

Patient Safety Research in Canada
Report on a Retreat to Identify Research Priorities

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Law, MSc.**

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Executive Summary

The Canadian Patient Safety Institute (CPSI) in collaboration with the Canadian Institutes of Health Research (CIHR) and the Canadian Health Services Research Foundation (CHSRF) sponsored a 2 day meeting on February 28 – March 1, 2005 to identify the research needed to support the mission of the CPSI to improve patient safety in Canadian healthcare. The retreat brought together more than 60 researchers, decision-makers and representative from funding bodies. The goals of the meeting were to:

- Define the spectrum of relevant patient safety research, including the different disciplines and research types that could be included;
- Identify the short (1-2 years) and long term (3+ years) patient safety research needs in Canada;
- Identify current areas of strength of patient safety research in Canada and internationally, and the leading researchers;
- Explore the types and forms of patient safety research that have been useful to decision makers in Canada and internationally; and
- Identify potential mechanisms for funding patient safety research in Canada

Three experts from the US and the UK provided overviews of patient safety research programs in those two countries. Retreat participants then identified the priorities for patient safety research that should be considered by Canadian funding bodies. Short term priorities included the development of an inventory of work in patient safety research done elsewhere and the development of an operating grants process.

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Specific **short term projects** that were identified across working groups included:

- Research improving safety using design ideas from industrial psychology, ergonomics and human factors engineering
- Patient safety indicators
- Workforce scheduling and skill mix
- Involvement of patients to create safer care
- Teamwork and communications supporting safer care
- Safe practices, especially for vulnerable populations
- Research methodologies in patient safety

Longer term priorities included:

- Research on patient safety culture and the impact of interventions on culture
- Dissemination and translation strategies
- Means of sustaining “best practices”

Representatives from CPSI, CHSRF and CIHR discussed funding programs currently provided or planned by these organizations. Effective knowledge translation strategies that will help to integrate the results of research in patient safety into practice were also presented and discussed.

A number of key issues were identified that need to be addressed in creating a sustainable research program on patient safety. These include the need to ensure that patient safety research funded by Canadian agencies is linked to the needs of Canadian organizations. A Canadian grants program should be aligned with research efforts in other countries and should consider the appropriate balance between target-driven and investigator-driven research. Finally, knowledge translation skills and resources must be integrated into the research program to ensure that the results will be useful to the organizations and communities that are working to improve in Canada.

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Retreat Background and Objectives

The Canadian Patient Safety Institute is an independent non-profit agency established in 2003 to improve patient safety in Canadian healthcare. To achieve that objective, CPSI intends to “collaborate and provide advice on effective strategies to improve patient safety, coordinate information across sectors and systems, promote best practices and raise awareness with stakeholders, patients and the general public about patient safety.”¹ To improve patient safety CPSI needs to create a work agenda that incorporates knowledge about the healthcare practices that promote or ensure safer care.

The Canadian Patient Safety Institute, in partnership with the Canadian Institutes of Health Research and the Canadian Health Services Research Foundation, sponsored a 2-day retreat in Toronto on February 28 and March 1, 2005 to identify research needed in patient safety. The retreat brought together more than 60 researchers, decision makers and representatives from funding bodies. (See Appendix A for a list of participants.)

The key objectives of the retreat were to:

- Define the spectrum of relevant patient safety research, including the different disciplines and research types that could be included;
- Identify the short (1-2 years) and long term (3+ years) patient safety research needs in Canada;
- Identify current areas of strength of patient safety research in Canada and internationally, and the leading researchers;
- Explore the types and forms of patient safety research that have been useful to decision makers in Canada and internationally; and
- Identify potential mechanisms for funding patient safety research in Canada.

¹ <http://www.cpsi-icsp.ca/>. Accessed 12 June 2005

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Retreat Methodology

To achieve these objectives, CPSI invited researchers, decision makers and representatives of funding bodies to participate in the retreat. Attendees participated in both brainstorming and priority setting exercises to develop an agenda for patient safety research. Specifically, participants were asked:

- What are the strengths in current research related to patient safety?
- What are the areas that need to be strengthened (key gaps)?
- What are the key issues and specific topics that need research?

