

Sask. Work initiative

Advancing workplace health, safety and injury prevention in Saskatchewan

Healthy workers. Stronger Saskatchewan.

The partnership between the Saskatchewan Workers' Compensation Board (WCB), WorkSafe Saskatchewan and the Canadian Institute for Safety, Wellness and Performance (CISWP) is intended to help create safer workplaces through research, innovation and evidence-informed prevention.

The WCB and WorkSafe are leading an innovative research initiative that brings advanced job exposure and demand assessment directly to Saskatchewan workplaces. Through its partnership with the CISWP, the WCB and WorkSafe are driving and fully funding the deployment of the Sask. Work mobile research lab to better understand workplace exposures and demands while supporting evidence-based prevention strategies across the province.

By leveraging its prevention mandate, industry relationships and knowledge of Saskatchewan workplace risks, WorkSafe is identifying priority research opportunities and connecting employers to practical, field-based research. The CISWP contributes specialized expertise in occupational health and safety research, exposure and demand assessment and wearable sensor technologies. Together, the partnership is generating Saskatchewan-specific data that helps employers identify hazards, evaluate controls and make informed decisions to reduce occupational health and safety risks and create healthier, safer workplaces.

About the CISWP

The Canadian Institute for Safety, Wellness and Performance (CISWP) is an independent not-for-profit research institute dedicated to strengthening the productivity, sustainability, and resilience of Canada's workforce.

Through industry partnerships, applied research and innovative technologies, the CISWP helps organizations better understand workplace exposures and demands while

developing evidence-informed strategies to improve worker health, safety and performance.

As an independent, not-for-profit research institute, the CISWP is not affiliated with any commercial vendor, insurer or product supplier. This independence allows the Sask. Work initiative to generate objective, evidence-informed findings that partners can trust, grounded in applied research conducted with actual workers, at actual worksites and under actual working conditions.

Why the Sask. Work initiative?

The Sask. Work initiative is a collaborative effort between the CISWP, WorkSafe and the WCB to better understand how workplace injuries occur and how they can be prevented.

By studying the physical, cognitive and environmental exposures and demands of real work activities, the initiative aims to:

- Identify factors that contribute to workplace injury risk.
- Better understand job-specific exposures and demands.
- Inform the development of practical injury prevention resources.
- Support safer, healthier workplaces across Saskatchewan.
- Generate evidence that helps protect workers while improving organizational sustainability and productivity.

The mobile research lab: State-of-the-art science at the worksite

At the heart of the Sask. Work initiative is the Sask. Work mobile research lab, a fully equipped, self-contained research facility that travels directly to worksites across Saskatchewan. Rather than simulating work in a fixed laboratory setting, removing real-world context, the mobile lab brings advanced measurement science to where work actually happens, capturing the true physical, cognitive and environmental exposures and demands of the job.

This worksite-based approach is what sets the initiative apart, above and beyond existing applied research approaches and offerings. Findings are built on applied research with actual workers performing actual tasks under actual working conditions, producing objective and transparent evidence that is directly relevant to the realities of your workplace.

What the mobile research lab can measure

Using scientifically rigorous, state-of-the-art research-grade wearable sensors and validated measurement instruments, CISWP researchers can capture a comprehensive picture of workplace exposures and demands. Depending on the workplace, tasks and research objectives, the research technicians may measure:

- Physical demands and risk factors such as:
 - posture and movement patterns
 - repetition
 - force exertion
 - muscle activity
 - physical effort
 - fatigue
 - whole-body vibration
 - hand-arm vibration
- Cognitive demands and risk factors such as:
 - heart rate and heart rate variability
 - physiological strain
 - mental fatigue
 - attentional demands
 - situational awareness indicators
- Environmental exposures such as:
 - heat, cold and noise
 - selected chemical exposures

CISWP researchers also observe tasks documented through structured, non-obtrusive, time-stamped worksite observation.

Access to state-of-the-art technology and wearable sensors

The instrumentation deployed through the mobile lab reflects the same state-of-the-art, research-grade technology used in leading academic and clinical research settings. Wearable sensors are lightweight, non-encumbering and minimally intrusive, allowing workers to carry out their normal duties while high-quality data is collected safely and unobtrusively in the background.

Access to research expertise

Partnering on the Sask. Work initiative also provides direct access to the CISWP's multidisciplinary team of researchers and data scientists, with expertise spanning

ergonomics/human factors, biomechanics, exercise physiology, occupational health and safety, engineering, physical therapy, machine learning and data analytics.

Partners benefit not only from advanced technology, but also from the scientific expertise required to interpret it, translating complex sensor and observational data into clear, practical and evidence-informed recommendations. Because the CISWP is an independent, not-for-profit institute, this expertise is applied objectively and free from commercial or product-driven influence.

