

Ministry of Transportation

Safety Policy and Education Branch

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Ministry of Transportation of Ontario

Guidelines & Application Forms

Road Safety Research Partnership Program

2015-2016

MINISTRY OF TRANSPORTATION OF ONTARIO
ROAD SAFETY RESEARCH PARTNERSHIP PROGRAM

Ontario's roads are among the safest in North America. Despite that and despite the significant improvements in road safety in recent years, motor vehicle collisions take an unacceptable toll in human life and personal injury. Traffic collisions are a leading cause of death among persons of all ages. Similarly, motor vehicle collisions are among the leading causes of injury and disability, as demonstrated by analyses of injury data. The Ministry of Transportation (MTO) continually pursues road safety research, with a focus on road user behaviour and social issues surrounding this complex field. Research into driver behaviour, the causes of collisions, and other issues impacting road safety provide helpful insights into the areas that MTO needs to target in the development of new initiatives.

Accordingly, MTO provides research funding through the Road Safety Research Partnership Program (RSRPP), which promotes a productive relationship with road injury researchers in the academic community. The research conducted under this program will identify causes of traffic collisions and suggest ways to reduce the resulting tragic loss of life. The purpose of this program is to fund research into the behavioural and social aspects of road user safety in order to identify the factors involved in motor vehicle collisions, suggest ways to reduce the impacts on individuals and society as a whole, and monitor the effectiveness of road safety initiatives.

This work will support Ontario's efforts to improve road safety and keep the province among the safest jurisdictions in the world. MTO looks forward to seeing the results of the innovative and high quality research that Ontario's hospitals, colleges, universities, and other public institutions are capable of conducting.

A set of application forms can be found with this package. Additional copies are available upon request. Please direct applications and inquiries to mary.gallucci@ontario.ca with **"RSRPP"** in the subject line and copy rsrpp@ontario.ca.

The application deadline is **July 15, 2015**. The deadline for forms of approval from the ethics committee of the sponsoring institution is **July 31, 2015**. The electronic copy of the application package must be received by the application deadline along with indication that hard copies are in transit. Please send hard copies to:

Mary Gallucci
Road Safety Research Partnership Program
Road Safety Research Office, Safety Policy and Education Branch
Ministry of Transportation
1201 Wilson Avenue, Building A, Room 212
Toronto, Ontario
M3M 1J8

The successful candidate(s) will be notified by **August 15, 2015**.

1.0 PURPOSE OF THE PROGRAM

This program is administered by the Road Safety Research Office within the Safety Policy and Education Branch. The purpose of the program is to encourage applied research on the behavior and social aspects of road user safety, to facilitate the transfer of knowledge, skills, and methodologies from another discipline to road user safety research, and to promote work that complements the research projects and research expertise within MTO that are available in the academic and broader public sector community. Novel and innovative approaches, population-based research using hospital and other administrative databases, data collection, pilot studies, or feasibility studies are of particular interest.

2.0 SCOPE OF THE RESEARCH FUNDING PROGRAM

2.1 Eligible Institutions

Ontario hospitals, colleges, universities (including their affiliated colleges, research centres, institutes, and hospitals), and other public institutions are eligible for funding by the RSRPP (“sponsoring institution”). The principal investigator must be a member of the faculty (full or part-time) or an employee of the sponsoring institution. Faculty carrying out behavioural and social research in road user safety in departments such as Economics, Engineering, Geography, Medicine, Psychology, and Sociology are encouraged to apply for assistance under this program. An institution that is listed on MTO’s Vendor of Record pool for procurement services may not be the sponsoring institution. The successful proponent may not subcontract to outside vendors.

2.2 Eligible Topics

Possible topics for research on road user safety are diverse. Research activities supported by this program will be in the behavioural and social sciences, including the development of methodology by which behavior and social factors in traffic crashes are analyzed. The program will not fund research on aspects of highway and vehicle engineering or medical research on the traumatic effects of traffic crashes. Faculty in these disciplines are still encouraged to apply, provided they investigate the behavioural or social aspects of road user safety or the methodology studying them. To be eligible for funding, research projects must cover at least one of the following topics as it relates to the Ontario population. Examples of relevant topics are included in Appendix 1.

