum between universities, on the one hand, that sit on data for ever and let years pass by before releasing evidence and I see the CIET methodology at the other end of this continuum as being very rapid in drawing conclusions.

What I constantly try to do in my work is to bring practice back to the research world. There are a lot of initiatives right now in Health Canada and elsewhere to provide data and make data accessible. I think that is very important. But I also think we tend to lose our focus and I would like to bring that focus back to why we are collecting data, what we are trying to answer with it, what is the health region trying to answer versus the province, versus the government. I worked with big surveys and survey inventories in Health Canada and I found this great collection of surveys and questions and results, but I don't really know what happened to those results.

We need a local public health infrastructure in the public health network and I would like to commend our earlier speaker Greg Sherman for coming up with some of the concepts that have now been made reality.

I think all of the speakers have shown in different ways that there is a challenge to all of us to find the appropriate data and make it accessible – whether it is for decisions regarding resource allocation, outbreak investigation or public health interventions."

Downloading for decisions and action

Discussants: Andrea Baumann, Cory Harris

Panelists: Leila Gillis, Eileen Woodford, Marie McCully Collier, Charlotte Carlsson

Downloading to stakeholders and staff

Eileen Woodford, director of public health services, Eastern Nova Scotia, used experiences from the second research cycle for evidence-based planning in this region to illustrate downloading to stakeholders and staff.

The main stakeholder group was the around 7000 students in grades four to six in the region who participated in the survey. The cycle looked at 9-12 year-olds' decision-taking in relation to risk factors such as drugs, alcohol, smoking and violence. Other stakeholders were their parents, teachers and the school boards. Parents and teachers were also interviewed and their answers were linked to those of the students.

Pre-design communication took place in the form of informal networking before the cycle started. This was a critical step since it opened up channels for communication throughout the process as well as for downloading of results afterwards. A lesson learned was that this networking should start well in advance so that relations are well established before the six month research cycle starts.

For this cycle, everything depended on good working relations with the school boards. Their permission was required to carry out the survey among students and to get the results back to them for discussion afterwards. To get them on board both formal, written communication and informal conversations took place explaining the process and goals of the cycle.

As for public health staff, a planning committee was established that was heavily involved in all aspects of design and data collection. Although it was hard to get people to add another task to their already heavy workload at first, the planning committee was encouraged to be involved in each step of the process to integrate the study with all aspects of their own daily practice.

All staff attended an information-sharing session where the planning committee presented the findings. Results were then packaged to facilitate communication and easy interpretation among the different stakeholder groups: internal staff, students, parents, teachers, school boards, the regional management team, community health boards, the media and the general public.

For effective sharing with the 9-12 year old students, the planning committee developed an interactive presentation. A series of activities were also organised and posted on bulletin boards in the schools. Bookmarks and doorknob hangers were also used to get the key messages across.

Moving evidence into action

As an important part of the CIET process, preliminary findings are always brought back to the community to enrich quantitative data with qualitative input and local solutions.

Marie McCully Collier, supervisor of public health nursing, Northern Nova Scotia said that for the first research cycle, focussing on perinatal care and caring, mothers were invited to come to focus groups during the household survey. However, since many had difficulties coming, other natural gatherings of mothers were used to accommodate them.



In Northern Nova Scotia, an interactive web site brought findings back to school children, encouraging them to contribute with comments and suggestions.

For the second cycle on “Children speaking up: eating, physical activity and dental care”, 27 schools were selected and around 2,400 children were interviewed in the classroom. They also brought a questionnaire home for their parents to fill out. Overall response rate was around 90 per cent. Some 20 focus groups were gathered to discuss preliminary findings. Since all the schools in the region had access to the Internet, a special website was created to take findings back to the children and encourage them to come up with suggestions and solutions.

To inform health practitioners in the region about the findings, regional meetings were held with the regional health board and public health staff. Doctors and key administrators were also invited.

Media releases and general public communications were created to coincide with the World Breastfeeding Week and the national non-smoking week. This resulted in wide regional, provincial and national media coverage in radio, television and printed press. Findings were also circulated to a wider audience through newsletters and pamphlets.

Evidence-based community mobilisation

Leila Gillis, community health nurse at the Health Commission, Sheshatshiu Innu Band Council, gave an example of how the research process was used as a communications tool to reach children and their parents with messages around dental health. Media skills helped to distribute the findings over a large geographic area.

"As a region, Labrador identified communication as a priority. We utilised our fine-tuned media skills to access radio, newspapers and local television in a systematic way and built relations with journalists and editors. It turned out to be a very effective way to get the evidence out to a very large geographic area which is linked most strongly by these forms of communication. By size, Labrador is as big as all the rest of Atlantic Canada combined, with very sparsely populated and isolated communities."

Making news: the role of the media

Communicating evidence through the media and the role of the media in making the voice of local communities heard in provincial/national debates was discussed by Charlotte Carlsson, information officer for CIET.

Referring to keynote speaker Nancy Edward's distinction between "old" versus "new" thinking in dissemination, she said the media – traditionally underused as a communication channel by public health staff – fit well with "new" dissemination approaches. It is more segmented, interactive and adjusted to the information needs of different audiences.

However, for the correct information to come across in the media in a clear way, health professionals need to collaborate with journalists/broadcasters to present the information in a way that is accessible and newsworthy.

"In the 'old thinking' it is generally held that as long as a technical report is produced and the report is interesting enough, the media will be pick it up and it will become a story. But unless the topic of the report is highly controversial, it doesn't happen that way. Even when a media plan is part of the communications strategy, there is an 'old' and a 'new' way to go about it.

In the old approach, it may mean running a few ads with text that has been controlled and screened beforehand, saying what is good and bad for people. Possibly a press conference is held where a written statement is read to the press.

The new approach that we have applied in this process, on the other hand, is about creating ongoing partnerships with the media. We try to communicate evidence in a way that let people make their own decisions about what is best for their health. At the same time, we try to make newsworthy material available to the press by providing hard facts and quotes, or by linking local data to current affairs and recent debates, putting the community voice into the larger picture. Working with journalists and broadcasters on an ongoing basis, we can explore how we can be useful to them and vice versa."

She said finding a news angle in the data and pitching it to the press is part of making news. There are several reasons why this is important for the evidence-based planner. Public health is about people and people and what affects their lives make news. However, more than just telling individual stories about people, the evidence-based planner also has the figures and the facts to back the stories up. These are powerful tools in shaping public opinion and influencing decision-taking.

Evidence, when publicised widely through the media, puts pressure on decision-makers, informs people and – once it has made the headlines – becomes a public reference. This adds transparency to the process of creating policy and accountability of public health staff and decision-makers to address the health needs that arise from research findings.



Children's self-esteem affects diet, study finds

ANDRÉ PICARD
Public Health Reporter

Children's dental health was the topic of the second cycle to build skills for evidence-based planning in Labrador. The study covered all the school-going children between ages five and nine in the participating communities in the region and was carried out in collaboration with the school boards and Innu Band councils. Since all children and their parents were contacted about dental health, the research process served in itself as an important communications channel.



A drawing contest got children involved in the research from the very beginning in Labrador.

The research cycle was launched with a drawing contest on the topic of “caring for your teeth”. Results from the drawing contest were covered by local media. Prize-winning drawings were also used in an educational pamphlet given to all children during the data collection phase. Together with the pamphlet, children were asked to bring home a questionnaire on dental hygiene practice and dental services for their parents to fill out. Answers from children and their parents could then be linked in the analysis.

Each classroom survey started with an educational session given by a public health nurse. This was followed by a picture questionnaire filled out by each child and an assessment of each child's teeth by trained field-workers. The children were encouraged to look in their own mouths and colour in any dark spots or fillings they could see on a drawing in their questionnaire. If many dark spots or fillings were recorded, parents were informed through a written recommendation to take their child to a dental hygienist.

