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Report on the Forum on Alcohol and Illicit Drugs Research in Canada

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Strachan•Tomlinson*

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Introduction

The purpose of this Forum was to develop a strategic addictions research agenda for Canada, ranging from basic and clinical science to social, cultural and environmental research in relation to alcohol and illicit drugs. Objectives were:

1. To review the range of research and related priorities in Canada and internationally
2. To identify and agree on research themes fundamental to addressing health and social issues associated with alcohol and illicit drugs in Canada
3. To explore and support the development of research partnerships among individual and organizational stakeholders.

Because of time and logistical considerations, prescription drugs were not included in the scope of the Forum, but were included in some discussions where appropriate.

Opening Remarks

Mr. Michel Perron, Chief Executive Officer, Canadian Centre on Substance Abuse, welcomed participants to the Forum. He noted the importance of (a) heeding lessons from the past to enable the alcohol and illicit drugs research community to work together well in the future and (b) the importance of consensus and mutual exchange in policy as well as research.

Mr. Perron recognized the diversity among participants and encouraged them to challenge each other in developing a national research agenda. In closing, he remarked on the commitment to the field of alcohol and illicit drugs research demonstrated by the joint sponsorship of the Forum by the Canadian Centre on Substance Abuse, the Canadian Executive Council on Addictions, the Canadian Institutes of Health Research, Health Canada and Solicitor General Canada.

Dr. Colleen Anne Dell, Research Associate, Canadian Centre on Substance Abuse, and Assistant Professor, Carleton University, emphasized the crucial role of teamwork and collaboration in this research area. She was pleased to note that planning for this Forum was initiated as a result of recommendations from several previous workshops, including the 2001 Canadian Addictions Researcher Workshop: Moving Towards a Plan of Action to Develop a National Research Agenda. Dr. Dell also commented on the importance of the Forum as an opportunity for participants to meet, share ideas and work together. In closing, she asked participants to spend a moment in silence to reflect on the impact of addictions on society and the constructive role of research and individual and organizational commitment in this area.

Participants

The Forum was attended by participants representing a broad range of key stakeholders – individuals, groups and organizations who have a significant, vested interest in research into addictions and the use of alcohol and illicit drugs in Canada. Stakeholders contribute to this research in a variety of ways, e.g., funding, developing, conducting, disseminating and applying research. Stakeholders also bring a variety of interests to this research, e.g., high quality and appropriate research processes and results, evidence-based practices and clear health and social outcomes for people affected by substance abuse.

Norms for Working Together

Participants used the following norms for working together (based on their responses to the pre-Forum questionnaire) to guide their discussions during the Forum:

- Respect diversity: explore perspectives
- Be clear and concise
- Collaborate
- Think strategically.

Hopes and Concerns

During opening discussions, participants expressed the following hopes and concerns with respect to the Forum.

We hope that:

- The Forum focus is broader than biological, clinical and social, e.g., more holistic, including regional concerns and priorities.
- There is more attention towards evaluation of treatment and prevention programs.
- The Forum advances the discussions and values that guide the agenda, e.g., gender, criminal and moral aspects.
- The issues discussed are broad enough to facilitate the bridging of the different sciences.
- The Forum helps find more effective ways of networking and linking researchers.
- There is a genuine movement toward action and results, and the research agenda can be sustained in terms of effort and funding.
- We can build on the wealth of experience, vitality and potential new resources; this is a good time for doing more and better work, particularly related to knowledge transfer.
- The research priorities are reasonably useful.
- The Forum clearly promotes research across the spectrum of substance abuse, use and non-substance abuse issues and a broader perspective among researchers.
- The focus is not only on practical research, but also on research focused on developmental risks in terms of both individuals and communities.
- We can do something with the Forum results.

- We can increase awareness in provinces other than Ontario, where addictions are clearly on the agenda.

We are concerned that:

- There is a lack of leadership in terms of developing and implementing an action plan related to alcohol and illicit drugs research in Canada.
- More partnering is required to implement a national research strategy.
- Knowledge transfer to end-users must be more effective.
- The relationship and linkages to the tobacco agenda are unclear.
- We need research grounded in the field to give direction to the field.
- There is a lack of knowledge about how Health Canada's renewed Drug Strategy funding is related to CIHR and other funding agencies.
- The Forum results in good, concrete outcomes.
- There is a lack of attention to ethical issues.
- The use of the word "surveillance" in the name of the HC Office of Research and Surveillance may be confusing to the general public, given that the office focuses on drugs.

Presentation

Dr. Robin Room, Professor and Director, Centre for Research on Drugs and Alcohol, Stockholm University, provided a summary of the Forum background paper "Alcohol and Illicit Drugs Research Priorities for Canada," co-written with Dr. Jurgen Rehm. The following points were made in discussions following Dr. Room's presentation.

- Australia has succeeded in several environmental and creative interventions that combine research with community effort and may be useful in Canada.
- Values are an issue for consideration, as we are missing a common ideological framework.
- Although access to US and European research is an asset, we need a research agenda defined within a Canadian conceptual framework from which Canada can begin looking at its own research agenda.
- Drug treatments are not generally available for various reasons, e.g., the relative slowness in approving medications and ideological reasons such as abstinence. Societies "build boxes" around drug treatments, e.g., only nicotine maintenance is generally accepted. Evidence related to the promotion of drug treatments is a potential area for a Canadian research contribution.
- The wording related to Aboriginal research could have a more positive tone.
- We need to build bridges among all areas of addiction research and ensure that this is reflected in the national research agenda.
- Canada has done well in the past in terms of biomedical research, but given limited capacity, should we be trying to link with the research of other nations, e.g., US research on drug treatments? Although we should not waste money by duplicating other research, we also need to recognize that duplication is in some ways at the heart of science – particularly for the purposes of comparing results in various environments.

- If there is not continued support for basic research, the real problem will become one of capacity – we won't have the people to carry out research. Most training in the area of alcohol and illicit drugs research is conducted in universities (e.g., the University of Toronto has a graduate program involving ten departments), but the area is often marginalized in academic settings. Biomedical research on cannabis is an area where Canada can use research to support policy development and implementation.
- The Determinants of Health model has its limitations. With changes at Health Canada (i.e., formerly Health and Welfare) and in health care generally, the social and income component has largely been lost and funding for community and social development organizations has eroded over the years. It is difficult to deal with Aboriginal issues unless we move away from the current health paradigm.
- CIHR has strategic funding available for gender-related research, including eight mentors in British Columbia.

Keynote Address

Janice Charette, Associate Deputy Minister of Health, opened her remarks by talking about the importance of knowledge generation – a key pillar in the renewed Canada Drug Strategy. The Government of Canada is investing \$245 million over five years in the renewed strategy, which takes a balanced approach to reducing both the demand for and the supply of drugs. Investments will be made in four strategic areas where gaps have been identified: enhancing leadership, generating knowledge and improving management, supporting partnerships and interventions and modernizing legislation and drug policy.

Ms. Charette commented that in the past, funding constraints have meant that Canada's Drug Strategy suffered from a serious shortage of high quality research, trend analysis and program evaluation information at a national level. This issue was raised by the Auditor General in a report issued in December, 2001, and by recent reports of the House Special Committee on Non-Medical Use of Drugs and the Senate Special Committee on Illegal Drugs. To address this gap, there will be investments of \$28.5 million over five years in knowledge generation and surveillance activities to help understand the nature and scope of substance abuse problems in Canada. Health Canada believes that generating new knowledge, applying the best evidence to decision making in programming and policy development and measuring results will help it in its efforts to better address alcohol and drug problems in Canada.

To focus and guide research activities and to ensure effective coordination of research initiatives and an optimum sharing of information, a National Research Agenda will be established early in the implementation of the Strategy and re-assessed on a regular basis. In closing, Ms. Charette commented that this Forum provided an important beginning for the development of this research agenda and that Health Canada was looking forward to collaborating with other partners at the Forum in providing the national leadership and coordination required to ensure that this research agenda is a key contributor to the success of the renewed drug strategy, and thereby the health of all Canadians.

Ms. Charette participated in a lively question-and-answer period following her presentation.

Strategic Research Themes

Participants worked in small groups to identify preliminary research themes, then chose the following nine themes (listed in alphabetical, not priority order) after thoughtful discussions in plenary.

- A. Aboriginal Peoples
- B. Biology of Substance Use and Addiction
- C. Epidemiology
- D. Health Promotion, Prevention and Healthy Public Policy
- E. Populations/Resiliency
- F. Research into Knowledge Exchange and Dissemination
- G. Sex Differences and Gender Influences
- H. System Design and Evaluation, and Public Policy
- I. Treatment and Relapse Prevention.

During discussions, working group members were asked to explore the following aspects of their research theme: keywords and phrases, relevance to CIHR research pillars and the determinants of health (see Appendix #2), current research, potential new research questions and partners.



A. Aboriginal Peoples

A resiliency perspective guides research in addictions and substance abuse with respect to Aboriginal Peoples¹. Research promotes and identifies factors that contribute to or constrain an ecology of resilience.

The categories that embody these factors of resiliency are spiritual, social/emotional, physical and mental health of Aboriginal individuals, families, communities and Nations. At a minimum any research incorporates and respects Aboriginal principles of ownership, control, access and possession (OCAP) as well as participation, education and collaboration. Moreover, the research contributes to capacity building of Aboriginal Peoples' responses to and understanding of substance use, dependency and addiction, and at the same time produces knowledge that is generalizable and applicable.

