

**ONTARIO INJURY PREVENTION  
RESEARCH WORKSHOP**

Hart House, University of Toronto  
May 10, 1995

**PROCEEDINGS**



## WELCOME/INTRODUCTIONS

Dr. Irving Rootman, Director of the Centre for Health Promotion at the University of Toronto, welcomed the workshop participants on behalf of the planning committee. A list of the workshop participants is provided in Appendix A.

The objectives of the workshop were presented:

1. To identify what research is being carried out on injury prevention in Ontario and who's doing it,
2. To identify the research required for the improved prevention of injuries; and
3. To provide the basis for developing an injury prevention research network in Ontario.

Irving introduced Malak Sidky, who served as moderator of the first plenary session.

### **PLENARY # 1: HOW HAS GOVERNMENT BEEN INVOLVED IN INJURY PREVENTION RESEARCH TO DATE?**

#### **Al Erlenbusch, Ontario Ministry of Health**

The role of the Ontario Ministry of Health in supporting injury prevention research was described by Al Erlenbusch, Senior Manager of Emergency Health Services at the Ontario Ministry of Health. Al began by thanking Cyvia Dym (Ontario Ministry of Health Research Unit), Yau Yip (Ontario Ministry of Health Emergency Services Branch), and Lorie Root (Health Promotion Studies Unit, Health Canada) for their assistance in providing information for his presentation.

Al noted that the Ontario Ministry of Health supports injury prevention research through its **Health System-Linked Research Units Grants Program**. This program links multidisciplinary researchers with partner agencies active in the health care system in order to accelerate and facilitate research.

At present, two of the Health System-Linked Research Units are active in the field of injury prevention:

The **Community Health Research Unit**, a joint venture between the University of Ottawa and the Ottawa-Carleton Regional Health Unit, has been funded by the Ministry of Health since 1989. Current initiatives at the Unit include a literature review and review of injury prevention programs, falls prevention for seniors, and suicide prevention.

## Plenary #1 (Continued)

The **North York Community Health Promotion Research Unit (NYCHPRU)** links researchers from the Faculty of Medicine (Departments of Preventive Medicine and Biostatistics and Behavioural Sciences, Faculty of Nursing and the Centre for Health Promotion) at the University of Toronto with the North York Public Health Unit. Funded by the Ministry of Health since 1991, NYCHPRU's interests include workplace safety and, as evidenced by the workshop, the development of an injury prevention research network.

Through the Health Research Unit and the Emergency Health Services Branch, the Ministry of Health provides funding for specific injury prevention research efforts. Initiatives funded by the Health Research Unit over the past three years include: a study of strategies to prevent child abuse, a study of falls among seniors, a study of safety in small workplaces and a suicidality study. Initiatives funded by the Emergency Health Services Branch over the same period of time include: a study of paediatric injuries, educational interventions for children and adolescents, head and neck injuries in hockey, parental knowledge of child safety, fatal firearm injuries, playground injuries, and attitudes, behaviours and perceptions of female snowmobilers.

The Health Research Unit also funds Fellowships and Career Scientist Awards. Over the past five years, two researchers in the field of injury prevention, Dr. Rob Brison and Dr. Will Pickett, have been recipients of such awards. To underscore the extent to which an informal network of injury prevention researchers may already exist, Al noted that Dr. Brison chairs his Branch's Research Advisory Committee, while Dr. Pickett's interest in injury prevention originated, in part, through a discussion of the role of the physician as a change agent he had with Mr. Jack Lichter, the Planning Coordinator for the Eastern Area Emergency Health Services Committee. This discussion was furthered by Dr. Mary Chipman, who helped to plan the current workshop.

The Emergency Health Services Branch provides funds to the Canadian Institute for Health Information (CIHI) in support of the Ontario Trauma Registry. This registry contains data on all Ontario hospital separations with an injury diagnosis, all trauma deaths, and cases treated in Ontario's major trauma hospitals. One of the principal objectives of the Registry is to provide researchers with rapid and affordable access to high quality data. The development and operation of the Registry has been guided and assessed by the Trauma Registry Advisory Committee (TRAC), which includes researchers and research consumers. In accordance with feedback at a recent TRAC meeting, the Ontario Trauma Registry is currently negotiating with CIHI in an effort to expand its role in the promotion of injury prevention research.

Al noted that he and Yau Yip have been asked to provide consultative and inter-ministerial advice on injury prevention projects such as the long-term evaluation of the PARTY program at Sunnybrook and the Canadian Hospital Injury Research Project (CHIRP) at the Laboratory Centres for Disease Control in Ottawa.

## **Plenary #1 (Continued)**

Lastly, the Emergency Health Services Branch encourages injury prevention research by promoting the use of research evidence as part of the decision-making process for the initial funding and ongoing evaluation of injury prevention programs. The Branch believes that research can help to: direct limited resources to the issues of greatest importance, choose programs incorporating interventions likely to be effective, evaluate achievements, and demonstrate the economic, social and health benefits possible through injury control. These expectations, in turn, foster a demand for injury prevention research.

