

FINDING SOLUTIONS 1998

A WCB grant program for research and training to improve the workplace

Finding Solutions, the Workers' Compensation Board's grant program, provides financial assistance to support early identification and prevention of workplace risks, research methods for reducing risks, evaluation of post-injury rehabilitation strategies, or promotion of effective education on health and safety risks.

With the advice of the 1998 WCB Grants and Awards Advisory Committee — comprised of employer representatives Maurice Fernandes (Canada Post Corporation) and Eric Skowronek (B.C. Maritime Employers' Association), and worker representatives Lee Loftus (International Association of Heat and Frost Insulators & Asbestos Workers) and Nancy Singh (Hospital Employees' Union) — the senior executive of the WCB approved funding for 11 new projects in 1998.

1998 Grants

Producing dive accident prevention videos for occupational divers

Agency:..... Canadian Diving Group

Representative: Geoff Greenwell

Recommended funding: \$43,500

Despite the introduction of the new health and safety standard that stipulates "all divers shall have dive accident management training," there is a lack of suitable educational material to provide the means to satisfy the regulatory requirement. This project will include the production and distribution of two professional videos: one video will focus on scuba issues, and the other is aimed at occupational surface-supplied diving operations.

Reducing repetitive injuries for laundry/linen workers in health care

Agency:..... Cumberland Regional Hospital Laundry

Representative: Mike O'Brien

Recommended funding: \$51,429

Laundry/linen workers in health care facilities have a high rate of repetitive injuries associated with processing large volumes of linen. This project will establish and evaluate corrective measures to reduce repetitive injuries within the laundry department. Areas to be examined will include physical plant layout, equipment operation, and processing procedures. Return-to-work protocols for injured workers will also be developed.



“In the 5 year period 1993 -1997, there were over 2,410 claims accepted due to acts of violence or force in B.C.’s health care industry.”

WCB statistical health care fact sheets



“By conducting a physical demand analysis we will have the information employers need to return injured workers to safe, meaningful, and productive work, and to establish more effective return-to-work programs.”

*Lana Ho,
City of Burnaby*

Investigating strategies to reduce violence to health care workers in emergency departments

Agency: St. Paul’s Hospital

Representative: Dr. Christopher Fernandes

Recommended funding: \$39,675

Violent incidents are occurring more frequently in hospital emergency departments. St. Paul’s Hospital will introduce and evaluate a program for the prevention and management of aggressive behaviour. This project will include a cross-sectional retrospective survey where staff perceptions, number of security calls, number of injuries, and absenteeism will be measured. It is anticipated that this program may serve as a model for injury prevention in emergency departments and other health care settings.

Evaluating a diving computer for occupational divers

Agency: Canadian Diving Group

Representative: Andy Nemier

Recommended funding: \$25,000

Traditionally, occupational divers use a manual tabular method of calculating decompression timings. This method does not accurately reflect the varied dive profiles routinely practised. Consequently, many divers ignore the tables, compromising their safety and significantly increasing the risk of inadequate decompression. This study will evaluate the viability of using a wrist computer as a tool for decompression calculation. A successful evaluation would mark a world first for B.C., as it would be the first jurisdiction to validate a wrist-mounted occupational dive computer.

Analysing physical demands to enhance injured workers’ return-to-work opportunities

Agency: City of Burnaby

Representative: Lana Ho

Recommended funding: \$45,000

Researchers will conduct physical demand analyses of jobs in several municipalities that show a high rate of injury. This project will recommend preventative measures and training to be developed. Employers will be able to use these findings in conjunction with health care professionals to identify suitable work, and assist in improving modified and/or light duties for injured workers. The findings will also help promote early identification and prevention of workplace hazards, and to facilitate education and training specific to the hazards identified.



Producing fishing vessel stability training materials

Agency: Universal Marine Consultants (West Coast) Ltd.

Representative: Murdoch Matheson

Recommended funding: \$50,000

Workers on fishing vessels run the risk of foundering or capsizing while they load at sea. Current stability information is often highly technical. This project will instruct fishers in the principles of fishing vessel stability and the threats to stability that they may encounter. A scale model fishing vessel, designed to permit demonstration of stability hazards, will be used as an educational device. A training video will also be produced.

Reducing musculoskeletal disorders among newspaper and commercial printing workers

Agency: Communications, Energy and Paperworkers Union of Canada, Local 226

Representative: Harold Funk

Recommended funding: \$53,000

Workers in the printing industry are at risk for developing musculoskeletal disorders. This project will reduce injuries by providing health and safety committees with a practical, comprehensive, field-tested program, specific to their needs and in compliance with ergonomic standards. The program can be used for other similar work activities.

Investigating vocational rehabilitation methodologies for brain-injured workers

Agency: B.C. Brain Injury Association

Representative: Jack Scollon

Recommended funding: \$15,000

Although there is a great deal of literature on head injuries, there has not been a systematic review to determine the most effective vocational rehabilitation model. This project will review existing research on vocational rehabilitation for traumatic, brain-injured workers. A methodology and process to implement a pilot project will be developed.