Key words and phrases for this theme include:

- Treatment continuum and treatment outcome studies
- Culture: role/application within continuum
- Resiliency: levels of health characteristics/factors
- Innovative practices
- The determinants of health from an Aboriginal perspective, including ecological systems perspectives and multi-generational trauma
- Research that is community-based, builds capacity and has a focus on ethics and intellectual property rights
- Working with non-Native persons
- Cost effectiveness of treatment
- Harm reduction: what, how
- On and off reserve
- Gender issues
- Systems and policy
- Dual disorders
- Youth and children: family, developmental issues, treatment methods
- Aboriginal research agenda and links to other bodies
- Integration: data sharing (federal/provincial/territorial, First Nations, Inuit, Métis); traditional Native and Western knowledge
- Human resource strategy – resourcing intervention.

¹ For the purposes of this report, the term Aboriginal Peoples is used as defined in section 35 of the Canadian Constitution and includes First Nations, Métis and Inuit.

All CIHR research pillars apply to this area to some extent. The most relevant is Pillar #4–Societal, Cultural and Environmental Influences on Health and the Health of Populations, followed in order by Pillar #3–Health Systems and Health Services, #2–Applied Clinical and #1–Basic Biomedical. Regarding #1–Basic Biomedical, group members noted that biomedical approaches may not be readily accepted by Aboriginal Peoples because of the stigma resulting from the idea that Native people are genetically pre-dispositioned to be alcoholic. However, biomedical approaches may be useful for the study of Fetal Alcohol Syndrome and Effects (FAS/FAE) and intergenerational effects.

Group members noted that all determinants of health² are linked to this theme but need to be approached from a cultural/resiliency perspective, taking into account other factors relevant to Aboriginal communities such as spirituality, cultural diversity and Aboriginal history.

Potential Research Areas

After discussing current initiatives in alcohol and illicit drugs research, group members identified the following potential new research questions:³

- i. Aboriginal, culture-based intervention strategies within the corrections system
- ii. Addictions Information Management System and its use in data collection for treatment outcome studies
- iii. Community-based research and capacity-building strategies
- iv. Comparison of policies that foster partnerships in addressing addictions
- v. Effective human resource strategies as per current research in addictions
- vi. Efficacy of First Nations regulatory policy and practice on substance use and access to alcohol, drugs and solvents
- vii. Ethnographic research of patterns of substance abuse behaviour, e.g., intravenous drug use
- viii. Impact of systemic violence and institutional racism on addictions/substance abuse among Aboriginal Peoples
- ix. Injection drug use: basic knowledge, attitudes and strategies
- x. Integration of Addictions and Mental Health and treatment for dual diagnosis
- xi. Longitudinal study of on and off reserve utilization patterns in social networks and mutual aid support networks
- xii. On and off reserve comparisons of health resiliency factors
- xiii. Safe strategies for responding to “public inebriates” and dual disorders
- xiv. Strategies for promoting prevention and life span support systems for FAS/FAE
- xv. Traditional Aboriginal knowledge and its application within the addictions continuum of care

² See Appendix #2 for a list of the determinants of health.

³ Research questions appear in alphabetical, not priority order.

xvi. What works across the continuum of care? Evidence-based best practices that include culture-based approaches (integration of Native cultural and Western practices) for adults, youth and children.

Relevant Partners for this Theme

- Aboriginal Healing Foundation (AHF)
- Alberta Aboriginal Capacity and Developmental Research Environments Network (ACADRE)
- Assembly of First Nations (AFN)
- Canadian Aboriginal Aids Network (CAAN)
- Canadian Centre on Substance Abuse (CCSA)
- Canadian Institutes of Health Research (CIHR)
- Canadian Tobacco Control Research Institute (CTCRI)
- Centre for Addictions and Mental Health (CAMH)
- CIHR Institute of Aboriginal Peoples Health (IAPH)
- First Nations, Inuit and Métis peoples
- First Nations and Inuit Health Branch (FNIHB), Health Canada
- Indian Affairs Canada
- National Aboriginal Associations, e.g., of social workers, physicians, psychologists, nurses, community health representatives
- National Aboriginal Health Organization (NAHO)
- National Aboriginal Women's Council
- National Indian and Inuit Community Health Representatives Organization
- National Native Addictions Partnership Foundation (NNAPF)
- National Network for Aboriginal Mental Health Research
- Native Friendship Centres
- Nechi Training, Research and Health Promotion Institute
- Provincial and territorial governments
- Royal Canadian Mounted Police (RCMP) and provincial police, e.g., drug awareness services
- Tribal Health Authorities
- Youth Solvent Addiction Committee (YSAC).

B. Biology of Substance Use and Addiction

This strategic research theme can be broken down into eight separate areas:

1. Neuroscience, e.g., neurobiology (neurotoxicity, plasticity and neuropsychopharmacology, including polysubstance abuse, neurotransmitters and threshold effects) and neuropsychology (including cognitive effects and risk taking).
2. Systemic Effects, including pharmacokinetics, end organ damage/protection and overdose/suicide.
3. Specific, e.g.,
 - relapse, including cue relativity/incentive motivation (e.g., cues-cravings, attentional bias, memory and automaticity), drug effects and stress
 - outcome expectancy, i.e., actions and consequences.
4. Models, e.g., animal and human
5. Methods, e.g., imaging (functional magnetic resonance imaging, positron emission tomography, etc.), electrophysiology (electroencephalography, event-related brain potential, transcranial magnetic stimulation), biomarkers and genetic/epigenetic markers
6. Treatments, e.g., medication and vaccines (Phases I – IV Trials)
7. Interactions, e.g., genes and environments, intrauterine exposure, development, early life events
8. Information, e.g., translation and dissemination of scientific knowledge.

Pillars #1–Basic Biomedical and #2–Applied Clinical are most relevant to this theme at all levels. Group members noted that ethics around confidentiality must be kept in mind to protect research subjects.

Determinants of health most closely linked to this theme include: Biology and Genetic Endowment, Gender, Healthy Child Development, Physical and Social Environments. Group members emphasized that looking at how non-biological factors (e.g., determinants of health) affect biology is an important consideration.

Potential Research Areas

After discussing current initiatives in alcohol and illicit drugs research, group members identified the following potential new research questions:

- i. Biological risk factors: genetic predisposition; drug exposure/abstinence; and interaction with environments including intrauterine exposure
- ii. Co-morbidity of mental disorders and addiction
- iii. Ethics in human studies: theoretical approaches to addiction research (e.g., self-medication vs. reinforcement)
- iv. Neuropharmacology and biology of risk taking and aggression
- v. Patterns of use/abuse and effects on neurobiology/physiology/psychology
- vi. Pharmacological treatment for addiction and relapse prevention (lapse and relapse) using vaccines and other approaches.

Relevant Partners for this Theme

- Brewers and vintners
- Canadian Psychiatric Research Foundation (CPRF)
- Canadian Institutes of Health Research (CIHR)
- Foundations
- Health professional organizations (for dissemination)
- Pharmaceutical companies
- Provincial/ federal departments
- Research funders.



C. Epidemiology

This strategic research theme includes determining incidence, prevalence and patterns of alcohol/drug use through dependence, as well as assessing individual and social changes in the use and consequences of alcohol/drugs. Other components include monitoring key indicators of use and non-use (through primary and secondary data), collecting epidemiological data that is necessary to establish harm and costs to society, and identifying risk and resilience factors. The analysis of social and economic cost information relevant for planning is also a key feature.

Pillars #3–Health Systems and Health Services and #4– Societal, Cultural and Environmental Influences on Health and the Health of Populations are most relevant to this theme.

All determinants of health are closely linked to this theme.

Potential Research Areas

After discussing current initiatives in alcohol and illicit drugs research, group members identified the following potential new research questions:

- i. Assessing the impact of cannabis decriminalization
- ii. Best research strategies for estimating use in remote communities
- iii. Cannabis and driving
- iv. Ecological studies of the interplay between community and individual influences on alcohol and other drug problems
- v. Understanding regional differences in alcohol/drug use and abuse.

Relevant Partners for this Theme

- Canadian Centre on Substance Abuse (CCSA)
- Canadian Executive Council on Addictions (CECA)
- Canadian Institutes of Health Research (CIHR)
- Federation of Canadian Municipalities (FCM)
- Health Canada
- Insurance companies
- Provincial addiction organizations
- Provincial governments
- Royal Canadian Mounted Police (RCMP)
- Transport Canada
- University researchers.

D. Health Promotion, Prevention and Healthy Public Policy

This strategic research theme includes the following domains of concern: community-based, multi-level, multi-sectoral, cross-national, community institutions and settings, e.g., workplace, schools, healthcare, hospitality industry sites and media channels.

Methods include monitoring policy initiatives, impact evaluation, “natural experiments,” community demonstrations, cost-benefit studies and policy and intervention experiments.

Strategies of concern include the following, non-exhaustive list:

- hospitality industry training, interventions and regulations
- integrated comprehensive community approaches
- targeting high-risk groups
- harm reduction
- environmental interventions
- social marketing
- public education
- dissemination demonstrations.