As described two injury prevention studies supported by the Ministry of Health:

### **A Systematic Review of Randomized Clinical Trials Dealing With Injury Control Interventions in Children and Adolescents**

Funded on the recommendation of the Emergency Health Services Branch Research Advisory Committee. Dr. Terry Klassen, a physician in the Division of Emergency Medicine at the Children's Hospital of Eastern Ontario (at the time of the study), served as the Principal Investigator.

The focus of the study, completed in December 1993, was to determine the effectiveness of educational interventions aimed at reducing injuries to children and adolescents occurring at home or on the road. One hundred and seventeen published studies, which met the criteria set out by the researchers, were reviewed.

The review of the relevant literature yielded the following results:

#### **For home safety programs:**

- Educational interventions do lead to behavioural changes, which are thought to be associated with injury prevention. There was, however, no significant relationship between these behaviour changes and actual reductions in injury rates;
- There was no evidence that amount of education (e.g., duration of educational sessions) or the use of financial incentives increased the efficacy of the educational interventions;
- Studies using unblinded outcome assessors reported better results than studies where outcomes were assessed by raters who did not know to which group the subjects belonged.

#### **For road safety programs:**

- As was the case with home safety studies, there was evidence of behavioural change without a decrease in actual injury rates. In fact, one study revealed that crashes increased among students who took driver training;

### **Plenary #1 (Continued)**

- Unlike home safety programs, the dose of education was positively correlated with behaviour change.
- There was a diminishment of effect over time.

The researchers offered the following observations about the significance of their findings:

- The failure to find significant changes in injury rates in home safety campaigns may be due to the relatively rare occurrence of such injuries;
- The lack of a dose effect in home safety campaigns may be due to the nature of the motivation and behaviour changes called for (e.g., "if you want to protect your child from electrocution, put switch covers on your wall outlet" -- a simple message for a simple action that only has to be performed once);
- Whenever possible, studies should use injury rates because of the likelihood of reverse effects (education may be associated with increased risk);
- Studies should use blinded assessments of outcome due to the intuitive bias that exposure to information will yield positive results.

### **Health and Safety Study of Small Workplaces**

The other study discussed by AI was conducted by Dr. Joan Eakin through the North York Community Health Promotion Research Unit. Dr. Eakin studied the health and safety of small workplaces between October, 1993 and March, 1995.

The study examined the health and safety-related attitudes, beliefs, knowledge, experiences and behaviours of small workplace employees. The project also determined how employees' perspectives on workplace health were related to the social and organizational context of their places of employment. In-depth interviews were conducted with thirty employees at diverse small businesses (less than fifty employees) located in North York. The resulting data were used to produce a comprehensive description and analysis of employees' perspectives on health and safety in small workplaces.

AI noted that injury prevention research, in all of its guises, is hampered by two limitations. First, the funders of such research are not doing enough to track how research results are applied. Second, the key stakeholders with an interest in injury prevention research have failed to establish mechanisms for the dissemination of research results to a broad range of planners, providers and community action groups.

AI's presentation concluded with the following comments:

## Plenary #1 (Continued)

The Ontario Ministry of Health supports injury prevention research in several different ways. The Ministry can and should do more to further the injury prevention research agenda, but there is clearly a political reality to any health-related research. Given the epidemiological significance of injuries, injury prevention research has had a relatively low political priority.

Ontario is in a good position to make significant contributions to the body of research on injury prevention. The province has a pool of skilled researchers and sources of funding: in fact, the Emergency Health Services funding has typically been under spent due to a shortage of high quality proposals, strong academic infrastructures and a growing demand for research outputs. The challenge is to make injury prevention research a higher political priority. The achievement of this objective requires strategies for connecting researchers across the various sub-categories of injury prevention (e.g., motor vehicle, sports, children, etc.) as well as strategies for connecting researchers to academics, program providers and consumers. This workshop is a good place to commence this process.

### **John Lefebvre, Ontario Ministry of the Attorney General**

John Lefebvre, Director of the Countermeasures Office of the Ontario Ministry of the Attorney General, described the role of his Ministry in supporting injury prevention research in Ontario. In 1986, the Countermeasures Office was mandated to coordinate efforts aimed at reducing the prevalence of drinking and driving in Ontario. In fulfilment of this mandate, the Countermeasures Office is engaged in a variety of activities.

Annual conferences on drinking and driving are sponsored by the Countermeasures Office. The Office also produces a variety of educational materials and multimedia campaigns on drinking and driving. For example, the Office sponsors **Arrive Alive**, a video dance program for young people with a drinking and driving prevention message. Half of the proceeds generated by this program go to the **Ontario Students Against Impaired Driving** (OSAID). "**Drinking/Driving: You Can Lose It All**", which targets hard core drinkers and drivers and the individuals who influence their behaviour (e.g., family members) is another communications campaign sponsored by the Countermeasures Office. This campaign is launched prior to each long weekend during the summer.