“Only a small percentage of people return to work after a serious brain injury — we hope to improve that.”

*Jack Scollon,
B.C. Brain Injury
Association*





“Approximately 935,000 days were lost at a claims cost of 271 million dollars in the logging industry from 1993 to 1997.”
WCB statistical logging fact sheets

Updates on Previously Funded Projects

Developing and evaluating portable lift and transfer devices for home care workers

Agency: British Columbia Institute of Technology

Representative: Nancy Paris-Seeley

Recommended funding: \$39,998

Home care workers are at high risk of developing musculoskeletal injuries, primarily when they are lifting and transferring patients. This risk is increased by the small, awkward spaces found in homes and the slippery surfaces found in bathrooms. This project will identify risks in the bathroom setting that expose a home care worker to possible injury, evaluate existing portable patient lift devices and transfer aids, develop a set of performance requirements and specifications for an optimal lift and transfer device, and construct and evaluate one or more patient lift and transfer prototypes based on the optimal performance requirements and specifications.

Training forest workers in cable yarding techniques

Agency: North West Loggers Association

Representative: Bill Sauer

Recommended funding: \$31,911

Recent changes in logging practices have created the need to develop and expand expertise in the strategies and techniques of cable yarding, particularly in grapple, skyline, and longline yarding. This project will develop and evaluate a model that can be used in yarding operations to identify workplace hazards and implement changes to reduce the risk of injury.

Preventing workplace violence and harassment of community care workers

Agency: Capital Health Region, Primary/Community Care

Representative: Julianne Sanguins

Recommended funding: \$10,000

Community care workers regularly encounter workplace violence and harassment. This project will develop and deliver a training module to community care workers of the Capital Health Region.

Training health care workers in long-term care facilities

Agency: Tillicum and Veterans Care Society

Representative: Gloria Parker

Recommended funding: \$21,483

Clients with dementia present unique challenges to health care workers in long-term care facilities. Tillicum and Veterans Care Society are developing and evaluating the delivery of safe care in a training program for health care workers dealing with long-term care residents with dementia. Training for nurses and care aides will cover lifting, transferring, and communicating effectively with residents with dementia to reduce injury risks associated with patient transfers.

Evaluating the preventive effect of surgical ergonomics

Agency: Faculty of Dentistry, University of British Columbia

Representative: Dr. Lance Rucker

Recommended funding: \$53,979

Dentists and dental hygienists are at risk of developing strain injuries while performing surgical tasks. This project is determining whether an understanding of clinical surgical ergonomics, attainable through existing clinical training programs or other factors including the use of surgical magnification and equipment layout, lead to lower rates of musculoskeletal injuries among dental clinicians.

“The personal suffering and costs of MSIs in health care are significant. Research is needed to understand and reduce the risks of these serious injuries.”

Dr. Susan Kennedy,
UBC

Investigating links between work stress and musculoskeletal injuries in health care

Agency: University of British Columbia

Representative: Dr. Susan Kennedy, Dr. Paul Demers,
and Dr. Clyde Hertzman

Recommended funding: \$22,369

Health care workers face an especially high risk of developing musculoskeletal injuries (MSIs). UBC researchers are studying the relationship between work organization/stress factors, and MSIs among health care workers. Researchers are investigating the relative importance of various risk factors and will provide recommendations for interventions to reduce injuries. These findings will form the basis of a comprehensive report for health care organizations and stakeholders.

Promoting respiratory health in radiology

Agency: University of British Columbia

Representative: Dr. Kay Teschke

Recommended funding: \$50,000

Processing radiographic film exposes workers to many chemicals, some of which are known to cause asthma and other respiratory ailments. This study is measuring the concentrations of hazardous airborne compounds at selected radiographic facilities. It is also evaluating the effectiveness of several ventilation methods for reducing or preventing the exposure of radiographic staff to hazardous compounds. Results of the study will enable radiographic facilities to protect their staff from airborne chemical exposures.

Helping emergency service workers cope with critical-incident stress

Agency: Pediatric Transport Program, University of British Columbia

Representative: Andrew Macnab

Recommended funding: \$55,000

Ambulance attendants, paramedics, and other emergency service workers regularly encounter incidents that can produce disabling stress symptoms. This study is determining which interventions are most effective in helping emergency service workers deal with critical-incident stress.



The knowledge gained through WCB-funded research is vital to our understanding of the causes and factors contributing to occupational injury and disease.”

Dr. Bart Jessup, Director Strategic Projects, Coordinator Grants and Awards Advisory Committee, WCB

Developing skills in disability management

Agency: British Columbia Institute of Technology

Representative: Lars Larsson

Recommended funding: \$50,000

Training for disability management requires a broad range of skills. The goal of this project is to develop a non-credit certificate program in disability management to be offered through the WCB education network. The curriculum has been completed and the first test course will be offered in the first quarter of 1999. Curriculum materials will be available throughout the province, enabling people involved in disability management to take the course through local community colleges.