Factors to be taken into account include:

- socio-economic context
- community involvement
- risk-taking behaviours and factors determining low risk
- developmental factors, including biomedical
- differential applicability by gender and culture
- role of hospitality and beverage alcohol industries
- integration of approaches across sectors/channels and jurisdictions
- effects of alcohol on violence and injury.

Pillar #4–Societal, Cultural and Environmental Influences on Health and the Health of Populations is most relevant to this theme. If Pillar #3–Health Systems and Health Services is defined broadly to include health promotion, then it too is relevant.

All determinants of health are closely linked to this theme. However, group members noted that the absence of “policy” as a determinant of health is problematic.

Potential Research Areas

After discussing current initiatives in alcohol and illicit drugs research, group members identified the following potential new research questions:

- i. Cultural and gender differentiations in prevention effectiveness
- ii. Development and evaluation of effective environmental interventions
- iii. Development and evaluation of integrated, comprehensive approaches to prevention and policy in different settings and populations, e.g., workplace, community, schools and media
- iv. Evaluation and cost-benefit analyses of prevention programs and policies
- v. Policy experiments in different jurisdictions (e.g., national, provincial, municipal, band councils, etc.) and across jurisdictions
- vi. Research on dissemination of prevention and policy programs and knowledge, e.g., diffusion of municipal alcohol policies beyond Ontario, media advocacy
- vii. Research on reducing harm from risk-taking behaviour and substance use among adolescents and young adults
- viii. Standing capacity for evaluations of policy changes on illicit drugs and alcohol.

Relevant Partners for this Theme

- Band councils and Aboriginal organizations
- Chronic disease framework partners, e.g., alcohol and heart health
- City councils
- Community agencies
- HIV and Hepatitis C programs
- Hospitality industries
- Injury prevention field
- Liquor control and licensing boards
- Local, provincial, territorial and federal governments
- Media
- National funding bodies
- Parks and Recreation departments
- Police
- Provincial and municipal public health departments/services
- Public health departments of universities
- Research centres outside Canada
- Schools
- Workplaces
- World Health Organization (WHO).

E. Populations/Resiliency

This strategic research theme has three key areas:

1. Inherited and acquired predispositions, including:
 - biological components such as genetic, epigenetic (e.g., fetal environment, birth complications), drug exposure, toxins and trauma
 - psychosocial components such as family modeling, abuse and neglect, trauma, social support, coping skills, community, socio-economic status and child development.
2. Biological-environmental interactions, including biological traits that affect responses to environmental events.
3. Group differences, including differences based on sex/gender, Aboriginal Peoples, disability, age (e.g., child/youth), criminogenic factors, sex workers and personality.

Pillars #1–Basic Biomedical (biological and acquired risks) and #4– Societal, Cultural and Environmental Influences on Health and the Health of Populations (social risks) are most relevant to this research theme.

The most closely linked determinants of health are Biology and Genetic Endowment, Healthy Child Development and Social Environments. Secondary determinants include Culture, Income and Social Status and Personal Health Practices and Coping Skills. Education, Employment/Working Conditions, Gender, Health Services and Physical Environments are considered tertiary determinants.

Potential Research Areas

After discussing current initiatives in alcohol and illicit drugs research, group members identified the following potential new research questions:

- i. Biological mediators (e.g., substance exposure) that impact genetic vulnerability in predicting substance use to abuse
- ii. Impact of decriminalization of cannabis on vulnerable populations and interpretation of cannabis policy by vulnerable populations
- iii. Impact of the first episodes of mental illness (e.g., depression) on the increase in the risk of substance abuse
- iv. Impacts and costs of child maltreatment associated with substance abuse
- v. Sensitization of the nervous system by repeated psychological stressors and related drug use
- vi. Stressors, e.g., do some people respond to stressors in ways that can lead to drug use? Do stressors induce brain changes that can increase susceptibility to drug use?

Relevant Partners for this Theme

- Canadian Institutes of Health Research (CIHR)
- Canadian Centre on Substance Abuse (CCSA)
- Canadian Mental Health Association (CMHA)
- Child Welfare League of America (CWLA)
- Correctional Services Canada (CSC)
- Users, clinicians, policy makers.



F. Research on Knowledge Exchange and Dissemination

This strategic research theme includes studying and developing effective knowledge about the ways that useful information and skills are exchanged among the public, practitioners, scientists and policy makers. The purpose of this research is to produce evidence-based changes in perceptions, policies and practices through education and training, community engagement and development and organizational development practices, e.g., knowledge applications and dissemination research strategies. Key principles include community participation, collaboration and inclusivity.

Pillars # 2–Applied Clinical, #3–Health Systems and Health Services and #4– Societal, Cultural and Environmental Influences on Health and the Health of Populations are relevant to this theme.

While the determinants of health apply generally to most research, they are not applicable to dissemination research.

Potential Research Areas

After discussing current initiatives in alcohol and illicit drugs research, group members identified the following potential new research questions:

- i. Changing the researcher as well as the user, e.g., assessing strategies for translating competence and skills; evaluating systems responses to knowledge translation
- ii. Comparisons to other fields to find compatible methodologies to adapt to addictions research and evaluate
- iii. Conceptual research in models for dissemination research, e.g., stages of change model; self-management model
- iv. Dissemination as a process of change
- v. Research involving exchanges with users, e.g., consumers, clinicians and policy makers.

Relevant Partners for this Theme

- Community and academic treatment centres
- Community and community participation
- Trainers
- Users, e.g., consumers, clinicians, policy makers.

G. Sex Differences and Gender Influences

It is essential that the variables of sex and gender⁴ be investigated across areas of alcohol and illicit drugs research. However, sex and gender are more than just control variables; they are issues that merit direct investigation themselves. The following general topics require further scrutiny, but do not represent an exhaustive listing.

- Accounting for developmental life-stages
- Acknowledgement and exploration of links among mental health, addiction, violence and trauma, including co-existing mental health and substance abuse problems
- Biological differences affected by hormones/genes and substances, i.e., the impact of substance use on women's bodies
- Consideration of sex and gender in all research themes, e.g., translational research
- Differential responses to alcohol and drugs (e.g., biological and disease trajectories) between women and men
- Differential treatment: differential effects of treatment, relapse, prevention, access to care, initiation, etc.
- Effects/implications of social inequality
- Gender specific research
- Heterogeneity: acknowledging diversity among women and between men and women
- Pregnancy: effect on fetus and children, stigma, parenting, etc.
- Roles in the addiction subculture: who influences whom to use substances
- Roles: motherhood, impact on children, etc.

All pillars are relevant to this theme, but require integration across the theme area. "Policy" should be added as a fifth pillar.

The following statement (agreed upon by the Sex Differences and Gender Influences working group at the Canadian Tobacco Control Research Summit held in April, 2002) was adopted: "All determinants are linked to this area, although Biology and Genetic Endowment have a primary (pre-determined) role. While 'gender' is a determinant of health, behaviours and use of health services and sex differences are contained within a 'biology and genetic environment,' and all determinants have a bearing in this area. Sex and gender interact with other determinants in complex ways." (*Report on the Canadian Tobacco Control Research Summit*, p. 52)

⁴ "Sex" refers to "biological trait." "Gender" refers to "the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis."

Potential Research Areas

After discussing current initiatives in alcohol and illicit drugs research, group members identified the following potential new research questions.

- i. How do we create treatment services that are accessible to women (e.g., pregnant and mal-diagnosed)?
- ii. How does stigma impact women and men differently (e.g., treatment, prevention, risk factors, recovery)?
- iii. How is the “consumer” involved in the research process?
- iv. What are appropriate gender-specific responses from police to judges in drug treatment court and the criminal justice process?
- v. What are the barriers to appropriate resources, information and related services such as housing?
- vi. What are the differential biological impacts?
- vii. What are the differential social/environmental impacts for women and men?
- viii. What are the disease trajectories and patterns (morbidity among women and men) for substance use?
- ix. What are the factors affecting sex-trade workers?
- x. What are the factors and dynamics influencing the medication of women and men? For example, why are more women than men being medicated with benzodiazepines?
- xi. What are the prevention and treatment issues related to gay, lesbian, bisexual and trans-gendered individuals?
- xii. What are the sex differences in developing dependency?
- xiii. What are the techniques of advertising and responses by women and men to marketing?
- xiv. What is effective FASD prevention (including drugs) for girls and women?
- xv. What is the differential effect of HIV/AIDS transmission through intravenous drug use, e.g., on pregnant women?
- xvi. What is the relationship between alcohol, drug and tobacco use for women and girls?
- xvii. What is the relationship between trauma, mental health and addiction?
- xviii. What is the relationship between violence in the family and alcohol and drug use?
- xix. Will the marijuana laws result in differential prescription of medical marijuana for women and men?

Relevant Partners for this Theme

- Aboriginal women's network
- Academics
- Alcohol producers (e.g., brewers)
- Canadian Centre on Substance Abuse (CCSA)
- Centres of Excellence for Women's Health
- Canadian Institutes of Health Research (CIHR)
- Corrections, policing, justice
- Homeless Secretariat
- National organization of visible, immigrant and minority women of Canada
- Not-for-profit organizations
- Social Sciences and Humanities Research Council (SSHRC)
- Status of Women Canada (SWC).



