

Ministry of Transportation

Road Safety Research Office
Safety Policy and Education Branch
Road User Safety Division
212-87 Sir William Hearst Ave
Toronto, ON M3M 0B4



Ministry of Transportation of Ontario

**Road Safety Research
Partnership Program**

Guidelines 2017-2018

RSRPP Guidelines 2017-2018

Call to Action

Ontario's roads are among the safest in North America; however, despite significant road safety improvements in recent years, motor vehicle collisions continue to be a leading cause of death, injury, and disability among persons of all ages. Our most recent statistics indicate that one person is killed every 17 hours on Ontario roads, and that collisions cost society well over \$14.8 billion annually. Ontario is committed to reducing and, ultimately, eliminating all fatalities on its roads, an approach that is consistent with the Minister of Transportation's mandate letter to "strengthen road safety".

The Ministry of Transportation (MTO), through the Road Safety Research Office (RSRO) in the Safety Policy and Education Branch (SPEB), is committed to studying road user behaviour and human factors surrounding this complex field. In the past, such research has contributed to policy and program developments such as the inclusion of cognitive screens into the Senior Driver Renewal Program and the expansion of Ontario's drinking and driving laws. Similarly, research currently underway has clear program and policy implications, for example, determining the effectiveness of driving simulators for the delivery of driver education or the enhancement of the Standardized Field Sobriety Test for drug detection at roadside.

The RSRO's mission is to:

- Evaluate the effectiveness of Ontario's road safety programs;
- Conduct applied research to inform policy and program development;
- Guide road safety marketing and public education campaigns;
- Support enforcement partners by providing the best tools possible to keep Ontario's roads among the safest in the world;
- Leverage partnerships with international researchers and other road safety stakeholders to advance research that is directly relevant to MTO's programs and road safety mandate.

A key component of RSRO's mission is to work with external partners. Accordingly, the Road Safety Research Partnership Program (RSRPP) has been established. This program provides grant funding to researchers in the broader public sector community, enabling them to contribute to policy-relevant road safety research to support Ontario's efforts to improve road safety and keep the province among the safest jurisdictions in the world. The call of proposals for 2017-2018 is now open, and we invite you to apply.

Ontario's strong road safety record has been built upon relationships established over the years with police services, the medical community, other ministries, municipal and federal governments, industries and associations, and grass root road safety stakeholders. Together, we can achieve our shared goals and improve road safety for all Ontarians.

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Correspondence and Timelines

Before submission

Please direct all inquiries to RoadSafetyResearch.PartnershipProgram@ontario.ca

Application submission

The call for applications opens on **March 1, 2017**. The application deadline *for the screening stage* is **March 31, 2017**. Applicants who pass the screening stage will be invited to submit a full application.

An electronic copy of the initial proposal must be received by the application deadline. Please submit electronic applications to RoadSafetyResearch.PartnershipProgram@ontario.ca.

After submission

Due to the high volume of applications received, MTO will not be providing individual feedback to unsuccessful applicants.

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1.0 PURPOSE

The primary purpose of the program is to encourage policy- and program-relevant applied research on road user behavior and human factors surrounding road user safety. The secondary purposes of this program is to facilitate the transfer of knowledge, skills, and methodologies from another discipline to road user safety research, and to foster collaborative working relationships between MTO and researchers in the academic and broader public sector community.

2.0 SCOPE

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 through the RSRPP (“sponsoring institution”). The principal investigator(s) 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 funding 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 behaviour and social factors in motor vehicle collisions are analyzed. To be eligible for funding, research projects must relate to risk factors (e.g., drug consumption, alcohol consumption, dangerous/illegal driving behaviour, driver distraction and inattention, driver fatigue), preventive factors (e.g., technology including automation, connectivity, and telematics), and/or risk groups (e.g., pedestrians, cyclists, high risk drivers, commercial drivers, medically unfit drivers, senior drivers, young/novice drivers) that are of road safety relevance in Ontario. Please refer to the Ontario Road Safety Annual Report (ORSAR)¹ for an overview of priority areas and a description of collision statistics. A list of projects funded to date can be found in Appendix 1.