2.3 Ministry Assistance in Conducting Funded Research

Research staff in the Road Safety Research Office within the Safety Policy and Education Branch have extensive experience in carrying out road user safety research in a variety of areas. They are available to assist the principal investigators of accepted proposals in their research, whether to provide names of contacts in the field, advice on the relevance of the research to government stakeholders, or data from MTO databases (subject to availability and confidentiality requirements).

2.4 Available Funds

The total value of the awards will be \$150,000. Up to five projects may be funded. In cases where more than one project is to be funded, the total available funds of \$150,000 will be split between projects in a manner decided by MTO. MTO reserves the right not to grant any funds. Projects may be funded by other grant agencies simultaneously; sources of additional funding including in-kind contributions must be disclosed to MTO. Projects may span a period up to two years; however, funding from MTO must be incurred and paid prior to **March 15, 2016** and no additional funds will flow from MTO for expenses beyond that date. Funding for project work occurring after **March 15, 2016** must come from other funding sources and researchers cannot apply for additional funding

under RSRPP in upcoming grant years for continuation of this project.

3.0 BUDGET

3.1 General

The detailed budget must include a full account of purchases and activities to be financed by the award. The budget breakdown and supporting information must be in sufficient detail to justify the items relative to the project description. Other sources of funding for the project should be indicated on application including in-kind contributions. The provided information must be signed off by the Vice President of Finance (or designated official) of the sponsoring institution along with the principal investigator. The proposed budget will be considered by the selection committee when reviewing applications. The selection committee reserves the right to disallow expenditures in the budget that are not adequately justified. Partial support of a project may be recommended by the committee.

3.2 Eligible and Ineligible Expenditures

Expenditures will only be eligible for funding under the RSRPP (an “Eligible Expenditure”) if it meets all of the following general criteria: (1) directly related to and necessary for the successful completion of the research; (2) specifically identified in, and made in accordance with, the budget provided to MTO as part of its application for funding under RSRPP. No changes to the budget will be allowed without the prior written approval of MTO; (3) incurred and paid after the date of award and prior to **March 15, 2016**. No expenditures incurred outside of this period will be eligible for payment under the RUSRFP Program; and (4) documented through paid invoices or original receipts, or both.

Salaries and Benefits. The number of persons in each line item should be specified along with the amount of time each individual will spend on the project (e.g., in person-days). Salaries will be in accordance with those considered appropriate by the institution. Salaries of professional assistants, graduate and senior undergraduate students, post-doctoral fellows, research associates, overhead, technical, clerical, and secretarial staff working on the proposed project under the direction of the applicant are eligible for inclusion. The salary of the principal investigator will not be funded by this program.

Equipment. Hardware includes all equipment essential to the project that is to be purchased, including operating and maintenance costs. Hardware and software should be listed separately and broken down into two categories: purchase and rental. If equipment or supplies are to be purchased, consideration should be given first to Canadian manufacturers and suppliers. Purchases from non-Canadian manufacturers and suppliers will be acceptable if adequate justification is provided in the proposal. Equipment purchased under this program will be retained by the sponsoring institution for further research or teaching. Desktop and portable microcomputers will not usually be eligible for funding unless sufficient argument is made in the proposal for this otherwise standard equipment.

Other costs include computing costs, direct administrative costs, travel and accommodation, consulting costs, overhead (maximum of 15% of total budget), supplies and services, and contingency costs. Request details on overhead rates from your institution's office of research, and state in the application how the value for overhead was calculated. Funds may be requested for travel that is essential for the collection of data, for fieldwork, or for the presentation of papers resulting from the project. Travel to centres performing similar work to obtain first-hand information essential to the project will be considered. Travel and accommodation costs should be in accordance with the sponsoring institution's internal guidelines. Supplies and services include expendable materials, telephone, postage, printing, photocopying, and the like. Requests for

common office items are not eligible for inclusion.