Community groups with an interest in drinking and driving prevention are assisted by the Countermeasures Office; over forty groups were supported by the Office over the last two years.

Interest in drinking/driving policy and policy development has increased over the past four years. In response to this interest, the Countermeasures Office has worked with other Ministries to produce a consultative document on key drinking and driving issues.

## Plenary #1 (Continued)

Since 1986, the Countermeasures Office has produced the **Drinking and Driving Ontario Statistical Yearbook**, which provides information for media campaigns, community action initiatives, etc. The yearbook includes statistics on fatalities, crashes and impaired driving charges. Statistics on fatalities from marine, snowmobile and all-terrain vehicle accidents have recently been added. Other drinking and driving variables discussed in the yearbook include gender of the vehicle operator, month, day and time of accidents, repeat offenders, geographic trends (i.e., counties/regional municipalities where Drinking and Driving crashes take place) and trends in fatalities and crashes.

John reviewed some of the pertinent findings presented in the Statistical Yearbook:

- Sixty percent of fatally injured drivers with a positive blood alcohol count (BAC) had BACS that were double the legal limit (.08%);
- Fifty-three percent of fatally injured snowmobile operators with positive BACS were 150 percent over the legal limit;
- Drinking and driving is predominant among males between the ages of 25 and 40;
- The incidence of drinking and driving among young people is decreasing at a faster rate than any other age group;
- The breath test is the most predominant measure used to substantiate drinking and driving charges;
- Repeat offenders are responsible for over sixty-three percent of drinking and driving convictions;
- Forty-three percent of motor vehicle fatalities in Ontario are alcohol-related.

In conclusion, John noted that the two-page "highlights" summary of the yearbook is routinely distributed to journalists, community groups and interested members of the public.

## Peter McLaren, Ontario Ministry of Culture, Tourism and Recreation

The role of the recreation sector in injury prevention research was reviewed by Peter McLaren, a research analyst with the Ontario Ministry of Culture, Tourism and Recreation.

Peter commenced his presentation with a review of data on the prevalence of sports-related injuries. In 1987, Statistics Canada studied accidental injuries that resulted in a 1/2-day or more loss of work time and/or \$200.00 or more in damage. Sports were found to be the leading cause of these injuries, accounting for 1.2 million injuries in Canada. In 1990, the Ontario Health Survey found that 248,000 injuries and 199 fatalities in Ontario were due to sporting and recreational activities. These injuries accounted for over \$400 million dollars in medical expenses and lost productivity.

## Plenary #1 (Continued)

In 1985, the Ontario government established the Ontario Sports Medicine and Safety Advisory Board to develop recommendations for decreasing the incidence of sports-related injuries. The Board recommended the adoption of the following measures:

- The establishment of a Ministerial Advisory Committee on Sports, Fitness and Recreation; and
- The implementation of a safety program with six main elements, including research.

Peter described some of the research initiatives supported by the Ministry of Culture, Tourism and Recreation:

- A study of injuries in hockey, soccer, basketball, softball and gymnastics;
- The development of a computerized economic cost model for sports-related injuries;
- A study of catastrophic and serious sports-related injuries; and
- An annual review of recreational fatalities using data obtained from the Office of the Chief Coroner.

A reorganization of the Ministry of Tourism and Recreation in 1990 resulted in a significant decrease in support for research initiatives. In spite of diminished resources, the Ministry is still involved in several ongoing research projects, including the **Sport and Recreation Injury Survey (SRIS)**, an omnibus survey of sports and recreational injuries.

The objectives of the SRIS are: to develop statistically valid measures of sports and recreational injuries; to understand the types and consequences of these injuries; and to build a national database of measures that can be replicated by future studies.

Variables to be examined by the SRIS include: type of sport and recreational activity and frequency of participation, types of sports and recreational injuries, nature and amount of medical treatment, time off from work and school and other costs of sports and recreational injuries. The methodology that will be used by the SRIS will be similar to that employed in a Quebec study. Based on a survey of 3,850 households (8,350 individuals), the Quebec study found an injury prevention rate of 4.8 percent.

## Questions and Discussion

A short question and answer session, facilitated by Malak Sidky, was held after Peter McLaren's presentation. Workshop participants discussed the following questions and comments regarding the first three presentations:

## **Plenary #1 (Continued)**

### **Question:**

Given that research has already revealed that more stringent legislative and enforcement measures are needed to prevent drinking and driving:

- Why haven't these measures been adopted?
- Why doesn't Ontario have stricter legislation against drinking and driving?
- Why is there a need for more research on drinking and driving countermeasures that have already proven to be effective in other jurisdictions (Sweden, Denmark and Australia)?

### **Response:**

Contrary to popular belief, drinking and driving injuries are not decreasing in many jurisdictions with more stringent countermeasures. For example, a lower BAC limit in Sweden has not prevented an increase in drinking and driving crashes. There is a need for more research on a number of innovative measures to prevent drinking and driving, such as the use of emergency interlock ignition systems in Alberta, and the immediate imposition of 90-day license suspensions for impaired drivers in Manitoba.