To assist in answering these key questions, a background paper on patient safety research in the US, UK, Australia and Canada was commissioned and distributed to participants. In addition, three international experts addressed the group: James Battles (Agency for Healthcare Research and Quality, United States); Jeffrey Cooper (National Patient Safety Foundation and Anesthesia Patient Safety Research Foundation, United States) and Richard Lilford (University of Birmingham, Public Health & Epidemiology, and English Patient Safety Research Unit, United Kingdom). The three experts shared their experiences and lessons learned in the development of the research and policy agendas associated with patient safety science in their respective countries. Funding agencies (CIHR, CHSRF and CPSI) provided overviews of current and potential funding sources/competitions for patient safety research. Finally, Paula Goering, CIHR/CHSRF Chair, Centre for Addiction and Mental Health provided an overview of knowledge transfer strategies for patient safety research. Much of the time in the meeting was spent identifying patient safety research priorities for Canada. This work was done in concurrent sessions in mixed groups of researchers and decision makers.

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Patient Safety Research in the US and UK

Day 1: Understanding the Context: The US Patient Safety and Patient Safety Research Efforts

Dr. Jeffrey Cooper, Executive Vice-President of the U.S. Anesthesia Patient Safety Research Program and Chair of the U.S. National Patient Safety Foundation Research Committee in the US, provided an overview of the work of these two U.S. organizations that have sponsored patient safety research. The Anesthesia Patient Safety Foundation has been funding research in support of patient safety since 1985. The Foundation's strategies are to provide small grants for seed funding, to create a cadre of researchers and to germinate innovation and ideas that will influence research and practice. The APSF has given highest priority to studies relevant to anesthesia safety that point toward implementable improvements. The APSF has one yearly cycle of submissions and provides funding for 3 to 4 grants per year up to \$100,000 US. In addition to funding a number of noteworthy projects, the APSF has also been instrumental in supporting the development of a number of anesthesia patient safety researchers. In 15 years of operations, the APSF has provided \$2.7 million US in grants for 60 projects.

Dr. Cooper also discussed the development and work of the National Patient Safety Foundation in the US. The NPSF Research Program was founded in 1998 to support new ideas and to seed projects; to create a cadre of new investigators; and to facilitate and help to implement ideas from research. The NPSF research agenda has covered a wide range of topics. The research process is a two stage application, beginning with letters of intent, and then selected applicants prepare and submit full proposals. In addition to funding research, the NPSF has also

worked to create a catalogue of current patient safety research and funding opportunities. The NPSF research grants program favors work that will have high leverage, broad impact on the population, and proposes innovative and creative methods for studying issues or providing solutions. The NPSF has also identified the importance of funding inter-disciplinary teams and of providing funding to projects for which there are no alternative sources of funding.

Dr. Cooper provided an overview of why patient safety research is needed. He noted that although lessons learned from other industries can be useful, many of the problems of healthcare are unique, and many general principles and solutions require translation before they can be implemented. These translations require careful study. Patient safety research is still in early stages. Among the areas that require additional research are:

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- Discovering the underlying patterns of human performance in healthcare;
- Understanding the nature of technical work;
- Learning about systemic vulnerabilities when incidents and accidents occur;
- Anticipating new areas of concern as change occurs; and,
- Developing, prototyping and evaluation new approaches to patient safety²

Since its inception, the NPSF has funded 21 projects and provided more than \$2 million US in funding to investigators.

The second presenter was Dr. James Battles from the Agency for Health Care Research and Quality (AHRQ) in the US. Dr. Battles outlined AHRQ's patient safety research agenda and approach to funding. AHRQ' mandate is to:

- Identify the causes of preventable health care errors and patient injuries in health care delivery;
- Develop, demonstrate and evaluate strategies for reducing errors and improving patient safety; and
- Disseminate such effective strategies throughout the health care industry

AHRQ is the largest source for patient safety research funding in the world. Over the last 5 years it has received more than \$300 million US for patient safety research. It has funded projects in a number of priority program areas including:

- Identifying risks and hazards
 - Reporting system demonstrations (16 projects)
 - Working conditions projects (22 projects)
- Raising awareness
 - Dissemination and education (6 grants)
 - User liaison program with states on patient safety issues
- Identification of proven patient safety practices
 - System best practices (6 projects)
 - Computer applications (11 projects)
- Grants to build research capacity
 - Centers of excellence in patient safety research (3 centers)

² J. B. Cooper. Research in Patient Safety (with Special Attention to the APSF and NPSF Research Program)" Presentation to the Canadian Patient Safety Institute Research Retreat, February 28, 2004, Toronto, Ontario.