Once the analysis of children's and parents' questionnaires was done, another pamphlet with the key findings was sent home to parents. It was distributed together with the child's report card to make sure parents saw and read it. Results were also shared with the partner organisations, dental hygienists and other stakeholders in the region. Mapping of the findings using GIS facilitated discussions around the results among public health staff and planners.

Ms Gillis said the community mobilisation started with raised awareness among children and their parents during the design and data collection phase. Parents were then encouraged to address the problem right away. Finally, once the analysis and linking of child and parent questionnaires had been completed, findings were disseminated widely to planners and the general public using GIS maps, information materials and the media.

"An innovative aspect was that the kids themselves were brought in as major mobilising actors and communication channels in research about their own teeth. Just by involving them in the survey and actually having them check their own teeth, they started to talk and think about dental care in a different way. It shows the research in itself is the message.

In the Innu community Sheshatshiu where I work, we are at a stage now where we can help transfer ownership of programs to the community. To get that local ownership among Band Council members, the GIS maps really helped to visualise the data and create interesting discussion around the table."

The CIET method also makes it possible to provide evidence on a timely basis to the mass media. The media will not wait for six to eight years to write the story once a particular public health problem has been identified. With a research cycle of six months – with experiential quotes and the hard facts at hand – media coverage can be more informed while the debate is still ongoing. In this way, the media can become a source of information for debate, going beyond simply reflecting the state of debate.

From the service provider's point of view, media coverage is a relatively quick and effective way to feed results back to the communities, compared to the more costly direct communications through dissemination materials and pamphlets.

From the community point of view, people who participated in the survey see that their opinions count by hearing about findings on the radio or television or seeing an article about it in the papers. This is in itself a way to empower the community and encourage them to take control of the local decision-taking process. As they see that their thoughts and opinions count, they are encouraged to participate in other research cycles and to put in the extra effort to come up with local solutions. A dialogue is started between service providers and clients on the one hand. On the other hand, it allows for community views to feed into the regional, provincial and national debates.

Media also offer a third party endorsement of the findings that adds credibility to the story. Right or wrong, the popular image of “it was on the news, so it must be true,” still exists. Messages via the media also reach a different population group than direct communications such as pamphlets, talks or presentations do.

"Those who actively seek help or would consciously pick up a health pamphlet differ quite substantially as a population group from those who do not seek health information actively or avoid the public health services, but passively listen to the radio. For example, someone who would never pick up an educational pamphlet at the public health office may listen to the radio when the same health issue is being discussed. In this way, communicating via the media could be a way of reaching more vulnerable or high-risk groups that traditionally fall between the cracks."

She said the acknowledged need to move away from the old concept of “telling people what to do because we know best,” to communicating different health options and their effects, making media critical partners in the evidence-based cycle. Through CIET analysis it is possible to produce detailed evidence about risk, resilience factors and costs without necessarily telling people what they should choose. It is up to the reader or listener to make that decision.

Media skills have been part of capacity-building for evidence-based planning since the beginning of the LoPHID initiative, both on-site in the regions and during the eight week course. The training covered how to build long-term partnerships with the media, how to make news by understanding the world of the media, and how to influence the message through effective interview techniques and through writing for the media. Finally it dealt with the crossing of disciplines that is necessary for public health staff to act in a more “media smart” way.

Conclusion and discussion: downloading for decisions and action

Andrea Baumann, Associate Dean of Health Sciences (Nursing), McMaster University:

"It's been a fascinating morning, and I feel privileged to really get to know this process that has started to take root in the Atlantic Provinces and to hear about the field experiences as well as the methods. For me as a researcher, this morning has illustrated how critical it is that we make the effort to communicate our findings, to get the skills and make the necessary partnerships to do so.

From listening to the presentations today, there is no doubt that the way information is framed and shaped makes all the difference. It is interesting to see that these methods, like the CIET mapping presented by Neil Andersson this morning, is applicable here in Canada as well as internationally. We've also heard a lot of thoughts on what is the best way to make the message come alive, to make it user-friendly and appropriate for people who need the information. The advances in communication technology makes this a very exciting field. But more importantly, I found some very interesting ideas behind dissemination this morning, beyond just the use of expensive technology. The main opportunity from transparent dissemination of findings, as I see it, is more accountability.

I also agree that we have to become a lot more sophisticated in our partnerships with the press. I've come to the conclusion myself, that even if the story does not always get the right spin, some press is better than none. But I agree that the better we can form those partnerships, the more likely we are to help transmit accurate knowledge.

So I think we started this dissemination discussion with one sort of mapping and ended it with another of how we can share evidence and get information across, which makes it a nice circular way of looking at this communication piece.

I think the CIET approach to bridging research to practice and applying a multi-disciplinary and multi-cultural approach to getting the findings out to different stakeholders fits with what Nancy Edward addressed this morning in terms of dissemination challenges and the way this kind of research for action will be carried out in the future.

Another aspect related to communication is that you course-participants now have – between yourselves – a fantastic communication network set up that will probably last for life, having just spent eight intensive weeks together learning these methods. I am excited for you. Use it."

Cory Harris of CIET Uganda, stressed the importance of communicating evidence in a way that is culturally acceptable and appropriate for a particular group of people. In Uganda, the use of GIS maps was very successful since people could easily see how the information related to their own situation. Ms Harris, who specialises in group feedback and interaction around findings, emphasised the role of story-telling, people's stories and anecdotes in getting evidence across. This technique is used extensively in Uganda which has a rich story-telling culture.

"You can have as much relevant research you like, but if you can't get it back and make it useful to people, using their own words and cultural contexts, it ultimately has very little effect on their lives. During group interactions, a big part for me as a coordinator is to listen to their stories, connect it to the research and make evidence part of the story-telling."

She said in recent research on change management, it is widely acknowledged that if a change is to take place, the whole system needs to change. There are three basic requirements for this: dissatisfaction with status quo, some clear first steps to initiate change and a clear vision for the future that is greater than the existing vision. Without these three ingredients, change is unlikely to take place on an individual basis or in a system or organisation.

In Uganda, a CIET national integrity survey, carried out in collaboration with the Inspector General of the government, looked at petty corruption in the delivery of public services and what could be done about it. The health sector was found to be one of the most corrupt services. Workshops around these findings have been carried out in each district of the country and were attended by government officials, district officials, representatives from civil society and non-governmental organisations. Findings were also disseminated via the media to the public.

"The dissemination phase has been going on for a year now and the response from government officials and the public has been tremendous. An action plan was created for each district and has been publicised via the press. Given that we have sufficient funding, we will measure progress in a year's time to see what has changed. That way, decision-makers and politicians are held accountable for what they say they will do.

The three ingredients for change are there: people are fed up with having to pay for public services that are supposed to be free, there are some first steps outlined for which politicians will be held accountable and there is a clear vision for a society where corruption is eliminated or reduced. The evidence is needed to make it happen."

"I find those three steps for change - dissatisfaction with *status quo*, a clear vision, and some first steps - fascinating. Because for me, there is no doubt that those first steps is local evidence-based planning in the way we have done it under the LoPHID initiative. My concern is how to get the nay-sayers onboard so we can spread the vision to the whole system. I'm not saying that what we do is perfect, but we have some real successes behind us. We can't let this become invisible."

Hope Beanlands
Coordinator, Public Health Promotion
Nova Scotia Department of Health

What has changed? Examples of evidence-based planning

Discussants: Marianne Lamb, Eleanor Ross

Panelists: Andrea White, Madonna MacDonald, Shirley Campbell, Judy O'Keefe

Building partnerships

Andrea White, Health Labrador Corporation, said that partnerships were formed at the outset of each cycle while defining the topic and reviewing existing data.

In Labrador, it started with contacting the region's different health care organisations to discuss priority health problems. Before arriving at the joint planning meeting, each participant talked it through with their field staff. Key informants from the private sector and consultants were also contacted for their input. For the first research cycle on breastfeeding, this included a lactation consultant and for the second on dental hygiene, private dentists were involved.