4.0 APPLICATION PROCEDURE

The application package consists of the following components:

1. Application Form (form included)
2. Summary Research Proposal (form included)
3. Research Proposal
4. Summary Budget (form included)
5. Budget
6. Curriculum Vitae of principal investigator and other principal research staff
7. List of referees who are familiar with the principal investigator's scientific work.
8. Certificate from the ethics committee of the sponsoring institution (sample form included)

Research Proposal (Item 3 above). The detailed proposal for the project should include the title, background (e.g., objectives, relevance and rationale, research questions, overview of relevant literature), methods (e.g., study design, study population, procedures, data source, measures, analytic strategy), and a time schedule of the activities to be undertaken during the project. The proposal must be no more than 10 pages, including a Table of Contents.

Ethics Guidelines (Item 8 above). Research involving human subjects in an experimental or observational setting or the use of data or records concerning them collected by any agency must meet ethics guidelines of the sponsoring institution and professional associations of which the principal investigator is a member. A certificate from the ethics review committee at the applicant's institution, indicating acceptability of the study on ethical grounds, is required. This certificate must be signed by the head of that committee. If necessary, the applicant may indicate that the proposed project is put before this committee for review, and that the certificate will be sent thereafter. This certificate must be received by the MTO before funds are released to the institution.

Applicants must submit five copies of the application package, including one copy with original signatures by mail, along with one electronic copy of the application package by email. The electronic copy must be received by the application deadline along with indication that hard copies are in transit. Information contained in project proposals will be treated as confidential by the reviewers.

5.0 SELECTION CRITERIA

Applications will be reviewed by a selection committee comprising of members of the Road Safety Research Office within the Safety Policy and Education Branch. One or more traffic safety research experts, external or internal to the MTO, may be requested to review applications, at the discretion of the MTO. The selection committee may request clarification of points contained in the proposal of any applicant.

The selection criteria for new applications are as follows:

1. Clarity of research objectives
2. Demonstrable understanding and expertise on topic area
3. Relevance of the proposed research to road user safety and to current ministry priorities or emerging issues
4. Appropriateness of the study design, methods, and proposed analysis
5. Capacity in project management and quality control

6. Feasibility of accomplishing the stated aims within the estimated time and budget
7. Experience and qualifications of the researcher(s) in road user safety or related fields
8. The potential for the research to result in important, significant, understanding of, or improvement in, road user safety in Ontario
9. A realistic and justifiable budget, including the optimal use of proposed personnel.

Each of the above requirements will be assigned a score on a scale from 0 to 2 where, 0 indicates the reviewer lacks confidence in the research proposal in meeting said criterion, 1 indicates partial confidence, and 2 indicates full confidence. Proposals will be given a bonus of 2 points for demonstrating innovation. Items 3 “Relevance” and 8 “Potential” will be given a weighting of 1.5.

6.0 NOTIFICATION OF AWARD

A letter announcing an award is sent to the principal investigator at the beginning of the award period, and a copy is sent to the Vice President of Finance (or designated official) of the sponsoring institution designated in the proposal. Awards for researchers at hospitals that are affiliated with teaching institutions are awarded to the teaching institution, not the hospital nor its research department. Upon receipt of notification of award, the principal investigator will sign an agreement to accept of the terms of these Guidelines.

The letter of award provides authority to incur project expenses for items and amounts specified in the **approved**, detailed budget. Expenses incurred in excess of the approved budget are not the responsibility of MTO. The holders of research awards and their associates are not considered employees of MTO.

7.0 FINANCIAL ARRANGEMENTS & REPORTING REQUIREMENTS

At the beginning of the award period, MTO will flow funding for 25% of the approved budget. The remaining funds will be paid after commencement of work. Researchers will be required to provide periodic fiscal reports to MTO containing proof of funds spent to date. Upon receipt of these reports, MTO will flow additional funding to cover expenses incurred in the preceding period, as outlined in the corresponding report.

The first report must be submitted immediately after **November 15, 2015** and will cover expenses incurred and paid between the beginning of the award period and **November 15, 2015**. The second report must be submitted immediately after **February 15, 2016** and will cover expenses incurred and paid between **November 16, 2015** and **February 15, 2016**. The third and final report must be submitted immediately after **March 15, 2016** and will cover expenses incurred and paid between **February 16, 2016** and **March 15, 2016**.