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- Developmental grants to support emerging centers of excellence (18 grants)
- Patient Safety Improvement Corps

Dr. Battles identified a number of key lessons learned from the five years of funding for patient safety research. In terms of the specific priorities listed above, Dr. Battles suggested that based on AHRQ funded research that no one best method has emerged in the assessment of risk and hazards. However, AHRQ has sponsored the development of a series of Patient Safety Indicators from administrative data which will be helpful in assessing organizational and system performance. AHRQ is working with the National Quality Forum in the US and the World Health Organization (WHO) alliance in the development of a taxonomy for patient safety standards. AHRQ is funding risk assessment projects focused on the development and improvement of methods for risk assessment including FMEA (Failure Modes Effects Analysis) and other tools. Currently AHRQ is funding risk assessment projects around transitions of care, long term care, chemotherapy, transplantation, and other areas.

Safer patient care will require the redesign of care environments. AHRQ is supporting research on “risk informed design” that considers improvements to clinical tasks, teamwork skills, and the working conditions in healthcare as major contributors to patient safety.

The largest agenda item currently in the AHRQ patient safety research agenda is focused on health information technology. Activities in these areas include planning grants, implementation evaluations and reporting systems. This priority is linked to the current US administration’s interest in information technology infrastructure. In addition to a strong continuing investment in research on health information technology use in patient safety, Dr. Battles identified AHRQ’s commitment to further work on relevant basic research, on supporting more proactive risk assessment, on safety by design, on the implementation of safe practices, and on the diffusion of patient safety innovations.

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Patient Safety Research in the US and UK

Day 1: Understanding the Context: The English Patient Safety and Patient Safety Research Efforts

The third speaker was Professor Richard Lilford from the University of Birmingham, England. Professor Lilford heads the Patient Safety Research Programme in the UK. He provided some background on the relationship of patient safety research to quality of care research and health technology assessment, on the one hand, and to the concerns of managers and practitioners on the other. Professor Lilford noted that patient safety research should focus on the epidemiology of error, its underlying causes, and the development and evaluation of interventions to reduce errors. A variety of methodologies are useful in patient safety research ranging from cluster RCTs to prospective hazard analysis to data collection on natural experiments and qualitative or ethnographic studies.

Professor Lilford has noted elsewhere the importance of patient safety researchers working with managers and clinicians “to introduce change within an evaluation framework. In such situations, the role of patient safety researchers is to get evidence about what is likely to work, then to proselytize for change based on that evidence and, above all, to encourage managers to innovate in such a way that the whole world may learn”³ He returned to this theme in his Toronto address noting the importance of aligning researcher’s interests with those of managers and policy makers. In the UK, patient safety research is commissioned in an iterative process that enables a dialogue between research funders and those doing the research on the goals, general approach and specific methods developed to address policy and practice-relevant issues.

³ Lilford, R.J. Patient safety research: does it have legs? *Quality and Safety in Health Care* 11(2): 113-4, 2002.

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Key Recommendations for Short and Long-Term Priorities

Work in concurrent sessions lead to the development of a detailed and prioritized list of key issues. Workshop participants worked in four smaller groups to identify the strengths and weaknesses of current patient safety research in Canada, and to list key issues and specific topics for research. Both short-term (1-2 years) and long-term priorities (3+ years) were identified. (Detailed lists of research priorities developed by each working group are included as Appendix B.) Underlying guiding principles for both include the need for capacity building; teamwork approaches; generation of knowledge across the continuum of care, vulnerable populations (e.g. institutional elderly, mental health, etc.); involvement of patients in managing their own safety; and joint accountability of all those involved in patient safety research.