For the third research cycle, a poll among all health care providers in the region was carried out to decide on a research topic. This encouraged partnerships to form from the very outset and encouraged involvement and ownership of the process among staff. Partnerships external to the region were also built during the cycles, especially links with universities to access background research.

During the fact-finding phase, field workers were drawn into the process to become, not just temporary staff, but real partners. Since there was not a large work force available for this kind of work in the region, this was a critical aspect of all interaction with field staff. Family resource centres and the Friendship Centres also provided a lot of cultural insight and became natural links to the communities. The Friendship Centres were also helpful in dealing properly with the cultural values of and feedback to, Innu and Inuit populations.

Partnerships with schools, the private sector and the media were strengthened and expanded. For the dental survey, the school-based assessments and children's questionnaires were carried out in combination with the existing educational dental hygiene program. This facilitated buy-in from schools and school boards into the process. In parallel, a private dentist put in time and resources to assist with technical support, providing free toys for children etc.

Media was another instrumental partner in the process. All staff involved in the evidence-based planning cycle went through on-site media training, using examples from the on-going cycle. This resulted in radio interviews and various types of press coverage. A new approach was to write some non-technical articles for submission to the smaller papers who do not have a lot of staff writers. This was appreciated by many of the smaller, local publications.

For planning of the research and follow-up actions, partners included the Regional Health Board, the Innu Health Commission, clinicians, dentists, physicians and clients. A special effort was made to get the Band Councils on board.

Finally, community members who participated through questionnaires and focus group discussions were the most valuable partners of all. As these methods take root in the region, clients are expected to play a more important role also in planning and design of the research cycles.

What has changed?

Judy O'Keefe, Health and Community Services, Eastern Newfoundland based her observations on experiences from the first research cycle in Eastern Newfoundland, focusing on youth risk and resiliency. She said there were three main changes taking place in planning in the region:

- a move towards an interdisciplinary approach within restructured health and community services
- a joint planning committee with representation from major service providers
- youth involvement as stakeholders in the planning process.

"Before, we all did our own thing and we thought it worked wonderfully. But because we were so disjointed we really didn't get much bang for the buck. Now, as a result of the LoPHID initiative, we have actually established a joint planning committee with representation from all major service providers. I think this is certainly going a step further than we've ever been before. In the future we hope to add other players, for example the school boards, to this committee.

Another important change is that we are now involving youth as stakeholders in the planning process. We ask them how they want their services and how we can work with them. We let them set the tone. That means they are not merely passive recipients any more, but active players."

As for changes in *practice*, Ms O'Keefe said evidence is being linked with other regional and provincial initiatives to pull all information together in a more systematic way.

Another change is to refocus and reorganise the services to put more emphasis on prevention and mental health promotion.

"Waiting lists to get into mental health or addiction services have been so long that we were only able to deal with the worst cases. Now we hope we can do more in the area of mental health promotion and prevention using the results from the research cycle."

Delivery methods are also being reoriented to better meet the needs of the young people.

"In the past, we tried to provide an adult approach to youth. But most 15 year-olds don't really want to come in and sit across the table from me and discuss their lives like grown-ups. So this process initiated us into seeing youth in the environment where they want to be seen and provide the types of services they want by giving them a say in planning. We will start more peer-to-peer programs. Peer drug counselling in schools which has worked really well. This whole effort to empower youth in decision-taking is a major change."

She said more joint learning opportunities are now being identified where social workers, nurses and psychologists get a chance to sit down and discuss services, exchange views on service delivery and learn from each other. This has strengthened the coordination of interdisciplinary teams.

One of the biggest changes in the region since they introduced evidence-based planning can be found in the area of evaluation and impact assessment.

"For a long time we provided services without knowing how much effect we had. We had some numbers. I could have told you how many youths we treated last year in mental health and addiction, but I could not have told you whether it made any difference whatsoever or whether they were delivered to the youth who most needed them. Now, through this evidence-based planning cycle we have been able to establish some baselines that were never there before.

Through the regular youth drug surveys that we had as planning tools before, we knew what the problems were, we knew how many kids were smoking, etc., but we didn't have any numbers in relation to risk or resilience factors that we could use programmatically to have an impact on the behaviour.

The most fascinating part of this process is that we can focus on health outcomes and measure risk factors instead of just counting how many patients are seen in a day and how many were here for what problem."

She said that by getting the data and sharing them openly with stakeholders including the youth themselves, there is also a demonstration of accountability to the public inherent to this process.

"For the first time, we can show the public that we are not just out there, but that we are committed to what we do and that what we do actually makes a difference. This is particularly important in mental health, addiction services and social services where it is easy to resign to the problems as being 'too big' or otherwise 'never ending!'"

She concluded that evidence-based practice must now be solidified and built into all aspects of the operations so that it does not just remain as a successful "experiment" in the region, but that it becomes the new *modus operandi* in public health.

Spurring local action through evidence

Madonna MacDonald, a nurse manager of public health services in Eastern Nova Scotia used the example of breastfeeding to show how local action can be spurred by local evidence.

Extensive knowledge is available to guide health professionals on the issue of breastfeeding and the body of knowledge continues to grow. Two joint statements have also been released on the subject by UNICEF/WHO, denouncing free distribution of infant formula in hospitals and recommending

exclusive breastfeeding during the first four months of life. These statements have been accepted and adopted by most professionals and governments.

So why has it not moved to policy and action at the local level?

In the research cycle focusing on perinatal care in Eastern Nova Scotia, it was found that commercial formula promotion had a big influence on a mother's breastfeeding choice. Women who were more likely to breastfeed were more frequently targeted with formula promotion.

- A woman who attended prenatal education was 75% more likely to receive free formula samples from a private company compared with a woman who did not attend prenatal classes.
- A woman who did not receive formula samples was 50% more likely to breastfeed.

Moreover, it was found that local hospitals actually make legal contracts with infant formula companies to make a particular brand available to new mothers. According to Ms MacDonald, all these issues were somehow known by public health staff before, but they didn't have any hard figures to initiate change.

Since they got local evidence on the subject, they could track from where mothers got promotional materials, when they received it and how it influenced their breastfeeding decision. This information was matched with answers from hospital facility managers on what was common practice at hospitals and staff responsibilities. This, in turn, led to more focussed policy discussions.

In other words, evidence now exists that is locally relevant and can influence local breastfeeding programs and policies. The initiative has also opened up for joint education and planning sessions between public health staff, hospital staff and other service providers who deal with perinatal issues.

Evidence-based changes in Northern Nova Scotia

Shirley Campbell, a health educator at the Nova Scotia Department of Health, drew attention to some findings and policy changes in the areas of perinatal care and children's healthy decision-taking following the first two research cycles in Northern Nova Scotia.

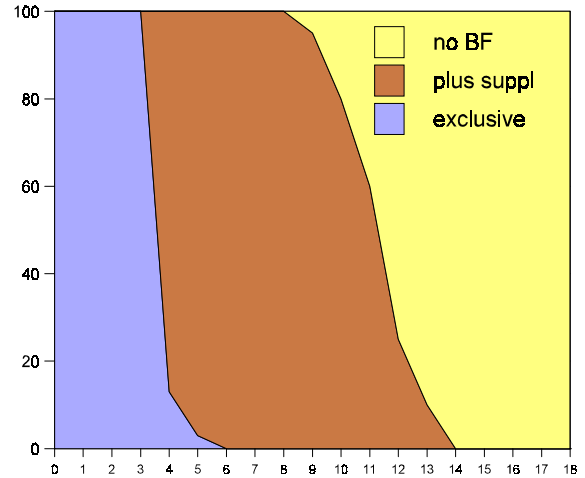
To get evidence for planning in the area of perinatal support services, a household survey was carried out with over 500 women who had delivered within the last three years. A strong relationship was found between breastfeeding and formula promotion within the health institutions. Only one hospital was found

in the region that did not distribute formula at the obstetrics ward. A comparison was made between women delivering at this formula free hospital and those delivering in hospitals that had contracts with formula companies.

