National Défense
Defence nationale

ANNEX A **11 July 2017**

- STATEMENT OF WORK -
Task Authorization (TA) - 41

FOR SUB CONTRACT WITH CIMVHR

1. NUMBER – TITLE OF TASK AUTHORIZATION

TA 41 – Towards reducing musculoskeletal injuries in the Canadian Armed Forces

2. VALIDATION OF SCOPE OF CONTRACT

2.1 The following task(s), as written in the SOW of the main contract (W7714-145967/001/SV) apply to this Task Authorization (TA):

j. **Roadmaps -** Develop roadmaps for major topics related to the health of military members, Veterans, and their families (e.g., blast injury, mental health, delivery of service, and transition to civilian life).

k. **Advice -** Provide recommendations on peer review research proposals, publications, experimental studies, surveys and scientific evidence.

l. **Expert support -** Provide personnel support to military and veteran health research projects through education, dissemination of research findings or knowledge translation.

3. ACRONYMS

CAF	Canadian Armed Forces
DND	Department of National Defence
DRDC	Defence Research and Development Canada
MSK	Musculoskeletal Injury
SA	Scientific Authority
TA	Technical Authority

4. REQUIREMENT

4.1 Currently, surveillance of injuries is conducted by multiple organizations within the CAF and DND. Each organization has a different reason for collecting their own injury data; and therefore, the details captured in each data set can be different.

4.2 In order to more effectively design sustainable programs and interventions to reduce the incidence of musculoskeletal injuries (MSKs) in the Canadian Armed Forces (CAF) and engage the chain of command, there exists a need to: define the specific surveillance needs of stakeholders; determine models of injury prevention and surveillance that have been successful in military environments; review all the current data records that exist pertaining to MSKs in the CAF; determine how data can be shared; and develop a framework for injury surveillance that is sustainable over time.

5. BACKGROUNDs

5.1 MSK is the leading reason why Canadian Armed Forces personnel are unable to deploy on operations (Thériault, et al., 2016). Data from the Health and Lifestyle Survey show that 44% of CAF Regular force personnel sustained an injury in the previous 12 months and the prevalence of repetitive strain injuries increased between 2008/09

and 2013/14. Since MSK is also the most common reason listed for medical discharges, it is clear that MSK reduces both training and operational effectiveness, and increases the demands placed on associated medical care providers. Published NATO allied reports show that 20 – 59% of recruits are affected by MSK with about 8% of recruits being discharged due to MSK (NATO-HFM-RTG-283, 2017). Generic interventions have been found to be ineffective.

5.2 The frequency and quality of injury reporting varies within the Canadian Armed Forces. The data that are generally reported quantify the incidence and prevalence of MSK to military personnel and focus on the more severe injuries that result in either medical discharge or medical downgrading. Whilst efforts have been made to reduce injury rates based on this relatively coarse data, a better understanding of the causes of MSK and the effectiveness of existing preventative measures is necessary to provide data on the mechanism of injury with the aim of optimizing operational readiness.

5.3 Through a series of workshops and meetings (**ANNEX B** and **ANNEX C**), DND and the CAF have identified that there is a great deal of data that does exist recording incidences of MSKs; however, this data has not been validated to determine comprehensiveness, quality, and the potential for compilation. Determining where all of the relevant MSK reporting data is currently housed, how accessible the data is, and what level of effort is required to create a comprehensive MSK surveillance database is a necessary first step to identifying any potential gaps that may exist in the current data set. As well, understanding the specific needs of DND stakeholders in the collection, analysis, reporting, and sharing of data is critical in establishing a system for injury monitoring.

5.4 For the purposes of this work, MSK will encompass both acute and repetitive strain injuries; where acute injuries are defined as: physical damage that exceeds the threshold of human tolerance, or from the absence of vital elements (e.g. oxygen, heat) (Holder, et al., 2001); and repetitive strain injuries are defined as: physical damage that results from repetitive or forceful motions affecting muscles, tendons, and nerves over an extended period of time rather than from a single injury event (Yassi, 1997).

6. OBJECTIVES

6.1 Global Objective: To reduce musculoskeletal injuries and their impact on CAF operations and its members, while maintaining operational effectiveness and readiness.

6.2 Specific Objectives:

a) To determine what injury surveillance data is required to engage leadership and to design/implement more effective programs to reduce the incidence of MSKs.
b) To determine, through a review of military injury prevention programs, interventions that are effective in engaging the chain of command in reducing injuries.
c) To complete an inventory of injury surveillance data sources assessing accessibility, quality, and the requirements for creating a single comprehensive injury surveillance database.
d) To identify any gaps that may exist in the currently available sources of injury surveillance data, and to propose a means to fill the gaps.

7. SCOPE

7.1 This work will focus on both acute injuries and repetitive strain type MSKs sustained by Canadian Armed Forces personnel. This work will explore all records of injury that DND keeps. This should include (but not be limited to) records from the Canadian Forces Health Services Group, Director of General Safety, Personnel Support Services, and other CAF and DND organizations (e.g. DRDC).

8. APPLICABLE DOCUMENTS & REFERENCES

1. Holder Y, Peden M, Krug E, Lund J, Gururaj G, Kobusingye O. 2001. Injury surveillance guidelines. Geneva: World Health Organization.
2. NATO-HFM-RTG-283 Reducing Musculoskeletal Injuries. 2017. Technical Activity Proposal (TAP).
3. Rowe P. 2011. The Impact of Musculoskeletal Conditions on the Canadian Forces. *Military and Veterans Health Research Forum 2011*.
4. Thériault FL, Gabler K, Naicker K. 2016. Health and Lifestyle Information Survey of Canadian Armed Forces Personnel 2013/2014 – Regular Force Report. B.A. Strauss & J. Whitehead (Eds.), Ottawa,Canada: Department of National Defence.
5. Yassi A. 1997. Repetitive strain injuries. *Lancet*. 349(9056):943-947.