In this context, representatives from each working group and the organizing committee synthesized the results from the working group into the following **short-term and long term priorities** for patient safety research in Canada:

Short-Term (1-2 years)	Long-Term (3+ years)
Compile a global inventory of past and current research initiatives in collaboration with our United Kingdom and United States partners to determine current activities	Focus on culture of safety research including organizational culture assessment and interventions.
Create operating grants to investigate specific issues and determine patient safety best practices	Disseminate and translate knowledge to change practice and policy to improve safety
Focus on research that involves safety by design including industrial psychology, ergonomics, and human factors design	Sustaining best practices for improved safety
Develop and test patient safety indicators for use across the continuum of care and within specific health care sectors	
Examine workforce issues, including impact of scheduling, impact and skill mix	

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Short-Term (1-2 years)	Long-Term (3+ years)
Develop research on involving patients in managing and improving safety	
Focus on research on teamwork and communications	
Develop evidence of safe practices especially for vulnerable populations, including pediatrics and mental health and outside of the acute care environment that has been the principal focus of current research	
Develop research methodology resources for patient safety research	

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Research Funding and Knowledge Transfer Strategies for Patient Safety

Day 2: Knowledge Transfer strategies for patient safety research: Best practices and resources

On the second day, the retreat participants listened to a set of brief presentations about funding possibilities for research on patient safety. Joseph Gebran from the Canadian Patient Safety Institute outlined the Call for Proposals that was being planned by CPSI. Susan Law, from the Canadian Health Services Research Foundation, described the research program funding for quality and safety at CHSRF and Michelle Gagnon identified the funding opportunities underwritten by the Canadian Institutes of Health Research.

Paula Goering, Director of the Health Systems Research and Consulting Unit at the Centre for Addiction and Mental Health provided retreat participants with an overview of knowledge transfer strategies. Knowledge transfer is a critical aspect of the CPSI research strategy since the mandate of the Canadian Patient Safety Institute includes focusing on providing advice on effective strategies and best practices for patient safety to policy makers, managers and practitioners. Professor Goering noted that CIHR had defined knowledge translation as the process of supporting the uptake of health research in a manner that improves the health and health care of Canadians through improved understanding, processes, services, products or systems.⁴ Effective knowledge translation strategies require that researchers work closely with decision-makers at all stages, not just after research results have been developed.

Effective research transfer requires effective communication by researchers of the messages derived from their research. Professor Goering noted the impact of both the nature of the organizations delivering messages and the nature of the message itself. Greater impact for research occurs when the organizations delivering the message have high credibility and when the main messages are compelling, related to one or more decisions and clearly back by rigorous research. The Canadian Health Services Research Foundation has developed strategies for helping research transfer, including building relationships and dialogue between researchers and decision-makers, making research reports more relevant to research stakeholders, and identifying barriers and facilitators to improved uptake of research.

⁴ Canadian Institutes of Health Research. <http://www.cihr-irsc.gc.ca/e/26574.html#defining> Accessed June 10, 2005.

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Additional Issues and Challenges

Several other issues and challenges were identified in the discussion by participants and the international experts. These include:

- How to prioritize patient safety research topics areas and methods taking into account the research already being done elsewhere and the needs of Canadian organizations and caregivers?
- Should a separate peer review process that involves people with substantive content area expertise be developed for the patient safety research, or should existing peer review processes be used?
- To what extent should funding be targeted or investigator driven?
- What are effective knowledge translation strategies for patient safety research?
- How can “better practices” that are identified through research be made sustainable?

Reflections from International Participants

Each of the international participants was asked to provide additional information based on their participation in the workshop that would help to shape the Canadian patient safety research efforts. Dr. Lilford began by suggesting that Canadian researchers and funding bodies work with those from the US and UK to identify current patient safety research and areas where gaps exist that further research could address. Dr. Lilford identified some underdeveloped areas that require further attention, including the epidemiology of adverse events in pediatric and ambulatory settings, the need to focus explicitly on transitions of care, and the need for more research on improving safety through better design and improved teamwork. Reflecting on the current emphasis in the US on information technology as a way of improving safety Dr. Battles suggested that Canadians *not* emphasize information technology assessment, but rather focus on identifying safer practices and involving other disciplines besides medicine and nursing in the analysis of safety. Dr. Cooper suggested that Canadian researchers could play a role in updating the current inventory of patient safety research and developing evaluations of patient safety interventions. Dr. Cooper agreed with the need to focus on issues other than medication safety and information technology which are strongly emphasized in current US funding programs.