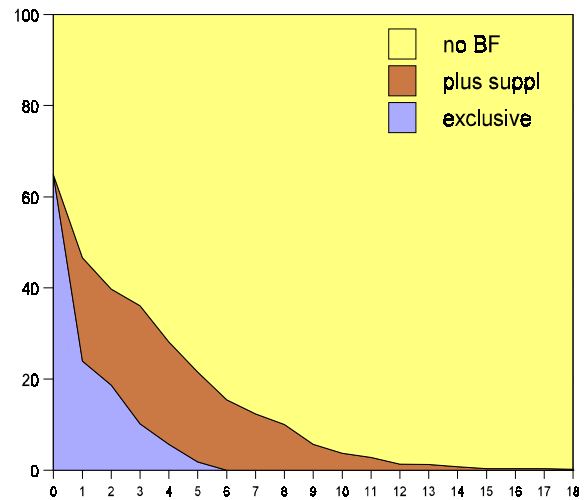
One half of the women with children under three years of age received free formula samples in hospitals. Of these women, fewer started breastfeeding, they introduced supplements earlier and they stopped breastfeeding sooner.

The findings were then plotted out in a model comparing the Northern Nova Scotia breastfeeding profile with the WHO ideal breastfeeding profile, showing clearly differences in low initiation and early cessation. These findings helped reformulate the policy on the distribution of infant formula in hospitals over two consecutive meetings by the Regional Health Board.

A review was also done of all educational and promotional materials distributed to pregnant women and new mothers. At the Public Health Office, health magazines that contained coupons for free formula samples were removed, as well as those publications with advertisements saying that infant formula is just as good as breastfeeding. The Regional Health Board has also asked hospitals to review their formula distribution policies and the Medical Society updated their breastfeeding policy. Another finding indicated that women wanted more information about the content and value of prenatal



WHO idealised breastfeeding profile: proportion with exclusive, supplemented and no breast-feeding at each month of age



Northern Nova Scotia breastfeeding profile: proportion with exclusive, supplemented and no breastfeeding at each month of age

"When the findings around formula distribution in hospitals were shown together with our region's breastfeeding profile, the reaction from members at the Regional Health Board was: 'Why are we doing that? When did that start? We don't do that!' In fact, hospitals have had contracts and have received financial contributions from infant formula companies for a very long time, but this practice was never questioned until the evidence was on the table. As a result, within two meetings the Board had a new policy on distribution of infant formula in hospitals. That's how powerful the evidence was."

*Dave Kerr, Health Systems Planner
Northern Nova Scotia Regional Health Board*



classes before committing to attending them. As a response, a new prenatal information kit has been developed. Since partner support came through as a very important factor for a positive birth outcome, the revised information kit contained a whole new section addressing the partner. The province has also agreed to review prenatal class promotional materials to make them clearer, more informational and more accessible. Some other results from this research cycle were:

- one out of three infants are not breastfed in the region
- one out of three first-time mothers do not attend prenatal classes
- 35% smoke during pregnancy
- having a supporting partner increases breastfeeding rates and decreases smoking.

Public health nurses have been asked to incorporate these and other cycle results into their performance appraisal objectives. That process has already been put in place.

The second cycle, "Children speaking up" dealt with eating habits, level of activity, body image and self esteem among children in grades four to six.

In the preliminary analysis, children's answers indicated that:

- 14% don't eat breakfast in the morning
- 16% are on a diet or have been on a diet
- 17% consider themselves overweight
- 25% like themselves sometimes or not at all
- 47% feel adults at school don't listen to them
- 49% are not physically active at lunch time.

At the time of this presentation, these findings were quite fresh and full downloading of findings had not yet taken place. However, some anticipated changes included working closely with principals on school-based actions and communication of results. Principals took a serious interest in this study and were asking for results in advance. A series of workshops with principals had been planned for the information-sharing phase. The Regional Sport and Recreation Commission was also consulted in the design phase of the study and had expressed an interest in the results for their planning purposes.

Ms Campbell said some major achievements have come out of the evidence-based planning process in Northern Nova Scotia and these two first research cycles. It has enhanced the credibility of Public Health Services in the region and it has given Public Health Services the information they need to strengthen their services. It has also given the region a process to engage the community in health decisions. Finally, it has begun to influence health policies within the Northern Regional Health Board. She completed her presentation with a quote from a mother who took part in the survey on "Children speaking up":

“This is a very interesting survey. I think all the questions are great and they pertain to the child's overall health. It is great to see that the Regional Health Board takes such an interest in today's children.” (Mother, Northern Nova Scotia)

Conclusion and discussion: what has changed – examples of evidence-based planning

Eleanor Ross, Assistant Professor, Faculty of Nursing, University of Toronto:

"I will try to tie together some of the thoughts we've heard today and add some of my own thoughts to the subject. It is a privilege for me to be part of these discussions and hear about what you have been able to accomplish in this interesting initiative to introduce local evidence-based planning in your regions. I think it is very impressive.

I think overwhelmingly, what I've heard in these last couple of days, is just how empowered all of you who are involved in this process are. It is an exciting thought that this is not only a capacity-building model, but also an *empowerment model*. I don't know if empowerment is the term that is used these days, but it really does seem to fit -- especially when hearing regional public health managers and panel participants say that no matter what happens, they are going to keep this process going.

My question is therefore: how are we going to move this process into the rest of Nova Scotia and across Canada? Because if we believe in public health and how we should be working in the community and with the community – this is how we should be functioning today. The empowerment and passion demonstrated here was just wonderful to see.

I would like to go back to Professor Miettinen's opening remark separating science from fact-finding for enhanced practice. He also pointed out that nothing much has changed in public health and that ideas and values were like fossils in rock. I would like to add to that, those fossils, those values, have formed some very powerful structures. These structures have been there for 50 to a 100 years, they have been legislated and I'll go back to that in a minute.

But I would like to point out that the CIET methods are a composite of scientific research methodologies, so there is no doubt about whether you are doing scientific research. Remember that definitions depend on who gets to define – so make sure you are part of the group of decision-makers who come up with these definitions in the future. Also, the CIET-style research is research that empowers the community and that is ultimately what public health should be all about.

Professor Miettinen also commented on what happens when concepts are malformed and lead to malformed principles. He said that concepts matter. They matter enormously. Well, I am very excited to say that the CIET concepts are not being malformed. Quite the contrary, they are focussed on the community. He said that a socially productive public health professional should be 'uncorrupted by the temptations of the pursuit of power.' You all pass that test as well. What I have heard in all these presentations is a *sharing* of power and information and that is really what public health and community development is about. I think this is a very important aspect of what you are doing.

Dr Raisa Deber challenged us earlier. She said that to really move processes beyond your own area, there is a need to look at values and politics. This is important to keep in mind as well."

Marianne Lamb, Director, School of Nursing and Associate Dean (Health Sciences), Queen's University:

"Going back to Raisa Deber's discussion around economic evaluations, I'd like to identify some of the pitfalls in this field. Evidence can help you sort out choices, and sort through various choices. But there is more than evidence in planning and in making these choices. The two key areas discussed were values and politics. She also talked about some of the technocratic issues that can obscure these issues. In relation to values there is what is generally called the distributive justice issues: who gets the benefits, are there specific groups that get more benefits than others, how small or big is the benefit in relation to the population as a whole?"

With respect to politics, the key issue is who defines the alternatives and who controls the scope of conflict, who participates in community groups and in decision-taking groups?

I'm very impressed with this whole approach you are taking to building the community voice into planning, using the CIET methodology. There has been a tremendous amount of work done in a short time period, and there has obviously been a transfer of skills and knowledge in getting relevant data, in analysing data, community feedback and involvement in strategising how you might address public health issues that are very real to people.