Appendix A – Post Session Reporting: Research Theme Working Group Title: Musculoskeletal Health in the CAF, how do we stem the tide? Injury prevention for the 21st century

Appendix B – Meeting Minutes for Reducing MSK in CAF May 2017 Ottawa Meeting

9. TASKS TO BE PERFORMED

9.1 Engage CAF and DND stakeholders involved in the Personnel Portfolio project on Reducing MSKs in the CAF to conduct a needs assessment that will determine what data is required to develop effective injury prevention activities and programs. The Scientific Authority (SA) will confirm the names of the stakeholders to be consulted (many of them are identified in Annexes B and C).

9.2 Create a comprehensive list/inventory of all records and data that already exist, or are currently being collected by the CAF or DND, that may be useful in identifying the incidence of MSKs and the details surrounding why MSKs occur in the CAF.

9.3 Determine the accessibility of the records and data identified in **Task 9.2**, including where the data and records are located, what is the structure of the database and how difficult is it to query, which individual or organization is mandated to maintain the records and data, the timeliness of accessing the records and data, the quality of the records and data, and all possible privacy and security concerns.

9.4 Conduct a gap analysis to identify any data that has been identified as required in the needs assessment conducted as part of **Task 9.1** that does not already exist as part of the comprehensive list created as part of **Task 9.2**.

9.5 Describe the feasibility, and a proposed structure, for creating a comprehensive injury surveillance system that may be useful in identifying the incidence of MSKs and the details surrounding why MSKs occur in the CAF, including a proposal for filling the gaps identified as part of **Task 9.4**.

9.6 Identify and describe models of injury prevention and surveillance that have been used in other military and civilian organizations to successfully engage leadership.

9.7 Provide recommendations on the design of an injury surveillance system for the CAF.

10. DELIVERABLES (DESCRIPTION AND SCHEDULES)

All deliverables must be submitted and completed by March 2018. The Sub Contractor must prepare and submit the following deliverables to CIMVHR:

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Deliverable Number	Task reference	Description (Quantity and Format) and Schedule
10.1	9.1 – 9.5	Work plan to be created by Sub Contractor and delivered to CIMVHR, within first 5 working days after the authorization to begin work
10.2	9.1 – 9.5	Monthly half-hour teleconferences with SA to update progress
10.3	9.1 – 9.5	Mid-project update two-hour teleconference with all relevant stakeholders from DND and CAF
10.4	9.1 – 9.5	Final Presentation, in-person, by Sub Contractor to all relevant stakeholders from DND and CAF
10.5	9.1 – 9.5	Draft Final report by March 2018. The SA will require no more than 14 calendar days to provide feedback to the Sub Contractor. Final report addressing issues and concerns identified by the SA on the Draft to be submitted by March 2018

11. MANDATORY SELECTION CRITERIA

11.1 For the purposes of this SOW the minimum qualifications of the SME are as follows:

a) An epidemiologist or health practitioner in community health/public health;
b) Knowledge of the military health care system; (asset)
c) Post-graduate training in epidemiology. Post-graduate training in injury prevention epidemiology (preferred);
d) Experience or knowledge of the prevention of injuries would be an asset; and
e) Knowledge of the military injury surveillance system would be an asset.

12. LANGUAGE OF WORK

Documentation and deliverables must be submitted in the English language.

13. LOCATION OF WORK

13.1 The work will be performed at the Sub Contractor’s site.

14. TRAVEL

14.1 The Sub Contractor may be required to travel to present research findings at scientific meetings. Sub Contractor travel must have the prior written authorization of the Scientific Authority and the Technical Authority, and must be undertaken in accordance with the National Joint Council Travel Directive and with the other provisions of the directive referring to "travellers", rather than those referring to "employees".

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15. MEETINGS

The tentative schedule of meetings is as follows:

15.1 Monthly Update – September 2017 (half-hour teleconference)
15.2 Monthly Update – October 2017 (half-hour teleconference)
15.3 Mid-project Update – November 2017 (two-hour teleconference)
15.4 Monthly Update – December 2017 (half-hour teleconference)
15.5 Monthly Update – January 2018 (half-hour teleconference)
15.6 Final Presentation – February 2018 (in-person, likely Toronto)

Final details regarding these meetings shall be determined upon authorization to begin work.

16. GOVERNMENT SUPPLIED MATERIAL (GSM)

None

17. GOVERNMENT FURNISHED EQUIPMENT (GFE)

None

18. SPECIAL CONSIDERATIONS OR CONSTRAINTS

18.1 See Section 11

19. SECURITY

19.1 The Sub Contractor will not require access to PROTECTED and/or CLASSIFIED information or asset. The security classification for the work is “UNCLASSIFIED”. The Sub Contractor will be escorted at all time while at DRDC Toronto.

☐ Not applicable ☐ RELIABILITY STATUS ☐ PROTECTED A ☐ PROTECTED B

20. INTELLECTUAL PROPERTY (IP) OWNERSHIP

There will be no IP generated through this contract.

21. CONTROLLED GOODS

Not applicable

22. BUDGET

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The Sub Contractor will be paid by CIMVHR as per the terms of Contract # W7714-145967 between Defence Research and Development Canada and CIMVHR. The amount of funding available is allocated by fiscal year (April1-March 31) and is approximately $30,000 for FY17/18 (inclusive of overhead; taxes extra). Details TBD upon award.

A draft budget must be submitted with the proposal along with a budget justification. A detailed budget will be developed post award in consultation with CIMVHR. Interested parties should request budget documents and information on creating their budget from Jocelyne Halladay.

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