Participating in the Sask. Work initiative

During the Sask. Work data collection, CISWP researchers collect data directly at participating worksites using a fully equipped Sask. Work mobile research lab and wearable sensor technology.

Bringing applied health and safety research directly to workers, the Sask. Work mobile research lab travels to worksites across Saskatchewan.

Voluntary participation

- Workers participate voluntarily.
- All participants review and complete an informed consent process with CISWP researchers.
- All data is completely confidential.

Wearable sensors

- Researchers apply wearable sensors at the beginning of a shift (approximately 15 minutes).
- Sensors and measurement instruments are selected based on the job and tasks observed and informed by the interests of the partner. Sensors may measure:
 - heart rate variability
 - muscle activity
 - core body temperature
 - posture and movement patterns
 - other indicators of workplace demands and exposures
- Sensor removal takes approximately five minutes at the end of the shift.

Worksite observation

- Researchers observe participants performing their normal job tasks and duties throughout their shift, often over multiple workdays.

- Time-stamped observations are recorded to provide context for the sensor data, allowing researchers to accurately associate specific tasks with measured exposures and demands.
- CISWP may capture brief photos and videos, with permission from all workplace partners, to help with signal processing and data analysis.

Participant appreciation

- Workers who participate receive a gift card as a token of appreciation for their time and contribution.

What partners receive

Sask. Work report

After data collection and analysis, participating organizations receive a Sask. Work report that summarizes:

- Job-specific physical, cognitive, and environmental exposures and demands.
- Key workplace exposure and demand findings.
- Identified risk factors.
- Evidence-informed practical recommendations.
- Opportunities to support worker health, safety and injury prevention

The report is intended to provide practical insights that organizations can use to support continuous improvement in workplace health and safety.

How the CISWP will use the data

Protecting participant privacy is a critical component of the initiative.

Data protection and privacy

- All collected data is anonymized before analysis.
- Individual worker data will not be shared with employers or other parties.
- Data is securely stored and managed according to established research and privacy standards.
- Data is used only for the research and injury-prevention purposes described here and is retained and securely destroyed in accordance with established research data-management standards.
- Results are analyzed at a job-task level to better understand workplace exposures and injury risk factors.

- The purpose of the data collection is research and prevention, not worker evaluation or performance management.

Confidentiality

- Individual workers will not be identified in reports or publications.
- Personal information is protected and handled confidentially.
- Findings are reported in a manner that safeguards participant privacy.
- Participating organizations and individual worksites will not be identified in any external report, publication or presentation without their consent.
- When findings are shared beyond a participating organization, they are presented in aggregate or de-identified form so that no individual worker or employer can be identified.

Ethics

The Sask. Work initiative is reviewed and conducted in accordance with established research ethics standards, ensuring that all participants are treated with respect, that participation is fully informed and voluntary and that participants may withdraw at any time.

Before taking part, every worker completes an informed consent process that explains the purpose of the research, what participation involves and how the CISWP will collect and use their information. Participation is entirely voluntary and a worker may decline or withdraw at any point without any effect on their employment.

Intellectual property

Data, analyses and research outputs developed through the initiative remain the property of the research partners – CISWP, WorkSafe and the WCB. Participating organizations receive access to their Sask. Work report and related findings generated through their participation.

Research partners may also use de-identified and aggregated findings to support scientific publications, injury-prevention resources and broader efforts to improve workplace health and safety across Saskatchewan. In all such uses, no individual worker or participating organization is identified without consent.

Participating organizations are free to use the insights and recommendations in their own Sask. Work report to support internal health, safety and injury-prevention efforts.

Why partner on the Sask. Work initiative?

Participating organizations have the opportunity to:

- Contribute to improving workplace health and safety across Saskatchewan.
- Receive evidence-informed insights about job exposures and demands and injury risk factors.
- Support industry-leading research focused on injury prevention.
- Help shape future workplace safety resources and best practices across your industry.
- Demonstrate a commitment to worker well-being and continuous improvement.

Getting started

Getting involved is straightforward. CISWP researchers manage the entire research process and a typical collaboration begins with a short conversation to understand your workplace and identify the roles or tasks of greatest interest. Field researchers are highly trained specialists with experience and expertise in measuring workplace exposures and job demands in varied worksites and sectors.

What we ask of participating organizations:

- Identify a workplace contact to co-ordinate scheduling and logistics with the research team.
- Help identify the job roles and tasks of interest and support voluntary worker recruitment.
- Provide site access and a brief safety orientation for researchers, consistent with your normal visitor procedures.

The CISWP leads the study design, ethics, data collection, analysis and reporting, and works around your operations to keep any disruption to a minimum.

Interested in collaborating?

We welcome the opportunity to discuss participation and determine how the Sask. Work initiative can support your organization's commitment to health, safety and injury prevention. For more information, contact:

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