H. System Design and Evaluation, and Public Policy

This strategic research theme includes evaluation of systems, structure design, planning, integration, coordination and information management and how systems interact with policy, legislation and resource allocation. Systems include the addictions system and its interaction with health systems and public health, criminal justice, social welfare, education, children and family services, community, political system, and all levels of government, i.e., federal, provincial, municipal and international.

The addiction system includes the continuum of prevention and treatment activities.

Pillars #2–Applied Clinical, #3–Health Systems and Health Services and #4–Societal, Cultural and Environmental Influences on Health and the Health of Populations are most relevant to this theme.

All determinants of health are linked to this theme.

Potential Research Areas

After discussing current initiatives in alcohol and illicit drugs research, group members identified the following potential new research questions:

- i. Cost-benefits of supply reduction in other contexts and unintended consequences
- ii. Evaluation of how addiction services are placed and supported within provincial government structures and how that impacts services and outcomes at the community level, e.g., research on policy underpinnings that inform addictions and mental health integrations
- iii. Identifying individual and systems-level barriers and encouragers of help-seeking behaviours
- iv. Mapping of interactions of multiple systems with the addictions system and impacts on structure, process and outcomes
- v. Policy research issues such as legal and health grounding of issues, medical and legal aspects of changes to the cannabis law, and application of Canada Health Act principles to addiction services
- vi. Recognition of substance use problems in other supports (e.g., health, justice, education) and socio-economic costs
- vii. Research on benchmarks and performance measures of systems functioning and reaching common definitions of success.

All research initiatives in this area rely on the following key system supports:

- information systems and multi-systems information coordination
- investment in research infrastructure across the country to support this area of research
- multi-system partners and community stakeholders involvement in the process through funded collaboration, e.g., community advisory committees.

Relevant Partners for this Theme

- Communities
- Funders
- Justice, health, social services, education, housing, corrections, academic institutes, children's services, legal bodies
- Provincial, federal and municipal government
- Researchers
- Service providers
- Service users.

I. Treatment and Relapse Prevention

This strategic research theme includes:

- Treatment outcome and long-term follow-up
- Development of innovative measures of outcome including harm reduction
- Treatment matching, e.g., biological predictors, environmental factors
- Dismantling studies, e.g., therapist effects, mechanisms of change
- Biological correlates of treatment outcomes
- Clinical trials and integration of pharmacotherapy and psychotherapy
- Treatment gaps, e.g., innovative treatment for concurrent disorders, youth, families, offenders, disabled, elderly, etc.
- Process of change studies
- Effectiveness studies
- Harm reduction
- Transfer of knowledge and dissemination to the frontline.

All pillars and determinants of health are relevant to this theme.

Potential Research Areas

After discussing current initiatives in alcohol and illicit drugs research, group members identified the following potential new research questions:

- i. Comparisons of group vs. individual formats for treatment
- ii. Development and evaluation of new innovative programs for the following populations: Aboriginal Peoples, youth, offenders, individuals with concurrent disorders, families and children and disabled persons
- iii. Dismantling and process studies, e.g., effective components
- iv. Effectiveness studies, e.g., taking well-validated treatments developed in research environments to the field
- v. Efficacy studies to evaluate new promising treatments e.g., mindfulness, dialectical behaviour therapy
- vi. Harm reduction treatment approaches, considering effectiveness over the long-term, retention, outcomes and quality of life
- vii. Outcome studies in which a wide range of predictors are examined (e.g., biological factors, therapist characteristics, social support, psychopathology) in relation to treatment failure and success
- viii. Research on consumers, e.g., qualitative studies to understand processes of change.

Relevant Partners for this Theme

- Consumers
- Pharmaceutical industry
- Professional associations, e.g., Canadian Society of Addiction Medicine, social workers
- Treatment centres and therapists.

Implementation

Participants discussed implementation of a national, coordinated research agenda in terms of communities of interest. For discussion purpose, a community of interest was defined as a specific group of people who:

- share a common culture, beliefs, values and norms
- exhibit some awareness of their identity (personal/ social/ professional) as a group
- may or may not live in a defined geographical area
- share common needs and a commitment to meeting them
- are arranged in a social or professional structure according to relationships which the community has developed over a period of time.⁵

Based on this definition, the following communities of interest (in alphabetical order) were identified:

- Governments
- Leadership
- Non-governmental organizations
- Practitioners
- Researchers.

Participants self-selected into small working groups to discuss implementation issues related to their communities. Each community looked at: a definition of their community, the benefits of a national, coordinated research agenda, current strengths, supports and opportunities, as well as exploring challenges, recommendations for addressing these challenges and contributions their community could make to a national research agenda. The results of this group work follow.

Discussion Point

During plenary discussions, several participants noted the need for a conceptual framework and suggested the following draft recommendation:

“We recommend that a conceptual framework be developed covering the spectrum of substance use, abuse, addiction, prevention and treatment. This framework would (a) be based on a multidimensional model encompassing approaches, settings and populations and (b) provide a conceptual overview linking various system initiatives at national, regional and local levels.”

This recommendation requires further exploration at a later date.

⁵ Adapted from the World Health Organization definition.

Governments

This community represents government at all levels, i.e., national, provincial/territorial, regional and municipal. It includes government agencies, departments and commissions, e.g., the Alberta Alcohol and Drug Abuse Commission (AADAC).

Benefits

A national, coordinated research agenda could help inform governmental policy development and program planning. It could also facilitate the development of a common language and process, as well as provincial, regional and municipal coordination of issues and a sharing of resources.

Current Strengths, Supports and Opportunities

Current strengths, supports and opportunities are included through partnerships among the Canadian Institutes of Health Research (CIHR), the renewed Canada Drug Strategy and the Canadian Centre on Substance Abuse (CCSA). The Federal/Provincial/Territorial Advisory Council on Alcohol and Drugs is currently inactive, but has potential. Governments at different levels also have connections to eminent Canadian researchers. Other strengths include the capacity to keep issues related to alcohol and illicit drugs research on government agendas and the inter-sectoral nature of government work. In addition, there are dedicated resources in areas such as AADAC, Addictions Foundation of Manitoba (AFM), the Centre for Addiction and Mental Health (CAMH) and public health resources.

Challenges and Recommendations

	Challenge	Recommendation(s)
1.	Coordinated information systems	<ul style="list-style-type: none">• Explore ways for organizations to disseminate their information and expertise.• Develop an infrastructure for sharing information and data.• Synthesize and publish the best advice on complex issues and the outcomes of research from stakeholder organizations.• Hold national conferences on alcohol and illicit drugs research.• Build networks across Canada.
2.	Nurturing, coordinating and sustaining the national research agenda	<ul style="list-style-type: none">• Ensure there is accountability at all levels.• Require dissemination strategies as a component of all research proposals.• Provide incentives for academics, clinicians and policy makers to work together.

3.	Leadership and political profile	<ul style="list-style-type: none"> • Advocate for funding of addiction services under the Canada Health Act. • Foster more partnerships, especially at the municipal level. • Work to keep substance abuse and addictions on the political agenda at all levels of government.
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Contributions

This community can work to facilitate access to provincial data for research purposes. Government organizations could support the use of research and advocate (where advocacy is within their mandate) for its incorporation into policy. Other contributions include exploring cost-effective ways of networking (e.g., tele-health and expanded teleconferencing) and ensuring linkage mechanisms are in place among researchers and government decision makers at all levels, e.g., through (a) the use of front-line practitioners on advisory councils and academic research projects and (b) the FPT advisory mechanism. Governments could also play a role in solidifying the linkages among researchers and practitioners by ensuring that evaluation is a standing requirement built into all research.

Leadership

Leadership in the field of alcohol and illicit drugs research is spread over a broad range of organizations in various areas such as research, policy and funding. Leadership involves the entire community, including researchers, academics and other university stakeholders, government representatives with the potential to influence decision makers (e.g., the Canadian Institutes of Health Research – CIHR, Health Canada, Solicitor General Canada and heads of provincial organizations), non-governmental organizations (e.g., the Canadian Centre on Substance Abuse – CCSA), national advocacy groups (e.g., the Canadian Executive Council on Addictions – CECA) and police and corrections officials. Leaders can have many roles, such as resource and research management, advocacy, liaison, communication, knowledge exchange and implementation.

Benefits

Benefits to the leadership community from a national, coordinated research agenda could accrue in the following three areas.

a. Research and Capacity

The research agenda could facilitate a more systemic, evidence-based approach to the field, as well as a more efficient use of research resources. Other benefits could include support and implementation for knowledge exchange and for assuring continuity of care through sustained research momentum and accumulation. Capacity building could also be positively affected, e.g., recruitment and retention of researchers. The agenda could be a mechanism for providing increased opportunities for collaborative research and the use of evaluation to build credibility for projects. Ensuring publication and dissemination of research results could also be an important result.

b. Policy and Public Awareness

The national agenda could be an important tool for influencing policy and funding decisions, e.g., building credibility among funders; helping provinces make the case for resources. It could be used to inform the work of various networks (such as the FPT advisory committees) through support of evidence-based decision making and programs. Another important benefit would be providing a focus for advocacy (to get the addictions field on the public agenda) and raising public awareness, e.g., in the area of stigma. Another function of the agenda could be to act as a mechanism to sustain and focus (or refocus) the Canada Drug Strategy.

c. Coordination and Linkages

A national, coordinated agenda has the potential to (a) build synergy, (b) focus stakeholders as a team working toward the same goals across Canada and (c) promote integration/collaboration across systems, e.g., health and corrections. The development of better coordination between treatment systems would be a potential benefit. The agenda would assist in the coordination of international efforts and potentially increase Canadian influence around the world.