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Next Steps for the Canadian Patient Safety Institute

Discussion about current and future funding ranged across several issues. Several participants commented on the potential for investing more money in fewer, larger projects that might have greater impact, instead of many smaller projects. There is a need to explore whether grantees identified through other means, such as the CHSRF Research, Exchange and Impact for System Support (REISS) program and the CIHR Partnerships for Health System Improvement projects might be funded using CPSI resources. Efforts to match funds from other sources, including delivery organizations and other funding bodies (e.g., Alberta Heritage Fund) could help broaden the impact of the CPSI investments. The Call for Proposals from CPSI as well as ongoing research programs at CIHR and CHSRF will provide resources for addressing the broader agenda and specific topics identified in the research workshop. There was strong support among workshop participants for the research granting agencies, including national and provincial funding bodies, to continue to work together to leverage existing and identify new funding opportunities and to share information on the development of priorities.

Evaluation

Surveys returned by meeting participants suggested a high level of satisfaction with the retreat program, background information and presentations by the international experts. Some participants were less satisfied with the priority setting process than with other parts of the workshop and wanted more details on the funding to be provided for research on patient safety.

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Appendix A: List of Invited Participants

Name	Organization
Ansermino, Mark	University of British Columbia, Centre for Health Innovation and Improvement, Department of Anesthesia
Baker, Ross	University of Toronto, Department of Health Policy, Management and Evaluation
Baumann, Andrea	McMaster University, Director, (McMaster Site) Nursing Health Services Research Unit, Associate Vice-President, Faculty of Health Sciences
Bowen, Sarah	Winnipeg Regional Health Authority, Research Coordinator Research, Quality & Decision Support
Brown, Adalsteinn	University of Toronto, Health Policy, Management and Evaluation, Faculty of Medicine
Campbell-Borland, Dawn	The Society of Obstetricians and Gynaecologists of Canada, MOREOB Program
Corvari, Ron	Health Canada, Pharmaceuticals
Croskerry, Pat	Dartmouth General Hospital, Clinical Consultant in Patient Safety - CDHA
Davies, Jan	University of Calgary, Department of Anaesthesia; Foothills Medical Centre
Ensom, Robin	Providence Health Care in Vancouver
Espin, Sherry	University Health Network, Toronto
Feasby, Tom	Capital Health, Edmonton
Flintoft, Virginia	University of Toronto, Hospital Report Research Collaborative
Forster, Alan	Ottawa Hospital, Clinical Epidemiology Program, Ottawa Health Research Institute
Hammell, Nora	Canadian Nurses Association, Policy/Directrice, Ottawa
Hebert, Philip	Sunnybrook Health Sciences Centre, Department of Family and Community Medicine
Heidemann, Elma	International Society for Quality in Health Care
Hunter, Kendra	Health Canada, Acute Care Unit, Quality Care, Technology and Pharmaceuticals Division Health Care Policy Directorate, Health Policy Branch
Jeffs, Lianne	University of Toronto, Department of Health Policy, Management and Evaluation
Josey, Mary Lou	Canadian Anesthesiologists Society
Kaplow, Marilyn	McGill University Health Centre
Lahey, Michele	Canadian Association of Pediatric Health Chair, CAPHC Patient Safety Work Group: Senior Vice President - Health Services, Capital Health
Law, Madelyn	Department of Health Policy, Management and Evaluation, University of Toronto
MacDonald, Kathryn	Health Council of Canada
MacKinnon, Neil	Dalhousie University
Marck, Patricia	Faculty of Nursing, University of Alberta & Royal Alexandra Hospital Clinical Research Unit, Capital Health
Martin, Murray	Hamilton Health Sciences Centre