### **Question:**

Why aren't impaired drivers prosecuted when they are brought to emergency wards with BAC levels over the legal limit?

### **Response:**

The government needs to take action on this issue. BAC levels obtained in emergency wards need to be made admissible in court.

### **Comment:**

It's over simplistic to expect that more stringent legislation is a sufficient means of preventing drinking and driving-related accidents. Further research is required to identify the underlying causes of accidents for more effective prevention measures.

### **Marianne Levitsky, Workplace Health and Safety Agency**

The role of the government in the prevention of work-related injuries was discussed by Marianne Levitsky from the Workplace Health and Safety Agency (WHSA). Created in 1990, the WHSA is engaged in the following activities to prevent workplace-related injuries and illness in Ontario:

- funds and oversees several occupational health and safety organizations, such as the Industrial Accident Prevention Association (IAPA);
- conducts a training program to certify health and safety committees comprised of labour and management representatives;

## Plenary #1 (Continued)

- promotes awareness of occupational health and safety issues; and
- provides financial support for occupational health and safety research.

Funding for the research grants program administered by the WHSA was terminated in 1993. The WHSA still retains an interest in research, however, and is currently looking into other means of supporting research efforts.

One of WHSA's research interests concerns the factors that contribute to effective health and safety programs in the workplace. To this end, WHSA funded a survey of worker/management co-chairs of occupational health and safety committees throughout Ontario. The study revealed that cooperative (i.e., joint labour-management) health and safety committees were perceived to be more effective.

WSHA also supported an analysis of Workers' Compensation Board (WCB) data to determine risk factors for occupational injuries and illnesses. Marianne noted a number of problems with this type of research. Studies examining the risk factors associated with strains are particularly vulnerable to methodological difficulties. Bernard Choi at the University of Toronto compared risk factors associated with strains with the risk factors for other work-related injuries. Injuries due to strains were found to be more prevalent during the early part of the workday/week/month/year. Nurses, truck drivers and ambulance drivers are more susceptible to injuries from strains.

WHSA established a committee to evaluate the efficacy of workplace injury prevention programs. At present, the committee is focusing on the prevention of musculoskeletal injuries.

It is expected that future research efforts will continue to focus on the social determinants of injury prevention in the workplace. The interaction between key stakeholders (labour and management) appears to be one of the key social determinants, as evidenced by the body of research indicating that cooperative efforts enhance the outcome of workplace health and safety initiatives.

In closing, Marianne noted that the IAPA and the Construction Safety Association are also involved in injury prevention research. Recent efforts have focused on workplace health and safety issues among young people.

## Lorie Root, Health Canada

The role of the federal government in the prevention of childhood injuries was discussed by Lorie Root from the Population Health and Issues Directorate (formerly known as the Health Promotion Directorate), Health Canada. Lorie presently serves as Chair of the federal government's **Interdepartmental Working Group on Childhood Injury Prevention**.

## Plenary #1 (Continued)

Lorie began with an overview of the Family and Child Health Unit of the Population Health Directorate. Funded under the Child Development Initiative, which focuses on "at-risk" children aged 0-6 years and their families, the unit focuses on the promotion of healthy babies and optimal infant nutrition, parent support programming, the development of a National Child and Youth Health agenda and childhood injury prevention activities.

The goal of the injury prevention component of the Family and Child Health Unit is "to reduce the incidence of unintentional injuries for children in Canada by supporting the advancement of injury prevention programs and research." To achieve this goal, the Unit works with partners from NGOs, professional associations, academics, the private sector and different levels of government to build the capacity of injury prevention stakeholders involved in programming and research. The Unit is particularly interested in injury prevention strategies, which involve increasing public awareness, community education and mobilization, and technological and regulatory solutions.

To coordinate injury prevention activities within the federal government, the Unit established the Interdepartmental Working Group on Injury Prevention. This intersectoral group includes members from Transport Canada, the Canada Mortgage and Housing Corporation, Agriculture Canada, Statistics Canada, and other branches within Health Canada.

Lorie described the various ways in which the Family and Child Health Unit supports injury prevention research:

- The unit carries out capacity-building activities in community mobilization and knowledge development. Through these initiatives, the Unit identifies gaps where it might work best with its partners to advance injury prevention research across Canada. In addition, the Unit looks for opportunities to increase the profile of childhood injury prevention within government. For example, the Unit recently held a consultation meeting with injury prevention stakeholders from the provincial and territorial governments, NGOs and health promotion research centres. This event gave participants the opportunity to network, share their experiences, and identify emerging regional injury prevention coalitions and research opportunities. The **Dissemination Research Conference** in Vancouver was another event supported by the Unit. This event featured a presentation by Dr. Richard Stanwick, the Chief MOH of Winnipeg. Noting the relatively slow acceptance and uptake of research findings in the field of injury prevention, Dr. Stanwick indicated that childhood injuries could be reduced by forty percent if current knowledge was applied.
- The Unit works with the Health Promotion Contribution Program to fund programs, which are national in scope. Some of the funded projects aimed at preventing childhood injuries include:

- The Canadian Bike Helmet Coalition;
  - Kidestrians, a child traffic safety program;
  - The second edition of the CICH Profile, which gives a broad overview of child health trends and statistics. The Unit is currently developing **Injury Fact sheets** from data not presented in the Profile. These fact sheets will be disseminated via **Health Promotion** online.
  - The Secretariat for the Canadian Children's Safety Network (CCSN). The CCSN online, which provides an online research conference for the discussion of research by practitioners, is a potentially important communication venue for injury prevention researchers.
- The Unit supported the compilation of the **Directory of Canadian Child/Youth Injury Prevention Programs and Researchers**. This document is available through the CCSN Secretariat in Toronto.
  - The **Compendium of Canadian Data Sources for Childhood Injury Prevention** was supported by the Unit. Available from the Injury Prevention Centre in Alberta, the Compendium profiles existing data sources relevant to injury prevention programming and research.
  - The Unit has worked with Statistics Canada and other data collection organizations to ensure the presence of relevant and appropriate injury prevention questions on the following national longitudinal surveys:
    - **The General Social Survey** (Personal Risk Cycle);
    - **The National Longitudinal Survey of Children;**
    - **The Health Promotion Survey;** and
    - **The National Population Health Survey.** The Unit purchased additional injury prevention questions on the National Population Health Survey to monitor public awareness of injuries relative to other health issues, and to determine key sources of information. Data from the first cycle of the survey should be available in the summer of 1995, and the unit hopes to produce a report on these initial findings later in the year.

The Family and Child Health Unit also funds injury prevention research initiatives in conjunction with the National Health Research and Development Program (NHRDP).

Lorie described some recently funded projects.

- The **Brighter Futures Book**, which profiles the twenty successful projects funded by the Brighter Futures Program;
- Research on playground injuries conducted by Dr. Patricia Parkin at the Hospital for Sick Children. This research study is one of the twenty projects described in Brighter Futures;
- The **Canadian Collaborative Study of Injuries in Childhood**, a three-year collaborative project underway at the Montreal Children's Hospital, Hôpital Ste.-Justine, the IWK Hospital in Halifax and the Children's Hospital of Eastern Ontario. Dr. Barry Pless in Montreal heads this study, which aims to establish the magnitude of risk resulting from the failure to adopt home safety recommendations by families

## Plenary #1 (Continued)

of children under the age of six, evaluate the effectiveness of a home visit in changing safety behaviours, and determine the extent to which preventive behaviours are clustered and socio-demographic factors are associated with their performance.

- **Parental Attitudes Towards Unintentional Childhood Injuries**, a qualitative research project investigating the awareness, attitudes, perceived role expectations and actions to prevent childhood injuries by parents and to assess parental awareness and reaction to existing injury control measures undertaken in communities. The research team is currently analyzing data gathered through focus groups and questionnaires administered to low-income parents of children aged 1-6 years. This information, which will be made available in a final report and 2-5 minute video clips, will be shared with injury prevention stakeholders across Canada to guide the development of future injury prevention activities.

In closing, Lorie described some future research priorities of the Family and Child Health Unit. Specifically, the Unit is interested in:

- developing resources on the costs of injuries;
- better documentation of effective programming and the effectiveness of passive measures;
- improved dissemination of research findings to ensure evidence-based policy and program development.

### **Linda Clifford, Ontario Ministry of Transportation**

The role of the Ministry of Transportation in supporting research on injury prevention was described by Linda Clifford, Manager of the Ministry's Safety Research Office. Linda noted that, at present, the Ministry of Transport has an extensive research program in the area of traffic safety. An in-house research unit and a safety research office, funded through license revenues, are maintained by the Ministry. In addition, the Ministry has established a \$200,000 grants program for researchers and community organizations with an interest in traffic safety. Current research initiatives pursued by the Ministry of Transport include studying the impact of graduated licensing and photo radar. In closing, Linda stressed the need to move the injury prevention agenda forward by looking at successful models of collaboration and partnerships to carry out needed research.

## **Summary of Plenary #1: How Has Government Been Involved in Injury Prevention Research to Date?**

### **Irving Rootman, University of Toronto Centre for Health Promotion**

A summary of the plenary presentations detailing the government's role in injury prevention research was provided by Irving Rootman. After listening to the plenary speakers, Irving noted five main themes regarding government involvement in injury prevention research:

- There is an **extensive amount of injury prevention research conducted directly by the public sector, or supported by the public sector;**
- There is a **need for greater synergy in injury prevention research.** The scope of many surveys covering injury prevention issues, for example, can be broadened with minimal expense;
- There is a **need for further research in many areas, such as the dissemination and diffusion of injury prevention research;**
- Financial support is available for injury prevention research, but many researchers may not know about the potential resources available to assist them in their work. There is, therefore, a **need for information sharing that will enable injury prevention researchers to access financial support;**
- **Continual networking and information sharing among key stakeholders** is crucial to make efficient use of existing resources, and to **avoid duplication of research efforts.**

## **PLENARY # 2:        EMPHASIS OF WHERE RESEARCH IS GOING OR SHOULD BE GOING**

Irving introduced Reg Warren, Visiting Scientist at the Centre for Health Promotion, who served as the moderator for the second session.