Current Strengths, Supports and Opportunities

Strengths, supports and opportunities include increased visibility for alcohol and illicit drugs research, e.g., this area is on the government agenda and is being reported to Parliament. Funding has increased, as has awareness of addiction issues in the broader health system. There is also the opportunity to leverage existing funding to support collaborative research. In addition, partners in the field are working together in a spirit of cooperation and willingness to serve common interests, e.g., the existence of CECA to provide leadership. Leaders are generally aware of and recognize the importance of research. Increased professionalism in the field has resulted in raising the bar for research and increasing knowledge exchange. There is support for openness to various ideologies and paradigms. Health Canada's efforts in the area of best practices are a useful asset to the field.

Challenges and Recommendations

	Challenge	Recommendation(s)
1.	Alignment of policy, practice and research	<ul style="list-style-type: none"> • Ensure research is represented in governmental decision making. • Engage the right people, e.g., develop and disseminate an alignment plan targeting decision-makers. • Address issues related to timeliness of knowledge transfer for users of research results. • Develop a coordinated approach to dissemination of research. • Invest in best practices.
2.	Contradictory research Results	<ul style="list-style-type: none"> • Focus on common ground.
3.	Management of expectations	<ul style="list-style-type: none"> • Increase understanding of what research can accomplish and set realistic expectations.

Contributions

This community could contribute to the implementation of the agenda through the development of a leadership group as a mechanism to sustain momentum related to the national research agenda. This group would meet as an advisory body, then choose one or two projects to define and implement based on agreed criteria, e.g., work to identify challenges and opportunities and plans to address them, identify mechanisms to operationalize (i.e., fund and implement) the key themes from this forum, including those that may not be chosen to be part of the agenda. An inventory of existing research is another potential contribution that could be made by this leadership group.

Non-Governmental Organizations

This community is a diverse group involved in many different activities and serving many communities and client groups. It includes service providers, funders, researchers and capacity builders.

Benefits

As service providers and consumers of research, this community would benefit from development and dissemination of best practices, support for ongoing funding outcomes and increased recognition as part of the research team. A national research agenda would benefit (a) funder-NGOs by offering guidance to their funding policies and (b) NGOs generally through consolidating the base of available partner agencies and expanding opportunities for participation in research.

Current Strengths, Supports and Opportunities

Many funders are “evidence-hungry.” A solid evidence base is imperative for supporting NGO activities. NGOs are meaningful organizations with unique characteristics connected and committed to specific causes. Their voluntary sector component is a major strength. NGOs can facilitate translational research and linkages between researchers and their constituencies, e.g., through the provision of research subjects. They have experience and competencies working with specific populations and can provide first-hand experience of staff and volunteers related to recovery.

Challenges and Recommendations

	Challenge	Recommendation
1.	Access, e.g., awareness, format, practice guidelines	<ul style="list-style-type: none">• Ensure funders are engaged in the research process to facilitate allocation of funding and development of evidence-based strategies for service providers.
2.	Isolation among communities of expertise	<ul style="list-style-type: none">• Develop mechanisms that encourage community building, e.g., bridging programs where researchers work with the community.
3.	Coordination of interdependent communities of expertise	<ul style="list-style-type: none">• Consider government as both a funder and consumer; they have a huge impact on strategies that influence collaborative mechanisms among communities.
4.	NGO interactions with different levels of government	<ul style="list-style-type: none">• Coordinate an informal network for communication and information exchange through NGOs that can highlight needs, policy conflicts and help with the identification of research needs.

Contributions

The NGO community can play an active role in bridging levels of government with themselves, communities of need and the research community. NGOs can provide sites for research and act as funding partners for research, e.g., through a mechanism for transferring funds.

Practitioners

Practitioners work within the “use-to-abuse” continuum. They intervene and act to address problems, risks and harm, as well as needs from enforcement to advocacy, prevention, assessment and treatment of individuals, families, groups, communities and society. Practitioners include: health care professionals such as physicians, nurses, pharmacists and community health workers, counselors and therapists, enforcement and policing personnel, educators and trainers, Aboriginal healers, pastoral care workers, community and organizational development workers. Practitioners are change agents who apply knowledge in the interest of appropriate action.

Benefits

Benefits to this community from the implementation of a national coordinated research agenda include increased participation in agenda setting and the pursuit of practice-based knowledge. Other benefits relate to the training and education of practitioners, development of evidence-based standards of practice, clarification of practice for policy makers and funders, and evaluation of practice impacts. A national research agenda could also facilitate the iterative creation of useful knowledge and its dissemination, continuous quality improvement (CQI) and the improvement of contacts and linkages among practitioners.

Current Strengths, Supports and Opportunities

Capacities, competencies, experience, legislation, situations or trends existing in Canada that would facilitate the implementation of this research agenda include:

- Capability for making the practice context a living laboratory for researching needs, risk and harm
- Growth of articulated evidence-based practices and a collaborative approach to research
- Some infrastructure to facilitate traditions of practice-based wisdom
- Accreditation programs
- Continuous quality improvement (CQI)
- Tapping into the research potential of practitioners
- National native addictions information management
- Data systems
- Increased experience with evaluation and research.

Challenges and Recommendations

	Challenge	Recommendation(s)
1.	Broadening the evidence base of practice	<ul style="list-style-type: none"> • Build competency through training initiatives. • Shift from a research-driven agenda to a collaborative agenda that includes populations and consumer. • Develop a learning pyramid that disseminates necessary knowledge.
2.	Development and utilization of practitioner research capacity	<ul style="list-style-type: none"> • Build an organizational development process for research and research dissemination. • Make evaluation and CQI inherent in the process. • Change the emphasis of information systems from management- to client-driven.
3.	Practitioner and community ambivalence to research opportunities	<ul style="list-style-type: none"> • Develop participatory strategies such as setting a community agenda. • Address issues related to confidentiality.

Contributions

The practice context is a living laboratory for researching need, risk and harm. Practitioners can provide both data and input to research questions, as well as a collaborative approach to research. They also enable the development of education and training skills in best practices and applied research skills.

Researchers

This community⁶ includes researchers working in many environments, e.g., university and non-university, NGOs, hospital-based researchers, private consultants and industry. Types of research include biological, clinical, epidemiological, social and community in both basic and applied areas. Government grant support is important for many researchers.

Key features of this community include open communication, a focus on excellence, peer-reviewed research and researcher-driven investigation.

Benefits

Benefits to this community from the implementation of a national coordinated research agenda include:

- An environment that fosters interdisciplinary, collaborative teams of researchers working on cross-disciplinary research opportunities and encourages programs to perform research and accumulate knowledge
- Capacity building of both human and institutional resources through, e.g.,
 - increased or new funding resulting in the ability to address new research questions and develop new enthusiasm for the field of addiction and illicit drugs research
 - greater employment opportunities for current and new researchers
 - creation or improvement of national data bank(s) and coordinated facilities among “mass” research areas, and
 - cross-disciplinary training for researchers at the national level.
- Enhancement of Canada’s position in the international research community
- Development of community knowledge and an increased ability to have an impact, e.g., on policies that help to improve the health of Canadians.

Current Strengths, Supports and Opportunities

The community is highly interdisciplinary with strong international and community linkages and pre-existing training models. The available research capacity includes a core of dedicated researchers with the ability to make important contributions to this area. There is a supportive public and health culture and few ideological constraints. The demand for evidence-based decisions is supported by an efficient infrastructure (including data collection and data bases) and any improvement of this infrastructure provides a significant opportunity to increase capacity. Organizations such as the Canadian Centre on Substance Abuse (CCSA) and the Canadian Institutes of Health Research (CIHR) are supportive of the research community. The Canadian Psychiatric Research Federation (CPRF) has funding specifically available for addictions research. National meetings and conferences help to foster networks and linkages among researchers.

⁶ This report synthesizes the work of two groups focused on researchers as a community of interest.

The current environment of policy change is favourable to the study of issues and new research questions such as harm reduction and the revisions to cannabis legislation. The renewed Canada Drug Strategy could play a major role, e.g., in facilitating the integration of addictions and mental health.

Challenges and Recommendations

	Challenge	Recommendation(s)
1.	Accessibility to data	<ul style="list-style-type: none"> • Create or enhance databank(s) (e.g., epidemiological, genetic, survey) funded by government but arms length from government. • Pool resources at all levels. • Ensure data becomes available within a reasonable time after funding from networks.
2.	National conference on addictions	<ul style="list-style-type: none"> • Create a forum for significant and meaningful discussions of national interest (e.g., study groups around meetings) and to advance addictions research training.
3.	Longitudinal studies	<ul style="list-style-type: none"> • Buy into new or ongoing surveys with alcohol and illicit drug specific questions. • Take advantage of pre-existing surveys.
4.	Capacity building	<ul style="list-style-type: none"> • Increase opportunities for Canadian researchers to improve their expertise, e.g., training programs at the undergraduate level prior to graduate studies. • Develop facilities for producing drugs, e.g., access to drug-testing laboratories. • Ensure sustained funding and resources. • Improve peer-reviewed capacities.
5.	Multidisciplinary environment and collaboration	<ul style="list-style-type: none"> • Ensure sustainability and long-term commitment to alcohol and illicit drugs research themes. • Provide the opportunity for the community to meet, e.g., through CIHR sponsored meetings. • Develop research centres, e.g., thematic, regional. • Provide support for the development and training of interdisciplinary teams, e.g., through CIHR. • Develop a centralized area for coordination of information sharing and dissemination, e.g., a Web site accessible through CCSA and other partners.