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McFarlane, Anne	Institute of Health Services and Policy Research
McGillis Hall, Linda	University of Toronto, Faculty of Nursing
Moffatt, Michael	Winnipeg Regional Health Authority
Morgan, Pam	Department of Anesthesia, Sunnybrook and Women's College Health Sciences Centre
Muttitt, Sarah	Canada Health Infoway, Investment Strategy & Planning Canada Health Infoway/Inforoute Sante du Canada
Norton, Peter	University of Calgary, Department of Family Medicine
O'Beirne, Maeve	University of Calgary, Departments of Family Medicine/Community Health Sciences, Health Sciences Centre
O'Connor, Patricia	McGill University Health Centre
Palacios Derflinger, Luz Maria	University of Calgary, Department of Mathematics
Redelmeier, Don	University of Toronto, Sunnybrook and Women's Health Science Centre - Sunnybrook Hospital
Rifai, Fatima Al	McMaster University, United Arab Emirates and Graduate Student, Faculty of Health Sciences
Rosenbloom, David	McMaster University
Sheps, Sam	University of British Columbia, Department of Health Care and Epidemiology, Faculty of Medicine
Shojania, Kaveh	University of Ottawa & Clinical Scientist, Clinical Epidemiology Program, Ottawa Health Research Institute
St-Germain, Daphney	Université de Moncton, Campus de Shippagan
Teare, Gary	Health Quality Council of Saskatchewan, Director, Quality Measurement and Analysis
Tierney, Mike	The Ottawa Hospital
Tolkin, Jonathan	Canadian Paediatric Society
Tourangeau, Ann	University of Toronto, Faculty of Nursing, Career Scientist
Tregunno, Deborah	York University, School of Nursing
U, David	Institute for Safe Medication Practices
White, Ian	Federation of National Specialty Societies and Canadian Anesthesiologist Society
Yassi, Annalee	Occupational Health and Safety Agency, Vancouver
Zelmer, Jennifer	Canadian Institute for Health Information
Speakers	
Battles, James	Agency for Healthcare Research & Quality, Patient Safety Centre for Quality Improvement & Patient Safety
Cooper, Jeffrey	National Patient Safety Foundation
Goering, Paula	CHSRF/CIHR Chair, Director - Centre for Addiction & Mental Health
Lilford, Richard	University of Birmingham, Public Health & Epidemiology
Name	Organization
Conference Sponsors	
CHSRF	
Beardall, Sue	
Law, Susan	
CIHR	
Bray, Judith	Institute of Infection and Immunity
Gagnon, Michelle	

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Tsouros, Sophia	Institute of Musculoskeletal Health and Arthritis
CPSI	
Dyck, Judith	
Gebran, Joseph	
Hassen, Philip	
Hoffman, Carolyn	
Leonard, Pierrette	
Romano, Tracy	
Wade, John	

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Appendix B: Reports of Working Groups on Patient Safety Research Priorities

Patient Safety Research Retreat: February 28 – March 1, 2005
Toronto, ON

Notes

RED GROUP

Priorities for Patient Safety Research

- Building capacity and infrastructure
- Choose areas we know we can benefit/ show we made a difference
- Accountability, wise investments
- System benefit
- Research on knowledge translation
- Strategies for collaborative research
- Synthesis and best practices in patient safety
- Organizational change
- Improving the patient experience
- Diffusion of innovation for patient safety practices and interventions
- Effective strategies for changing behavior:
- Build in processes systems and infrastructure to support uptake of research findings
- Medication safety
- Team Building/ Safer Work Places
- Identification of patient safety indicators
- Research on diagnostic errors and problems
- Scoping and synthesis of patient safety
- Intervention research (what is going to be done)
- Implementation of current solutions (e.g., for medication errors)
- Human factors, team, and workplace

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Short Term Priorities

- 1) Safety by design
 - Human factors
 - Infrastructure (built environment)
 - Workplace safety factors
- 2) Patient Safety Indicators
- 3) Scoping and Synthesis
- 4) Diagnostic Error
- 5) Intervention and implementation

Long Term Priorities

- 1) Adoption/ Education/ Uptake/ Learning organization
- 2) Intervention/ Implementation research
- 3) Safety by design
 - Human factors, teamwork, environment
- 4) Organization of health services
 - Cost effectiveness/ benefit of “safety culture” in health care.
 - Design, implement and evaluation of interventions
 - Dissemination and translation of research \ Sustainability of best practices
 - Understanding epidemiology of safety in other sectors (e.g. h/c sectors)
 - Disclosure- impact on litigation

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GREEN GROUP

Priorities for Patient Safety Research

- Adverse Events in the community hospital (failure to diagnose, interpret, action, tools and complications)
- Taxonomy of patient safety research
- Methodology for patient safety research
- Work place environment (fatigue and volume)
- Culture change
- Pediatrics
- Simulations
- Training and education
- IT, decision support (providers, DM)
- Patient role in Patient Safety
- Implementation of IT (human factors and cost benefit)
- Secondary database access
- Database to id Adverse Events
- Qualitative research in patient safety
- Suicides and bedsores
- Updating evidence
- Prioritizing at an institutional level
- Coordination of care across institution and providers
- Alternative Medicines
- Best approaches
- Evaluations of interventions for PS (program tool)
- Clinical trials research in general (funding source?)
- Ability to link
- Champion (good collaboration, decision making and researchers)
- Method for funding intervention studies
- Reporting system
- Private
- Voluntary