I would like to look a bit more at the issue of values. For example, I was fascinated by some of the findings presented from Northern Nova Scotia and in particular the one saying that many children consider themselves overweight. This finding is in itself loaded with values. What kinds of values did you consider in addressing this and what kind of politics did you encounter?

Linking this back to Raisa's keynote address, I do think that some of the skills that you've demonstrated here were the persuasive skills required. The skills for working with the community and building the community voice into planning certainly came through very strongly, but you also need these types of persuasive skills and evidence to be able to sell it to decision-makers.

"The power shift that is happening in our region is one from service providers to the clients. It is not easy to tell some of the service providers, who do hard work with the best of their intentions, that according to the youth they're not doing so great. The reaction can be defensive. We tried to have a wide number of service providers involved in focus group discussions with the youth where they could hear for themselves and then talk about it with their peers."

*Judy O'Keefe,
Health and Community Services,
Eastern Newfoundland*

Again, Raisa Deber talked about who counts in decision-making and how to weigh that influence in terms of making policy. I'm reminded of a story about this Senator in the United States during a dinner to his honour.

Before the dinner has started, he is sitting at the head table when the waiter comes around to put a pat of butter on each plate. The Senator says to the waiter: 'Could you please give me another pat of butter?'. The waiter answers, 'I'm sorry, Sir, there's just one pat of butter per person.' Somewhat offended, the Senator replies: 'You obviously don't know who I am.' When the waiter confirms his suspicion, the Senator gives a little speech about his great accomplishments, foreign ambassadorships and current prominent position in the Government of the United States of America. The waiter replies: 'And you obviously don't know who I am.' The Senator admits that he doesn't know. The waiter replies: 'I'm the guy in charge of butter.'"

The skills set for local evidence-based planning

Discussants: Andrea Baumann, Marianne Lamb

Panelists: Madonna MacDonald, Cindie Smith, Judy O'Keefe, Leila Gillis

Skills for evidence-based planning: Eastern Nova Scotia

Madonna MacDonald, a nurse manager for public health services in Eastern Nova Scotia talked about skills needs among public health staff in her region.

"We come from the land of Coady-Tompkins, the home of the co-operative movement in Canada. We are fortunate to have people who are very experienced in community development and who believe that if you want to see change, you have to empower people to take their own decisions. But although we have a strong background in health promotion, we did not have the skills necessary for epidemiological research and analysis for local planning. While most of our staff are comfortable in dealing with clients on an individual or family basis, these methods helped us to feel more comfortable in dealing with the entire community as our client."



"Everybody can make a difference, and the difference shows through evidence." Madonna MacDonald, Nova Scotia

The multi-disciplinary public health team in Eastern Nova Scotia includes managers, public health nurses, health educators, community health nutritionists and public health inspectors. The medical officer of health position has been empty in Cape Breton for about nine years.

In Cape Breton, she said they have had a stream of people from the outside – Laboratory Centre for Disease Control (LCDC), provincial experts and university researchers – coming into the region to work with public health staff on population related issues and undertaking research. Now, when there is local capacity to carry out some of this research, a new environment for collaboration has been established, one where local staff can play a more important role.

"When we signed onto LoPHID and local evidence-based planning, we made a conscious effort to focus on skills development and to gradually involve all staff that could benefit from these methods. Although we were cautious to raise staff expectations at first, we made sure to send out a lot of information and involve as many as possible in the process once we saw that it was working.

For example, in our first cycle, participation was limited in the initial direct planning phase but was widely encouraged during data collection and dissemination. Once we had the initial results, we held an orientation and planning workshop to maximise inclusion in all other cycles. We are

still experimenting with the number of people that should be involved in planning and implementation of each cycle, trying to use learning opportunities and get buy-in without compromising logistics and the already existing workload."

In addition to the more technical aspects of carrying out community-based research and analysis, some important skills acquired through this process were according to Ms MacDonald:

- critical thought and reflection
- ability to identify priority public health issues and define contrast using existing data
- setting clear objectives and have a communications plan before starting the research
- instrument design for data collection and dissemination
- how to be accountable for results: accepting responsibility for results and sharing them
- to use evidence to match limited resources to priority needs.

"The technical skills have been critical. Both in terms of epidemiological tools and information technology. We've only just now started to get onto the Internet in our region. Only by the sheer determination of our director of public health do we actually have a computer in every office. We still have some way to go before we are part of any Information Highway – but we are on the way, and in that, we are probably luckier than many other regions. We have got so much support and training from our CIET colleagues and from our Regional Health Board."

She noted that in traditional education for nursing, critical thought and reflection was not previously encouraged, but that it is critical for modern public health practice. Through critical thought and reflection it becomes natural to start identifying the issues and see the contrasts, using existing data where possible or getting fresh evidence to adequately address a problem where needed.

For the process to take root, she noted that it would be important to reinforce skills, empower staff and make sure that they have confidence in the things that they are experienced in first, so that, gradually, they can take on bigger responsibilities and widen their skills set. She said there had been considerable professional growth among managerial staff and colleagues as a result of the LoPHID process and CIET training.

"Everybody can make a difference in their own capacity and the difference shows through evidence."

Community capacity building

Cindie Smith, CIETcanada intern for Northern Nova Scotia talked about community capacity building through the field workers. Field workers were not only instrumental to data collection, they also played a critical role in connecting with the communities.

In the three research cycles to date, different types of data collection were used: household interviews, classroom facilitation of self-administered questionnaires and one-on-one interviews during primary

school registration. Many of the field workers were retained from the first cycle when 25 public health staff and external workers from the community were engaged to visit around 4000 homes. They received training throughout their involvement in the process.

So who are the Northern Nova Scotia field workers?

"Most field workers have first hand knowledge of the cycle topics. They are all female, but this is not by design since a lot of effort goes into making sure field workers accurately reflect the community they live in. All except one are parents. Many are single parents and most are underemployed or have a low income. What they all have in common without exception, however, is that they are warm, personable, flexible and caring people who are true barometers to the community. They are also committed to the community and have a burning passion to make things better. These are qualities that we really looked for, because we knew that this was critical to initiate a successful two-way dialogue between the community and the public health services.

These women don't have great political power, they certainly don't have great purchasing power, but they all have significant circles of influence in the work that they do, and in the profile that they carry in their community. They certainly 'pack a punch', so to speak."

To find them, Ms Smith said they went to family resource centres, looking for people who were known to the staff. Other places contacted included: women's employment outreach, social assistance employment service, black employment outreach and nursing schools.

Utilising adult education principles, the training first gave an overview of the CIET methodology so that they got a clear picture of the whole process and their specific contribution. Roles and responsibilities of the field worker were then carefully explained and acted out. The particular skills set required for the given cycle was also conveyed, whether it was the household interview skills, classroom facilitation skills or group interaction techniques.

During the training, each field worker's natural aptitude was noted by the CIET instructor. Some were better at focus group facilitation than they were at recording and vice versa. There was intense training for a couple of days, followed by practice. The practical training included piloting of the survey instruments. What worked and what didn't work was discussed in a feed-back session afterwards, and instruments were adjusted accordingly. A special session was devoted to focus group facilitation and focus group recording.

The CIET/public health team supervised all field workers until they had reached an appropriate level of proficiency for individual data-collection. They were also given feedback about their work in daily debriefings and, if necessary, coaching and problem-solving. Each field worker reported on a daily basis on their impressions, what worked well, what problems they encountered and how these problems could be addressed.

At the end of the cycle, there was a cycle debriefing and a celebration of achievement to increase morale, exchange experiences and build up energy for the next time. This was an opportunity to share a lot of valuable anecdotal feedback.

Field staff were also involved in the design of survey instruments. This involvement increased for those who stayed on from cycle to cycle. They were challenged to think in new ways, using their knowledge of the community while taking the scientific rigour of the CIET method into account. This was much appreciated by field staff who found it beneficial to be involved in some of the strategic planning. Many took on roles in the advisory and implementation groups that will drive evidence through to action when the survey has been completed.