		<ul style="list-style-type: none"> Evaluate the renewed Canada Drug Strategy and its associated research on an ongoing basis, e.g., using the Australian model of internal self-evaluation.
6.	Policy change	<ul style="list-style-type: none"> Foster the ability for rapid response to policy change, e.g., through integration of policy and research and a virtual centre for studying policy.
7.	Working with communities	<ul style="list-style-type: none"> Take a different, formative approach to support researchers, e.g., partnership with agencies that work, investments in communities (such as through grants).

Contributions

This community has the potential to contribute:

- Support within the research community for this agenda
- Continuous quality control and peer review in the field (availability of researchers)
- Existing networks and models
- Expertise for the training and mentoring of new researchers
- Participation in research advisory committees
- Protocols for establishing/accessing a national database
- The voice of the community to the national research agenda, e.g., through participation at various venues, meetings and conferences to provide our input and bring back feedback to respective organizations
- Willingness to work with non-researchers and to do research informed by their input.

Closing Remarks

Dr. Rémi Quirion, Scientific Director, CIHR Institute of Neurosciences, Mental Health and Addictions, thanked participants for their energy and enthusiasm over the course of the Forum. He emphasized CIHR's commitment to the development of a coordinated national research agenda for alcohol and illicit drugs, whether through Requests for Applications (RFA), or training and infrastructure support. Dr. Quirion also emphasized that CIHR cannot accomplish everything required by a national agenda alone – partnerships are essential at all levels to ensure success. In closing, he asked participants to stay involved in the process, particularly in the creation of RFAs.

Mr. Michel Perron, Chief Executive Officer, CCSA, spoke of his organization's commitment through its mandate to advance the work started at the Forum in collaboration with other partners. He noted the need to (a) institutionalize alcohol and illicit drugs research so that it remains on the political agenda and (b) recontextualize addictions in order to move away from stereotypes and have a broader impact on systems. Mr. Perron also noted that the research agenda has to be a living, dynamic document subject to continuous review and evaluation. In closing, he expressed support for several initiatives proposed at the Forum (e.g., a standing research advisory group) and pledged CCSA support to make them happen.

Appendix #1: A Strategic Framework

A. Themes

For the purposes of this workshop, themes are research areas or applications that are fundamental to addressing health and social issues associated with alcohol and illicit drugs in Canada. Themes tend to cross disciplines, determinants of health and CIHR research pillars. They may vary in scope but should be focused enough to enable the identification of appropriate approaches or methodologies.

- **CIHR Research Pillars**

Which research pillars are relevant to this theme area?

- Basic biomedical, e.g., genetic, molecular, cellular, tissue physiology
- Applied clinical, e.g., drugs, devices
- Health systems, health services, e.g., quality of care, cost-effectiveness
- Societal, cultural and environmental influences on health and the health of populations.

- **Determinants of Health**

Which of the following determinants of health are closely linked to this theme area?

- Biology and genetic endowment
- Culture
- Education
- Employment and working conditions
- Gender
- Health behaviours and practices, coping skills
- Healthy child development
- Access to health services
- Income and social status
- Physical and social environments (e.g., home / family, workplace, recreation)
- Social support networks.

- **Potential Research Questions**

These are examples of research questions that could fit into a theme area. They give an indication of the scope of the theme area and help define how the theme could contribute to addressing health and social issues associated with alcohol and illicit drugs in Canada.

- What research questions are you aware of that are being investigated in this theme area?
- What new research questions could provide significant value in this theme area?

- **Potential Impact**

What impact (outcomes) could research have in this theme area? Whom would it affect? How could it affect them?

B. Implementation

- **Current Strengths and Supports**

What capacities, competencies, experience or situations exist in Canada that would facilitate the implementation of this research agenda?

- **Opportunities**

What initiatives and trends could we take advantage of to facilitate the implementation of this research agenda?

- **Current Challenges**

What additional capacities, competencies, expertise or supports are required to ensure the success of this research agenda? Identify gaps or problems and propose solutions to address each one.

Appendix #2: Key Determinants of Health⁷

KEY DETERMINANTS	UNDERLYING PREMISES
Income and Social Status	Health status improves at each step up the income and social hierarchy. High income determines living conditions such as safe housing and ability to buy sufficient good food. The healthiest populations are those in societies which are prosperous and have an equitable distribution of wealth.
Social Support Networks	Support from families, friends and communities is associated with better health. The importance of effective responses to stress and having the support of family and friends provides a caring and supportive relationship that seems to act as a buffer against health problems.
Education	Health status improves with level of education. Education increases opportunities for income and job security, and equips people with a sense of control over life circumstances - key factors that influence health.
Employment/ Working Conditions	Unemployment, underemployment and stressful work are associated with poorer health. People who have more control over their work circumstances and fewer stress related demands of the job are healthier and often live longer than those in more stressful or riskier work and activities.

⁷ Health Canada. *Towards a Common Understanding: Clarifying the Core Concepts of Population Health: A Discussion Paper*. Cat. No. H39-391/1996E. ISBN 0-662-25122-9

KEY DETERMINANTS	UNDERLYING PREMISES
Social Environments	<p>The array of values and norms of a society influence in varying ways the health and well-being of individuals and populations.</p> <p>In addition, social stability, recognition of diversity, safety, good working relationships, and cohesive communities provide a supportive society that reduces or avoids many potential risks to good health. Studies have shown that low availability of emotional support and low social participation have a negative impact on health and well-being.</p>
Physical Environments	<p>Physical factors in the natural environment (e.g., air, water quality) are key influences on health. Factors in the human-built environment such as housing, workplace safety, community and road design are also important influences.</p>
Personal Health Practices and Coping Skills	<p>Social environments that enable and support healthy choices and lifestyles, as well as people's knowledge, intentions, behaviours and coping skills for dealing with life in healthy ways, are key influences on health.</p> <p>Through research in areas such as heart disease and disadvantaged childhood, there is more evidence that powerful biochemical and physiological pathways link the individual socio-economic experience to vascular conditions and other adverse health events.</p>
Healthy Child Development	<p>The effect of prenatal and early childhood experiences on subsequent health, well-being, coping skills and competence is very powerful. Children born in low-income families are more likely than those born to high-income families to have low birth weights, to eat less nutritious food and to have more difficulty in school.</p>

KEY DETERMINANTS	UNDERLYING PREMISES
Biology and Genetic Endowment	The basic biology and organic make-up of the human body are a fundamental determinant of health. Genetic endowment provides an inherited predisposition to a wide range of individual responses that affect health status. Although socio-economic and environmental factors are important determinants of overall health, in some circumstances genetic endowment appears to predispose certain individuals to particular diseases or health problems.
Health Services	Health services, particularly those designed to maintain and promote health, to prevent disease, and to restore health and function, contribute to population health.
Gender	Gender refers to the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. "Gendered" norms influence the health system's practices and priorities. Many health issues are a function of gender-based social status or roles. Women, for example, are more vulnerable to gender-based sexual or physical violence, low income, lone parenthood, gender-based causes of exposure to health risks and threats (e.g., accidents, STDs, suicide, smoking, substance abuse, prescription drugs, physical inactivity). Measures to address gender inequality and gender bias within and beyond the health system will improve population health.
Culture	Some persons or groups may face additional health risks due to a socio-economic environment, which is largely determined by dominant cultural values that contribute to the perpetuation of conditions such as marginalization, stigmatization, loss or devaluation of language and culture and lack of access to culturally appropriate health care and services.

Appendix #3: Participants

Planning Committee

Chair

Dr. Colleen Anne Dell
National Research Advisor, CCENDU
Canadian Centre on Substance Abuse
75 Albert St., Suite 300
Ottawa, ON K1P5E7
Tel.: 613-235-4048 ext. 235
Fax: 613-235-8101
E-mail: cdell@ccsa.ca

Members

Ms. Patricia Begin
Director of Research and Policy
Canadian Centre on Substance Abuse
75 Albert St., Suite 300
Ottawa, ON K1P5E7
Tel.: 613-235-4048
Fax: 613-235-8101
E-mail: pbegin@ccsa.ca

Mr. John Borody
Chief Executive Officer
Addictions Foundation of Manitoba
1031 Portage Avenue
Winnipeg, MB R3G 0R8
Tel.: 204-944-6200
Fax: 204-786-7768
E-mail: jborody@afm.mb.ca

Ms. Louise Déry
Drug Strategy and Controlled Substances
Programme Health Canada
MacDonald Building
123 Slater Street, Rm D287, AL 3502D1
Ottawa, ON K1A 0L9
Tel.: 613-948-2160
E-mail: Louise_Dery@hc-sc.gc.ca

Ms. Astrid Eberhart
Assistant Director
Canadian Institutes of Health Research
410 Laurier Avenue West
9th Floor Address Locator 4209A
Ottawa, ON K1A 0W9
Tel.: 613-941-4643
Fax: 613-941-1040
E-mail: aeberhart@cihr.ca