### **Robert Conn, Canadian Injury Prevention Foundation**

The nature and scope of injury prevention research was summarized by Dr. Robert Conn, President of the Canadian Injury Prevention Foundation. Robert outlined the main priority areas of injury prevention research to illustrate the divergent nature of the field:

- **Injury Surveillance** focuses on the collection and analysis of data to determine what types of injuries occur;
- **Analytic Epidemiology** examines the causal mechanisms underlying injuries.
- **Behavioural Factors** studies the modification of attitudes and behaviours in order to prevent injuries;
- **Laws and Formal Rules** focuses on the prevention of injuries through legislative measures; and
- **Product Design** determines how products can be designed so as to minimize the risk of injury.

Robert noted that all injury prevention research initiatives focus on one of three phases: pre-injury, injury and post-injury. A matrix of behavioural, social, economic and environmental factors is related to each phase.

Robert reviewed four priorities for future injury prevention research efforts:

- **Economic Analysis** of the societal costs of preventable injuries;
- **Dissemination of Information** on how to avoid injuries to speed up the introduction of healthy policies and the adoption of preventive practices by the public;
- **Evaluation of Interventions** aimed at preventing injuries to determine their efficacy and identify areas in need of improvement; and
- **Social Marketing Research** to create a political climate amenable to injury prevention research by increasing public demand for research initiatives.

In closing, Robert noted that injuries are not "accidents"; they are predictable and preventable through the adoption of countermeasures. He re-iterated the need for increased social marketing campaigns as a means of fuelling public demand for the adoption of policies to prevent injuries.

## Plenary #2 (Continued)

### **Herb Simpson, Traffic Injury Research Foundation**

The contribution of research towards the prevention of injuries was discussed by Herb Simpson, Executive Director of the Traffic Injury Research Foundation. Noting that the significance of research findings are often downplayed to in order to make them more accessible to the lay public, Herb identified three issues that need to be addressed to increase the applicability of injury prevention research for intervention and policy development:

- **Data** (Improving the Knowledge Base). Data helps to identify where action is needed, and where action should be taken. When considering the applicability of data, it's important to distinguish between **descriptive** and **explanatory** data. Due to current limitations in the collection of descriptive data, many basic questions, such as the number of road crashes in Canada in 1994, cannot be answered. More data on risk conditions, which will permit the identification of who is at greatest risk (**exploratory data**) is also needed. Research efforts should be geared towards increasing the quantity and quality of injury prevention data.
- **Evaluation** is a vital part of injury prevention research. Ideally, evaluation should identify what does/does not work under what conditions. At present, injury prevention measures are seldom subject to evaluation. When evaluations are conducted, they tend to be cursory, focusing on process rather than outcomes. Evaluation should be an integral part of the development of programs and policies aimed at preventing injuries.
- **Coordination**. The increased coordination of agencies involved in injury prevention research is required. At present, government efforts are often dispersed across a wide variety of sectors, and many NGOs and community groups have vested interests in particular aspects of injury prevention research (e.g., traffic safety). As a result, people with shared interests are often working in isolation of one another. To rectify this situation, injury prevention researchers need to identify the means towards achieving greater coordination. Increased coordination will, in turn, foster increased communication and increased cooperation among key stakeholders. The establishment of a formal research network is one possible means of achieving these goals.

### **Harry Shannon, Occupational Health Program, McMaster University**

An overview of research priorities for the prevention of workplace injuries was given by Dr. Harry Shannon, a faculty member of the Occupational Health Program at McMaster University.

## Plenary # 2 (Continued)

Harry described the results of a recent literature review on workplace injury prevention::

- Most of the studies in the published literature were descriptive (22), rather than methodological (12);
- Most studies examined all types of workplace injuries, rather than specific injuries;
- The physical environment (workplace environment) was most often cited as the type of exposure;
- Only a small number of studies focused on the role of psychosocial or organizational factors in workplace injuries;
- Acute injuries accounted for a relatively small portion of compensated injuries (about one third). Back pain and upper-limb injuries were the other main types of compensated injuries;
- The fatality rate from workplace injuries has declined since 1972. This finding is partially attributable to greater efforts to improve health and safety in the workplace

Harry noted that research needs to focus on the broader social context of health and safety in the workplace to permit the identification of the factors underlying the incidence and prevalence of work-related injuries. Case studies, which constitute the bulk of the research conducted on workplace health and safety, suggest that measures can be taken to reduce injury rates. Not many of these initiatives are subject to any sort of rigorous evaluation, however.