2.3 *Total Available Funds*

The total value of the awards will be \$150,000. 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. The ministry 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, researchers cannot apply for additional funding under RSRPP in upcoming grant years for continuation of this project.

3.0 KNOWLEDGE TRANSLATION

3.1 *Ministry Involvement*

Research staff in the Road Safety Research Office have extensive experience in carrying out road user safety research in a variety of areas. Each funded project will be assigned a

¹ <http://www.mto.gov.on.ca/english/publications/ontario-road-safety-annual-report.shtml>

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team of MTO staff that are subject matter experts in that area of study. At the beginning and end of each project, the Principal Investigator (PI) and his/her team will be invited to the MTO Office at the Downsview Complex for a kick-off and close-out meeting, respectively. MTO subject matter experts will be at both meetings, and may also provide collective feedback to the PI throughout the course of the project at key milestones and/or upon receipt of progress reports. MTO subject matter experts will work closely with the PI on a knowledge translation strategy, and, where relevant, may also assist in research design, in data extraction from MTO databases, and in soliciting involvement of other stakeholders.

3.2 External Opportunities

Opportunities for RSRPP-funded research to be profiled at working groups (e.g., with the Canadian Council of Motor Transport Administrators) and conferences will arise. In these instances, MTO expects to work collaboratively with the PI(s) to prepare the appropriate materials.

Should researchers choose to publish their findings, 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(s) to ensure no impact on the candidacy of the research for future publication.

4.0 APPLICATION PROCESS & SELECTION

4.1 Screening Stage

Interested applicants are invited to submit a proposal. Applicants are welcome to submit more than one proposal if they have several research projects that fit the criteria identified above. Each two-page proposal must include a problem statement, a brief summary of extant knowledge/approaches, identification of empirical gap(s) and corresponding objective(s), an overview of the methodological approach, the amount of funds received or requested from another funding body, and a short biography of the PI. References may be appended on an additional page. At the screening stage, applicants that clearly demonstrate the following will be invited to submit a full application:

1. Relevance of the proposed research to road user safety and to current ministry priorities or emerging issues (see Section 2.2).
2. The potential for the research to result in important understanding of, or improvement in, road user safety in Ontario.
3. Objectives of the proposed project could otherwise not be completed in-house².

4.2 Evaluation Stage

Interested applicants who successfully demonstrate the above will be asked to submit a full application for evaluation. Information contained in the application package will be treated as confidential, subject to MTO's obligations under the *Freedom of Information and Protection of Privacy Act*.

The full application package will include a completed application form appended with the following components:

² in-house projects are those that rely on data to which MTO has access, including driver records, collision records, etc.

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- 1. Research Proposal.** In addition to the research summary included in the application form, applicants must submit a detailed proposal, with sections corresponding to 1. Background, including objectives, review of the literature (topic areas, theoretical frameworks, common methodologies), and research questions; and 2. Methods, including population and sampling, instrumentation, data collection, study design, analytic strategy, and timeline; and 3. Knowledge Translation, including planned publications or conferences. At this point, the timeline should be written in Month 1, Month 2 format, rather than specific dates; as the project timeline will eventually be revised to start at the date of the kick-off meeting (see Section 5.0). The proposal must be no more than 10 pages, excluding a Table of Contents and references.
- 2. Budget Justification.** Budget items listed on the application form may require additional justification. Please refer to Appendix 2 for eligible expenditures and provide an explanation accordingly.
- 3. Curriculum Vitae of Principal Investigator(s).**

Applications will be reviewed by a selection committee comprising of MTO staff. One or more road safety research experts, external 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 proposals. Applications will be evaluated on the following criteria:

1. Clarity of research objectives
2. Demonstrable understanding and expertise on topic area
3. Appropriateness of the study design, methods, and proposed analysis
4. Capacity in project management and quality control
5. Feasibility of accomplishing the stated aims within the estimated time and budget
6. Experience and qualifications of the researcher(s) in road user safety or related fields
7. A realistic and justifiable budget, including the optimal use of proposed personnel.
8. Relevance of the proposed research to road user safety and to current ministry priorities or emerging issues
9. The potential for the research to result in important understanding of, or improvement in, road user safety in Ontario
10. The proposed research challenges or seeks to shift current research paradigms by utilizing novel and innovative concepts and approaches

Each of the above requirements will be rated on a five-point Likert scale as per Appendix 3. Ratings on each of the 10 requirements will be summed to form an aggregate score. Aggregate scores will then be used to generate a rank ordered list of applications. MTO will make its funding decisions based on this list; applications will be considered for funding in rank order. MTO reserves the right to adjust rankings to reflect current ministry priorities. In these rare occurrences, adjustments will be made only after consensus at the Senior Management level.

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5.0 NOTIFICATION OF AWARD & ONBOARDING

MTO will notify successful candidates directly. A Letter of Award will be sent to the PI(s) along with a Letter of Agreement. The Letter of Award provides authority to incur project expenses for items and amounts specified in the approved 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.

The PI(s) will be asked to sign and return the Letter of Agreement, along with any additional items requested in the Letter of Award. These additional items may include a signed certificate from the Research Ethics Board at the sponsoring institution indicating acceptability of the study on ethical grounds, missing signatures, or revisions to the budget or proposal. All documents must be received by MTO before any funding is flowed.

Upon receipt of the above documents, MTO will invite the PI(s) to the MTO Office in the Downsview Complex for a kick-off meeting. The project will officially commence on the date of the kick-off meeting.

6.0 FINANCIAL ARRANGEMENTS

At the beginning of the project period, MTO will disburse funding for 100% of the approved budget, contingent upon a Letter of Agreement signed by both parties and receipt of ethics board approval and other items that may be requested in the Letter of Award.

6.1 Financial Reporting

Researchers will be required to provide periodic fiscal reports to MTO containing proof of funds spent to date, starting three (3) months after the kick-off meeting and continuing on a quarterly basis. Funds that remain unspent by the researchers at the project's stated end date must be returned to MTO within 30 days thereafter.

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 seven (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)*.

6.2 Appropriation of Funds by the Legislature

MTO reserves the right to terminate an award if, in the opinion of MTO, the award recipient: a) fails to comply with any of the requirements set out in these Guidelines and in the letter of agreement; b) uses any of the RSRPP funds for a purpose not authorized by or without the prior written consent of MTO; or c) fails to provide the requested periodic fiscal and progress reports. MTO reserves to terminate an award at any time by providing written notice of termination for the reasons above or for failure by MTO in

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receiving the necessary appropriation of funds by the Legislative Assembly of Ontario.

If MTO terminates funding, it may: a) demand repayment of any RSRPP funds remaining in the possession or under the control of the award recipient; and/or b) 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.

6.3 Conflict of Interest

An award 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.

7.0 PROGRESS AND FINAL REPORTS

7.1 Progress Report

Researchers must submit periodic progress reports alongside the periodic fiscal reports outlined in Section 6.1. 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.

7.2 Final Report

Researchers must submit a final report no later than three (3) months after completion of the research project. The final report should include the following an executive summary, a table of contents (including figures, tables, and appendices), and comprehensive background, methods, results, and discussion sections. Discussion should focus on applications of the new findings to the reduction or monitoring of collision risk on Ontario roadways. In addition, the final report shall include plans for publication and for dissemination of results to other road safety professionals and organizations. A copy of a student thesis or dissertation is not a substitute for the final report. Final reports will be kept in the Road Safety Research Office for future reference.