Dr. Brian Grant
Director
Correctional Services Canada
Addictions Research Centre
23 Brook Street
Montague, PE C0A 1R0
Tel.: 902-838-5905
Fax: 902-838-3537
E-mail: grantba@csc-scc.gc.ca

Ms. Rachel Huggins
Policy Analyst
Solicitor General Canada
340 Laurier Ave West
Ottawa, ON K1A 0P8
Tel.: 613-990-9931
Fax: 613-993-5252
E-mail: hugginr@sgc.gc.ca

Mr. Michel Perron
Chief Executive Officer
Canadian Centre on Substance Abuse
75 Albert St., Suite 300
Ottawa, ON K1P5E7
Tel.: 613-235-4048
Fax: 613-235-8101
E-mail: mperron@ccsa.ca

Dr. Rémi Quirion
Scientific Director, Institute of Neurosciences,
Mental Health and Addiction
Institute of Neurosciences, Mental Health and
Addiction
Douglas Hospital Research Centre
6875 Blvd Lasalle
Verdun, QC H4H 1R3
Tel.: 514-761-6131
E-mail: quirem@douglas.mcgill.ca

Dr. Patrick Smith
Vice President, Clinical Programs
Centre for Addiction and Mental Health
33 Russell Street, Room 3048
Toronto, ON M5S 2S1
Tel.: 416-595-6567
Fax: 416-595-6805
E-mail: patrick_smith@camh.net

Regrets

Ms. Sharon Clarke, Director,
National Native Addictions Partnership Foundation

Mr. Michael Degagne, Director, Aboriginal Healing Foundation

Reference Group

Dr. Rick Csiernik
Graduate Studies Coordinator and Associate
Professor
School of Social Work, Kings University College
University of Western Ontario
125 East 8th Street
Hamilton, ON L9A 4Y7
Tel.: 905-383-7890
E-mail: rcsierni@uwo.ca

Dr. Anthony Phillips
University of British Columbia
Department of Psychiatry
2250 Wesbrook Mall
Vancouver, BC V6T 1W6
Tel.: 604-822-4624
Fax: 604-822-7756
E-mail: aphillips@cortex.psych.ubc.ca

Dr. Christiane Poulin
Professor and Canada Research Chair in
Population Health and Addictions
Dalhousie University
Community Health and Epidemiology
5790 University Avenue
Halifax, NS B3H 1V7
Tel.: 902-494-1921
Fax: 902-494-1597
E-mail: christiane.poulin@dal.ca

Dr. Jane Stewart
Professor
Concordia University
Centre for Studies in Behavioural Neurobiology
Department of Psychiatry
1455 de Maisonneuve Blvd West
Montréal, QC H3G 1M8
Tel.: 514-848-2193
Fax: 514-848-2817
E-mail: stewart@csbn.concordia.ca

Dr. Richard Thatcher
Principal Consultant and Partner, Socio-Tech
Consulting Services
National Native Addictions Partnership
Foundation -
Box 184
Craven, SK S0G 0W0
Tel.: 306-731-3819
Fax: 306-731-2283
E-mail: rthatch@msn.com

Regrets

Dr. Serge Brochu, Centre international de
criminologie comparée, Université de Montréal

Dr. Luc Chabot, Consultant, Relais-Expert Conseil

Dr. Louise Nadeau, Professor, Department of
Psychology, University of Montreal

Ms. Nancy Poole, Research Network Development

Participants

Mr. Edward Adlaf
Head, Population and Life Course Studies
Centre for Addiction and Mental Health
33 Russell Street
Toronto, ON M5S 2S1
Tel.: 416-535-8501 ext. 4506
Fax: 416-595-6899
E-Mail: Edward_Adlaf@camh.net

Dr. John Anderson
Medical Consultant
BC Ministry of Health Services
Mental Health and Addictions
6-1515 Blanchard Street
Victoria, BC V8W 3C8
Tel.: 250-952-2301
Fax: 250-952-1689
E-mail: john.anderson@gems3.gov.bc.ca

Ms. Nancy Bradley Usher
Executive Director
The Jean Tweed Centre
215 Evans Avenue
Toronto, ON M8Z 1J5
Tel.: 416-255-7359 ext 223 (assistant ext 222)
Fax: 416-255-9021
E-mail: nancyusher@jeantweed.com

Dr. Richard Brière
Assistant Director, Institute of Neurosciences,
Mental Health and Addiction
Institute of Neurosciences, Mental Health and
Addiction
Douglas Hospital Research Centre
6875 Blvd Lasalle
Verdun, QC H4H 1R3
Tel.: 514-761-6131 ext 3930
Fax: 514-888-4060
E-mail: richard.briere@douglas.mcgill.ca

Ms. Tracy Butler
Program Director
Harbour Light Addiction and Rehabilitation
Centre
35 Torn gat Crescent
St. John's, NF A1E 5W9
Tel.: 709-753-5810 or 5811
Fax: 709-753-1116
E-mail: tlbutler@roadrunner.nf.net

Dr. Tulio Caputo
Associate Professor
Department of Sociology and Anthropology
Carleton University
50 Elmbank Crescent
Ottawa, ON K1S 5B6
Tel.: 613-727-8812
Fax: 613-727-0213
E-mail: tcaputo@ccs.carleton.ca

Mr. Wayne Christian
Executive Director
Community Health Associates of BC
#2 3003 29th Avenue
Vernon, BC V1T 1Y9
Tel.: 250-503-1123
Fax: 250-503-1733
E-mail: wmchristian@shawcable.com

Mr. Peter Coleridge
Vice President, Communications, Education and
Community Health
Centre for Addiction and Mental Health
33 Russell Street
Toronto, ON M5S 2S1
Tel.: 416-595-6650
Fax: 416-593-4694
E-mail: peter_coleridge@camh.net

Dr. Jocelyn Cook
Research Analyst
Health Canada
FASD Team
C957 Jeanne Mance AL 1909C2
Tunney's Pasture
Ottawa, ON K1A 0K9
Tel.: 613-954-5697
Fax: 613-946-2324
E-mail: jocelynn@hotmail.com;
jocelynn_cook@hc-sc.gc.ca

Dr. Shawn Currie
Adjunct Assistant Professor & Clinical
Psychologist
Depts. of Psychiatry and Psychology
University of Calgary
Addiction Centre – Foothills Hospital
1403 – 29th St. N.W.
Calgary, AB T2N 2T9
Tel.: 403-944-2009
Fax: 403-944-2056
E-mail: scurrie@ucalgary.ca

Ms. Halina Cyr
Drug Strategy and Controlled Substances
Programme Health Canada
MacDonald Building
123 Slater Street, Rm D287, AL 3502D1
Ottawa, ON K1A 1B9
E-mail: halina_cyr@hc-sc.gc.ca

Ms. Denise De Pape
Manager, Healthy Lifestyles
Toronto Public Health
55 Town Centre Court, Ste. 500
Toronto, ON M1P 4X4
Tel.: 416-338-7515
Fax: 416-338-6299
E-mail: ddepape@toronto.ca

Dr. Rebecca Dempster
Psychologist, Law and Mental Health Program
and Concurrent Disorders Service
Centre for Addiction and Mental Health
Toronto, ON M5S 2S1
Tel.: 416-535-8501 ext 6521
Fax: 416-595-6399
E-mail: Rebecca_Dempster@camh.net

Ms. Susana Deranger
National Native Addictions Partnership
Foundation
26 Petersmeyer Street
Regina, SK S4R 7P7
Tel.: 306-545-4536
E-mail: matsuin@excite.com

Dr. Suzanne Desjardins
Director, Office of Research and Surveillance
Drug Strategy and Controlled Substances
Programme
Health Canada
123 Slater Street, A.L. 3503B
Ottawa, ON K1A 1B9
Tel.: 613-946-4223
E-mail: suzanne_desjardins@hc-sc.gc.ca

Dr. Magali DuFour
Docteur en psychologie, responsable du Certificat
en toxicomanies
Université de Montréal
3744 Jean-Brillant, 3ième étage
CP 6128 succ. Centre-ville
Montréal, QC H3C 3J7
Tel.: 514-343-6111 ext 1-3451
Fax: 514-343-2447
E-mail: magali.dufour@umontreal.ca

Dr. Gordon Duval
Bioethicist
Centre for Addiction and Mental Health/
University of Toronto Joint Centre for Bioethics
88 College Street
Toronto, ON M5G 1L4
Tel.: 416-979-4255
Fax: 416-260-4128
E-mail: gordon_duval@camh.net

Ms. Naida Eftodie
Evening Supervisor
Salvation Army
127-2695 Main Street
Winnipeg, MB R2V 4S9
Tel.: 204-334-4724
Fax: 204-943-8898
E-mail: neftodie@shaw.ca

Dr. Patricia Erickson
Senior Scientist
Centre for Addiction and Mental Health
Room T-418, 33 Russell St.
Toronto, ON M5S 2S1
Tel.: 416-535-8501 x 4497
Fax: 416-595-6899
E-mail: Pat_Erickson@camh.net

Mr. James Froh
Program Consultant
Saskatchewan Health, Community Care and
Population
Health Branches
3475 Albert St.
Regina, SK S4S 6X6
Tel.: 306-787-2633
Fax: 306-787-9576
E-mail: jfroh@health.gov.sk.ca