"Not just another study. It gives ordinary people a voice through evidence" says field worker Bonnie Joldersma.

In the second cycle, another aspect of community capacity took place during the interaction with 4 to 6 graders regarding their eating and exercise habits and their self-esteem. Just by participating in the study and seeing the results afterwards, children increased their understanding of scientific research as something that does not only happen in laboratories but takes place in every-day life. They also learned a lot about confidentiality: that it is not something to hide, but that it is a fundamental right. In the phase where action plans were designed, the interactive website tried to encourage kids to come up with solutions, showing them that what they say has an impact.

Since parents also filled out questionnaires; the study also got kids talking to their parents about these issues in a way many hadn't done before. Parents were very interested in the results and many got a bit of a wake up call when the alarmingly high proportion of dieting children and children with bad self-esteem was announced. Many said that the child-parent dialogue was opened up when the children took the survey home to their parents and by the fact that both child and parent participated. Some parents said it gave them a reason to bring up some of these issues in a natural way with their kids.

Bonnie Joldersma was one of the field workers involved in the evidence-based planning process from the very beginning and who received training in data-gathering, focus group facilitation and community mobilisation throughout her involvement. She said about the second research cycle:

"We all like to be heard, negative or positive -- that makes a difference. I dare say that this is not 'just another study': it is a new approach to public health that brings health services closer to the public and that gives ordinary people a voice through evidence. We're doing this through a unique partnership between Public Health Services, ordinary people in communities and CIET. I would like to encourage other health regions to follow our example."

The multi-disciplinary experience

Rhoda Manuel, research analyst at Health and Community Services, Eastern Newfoundland, commented on the multi-disciplinary experience of evidence-based planning and how it brings together different experts and practitioners for an integrated approach to public health.

She said there were currently an emphasis on three main themes in the region: community mobilisation – especially in the area of youth, integration of services and evidence-based planning. Sharing the same evidence and understanding the same process can help concentrate efforts, reduce costs and increase impact.

"Multi-disciplinary" meant for the Eastern Newfoundland health region a collaboration between nurses, social workers, behaviour/child management specialists, psychologists, health promotion and protection officers, addictions counsellors and professionals for child welfare, youth corrections, family rehabilitation and mental health.

She said it was important to build skills in study design, data-collection techniques, interpretation of data and analysis. They also learned how to apply these skills to their practice and how to create good communication with the community and to partners around findings.

Every professional concerned with the subject matter of the research cycle was encouraged to get involved already in the planning and design process so that they could bring first-hand experience to the table. She emphasised the importance of a common understanding of the collective responsibility towards the public, which in itself could help to create a willingness to collaborate between different public health disciplines.

"A multi-disciplinary approach, such as it has been applied in LoPHID, leads to ownership among staff. When different professionals share and exchange experiences and when they have a baseline so that their input can be measured and held up in terms of impact, they feel connected, both to each other and to the community they serve."

The eight week residential course in evidence-based planning

Leila Gillis, community health nurse at the Sheshatshiu Innu Band Council and one of the participants of the eight week residential course in evidence-based planning, reported on how skills had been built during the course.

"The course. Eight weeks, 384 class hours, one fully completed CIET cycle, four computer crashes, one new motherboard, one crash course on the significance of air conditioning in your life, nine countries represented among colleagues, over 500 partnerships and friendships made between everybody, 6000 doors knocked on during field work and in the end – one diploma.



Rhoda Manuel, EasternNewfoundland (left) discusses one of the course practicals with her course colleagues from Eastern Nova Scotia: Agatha Hopkins and Madonna MacDonald.

Lectures, practicals, discussions and much sharing of knowledge and expertise has created a learning curve that has been straight vertical upwards for most of us. Not only has this learning curve been regularly evaluated by our esteemed professors and lecturers, but we've also evaluated ourselves and have come to the same conclusion. The self-evaluation of the skills-building is one of the most important ways to see what we really learned, since it is what we have recognised in ourselves as a shift in skills and knowledge.

For me, the results of this self-evaluation is indicative that we can do it and consequently, that we *will* do it."

She said that at the beginning of the course, a self-assessment was filled out by all participants to estimate their level of background knowledge for each required skill. Participants were asked to rate themselves on a scale from 1-5 with 1 being the lowest level and 5 the highest level of proficiency in each skill. The same assessment was carried out at the end of the course to look at change in confidence and skills-building as a result of the eight-week course.

The course, which took place from May 25 until July 16, 1999, was funded by Health Canada and hosted by CIETcanada and the University of Ottawa. It was adapted to the Canadian context from the international course in evidence-based planning offered since 1987 at CIET's training centre in Mexico. Since then, over 600 public health managers and researchers have been trained in the CIET methods.

Results from the self evaluations:

- **Epidemiological concepts:** An average of 16 out of 25 participants rated their skills as weak (1 or 2) before the course while only one person rated his/her skills in this area as weak after the course. The number of people who rated themselves as good, very good or excellent in this area (3 to 5) before the course increased from 5 to 22 participants out of 25 at the end. This module covered concepts such as causality, biases and confounders.
- **Parameters of epidemiological evaluation:** This module covered parameters such as average individual risk, risk difference, PAR and crude net gains. Overall, 17 out of 25 considered their skills as weak or very weak before the course. This shifted to a majority (21/25) placing themselves in the category of good to excellent after the course.

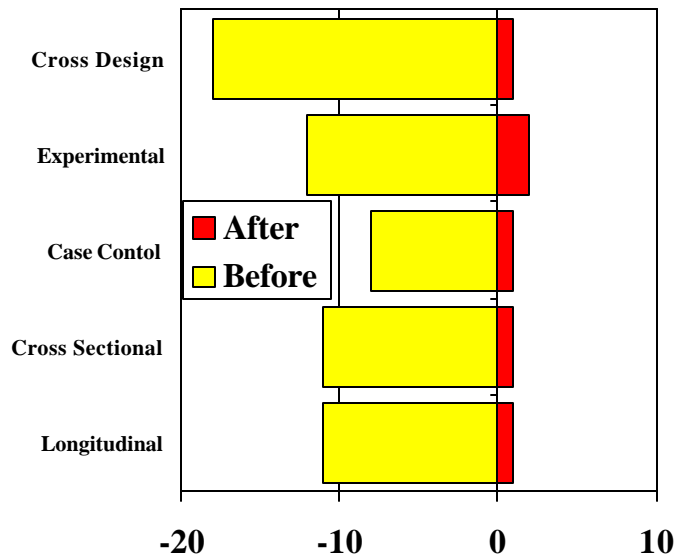


Figure 1: Those who rated their skills in study design as 1 or 2 (weak or very weak) before and after the course.

- Significance testing:** Before the course, overall 17 participants out of 25 said they had weak skills (1 or 2) in significance testing including interpretation of p-values, estimating confidence intervals, Poisson test, Fisher test, T-test, Chi-Distribution, the Mantel-Haenszel test and the Woolf test for heterogeneity. This changed to an average of 21 out of 25 rating themselves as 3 to 5 (good, very good or excellent) after the course with only one person still considering his/her skills lacking in this area.
- Study design:** Different design methods were covered, including cross design, experimental, case control, cross sectional and longitudinal study designs. From an average of 12 people who rated their skills as weak beforehand, almost all moved up to rating themselves in the category 3 to 5 after the course (21 out of 25 overall).
- Epidemiological analysis:** Overall 18 participants said they had weak skills in epidemiological analysis before the course. This number decreased after the training, when 21/25 rated their skills as good, very good or excellent (3 to 5). Epidemiological analysis covered analysis of existing data, the Mantel-Haenszel procedure and meso analysis.
- Costs in evidence-based planning:** Before the course, only four of the 25 participants considered themselves to have any substantial background knowledge in the field that covered cost benefit, cost utility, cost effectiveness, cost to the service users and cost to the public service. This shifted dramatically after the training when an average of 22 participants rated themselves 3 to 5 for this skill set.