Reports will include an itemized list of purchases and activities financed by the RSRPP, including equipment that was purchased (in whole or part) with those funds. The following headings will be included in the reports: salaries and benefits, equipment, and other costs. MTO reserves the right to question discrepancies or disallow expenditures that are not adequately justified or previously approved. MTO also reserves the right to audit any project. The institution is required to keep any records that may be required for a financial audit for the duration of the current fiscal year plus an additional 7 years. These rights are in addition to any rights provided to the Auditor General pursuant to section 9(1) of the *Auditor General Act* (Ontario).

All financial communications and transactions will occur between MTO and the principal investigator *along with* the Vice President of Finance (or designated official) of the sponsoring institution.

7.1 Appropriation of Funds by the Legislature

MTO reserves the right to terminate an award without cause at any time by providing written notice of termination. Furthermore, funding for the RSRPP is subject to appropriation of funds by the Legislative Assembly of Ontario. If MTO fails to receive the necessary appropriation of funds, MTO may terminate funding immediately by giving notice to the recipient.

If MTO terminates funding due to non-appropriation of funds, it may: a) cancel the payment of all further RSRPP funds; b) demand repayment of any RSRPP funds remaining in the possession or under the control of the recipient; and/or c) determine the recipient's reasonable costs to end the RSRPP project and permit it to offset these costs against the RSRPP funds remaining in the possession or under the control of the recipient.

7.2 Conflict of Interest

A recipient receiving RSRPP funds must ensure the RSRPP project is carried out and RSRPP funds are used without an actual, potential or perceived conflict of interest. A conflict of interest includes any circumstances where the recipient, or any person who has the capacity to influence the recipient's decisions, has outside commitments, relationships, or financial interests that could, or could be seen to, interfere with the recipient's objective, unbiased and impartial judgment relating to the RSRPP project and the use of the RSRPP funds.

8.0 AMENDMENTS TO A PROJECT

MTO must be notified in writing in advance of any intention to alter the direction or intent of the research, deviate from the allocation of funds as outlined in the proposal, terminate the research project, re-assign project responsibilities to researchers other than those named in the original proposal, or alter the project schedule. The principal investigator must obtain written approval from MTO before any alterations in the project are implemented. If the recipient is uncertain what constitutes a major alteration in the project, he/she may contact MTO to discuss this matter. If the principal investigator is to be absent for a time during the award period, alternative arrangements for responsible supervision of the project must be submitted for MTO approval, prior to the start of the absence.

9.0 PROGRESS AND FINAL REPORTS

9.1 Progress Report

Researchers must submit periodic progress reports alongside the periodic fiscal reports outlined in Section 7.0. Progress reports must detail the project's completed activities to date and work that has yet to be completed. The summary should also discuss any unforeseen circumstances that have led to any deviations from the original project timelines. This section does not replace the requirement of the researchers to inform MTO of any alterations to the project schedule.

9.2 Final Report

Researchers must submit a final report no later than 3 months after completion of the research project. The final report should include the following:

- An Abstract (about 250 words)

- A Table of Contents (including figures, tables, and appendices)
- A comprehensive description of the objectives, procedures, and methods of the research
- A statement of results obtained, with supporting data
- Conclusions and discussion of applications of the new findings to the reduction or monitoring of risk on Ontario roadways
- Plans for publication and for dissemination of results to other traffic safety professionals and organizations

A copy of a student thesis or dissertation is not a substitute for a final report according to the above format. The final report for each award will be kept in the Road Safety Research Office for future reference.

10.0 OWNERSHIP OF INTELLECTUAL PROPERTY

The research team owns all work funded by this grant. Should researchers chose to publish their findings (e.g., in conference proceedings or in scientific journals), MTO requires a copy of the final manuscript accepted for publication at least 30 days prior to the publication date. Should MTO choose to post the final report online, MTO will coordinate with the principal investigator to ensure no impact on the candidacy of the research for future publication.

Appendix 1. Examples of Eligible Topics

LEVERAGING TECHNOLOGY TO IMPROVE ROAD SAFETY (e.g.; AUTOMATED VEHICLES, IN-VEHICLE TECHNOLOGY, TELEMATICS).

