

What is FIREWELL?

FIREWELL: Firefighter Illness Remediation Enterprise: Work-Accommodations for Enabled Life & Livelihood

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Sponsors:



Firefighter Collaborators:

- Mr. Rob D'Amico (Lead)
- Chief John Hay
- Ms. Louise Hine-Schmidt
- Mr. Ken McMullen
- Mr. Chris Ross

Researcher Collaborators:

- Dr. Joy MacDermid (Lead)
- Dr. Kathryn Sinden (Lead)
- Ms. Amanda Brazil
- Dr. Nick Carleton
- Dr. Heidi Cramm
- Dr. Paul Frewen
- Dr. Veronica Jamnik
- Dr. Steve Palmer
- Dr. Susan Stock

Healthcare Collaborators

- Dr. Liz Scott
- Dr. Mike Pysklywec

Happy Summer Days!



Thank you all for your contributions to FIREWELL in 2017. Our partnership development grant activities continue over these dog days of summer.

Key Messages

The objectives of our Partnership Development Grant (PDG), Phase 1 are to:

- 1) Build the FIREWELL partnership into a larger, more diverse, more national, group of researchers, firefighters and stakeholders that are committed to optimizing firefighter work participation.
- 2) Identify the key knowledge, existing resources and innovations that can be leveraged.
- 3) Establish firefighters' priority needs and research questions.
- 4) Develop and pilot test promising work participation interventions for Phase 2.
- 5) Establish increased capacity in qualified individuals engaging in firefighter research.

PDG Phase 1 Updates

New Partnerships (Objective 1)

In 2017, we established new partnerships with organizations/associations and collaborators from different geographical locations who share common interests and experience in conducting firefighter research.

Partners:

- Hamilton Professional Firefighters Association
- Hamilton Fire Department
- Thunder Bay Fire Rescue
- Fire Service Women Ontario
- Montreal Professional Firefighters Association
- Canadian Institute for Public Safety Research and Treatment
- Dartfish Canada
- Organizational Solutions Inc.

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We would like to welcome the following organizations and individuals to the FIREWELL team:

Partners:

- Fire Service Women Ontario
- Montreal Professional Firefighters Association
- Canadian Institute for Public Safety Research and Treatment

Collaborators:

- Ms. Louise Hine-Schmidt (President, Fire Service Women Ontario)
- Mr. Ken McMullen (Board Member, Canadian Association of Fire Chiefs)
- Mr. Chris Ross (Vice-President, Montreal Professional Firefighters Association, Inc.)
- Dr. Nick Carleton (Scientific Director, Canadian Institute for Public Safety Research and Treatment)
- Dr. Heidi Cramm (Chair for Firefighters, Canadian Institute for Public Safety Research and Treatment)
- Dr. Steve Palmer (Executive Director, Collaborative Centre for Justice and Safety)

Potential Partnerships (talks in progress)

- International Association of Fire Fighters
- Centre for Research in Occupational Safety & Health
- Dr. David Frost (Assistant Professor, Kinesiology, University of Toronto)
- Dr. Heather Carnahan (Dean & Professor, Human Kinetics and Recreation, Memorial University of Newfoundland)

Next Steps:

We are still accepting partners and collaborators. If you have suggestions of other potential partners or collaborators, please let us know as soon as possible.

Research**I) Environmental Scan (Objective 2)**

As part of our efforts to catalog all best practices in prevention and disability management for firefighters, we are currently conducting:

- a) A comprehensive search and review of the Canadian firefighter websites, and extracting info on the work health and safety programs posted online.

- b) A scoping review of published literature on firefighter research to identify what type of research has been conducted on firefighter health, what specific injury prevention and musculoskeletal interventions have been tested, the quality of the literature, and the involvement of health professionals in customizing interventions for firefighters.

Next Steps:

Extract and summarize the data on the scope and nature of published firefighter research and firefighter websites.

II) Establishing Firefighters' Research Priorities (Objective 3)

Our qualitative study on firefighters' research priorities is underway. The goal of these interviews is to understand firefighters' concerns regarding their musculoskeletal health and critical incident exposure and how future research might help address these issues.

To supplement our qualitative findings, we will also administer a short survey that will ask firefighters to rate the importance of items related to firefighter work health.

The findings from the interviews and surveys will be used to identify and prioritize firefighters' needs and develop research ideas/questions for our Partnership Grant (Phase 2) proposal.

Next Steps:

- 1) Recruit firefighters for interviews.**
- 2) Draft needs assessment survey.**

II) Piloting Potential Tools or Interventions (Objective 4)

We are currently pilot testing the following tools and processes to see if they will help meet firefighters' needs to maintain full active duty.

a) Adapting Firefighter TEAM-Feedback Modules to Context

- Aim: To establish the feasibility of the Physical Demands Analysis and TEAM-Feedback Modules as injury prevention strategies for firefighters in different geographical locations.
- Lead: Dr. Kathryn Sinden, Lakehead University

b) Adapting the Tools for Modified Work for Workers with Musculoskeletal Disorders for Firefighters

- Aim: To adapt the Work-related Musculoskeletal Disorders: Guide and Tools for Modified Work (TMW) to the specific needs of firefighters.