Other projects in progress:

- Expanding safety training for power line technicians
- Evaluating physician practices in the treatment of acute back pain
- Preventing musculoskeletal injuries among health care workers
- Redesigning toll booths to reduce neck and shoulder pain in workers
- Improving quality of life and employability for severely disabled workers
- Assessing the health effects of residual pesticides
- Developing database links between health and safety organizations

**Research
Reports
Now
Available**

Reducing patient-handling injuries for health care workers

Agency: Trillium Lodge

Representative: Elaine Gamble

Recommended funding: \$7,170

This study compared different mechanical lifting devices currently being used in the facility to prevent and reduce musculoskeletal injuries associated with patient handling. The investigation showed that the overhead-mounted ceiling lifts (WISPA) are preferred by workers, while ERGO is the preferred floor lifting device. A full-body repositioning sling is recommended for residents who require repositioning.

A combination of mechanical interventions, policies, and programs substantially decreased the amount of injuries, time lost, and costs related to patient transfers. The annual number of injuries related to resident handling decreased by 71 percent, time lost decreased by 84 percent, and WCB premium costs decreased by 41 percent.

Preventing violence-related injuries in long-term care facilities

Agency: Simon Fraser University

Representative: Neil Boyd

Recommended funding: \$65,460

This study examined aggressive behaviour among residents in six long-term care facilities in B.C. Results indicate that most aggressive incidents toward care givers occurred during personal care or attempts to redirect a resident. Less than 10 percent of incidents were random or unexpected. Male residents were three times as likely as female residents to engage in acts of aggression. There were only a small number of residents responsible for aggressive incidents. Recommendations were made on staffing levels, in-service education, standardization of care aide education and language capacity, work procedures for responding to aggressive residents, and information availability about residents' medical and social history.

Reducing accidents and injuries in planer mills

Agency: Northern Interior Forest Training Initiative (NIFTI)

Representative: Fraser Deacon

Recommended funding: \$4,546

This study evaluated the results of a training course for planer maintenance and production workers in northern B.C. Results indicated that the course increased workers' safety awareness and changed their attitude toward workplace safety. New job procedures were developed out of the course content.

Measuring and reducing vibration risks in sawmills

Agency: Canadian Forest Products Ltd.

Representative: Kim Zinck

Recommended funding: \$15,800

This study identified and evaluated the effects of vibration exposures on sawmill workers performing high-risk tasks such as welding, sawfiling, bucking, and millwrighting. Different vibration reduction strategies and training for vibration intervention were developed.

Other reports now available

- Evaluating four methods of measuring psychosocial job strain
- Producing injury prevention programs for repositioning patients in bed: research report and training manual
- Analysing occupational risks in the school system
- Preventing musculoskeletal injuries in flight attendants
- Assessing the effectiveness of joint health and safety committees in forest product mills
- Minimizing ergonomic risks within the hospitality industry
- Developing safe work standards for utility arborists
- Beachline Safety Training



Videos now available

- Logging Safety Awareness
- Log Hauling Safety
- Taxicab Driver Safety: Assault Avoidance Awareness

These reports and videos are available through the WCB Library at 604 231-8450, or the Films and Posters Section at 604 276-3068, toll free at 1 800 661-2112, local 3068, or fax 604 279-7406.

Ongoing Research and Development

Educating tomorrow's health and safety experts

The WCB has supported BCIT student scholarships in occupational health and safety since 1988. In 1998, occupational health and safety students Laura Hardacre, Chris Scobie, and Todd Siefke were awarded entrance scholarships of \$1150 each.

Researching work-related cancers

The WCB has supported the BC Cancer Agency's research on work-related cancer since 1982, funding projects such as an analysis of cancer risk by industry; a study on detecting occupational cancer risks; and the geographic distribution of cancer rates. In 1998, the WCB continued its partnership with the BCCA by providing \$273,000 from the 5-year, \$1.2 million grant awarded last year.

During 1998, funding for the BCCA enabled a significant amount of progress which included the completion of a mortality analysis of pulp mill workers, a detailed analysis of the linkage between the incidence of cancer among B.C. pulp mill workers with the Canadian National Cancer Incidence Database, an analysis of occupational cancer risk factors as they pertain to cigarette smoking, a system of occupational coding for death registrations from 1985 to 1994 that will enable a more current analysis of mortality risk, the development and testing of surveillance system software for the early detection of occupational disease risks, the improvement and extension of a job exposure matrix (JEM) system for the detection of carcinogens in the workplace, and the creation of a computer-based registry of occupational disease risks based on exposure details.

For more information

about the Workers' Compensation Board Finding Solutions Grants and Awards Program, contact the Grants and Awards Program, Prevention Division at 604 231-8885, or toll free in B.C. at 1 888 621-7233, local 1210.