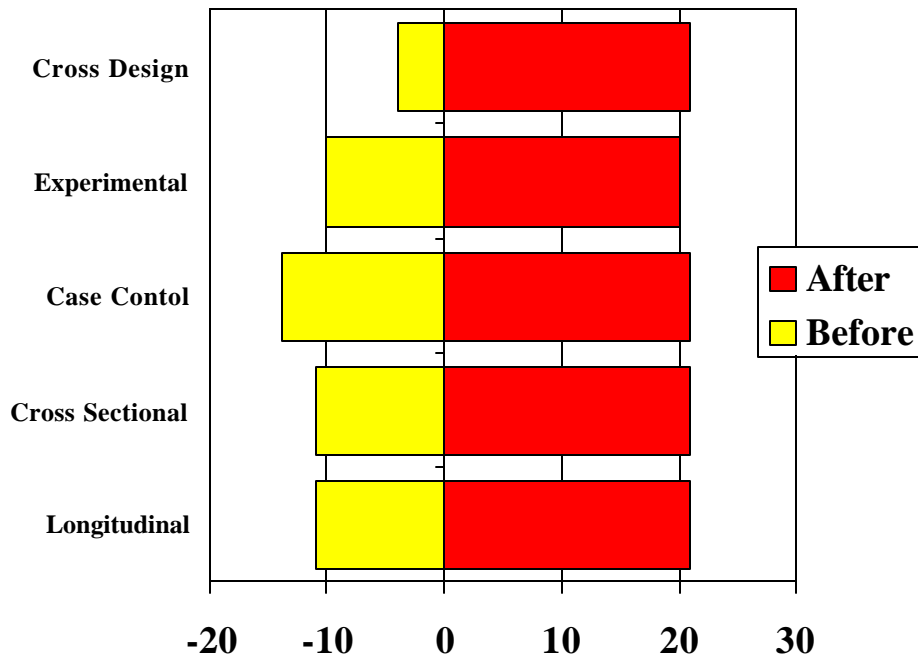


Figure 2: Those who rated their skills in study design as 3 to 5 (good, very good or excellent) before and after the course.

- Computing:** This module covered presentation software and Epi Info. At the end of the course, 21 participants rated themselves in the 3 to 5 category. This was an increase of 10 participants who previously thought their skills were insufficient (1 or 2).
- Communication:** The training covered community feedback, key findings report, evidence-based mobilisation, press release writing and media training including interview techniques for press, radio and TV. After the course, 21 participants rated themselves between 3 to 5 (good to excellent) in this area compared to the 15 who saw their skills as lacking in this area before the training.
- Epidemiological practice:** This category included statistical analysis, qualitative data management, quantitative data management, data cleaning and quality control, data entry process, qualitative questionnaire design, quantitative questionnaire design, ethical aspects and principles of measurement. Overall, 15 participants considered their skills as weak in this area before the course. This figure decreased to five participants after the course, while an average of 20/25 rated their skills as good, very good or excellent at the end of the course.

Comments and discussion: The skills set for local evidence-based planning

Marianne Lamb, Director of the School of Nursing and Associate Dean of Health Sciences at Queen's University commented on the wide variety of skills acquired during the research cycles and the management skills it takes to move evidence through to planning and action. In addition to the more technical skills in epidemiology, she pointed out change management skills and the need to incorporate more of the skill into the formal training of practitioners. She also said continued financial support is important to continue to build these skills and consolidate the process.

Andrea Baumann, Associate Dean of Health Sciences (Nursing) at McMaster University:

"I think we are moving in a very positive direction in terms of getting evidence on health outcomes. At a macro level we live in very exciting times when you will be able to look at data and use data at all different levels. At the local level this means you can actually involve your community both to utilise the data and collect the data. Hopefully, in my lifetime all these sorts of initiatives will actually be tied together. So far there has been a lot of money spent in this area and a lot of initiatives have been started, but there has also a lot of separation between different systems and initiatives.

What I have seen in the last two days make me think that there may be a type of intervention, a type of model, that provides that tying together of local, provincial and federal issues and need for relevant health data. This is very exciting for me. I see a lot of opportunity for skills training and education from community level up through to universities.

I must admit that I did not realise all the different aspects and steps that this process of local evidence-based planning included that you have been undertaking for the last two years, but I do understand it very well now. I hear very clearly the need for these skill sets and for partnerships to support this process. I may be overly idealistic, but I think initiatives like this eventually will move forward and I think partnerships should be enlarged.

This is the kind of model that I think gives us a heads-up as planners as to how we can use this as a paradigm to improve the health of Canadians."

Leadership and evidence-based planning

Discussants: Eleanor Ross, Nancy Edwards

Panelists: Marie McCully Collier, Andrea White, Agatha Hopkins

Linking leadership and evidence-based planning

Marie McCully Collier, supervisor for public health nursing in Northern Nova Scotia, quoted the Dean of the School of Hygiene and Public Health at John Hopkins University, who said that “the future of public health lies in developing a data system for measuring and tracking the health of the public more effectively, integrating curative and preventive services at both the individual and societal levels and evaluating success and modifying the system when needed to achieve it.”

"For me, linking leadership and evidence-based planning is about skills. In addition to the technical skills we have acquired here at the course, those skills include critical thinking, using information, technology and evidence along with managing change. Looking ahead, I see myself as a change agent for justifying change, initiating change, managing change, using the evidence and empowering others."

She also pointed out that the introduction of evidence-based planning in the region was very timely since it coincided with regionalisation. With shifts in accountability, the skills were needed to function and to be able to take on new responsibilities for regional planning. This brought with it new opportunities for local leadership.

She mentioned, however, that there is still a lot of work to do and that the last three days reminded her of the monumental task ahead to consolidate evidence-based public health practice and get everyone onboard. The pilot was completed in a short time frame and there are still people within the health profession to convince.

"Most of the skeptics are in our own the health care system, not in the community. When you look at community involvement and the reactions to this process from community members, it has been overwhelmingly positive. But there are still many agreements left to make in the health care system. We need to work together and to support each other in this process."

Educational preparation for public health professionals in a population based practice

Agatha Hopkins, a nurse manager of public health services in Eastern Nova Scotia, talked about changing roles, enhancing practice and educational preparation for public health professionals with regards to local evidence-based planning.

"Looking at what we're trying to do, where we've come with this eight week course, where we were before and where we're going back, I keep coming back to education and practice. The changing roles take place in all service areas, certainly in the health service and especially in

modern public health service. And if we really believe that changes are occurring, then we need to look at what are we doing to adjust educational preparations for the public health profession in this changing world."

In modern public health service there is increased expectations from interest/population groups, communities and public health staff. With regionalisation there is also an increased demand from management, regional authorities and the government.

"From the government side we have experienced an increase in demands for work on indicators. There are numerous outlines of what we should do and why we should do it, but these demands have not always come together with resources for developing the skill set to achieve it.

As some previous speakers have alluded, evidence has always been around. If you look at the evidence we need in public health services, it has been there for centuries and is still there as we enter the 21st century. So why is it that we, as a population, find it so difficult to move the issue of developing a really good, vibrant, well educated workforce in public health? We've seen a massive shift in health care in the post-war era. It has been built up as medical continuum type of care. And yet, as a society, we have not been able to deal with the evolving issues in public health.

When the restructuring in health care started, it was very much an issue of getting the community voice into health care. That's where we need to be. The community voice has got to be there. And yet, we've been restructuring now for around 20 years and we still have not effectively got the community voice into health care planning. That's why LoPHID was so refreshing.

We've had a lot of initiatives come our way and I think that sometimes, the initiative is so good that people who are supporting it, such as Health Canada and others, are scared that it may actually work. Because as soon as we know that it is effective, they just don't fund it any more! So I hope that we will be able to move this initiative beyond that and really use these new skills in building the community voice into planning. I also hope that this shows the need for skills development in local evidence-based planning as part of the educational preparation of all public health staff across the country."