- Lead: Dr. Susan Stock, University of Montreal

c) **Wearable Technology for Estimating Oxygen Consumption**

- Aim: To assess the accuracy and reliability of select wearable technology (Garmin Fenix 3, Garmin Forerunner, Fitbit Charge 2) to estimate firefighters' oxygen consumption during fitness testing and simulations of physically demanding, structural firefighting tasks.
- Lead: Dr. Veronika. Jamnik, York University

Website (Objective 4)

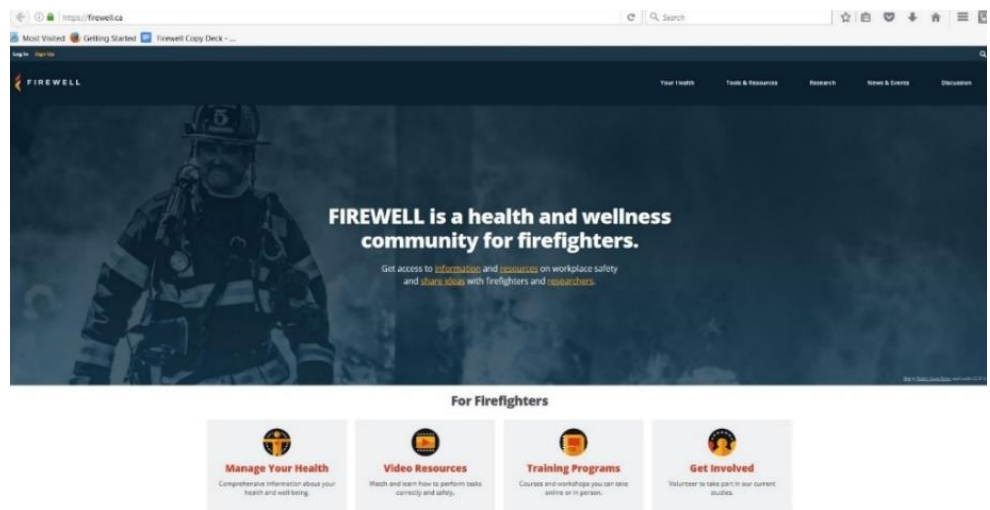
Over the past 6 months, we have been working on generating and translating to French content for the FIREWELL website such as:

- videos on how to perform firefighting tasks safely;
- the latest firefighter safety research info;
- tools and resources to help firefighters manage their mental health, bone and joint, fitness and chronic disease

The website will also function as a platform for sharing information with the FIREWELL team, and for interventions for future trials. The website is not live yet, but can be viewed:

Link: <https://firewell.ca/> (Password = password)

To access the members-only content, please contact Margaret Lomotan (lomotam@mcmaster.ca) for a Guest account.



Next Steps:

- 1) Beta test FIREWELL website with a small group of firefighters.**
- 2) Suggest relevant work that can be linked/posted on the website.**

Team News

In March 2017, **Dr. Joy MacDermid** and **Ms. Louise Hine-Schmidt** (Fire Service Women Ontario) attended the *Healthy and Productive Work (HPW) Strengthening Workshop* in Gatineau, QC. The HPW Workshop had 100 participants and was an opportunity for Dr. MacDermid and Ms. Hine-Schmidt to present the FIREWELL work, share information and network with other PDG research teams, knowledge users/partners, stakeholders, and representatives from the Canadian Institutes of Health Research, the Social Sciences and Humanities Research Council and Employment and Social Development Canada.

Grant Awards

Congratulations to the FIREWELL team members who were awarded funding in 2017 for the following pilot projects:

Project Title: *Firefighter burden of injury relative to specific fire response characteristics*

Funder: The Council of Canadian Fire Marshals & Fire Commissioners and The Canadian Association of Fire Chiefs

Investigators: **Kathryn Sinden (NPI) & Joy MacDermid, John Hay**

Project Title: *Adapting Firefighter TEAM-Feedback Modules to Context: Building Capacity in Firefighter Injury Prevention*

Funder: Canadian MSK Rehab Research Network

Investigators: **Kathryn Sinden (NPI), Joy MacDermid**, Heather Carnahan, **Amanda Brazil, John Hay**

Project Title: *Adapting the Tools for Modified Work for Workers with Musculoskeletal Disorders for Firefighters*

Funder: Canadian MSK Rehab Research Network

Investigators: **Susan Stock (NPI), Joy MacDermid**, Julie Cote, Clermont Dionne, Nicole Vezina, **Kathryn Sinden**, Ouïam Didane, **Chris Ross**

Presentations

At the 11th Annual Meeting of the Organization for the Study of Sex Differences (Montreal, Quebec, May 15-18, 2017), **Dr. Sinden** presented a poster titled, *“Sex differences in firefighter physiological response and task performance strategies: Implications for injury prevention”* (Co-Author: **MacDermid J**).

At the 2nd Quebec Congress in Adaptation-Rehabilitation Research (Montreal, Quebec, May 18-19, 2017), **Dr. Sinden** did a podium presentation on *“Determining reliability of Dartfish movement analysis software to identify upper extremity postures during a firefighter lift-task: Implications for ergonomic practice”* (Co-Authors: **MacDermid J**, Moll S, Jenkyn T, **D’Amico R**).

At the World Confederation of Physical Therapy Congress 2017 (Cape Town, South Africa, July 2-4, 2017), **Dr. Joy MacDermid** will present a poster titled, *“Prevalence and Distribution of Musculoskeletal Disorders in firefighters are influenced by Age and Tenure”* (Co-Authors: Negm A, **Sinden K**, **D’Amico R**, MacIntyre N).

Partnership Grant (Phase 2) Submission (Deadline: November 1, 2017)

The SSHRC-CIHR Partnership Grant application form and instructions will go live in July 2017.

We will start working on the different sections of the application during the summer months and will let you know what our application will need from partner organizations (support letters) and co-investigators (SSHRC Web CVs). Stay tuned!