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Appendix 1 Research Funded to Date

Distracted Driving / Automated Vehicles: “Using Technology for Road Safety: Distraction Monitoring and Real Time Transition from Driving Assistance to Automation Function”

- To find out how distracted, inattentive, and alert drivers perform while driving in various environments using a driving simulator; and to use their driving data to define the roles of an automated driving assistance system that is capable of complementing rather than interfering with or distracting the human driver. Results will yield insight into human-vehicle interactions and will support programmes and curricula on automation management for drivers.

High Risk Drivers: “YouTube High Risk Driving Videos: What are the Effects on Young Male Drivers?”

- To examine the content of high risk YouTube videos and their potential effects on young male drivers. Results will inform public education efforts.

Impaired Driving: “Comparing the Acute Effects of Alcohol and Cannabis on Young Drivers’ Simulated Driving”

- To compare the driving-related skills affected by alcohol and cannabis using a driving simulator; and to provide an estimation of the level of THC in the blood that will produce impairment comparable to that observed at a BAC of .08%. The study also compares the residual effects of alcohol and cannabis at 24 and 48 hours following consumption. Results will inform policy decisions regarding thresholds for administrative sanctions for drug-impaired driving.

Drug-Impaired Driving: “Effects of Therapeutic Cannabis Consumption on Simulated Driving and Road Safety in Ontario”

- To describe and compare the prevalence, self-reported collision risk, simulated driving performance, and self-reported experiences of driving under the influence of cannabis between medical users and recreational users; and to compare the levels of THC and metabolites in plasma, urine, and saliva in medical users before and after regular dose. Results will inform drug-impaired driving policy development and refinement of the Medical Review program.

Senior Drivers / Driving Simulator: “Evaluation of a Simulator Training Program with Automated Driving Specific Feedback for Older Drivers”

- To determine whether a simulator-training program targeting observational errors and providing automated feedback can improve on-road driving performance among older drivers; and to compare the efficiency of simulator-based automated feedback with simulator-based instructor feedback. The study entails a randomized controlled trial of 60

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adults aged 65 and over. Results will support driver education and training programmes and curricula.

Medical Fitness to Drive: "Medical Illness and Driving: A Knowledge Synthesis of the Risks of Harm"

- To create an up-to-date knowledge syntheses of the collision risk associated with acute and complex illnesses for incorporation into the CMA Guide. Results will support efforts by the Medical Review Office in identifying potentially unfit drivers.

Appendix 2 Budget

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 the application, including in-kind contributions. 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.

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; and (3) documented through paid invoices or original receipts, or both. No changes to the budget will be allowed without the prior written approval of MTO.

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 sponsoring institution. Salaries of graduate and undergraduate students, post-doctoral fellows, research associates, overhead, technical, clerical, and secretarial staff working on the proposed project under the direction of the principal investigator(s) are eligible for inclusion. The salary of the principal investigator(s) 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. These expenses include costs for computing, administration, travel, and accommodation, consulting costs, overhead, supplies and services, and contingency costs. The method for calculating the value for overhead costs must be stated in the budget and must be congruent with that of the sponsoring institution. Overhead costs may not exceed 15% of the total requested budget. 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.

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Appendix 3 Evaluation Rating Scale

Descriptor	Rating
The applicant has demonstrated the required knowledge and skills, based on the criteria outlined in the Guidelines, <i>with a very high degree of effectiveness</i> .	5
The applicant has demonstrated the required knowledge and skills, based on the criteria outlined in the Guidelines, <i>with considerable effectiveness</i> .	4
The applicant has demonstrated the required knowledge and skills, based on the criteria outlined in the Guidelines, <i>with some effectiveness</i> .	3
The applicant has demonstrated the required knowledge and skills, based on the criteria outlined in the Guidelines, <i>with limited effectiveness</i> .	2
The applicant has <i>not</i> demonstrated the required knowledge and skills, based on the criteria outlined in the Guidelines.	1