Ms. Karen Garabedian
Research Officer
Canadian Centre on Substance Abuse
75 Albert St., Suite 300
Ottawa, ON K1P5E7
Tel.: 613-235-4048
Fax: 613-235-8101
E-mail: kgarabedian@ccsa.ca

Ms. Janine Gates
Gates Consulting
18359 McCowan Road
Mount Albert, ON L0G 1M0
Tel.: 905-473-1662
Fax: 905-473-1663
E-mail: janine.gates@sympatico.ca

Dr. Kathryn Gill
Director of Research
Addictions Unit
McGill University
1604 Pine Avenue West
Montréal, QC H3G 1B4
Tel.: 514-934-1934 ext 42395 (clinic); ext 44594 (lab)
Fax: 514-934-8262
E-mail: kathryn.gill@mcgill.ca

Mr. Elliot Goldner
Head
Mental Health Evaluation and Community Care Unit
University of British Columbia
605-1125 Howe Street
Vancouver, BC V6Z 2K8
Tel.: 604-682-3504 or 3502
Fax: 604-682-3535
E-mail: goldnee@interchange.ubc.ca

Dr. Kathryn Graham
Senior Scientist and Head, Social Factors and Prevention Initiatives
Centre for Addiction and Mental Health
Suite 200, 100 Collip Circle
London, ON N6G 4X8
Tel.: 519-858-5000
Fax: 519-858-5199
E-mail: kgraham@uwo.ca

Dr. Lorraine Greaves
Executive Director
BC Centre of Excellence for Women's Health
E311-4500 Oak Street
Vancouver, BC V6H 3N1
Tel.: 604-875-2633
Fax: 604-875-3716
E-mail: lgreaves@cw.bc.ca

Ms. Sally Greenhill
Manager, Policy and Business Planning
Alberta Alcohol and Drug Abuse Commission
#246, 10909 Jasper Avenue
Edmonton, AB T5J 3M9
Tel.: 780-427-6172
Fax: 780-415-8998
E-mail: sally.greenhill@aadac.gov.ab.ca

Mr. Peter Greenlaw
Royal Canadian Mounted Police
Drug Awareness Service
4100 4th Avenue
Whitehorse, YK Y1A 1H5
Tel.: 867-667-5530
E-mail: peter.j.greenlaw@rcmp-grc.gc.ca

Ms. Carol Hopkins
Chairperson, National Youth Solvent Addiction Committee / Executive Director
Nimkee NupiGawagan Healing Centre
RR #1
Muncey, ON N0L 1Y0
Tel.: 519-264-2777 ext 226
Fax: 519-264-1552
E-mail: carhop@netrover.com

Ms. Darlene James
Alberta Alcohol and Drug Abuse Commission
#247, 10909 Jasper Avenue
Edmonton, AB
Tel.: 780-422-1213
Fax: 780-415-8998
E-mail: darlene.james@aadac.gov.ab.ca

Dr. Florence Kellner
Professor
Carleton University
Dept. of Sociology and Anthropology
29 Broadway Avenue
Ottawa, ON K1S 2V4
Tel.: 613-233-3651
Fax: 613-520-4062
E-mail: fkellner@ccs.carleton.ca

Dr. Dennis Kimberley
Professor
Memorial University
School of Social Work
St. John's College
St. John's, NF A1C 5S7
Tel.: 709-737-8145 (university); 709-579-1737 (clinic)
Fax: 709-737-2408
E-mail: dkimberl@mun.ca;
dkimberley@roadrunner.nf.net

Mr. Siu-Ming Kwok
Doctoral Candidate, University of Calgary
212 - 7215 Southridge Ave.
Prince George, BC V2N 4Z3
Tel.: 250-964-8098
Fax: 250-964-8098
E-mail: smkwok@ucalgary.ca

Dr. Michel Landry
Directeur des services professionnels et de la recherche
Centre Dollard-Cormier
950 de Louvain est
Montréal, QC H2M 2E8
Tel.: 514-385-0046
Fax: 514-385-5728
E-mail: michel.landry@ssss.gouv.qc.ca

Dr. Francesco Leri
Assistant Professor
University of Guelph
Department of Psychology
College of Social and Applied Human Sciences
Guelph, ON N1G 2W1
Tel.: 519-824-4120, ext 8264
Fax: 519-837-8629
E-mail: fleri@uoguelph.ca

Dr. Marco Leyton
Assistant Professor
McGill University
Departments of Psychiatry and Neurology &
Neurosurgery
1033 Pine Avenue West, Room 210
Montréal, QC H3A 1A1
Tel.: 514-398-5804
Fax: 514-398-4866
E-mail: marco.leyton@mcgill.ca

Dr. David Marsh
Clinical Director, Addiction Medicine Program
Centre for Addiction and Mental Health
33 Russell Street
Toronto, Ontario M5S 2S1
Tel.: 416-535-8501 Ext 4459
Fax: 416-595-6728
E-mail: david_marshall@camh.net

Dr. Shelley McMain
Head, Dialectical Behaviour Therapy Clinic
Centre for Addiction and Mental Health
33 Russell Street
Toronto, ON M5S 2S1
Tel.: 416-535-8501 ext 6852
Fax: 416-595-6399
E-mail: Shelley_Mcmain@camh.net

Dr. David Patton
Research Director
Addictions Foundation of Manitoba
1031 Portage Avenue
Winnipeg, MB R3G 0R8
Tel.: 204-944-6291
Fax: 204-786-7768
E-mail: dpatton@afm.mb.ca

Staff Sergeant Michel Pelletier
Director, Drug Awareness Service
Royal Canadian Mounted Police
Drugs and Organized Crime Directorate
1200 Vanier Parkway, Suite H-501L
Ottawa, ON K1A 0R2
Tel.: 613-993-2501
Fax: 613-990-0744
E-mail: michel.pelletier@rcmp-grc.gc.ca

Mr. Dan Reist
President
Kaiser Foundation
2210-1177 West Hastings Street
Vancouver, BC V6E 2K3
Tel.: 604-681-1888
Fax: 604-685-9046
E-mail: dreist@kaiserfoundation.ca

Dr. Robin Room
Professor and Director
Centre for Research on Alcohol and Drugs
Stockholm University
160 Sveavagen, 3. tr
104 35 Stockholm,
Tel.: 46 8 674 7047
Fax: 46 8 674 7686
E-mail: robin.room@sorad.su.se

Mr. Edward Sawka
Director, Research Services
Alberta Alcohol and Drug Abuse Commission
6th floor Pacific Plaza
10909 Jasper Avenue
Edmonton, AB T5J 3M9
Tel.: 780-422-0140
Fax: 780-422-5766
E-mail: ed.sawka@aadac.gov.ab.ca

Dr. Peter Selby
Head, Nicotine Dependence Clinic
Centre for Addiction and Mental Health
33 Russell Street
Toronto, Ontario M5S 2S1
Tel.: 416-535-8501 ext 6859
Fax: 416-260-4170
E-mail: Peter_selby@camh.net

Dr. Eric Single
Research Associate
Canadian Centre on Substance Abuse
University of Toronto
6 Mervyn Avenue
Etobicoke, ON M9B 1M6
Tel.: 416-231-1505
Fax: 416-231-9182
E-mail: e.single@utoronto.ca

Mr. Wayne Skinner
Clinical Director, Concurrent Disorder Program
Centre for Addiction and Mental Health
33 Russell Street
Toronto, ON M5S 2S1
Tel.: 416-535-8501 ext. 6387
Fax: 416-595-6899
E-mail: wayne_skinner@camh.net

Mr. Ron Tizzard
Addictions Consultant
49 Stapleton's Road
Paradise, NF
Tel.: 709-895-0495
E-mail: rtizzard@roadrunner.nf.net

Dr. Rachel Tyndale
Associate Professor
University of Toronto
Dept of Pharmacology
Rm 4336, 1 King's College Circle
Toronto, ON M5S 2A8
Tel.: 416-978-6374
Fax: 416-978-6395
E-mail: r.tyndale@utoronto.ca

Mr. Brian Wilbur
Director, Addiction Services
Nova Scotia Office of Health Promotion
12th Floor, Joseph Howe Building
1690 Hollis Street
Halifax, NS B3J 2R8
Tel.: 902-424-7220
Fax: 902-424-1740
E-mail: wilbur@gov.ns.ca

Dr. Cameron Wild
Associate Professor
Centre for Health Promotion Studies
Department of Public Health Sciences
University of Alberta
Addiction and Mental Health Research Laboratory
13-103 Clinical Sciences Building
Edmonton, AB T6G 2G3
Tel.: 780-492-6752
Fax: 780-492-9579
E-mail: cwild@phs.med.ualberta.ca

Health Canada Observers:

Mr. Luc Goudreault
Ms. Barbara Kennedy
Ms. Colleen Ryan

Support:

Ms. Cynthia Holmes
Ms. Jordan Fairbairn
Ms. Shannen Murphy

Communications:

Mr. Richard Garlick

Consultants:

Strachan•Tomlinson and Associates
Synthesis of Pre-Forum Questionnaires: Paul Tomlinson
Process Design and Facilitation: Dorothy Strachan
Project Management and Forum Report: Peter Ashley
31 Euclid Avenue
Ottawa, ON K1S 2W2
Tel.: 613-730-1000
E-mail: stractom@cyberus.ca