She said that the undergraduate program should focus more on the client and the role of service-providers in relation to the client, which in public health can be the individual, the family, the group, the community and the population. She also stressed that the public health profession has "lost somewhere along the way, the basic theories and principles of epidemiology" and that this needs to be reinstated in the preparations for the profession along with community and population health.

In postgraduate and graduate work she listed the following skills as critical for leadership in modern public health practice: application of the science of epidemiology, study of and application of statistics,

evidence-based planning methods, management of information systems, use of cutting edge computer technology, communication and media training and community capacity building.

"What we need most is leadership. We need the people who have participated in this course and the people who are in this room, to help us to move this issue beyond discussion. We've lost some of our common voice in the restructuring."

Communities should be brought back into a leadership role in public health planning. She also called on regional Medical Officers of Health and management, professional associations, academia, provincial and national governments to get involved in moving a modern public health practice based on local evidence-based planning beyond rhetoric.

"For too long, we have been unable to make that great leap because we have been too fractured and forgot about the basics.

I leave you with this line from the course materials: Epidemiology: epi – as in over, demos – as in people, -logy – as in Greek for science. Epidemiology = The science [of things] over [or affecting] people."

Leadership and evidence-based planning in Labrador

Andrea White, Health Labrador Corporation, spoke about leadership and evidence-based planning in Labrador.

"Labrador presents tremendous challenges and opportunities for health care planners. Fortunately our challenges are diminished and our successes are multiplied when we share responsibilities. The research cycles of local evidence-based planning present just such an opportunity for community health planners for each of the health care organisations to take a leadership role."

The leadership was shared between Health Labrador Corporation, Sheshatshiu Innu Band Council, the Mushuau Band Council and the director of public health nursing from the Labrador Inuit Health Commission. Representatives from the region's health providers met with the medical officer of health and CIET technical expertise to brainstorm, for each cycle, the potential benefits to the region for each topic.

The challenge was to achieve a macro impact while preserving focus and measurement in very culturally diverse communities in severe isolation. Adequate tools and a willingness to collaborate were critical to finding a common measurement of evidence within each of the three health care organisations.

"Experiences from the LoPHID initiative will assist us in translating evidence into practice. The word 'translating' helps us to focus on that bridge that goes over a gap between knowledge and

practice, rhetoric and reality, methods research and methods practice, research and practice, change and sustainability and success and application. I leave you with a quote from W. Scott Richardson, University of Texas Health Science Centre:

'Health care organisations that survive will do so because they understand the best possible care, where they stand currently in relation to the best care and how to close the gap between the two.'

Conclusion and discussion: Leadership and evidence-based planning

Nancy Edwards, Director of Community Health Research Unit, University of Ottawa:

"First of all, I would like to say that from what I've seen and heard at this Colloquium, I think you've all done something really important, both for public health and for your regions. Out of all of this, I hope that public health does have an enhanced leadership capacity, because I think that public health has a lot to share with the rest of our health care system.

In my mind, the fact that only four per cent of our budget -- and that is a very generous estimate -- goes into all our public health and community activities just does not make any sense at all. That has not budged for years. But it is time that it budged and I think that you are the leaders now in creating that critical mass needed for that change to take place.

I think it is very important that you capture and share your lessons learned and that you continue on with this experience. The short time frame that you have now in terms of funding is a concern, because it takes time, effort and energy also to capture those lessons. The long term lessons may not even be visible within these last months of Health Canada funding. But we really need a way of extracting all these lessons and sharing them, locally and provincially to your constituencies, but also across the country.

A couple of points about evidence. I think the whole approach to local evidence-based planning and the CIET methodology is really interesting when you think about using evidence for planning in public health. In the traditional approach we first do the community needs assessment, study population developments and try to identify priority groups, etc. Then we go into the next mode of evidence-based planning where we decide on how resources should be put together and afterwards interventions happen and we can deliver our services.

But what I think the CIET approach illustrates very well, is the importance of those different components of evidence-based planning going together. They should not be separate. In fact, understanding of the voice of our communities and pulling the evidence together *becomes* the intervention. The research becomes the message. And I think the challenge we've got is how we can use that process to maximise the interventions and offers. What has previously been seen as separate steps in a research for action cycle are now being merged and they should be merged.

The other point I wanted to make is in relation to interventions. Exactly how much can you do, in terms of community interventions? When you look at the program level, and you see one staff person assigned to the health of the elderly for the whole region, you realise that we have a big problem in public health with the intensity of the interventions that are on offer. That is why I think the voice you create through the evidence is so important. Otherwise, public health will always be on the back-burner. You are the leaders and practitioners who can change that. I wish you good luck."

Eleanor Ross, Assistant Professor, Faculty of Nursing, University of Toronto:

"We heard a lot about 'the politics of it all' and the different steps in that process this morning. Sometimes, because of the structures we work in, we end up blaming ourselves, wondering why we keep on knocking on the same doors and things don't change. But I want to go back to Professor Olli Miettinen's comment that one of the most powerful changes in public health was national health insurance and that we medicalise health care. There has been an ongoing fallacy in that. Medical necessity has always been put forward on an evidence and scientific base and politicians use that in justifying 'who got what', 'because the physicians did it'.

But I've heard all of you and you have been talking about areas that do not have a medical officer of health. There should be directors of public health for each region and why couldn't it be one of the course participants here or a nutritionist or a social worker or a nurse as the Head of Public Health? We are still under the medical paradigm that starts us with the illness bit rather than public health and community well-being.

On the Premier's Council of Ontario, we tried to analyse why this had happened. In the beginning we blamed the physicians, but what really happened was that we set up the schools, we produced the nurse practitioners, but we never changed the structure. Until the power structures change, you end up getting to a wall at some point in trying to move certain kinds of public health agendas broader. I do not want to be discouraging, but just recognise that those power structures are in place. Once we mobilise and recognise what we really want from public health, then there are some major structures that have to change.

Finally, I wanted to say to you all: you *are* directors of public health, because the skills that you have described here earlier today are the skills that it takes. Some of the exciting stuff from this morning has to do with empowerment. Empowerment of the community and empowerment of practitioners and frontline workers. I really hope that this will somehow be taken into account in Health Canada's internal evaluation of this process.

Empowerment is something that is so rarely taken into account in these sorts of evaluations because it is hard to get to, but I just really hope that it won't be left out in this case. In Deborah Jordan's presentation of Health Canada's perspective, it sounds like perhaps they have already determined what pieces will be picked from LoPHID for the future, so I would like some clarification on that."

Deborah Jordan's response:

"All I can say right now is that we are in a very initial stage of our evaluation, and I cannot say what tools will be used. However, it is done on the assumption that some things work better than others in any initiative and we will see how those pieces can be used to take the process forward. As I said in my presentation, there are a lot of questions that we still need to get answered.

In addition to the network which deals with the info-structure for surveillance, you need to realise that there are other Health Canada program areas that are undertaking public health action. We have for example the Laboratory Centres for Disease Control and we have the environmental health directorate who undertake other actions to do the actual public health piece. That might be for example notification of public health officers if there is an outbreak that they need to be aware of. So we are just one piece of it all. We are looking at some of the tools needed for infrastructure, but we must be tightly linked with the public health working group who are dealing with the substantive public health issues such as pandemic influenza vaccinations and other such actions.

I think there is a lot we can learn from the communicable disease side, because their systems have been in place for such a long time. As we are moving into these new areas where we realise we need to have better systems in place, we need to look at what we can take from some of these long established systems that work.

We need to make sure that we're providing the right tools to the right people so that they can do their job."

"Just remember that we are the front-line workers who identify and try to prevent those diseases you refer to."

*Madonna MacDonald
Nurse manager, Eastern Nova Scotia*

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