In closing, Harry identified a number of future priorities for the study of preventable injuries in the workplace:

- Studies need to focus on the total "burden of illness" from workplace injuries, not just the physical consequences of acute injuries;
- Greater attention should be focused on workplace cultures, which can influence the acceptance, implementation and efficacy of health and safety programs.
- More preventive interventions need to be developed and evaluated directly in the workplace.
- There is a need for more research on the impact of violence in the workplace. In recent years, there has been an increase in the number of workplace injuries related to violence, particularly among service sector organizations.
- Other factors that will affect the nature and scope of workplace injuries include: the shift from a manufacturing to a service-based economy, the increased number of jobs requiring knowledge rather than physical labour, increased numbers of females in the workforce, increased numbers of older workers, increased levels of education needed for many jobs, changing social values, fewer hours spent in the workplace, the increased "internationalization" of the marketplace, increased migration across international borders, and the steady rise in long-term unemployment.

## **Plenary #2 (Continued)**

### **Questions and Discussion**

A short question and discussion session was held at the end of the second plenary. Reg Warren, Visiting Scientist at the Centre for Health Promotion, served as the facilitator. Workshop participants discussed the following questions and comments regarding the issues raised by the plenary speakers.

#### **Comment:**

Given that the only way to injure tissue is through the application of inappropriate force, research should focus on the development of strategies to prevent the forces that cause tissue injuries.

#### **Question:**

Why is the general public not benefiting from much of the information emerging from the collection of data on injury prevention?

#### **Response:**

To facilitate the dissemination of timely information, a mechanism is needed to better distinguish between so-called "facts" and well-established empirical findings. Public perceptions about the causes of preventable injuries are often distorted due to "one-shot" study results that do not point to causal factors. Some degree of consensus regarding what needs to be communicated to the public is required before research results can be communicated more effectively.

One example of public misperceptions about health risks is the fact that more people are concerned about air safety than motor vehicle safety, even though many more people perish in automobile crashes than in plane crashes. People are not as concerned about their ability to drive cars safely.

#### **Question:**

Much of today's workshop has focused on positivist, quantitative research and data collection methods. Is there not a place for qualitative, phenomenological community action research on injuries and injury prevention?

#### **Response:**

There is a place for alternate research paradigms. Many researchers need to shift their focus to acknowledge the need for qualitative, community-action methodologies to assess the impact of injury prevention programs in workplaces and communities. Many interventions have not been effective in the workplace, since they failed to take workplace values into account.

## **SUMMARY OF PLENARY #2: EMPHASIS OF WHERE RESEARCH IS GOING OR SHOULD BE GOING**

Based on the plenary presentations and discussion, Irving Rootman identified the following priorities for injury prevention research:

- There is a **need for more social marketing** to inform the public, increase public awareness of injury preventing measures and foster public demand for policies that will prevent unnecessary injuries.
- There is a **need for more evaluation research to assess the impact of injury prevention measures.**
- **Greater coordination between key stakeholders** is needed for more effective research efforts.
- There is a **need for more community action research on injury prevention.** Irving noted some recent developments in the application of community action research to health issues, including the release of a key conceptual document on participatory research by the Royal Society of Canada.

## SMALL GROUP WORKSHOPS

Workshop participants divided into small groups to collectively answer the following questions:

1. How should the agenda for injury prevention research in Ontario be established?
2. What can be done to increase the production of high quality injury prevention research in Ontario?
3. Is there a need for an injury prevention research network, and what role should it play?

Facilitators in each of the small groups recorded the participants' ideas on flipcharts. The ideas generated by each of the groups are presented in Appendix A.

## SUMMARY OF SMALL GROUP WORKSHOPS

### QUESTION # 1: **How should the agenda for injury prevention research in Ontario be established?**

Lorie Root summarized the recurring themes raised when this question was addressed in the small group discussions. The following ideas for **advancing the agenda for injury prevention research** were identified:

- **Research should be promoted according to individual social costs**, the size of the population at risk and the potential effectiveness of research findings for the prevention of injuries.
- Research and injury prevention programs should be **more integrated**.
- **Greater emphasis** should be placed on **the financial costs of injuries** (i.e., lost productivity, etc.).
- **Key gaps** in injury prevention research need to be **identified**.
- **Research should generate "good" data** that translate into **valuable information**.
- **Fund a variety** of research **initiatives**.
- Establish **closer ties with key decision makers** (i.e., people who have power and influence).