A wide range of information and communication technologies that have the potential to improve road safety have emerged in recent years, and more advanced technologies are undergoing rapid development. Research will examine these technologies and their applications to the road user, and/or to existing ministry driver licensing/sanctioning/remediation programs, to determine effects on driver performance and safety-related driving outcomes (and/or to improve the effectiveness of existing ministry programs).

VULNERABLE ROAD USERS.

Research will address the need for a systematic examination of the reasons for serious crashes involving pedestrians, cyclists and motorcyclists in Ontario. Research will look at the safety issues related to vulnerable road users in Ontario and provide recommendations on how to reduce the frequency and severity of collisions involving vulnerable road users.

DRUG IMPAIRED DRIVING.

Research will promote an understanding of how drugs (other than alcohol) impair driver ability and/or affect collision risk at different drug levels or concentrations. Examples would include a literature review, systematic review, scoping review or meta-analysis to determine the current state of knowledge on this topic. As with Alcohol Impaired Driving (see below), research will contribute to a deeper understanding of drugs and driving behaviour, the relationship of this behaviour to other cognitive and psychosocial factors (e.g., psychiatric disorders, cognitive decline, other forms of medical fitness, levels of social support, etc.) and of the relationship between drug use and vulnerable road user groups (e.g., passengers, pedestrians, and cyclists). Research may also encompass a review and comparison of field sobriety tests (such as the Standardized Field Sobriety Test, and others) that are used in other jurisdictions to consider the effectiveness of their applicability and use within Ontario.

SAFETY ON RURAL ROADS.

Research will study rural roads as opposed to urban roads from several perspectives including the mix of road users and vehicles, road conditions, infrastructure, speed limits and actual speeds travelled in order to identify factors contributing to a higher incidence of fatalities on rural roads.

ALCOHOL IMPAIRED DRIVING.

Research will contribute to a deeper understanding of drinking and driving behaviour, its relationship to other cognitive and psychosocial factors (e.g., psychiatric disorders, cognitive decline, other forms of medical fitness, levels of social support, etc.) and of the relationship between alcohol use and vulnerable road user groups (e.g., passengers, pedestrians, and cyclists).

HIGH-RISK DRIVERS.

Research will examine self-reported behaviours and attitudes of drivers who engage in risky driving behaviours and the deterrent impact of Ontario's various countermeasures and laws (e.g., aggressive drivers, suspended drivers, drivers convicted of street racing, etc.). Alternatively, research may involve engaging in an objective analysis of driver behaviour via driving records.

MEDICAL FITNESS TO DRIVE - DRIVERS WITH COGNITIVE IMPAIRMENTS/DECLINES.

Research will contribute to an increased understanding of how driving performance and/or collision risk are affected by declines in cognitive ability. Research will examine the specific functions (i.e., cognitive, motor, sensory, etc.) that are affected either by the aging process or by different types of trauma to the brain.

OFF-ROAD VEHICLES.

Research will investigate the road safety and operational implications of allowing additional off-road vehicles (ORVs) on-road. Studies may involve a longitudinal analysis of fatalities and injuries before and after allowing extended on-road access to other types of ORVs. Alternatively, studies may involve researching and evaluating different off-road vehicle rider training models, delivery methods to improve the ORV licensing and the interaction between riders and the environment (e.g. greenhouse gas emissions).

DRIVER DISTRACTION AND INATTENTION.

Research will examine how and whether different types of driver and passenger behaviour and other external stimuli divert attention from the driving task. Research will also contribute to an understanding of the effects of cellphone use, handheld devices, and other technology on driver behaviour and road safety.

DROWSY DRIVING.

Research will provide information on the incidence of drowsy driving in the Ontario driving population and how fatigue affects driver performance and/or collision risk. Research will contribute to an understanding of how drowsy driving incidence can be reduced. Research may be based on an analysis of collision data, simulator/laboratory experiments and/or survey data.

LARGE TRUCKS.

Potential research projects may include a systematic analysis of crash causation involving large trucks in Ontario. A study of this type would involve collision reconstruction at the scene of the crash.

DRIVER TRAINING.

Research will provide information as to how new technologies such as telematics, online education, and/or driving simulators could be used to effectively complement/replace the in-class/on-road portion(s) of driver training.