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Short Term Priorities

- Epidemiological pediatrics
- Pay attention to psychometrics if working in areas where there is other research
- Workplace environment
- Closing the loop
 - Once a problem is identified, how does an organization scan the literature, and put steps in place, then monitor

Long Term Priorities

- info technology
- helping managers make decisions
- helping clinicians
- communications
- safety culture
- governance
- how do health systems monitor the quality of their care on an ongoing basis

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YELLOW GROUP

Priorities for Patient Safety Research

- How to find out the best practices/processes from other funding agencies – good way to organize research agenda/priorities
- Menu of different options
- Funding variety
- Different projects require different criteria
- Get away from highest dependable projects for funding
- Need variety
- Where to go depends on need
- Reporting
- How to access different reporting systems
- How is data going to be used
- Quick turn around
- Intervention studies that are upstream – break down into manageable
- How are healthcare providers able to prevent errors? – acute care, etc.
- Target and develop new centers of excellence
- Tie researchers together – networks and grants
- Sociological
- Understanding healthcare teams perception of errors
- What is actually happening in error reporting?
- Methodology beyond RTC – mixed methods
- Processes of research and funding vs. content
- Public engagement – subject partnering
- Healthcare union engagement – need not be obstacles but advocates
- Need funding for Patient Safety Chairs
- Assessing role of technology to prevent – effective? Supportive?
- Indicators/triggers tools (CIHI) – analysis of where we are currently
- Decision Makers and researchers working side by side – we aren't close yet
- “talk is cheap” – truly believing that safety is the key to Decision Makers
- Decision Makers need to drive because they have key to implement – stakeholder owned research
- Role of private industry
- Medical device developers
- Need much more engagement
- Their technology more at development stage

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- Research of the research, e.g.:
 - What is out there
 - Who is doing what
 - An inventory
- To inform strategy
- Content – human factor research
- Process – matching funds – CPSI etc.
- Canadian Anesthesia Res. Fund
- Canadian Anesthesia Res. Committee
- Decision Maker Partner needs to match funds similar to CHSRF
- Micro cultures
- How do people work within their environment?
- What are issues and how do they impact our perceptions/culture?
- Micro/macro level impacts
- Why Health Canada won't approve different drug labeling
- Students include post docs and PhD's etc.

Priorities:

Design, implement, and evaluation (cost effective) of interventions to improve safety culture or health systems organizations factors in health care

- 1) leadership/managers
- 2) support processes to support teams to increase knowledge translation\workforce staffing
- 3) receptor capacity for leaders
- 4) patient engagement – systematic, family caregivers
- 5) indicators, procedures of safety culture
- 6) evaluation of self-assessment tools
- 7) cost effectiveness/cost benefit

What impacts patient safety

1. Patients

- Self-efficacy
- Role/impact of involvement
- Patient-centered focus
- Models of care
- Prevention of hospital admission missing in first place
- Experience of patient perspective of error/root cause analysis
- Direct to customer advertising

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- And/or informed customer
 - Patient awareness as an issue
 - Stimulate demand
 - Building on current strengths
- 2. Personnel**
- Well-being and link to safety
 - Inclusion/non-inclusion of various personnel (team) on patient safety initiatives
 - Dose, scope
 - Multisite, large, international
 - Staff mix, numbers
 - Training, education on rule following behavior
 - e.g., checklists
 - Schedules/Overtime/Fatigue
 - Backup systems
- 3. Equipment**
- Compatibility/differences in models
 - How we “work around” the complexity
 - Backup systems
 - Establish liaisons – CCOHTA or HTA
 - Maintenance
 - Guidelines/criteria for usage (outdated, etc.)
 - Upgrade
 - Re-use of single use
 - Dissemination of alerts
 - What are comparative advantages of various designs?
 - Need to involve people who will use them
 - Training, new devices
 - Disability of alarms
- 4. Regulatory**
- Maintenance
 - Impact of CCHSA standard for accreditation
 - Disclosure – impact on litigation
 - Insurance and “no fault”
 - Tort reform
 - Professional regulation
 - How much is over-regulation?