### QUESTION # 2: **What can be done to increase the production of high-quality injury prevention research in Ontario?**

Al Erlenbusch summarized small group responses to the second question. When considering the range of actions that could be taken to increase the production of high quality injury prevention research in Ontario, participants raised the following issues:

### Summary of Small Group Workshops (Continued)

- **Money is a necessary, but not a sufficient, resource** for research. Money may have to be reallocated from other areas to fund needed injury prevention research.
- **Data** need to be **available, specific, timely** and, where possible, **promote linkages with other sectors.**
- **Training and Availability of Researchers** A **university degree program in safety issues** is one option for increasing the pool of trained injury prevention researchers and professionals.
- **Market the importance of Research** to government and other sponsors. Look for ways of giving **greater recognition to researchers and programs that support research.**
- **Work from a Clear Agenda** by **limiting the number of topics** and **finding linkages between topics.**
- **Integrate Programming and Research.** An **integrated programming and research agenda will help to increase program evaluations**, which should always be done as a matter of course.
- **Use Peer Review** to **monitor and enhance the quality of injury prevention research.**
- **Create Networks of Injury Prevention Researchers.**

**QUESTION # 3: Is there a need for an injury prevention research network and what role should it play?**

Sonya Corkum, Director of Information and Promotion at the Hospital for Sick Children in Toronto, summarized participants' views about the feasibility of an injury prevention research network. Participants felt that such a network should perform the following functions:

- **Promote linkages across sectors** (e.g. Canadian Children's Safety Network on-line);
- **Lobby for financial resources for research.**

To play a viable role in advancing the injury prevention agenda, participants felt that a **research network needed to be proactive**, not just a passive information sharing entity. Ideally, the network should also be cooperative and inclusive.

**PLENARY # 3: HOW DO WE MOVE THE AGENDA FOR INJURY PREVENTION RESEARCH IN ONTARIO FORWARD?**

Irving Rootman facilitated the closing plenary discussion on how the agenda for injury prevention can be moved forward. Irving outlined four options for consideration:

- **"Laissez-Faire"** - People **continue to pursue their own research** and programming interests, and no follow-up action is taken.
- **Maintain a Loose Network** - Injury prevention researchers could be linked through a **casual information-sharing network** (e.g., newsletter).
- **Carry Out Collaborative Projects** - Interested participants could **seek funding for a joint venture**, such as a multi-site study of childhood injuries.
- **Establish a Formal Injury Prevention Research Unit** - Such a unit would be responsible for coordinating all injury prevention research, evaluation and monitoring activities in Ontario. A similar research unit has already been established for tobacco.

Irving also discussed the possibility of organizing another workshop on injury prevention research next year. A sign-up sheet for those interested in helping to organize this event was circulated.

Participants made the following observations about furthering the agenda for injury prevention research in Ontario:

If a network is established, some organization is going to have to **assume responsibility** for coordinating it.

The ownership of an injury prevention research network needs to be **collective**. One option for ensuring this is an Internet-type multisectoral network that is not located within any specific organization.

The Canadian Children's Safety Network is housed in a specific institution, but it is controlled by those who use it.

In Finland, researchers in injury prevention attend an annual research seminar that is organized by volunteers. This venue provides a good opportunity for networking and information sharing.

There are a number of intermediary steps needed to develop a research network. The group needs to allocate specific tasks to build a network.

Some preliminary questions need to be answered before any action is taken. What will the network do? What will it achieve? The group needs to reach consensus on these questions, then proceed accordingly.

### **Plenary 3 (Continued)**

A research network needs to focus on more than just communications. Remember that the **"bottom line" is to prevent injuries.**

### **WRAP-UP AND THANK YOU**

Irving Rootman thanked the following individuals and organizations for their contribution to the workshop:

The Ontario Ministry of Health (Emergency Health Services Branch and Health Promotion Branch), the Ontario Ministry of Labour and the Ontario Ministry of Transportation for their financial support of the workshop;

The Planning Committee members -- Mary Chipman, Sonya Corkum, Al Erlenbusch, Malak Sidky, Bev Woods and Yau Yip -- for their role in organizing the workshop;

The Plenary Speakers: Linda Clifford, Robert Conn, Al Erlenbusch, John Lefebvre, Marianne Levitsky, Peter McLaren, Lorie Root, Harry Shannon and Herb Simpson; and Malak Sidky and Reg Warren, for facilitating the plenary question and discussion sessions; and the University of Toronto, for providing a venue for the workshop.

The Workshop was adjourned at 5:00 p.m. ◀

### **Potential Mandate of Injury Prevention Research Network (Draft for Discussion)**

At a follow-up meeting to discuss the workshop, the Planning Committee identified potential roles that could be carried out by an Ontario Injury Prevention Research Network. It was decided to circulate the following proposed mandate to workshop participants for their feedback and suggested revisions.

An Ontario Injury Prevention Research Network could assume responsibility for:

- improving communication/co-ordination between key stakeholders/sectors in the field of injury prevention research;
- reducing duplication of injury prevention research efforts;
- encouraging collaborative research efforts in the field of injury prevention;
- serving as an advocate for research to guide the development of policies to prevent injuries;
- serving as a link between funders, researchers and research consumers (e.g., programmers);
- showcasing exemplary initiatives in the field of injury prevention research;
- identifying intersectoral priorities in the field of injury prevention research through consultation with key stakeholders in relevant sectors; and
- providing advice and consultation on injury prevention research priorities to external bodies (e.g., government, funders). ◀

## APPENDIX A

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