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Short Term Priorities

- Maintaining an inventory of research
- Infrastructure/Support for centres of excellence (chairs, job jars, studentships)
- Operating support for centers of excellence
- Fatigue, scheduling, overtime, work hours
- Indicators/procedures of safety culture (design, implementation and evaluation)

Medium Term Priorities

- National data system to track errors
- Develop basic system of patient safety indicators
- Staffing and skill mix/well being

Long Term Priorities

- Cost effectiveness and benefits of safety culture in health care design, implementation and evaluation of interventions (things related to safety culture)
- Dissemination and translation of research
- Research on sustainability of best practices
- Understanding the epidemiology in other parts of the health system
- Disclosure-impact on litigation

Patient Safety Research in Canada

Report on a Retreat to Identify Research Priorities

BLUE GROUP

Priorities for Patient Safety Research

- What affects uptake?
- What works in:
 - Medication error
 - Diagnostic error
 - Falls
 - Hospital-acquired infection
 - Unusual results (no response)
 - Deteriorating patient
- Health Human Resources
 - Delivery
 - Training
 - Education
 - Numbers
- Influencing Patient Safety as a Team (Interdisciplinary)
- Theory-driven Research
 - Sharing theories
 - Conceptual framework
- Consistent Standard Reporting
- Culture of Organizations (Legal, Hierarchical)
- Low Expectations
- Settings/sectors outside of Acute Care
- Private Sector Modalities (roles)
- Voluntary/Informal Care
- Family Care
- Electronic Records
- consumer expectations/demand
- tool development (mixed methods)
 - evaluation
 - intervention
- Legal issues/regulatory framework
- Broad theoretical framework

Patient Safety Research in Canada

Report on a Retreat to Identify Research Priorities

Identifying Best Practices

- How do practices around injectable products contribute to hospital-acquired infections?
- There are various clinical protocols...To what extent do the current protocols/practices
- What is the current state of evidence within patient safety? (See topic areas)
- What kinds of interventions (organizational interventions, local) improve self-monitoring and feedback?
- What are effective models of service delivery within community care?
 - Long term
 - Primary care
 - Home care
- What are the safety issues in community care (including mental health)?
- What are the key risks in patient safety in transitions?
- Why is there no uptake?
- What are the barriers in doing knowledge transfer in patient safety?
- What are the most effective strategies to do knowledge transfer in patient safety?
- What methodological approaches allow us to develop more effective patient safety research?
- Which reporting systems reduce adverse outcomes?
- Which meds reconciliation strategies reduce adverse outcomes?
- Do med reconciliation strategies affect adverse outcomes?
- What is the correlation between safety culture and improved safety outcomes?
- What are effective strategies to prevent/manage nosocomial infections?
- What are effective strategies and tools to help patients with their own management of safety?
- What is the preferred regulatory and legal framework to improve patient safety?
- What are effective implementations of information systems in improving patient safety?
- Patient ID CPDE – bar code verification
- What teamwork strategies improve safety outcomes?
- Are these effective strategies for reducing diagnostic error?
- Are there effective strategies for improving the response to “unusual” results?

Patient Safety Research in Canada

Report on a Retreat to Identify Research Priorities

Short Term Priorities

- What is the current state of evidence within patient safety?
- What are the key risks in patient safety in transitions?
- What are the most effective strategies to do in knowledge transfer in patient safety?
- What methodology/approaches allow us to develop more effective patient safety research?
- What are effective strategies and tools to help patients with their own management safety?
- What teamwork approaches improve safety outcomes?

- Current state of evidence
 - what's ready to go
- Epidemiological questions that we know little about
 - patient safety transitions
- Most effective strategies for knowledge translation
- Methodological approaches to allow us to develop more effective patient safety research
 - we need to respond, act and evaluate at the same time. How do we actually develop effective patient safety practices. We can't wait.
- Tools for patients to develop and protect their own patient safety
 - Pediatrics and geriatrics might be particular areas
- Team work approaches to enhance team performance
 - Which are effective
- National data systems/benchmarking/indicators

Long Term Priorities

- What is the correlation between safety culture and improved safety outcomes?
- What kinds of interventions improve self-monitoring and feedback?
- Organizations have to have certain capabilities to monitor their own capabilities. What practices enhance patient safety? Also at the team and individual level.