



Request for Proposal (RFP): National Manual Dexterity Test Validity Study

1. Introduction and Background

In 2019, the Canadian Dental Association (CDA) committed \$1 million to support research on dental school admissions in Canada, with the goal of strengthening the evidence base for admissions tools and ensuring their continued relevance to the profession. Working in collaboration with Canadian dental schools, CDA established a national committee to identify research priorities and guide funding decisions focused on predictive validity, fairness, and professional competencies.

One of the committee's early research priorities was the evaluation of manual dexterity as a component of dental school admissions. Previous studies explored the predictive value of assessments such as the Bead Test and Purdue Pegboard & Mirror Test, leading to the development of a combined assessment. These tools have shown promise as standardized and scalable measures of manual dexterity and warrant further investigation.

Following pandemic-related delays, CDA reconvened the committee in 2025 to reassess priorities and determine next steps for the remaining research funding. Subsequent consultations, including the 2026 CDA–ACFD Admissions Conference, reinforced the need for additional evidence on the role of manual dexterity testing in admissions. Through this Request for Proposals (RFP), CDA seeks qualified researchers to evaluate the predictive validity of this combined assessment (Bead Test and Purdue Pegboard & Mirror Test) and determine its suitability as a potential national threshold measure for identifying applicants who possess the minimum manual dexterity required for success in dental education and safe clinical practice.

2. Scope of Work

The selected researcher(s) will be responsible for designing and conducting a comprehensive study to evaluate the predictive validity and operational feasibility of a combined manual dexterity assessment composed of the Bead Test and the Purdue Pegboard and Mirror Test.

The scope of work will include, but is not limited to, the following components:

1. Study Design and Data Collection

- Develop a robust study design that enables meaningful evaluation of the relationship between manual dexterity performance and relevant outcomes in dental education.
- Identify and recruit a sufficient number of participants across one or more dental schools to ensure that the study produces statistically reliable and generalizable results.
- Where feasible, include multi-institutional participation to strengthen the validity and applicability of findings at a national level.

2. Analysis of Predictive Validity

- Assess the relationship between performance on the combined manual dexterity assessment and indicators of student success, which may include:
 - Academic performance
 - Preclinical and clinical performance
 - Progression or remediation outcomes
- Evaluate the relative contribution of each component test, as well as the combined assessment.

3. Determination of Threshold (Cut-Off) Score

- Develop and validate an evidence-based approach to defining a minimum performance threshold (cut-off score) for the combined test.
- Ensure that the proposed cut-off:
 - Is statistically justified and empirically derived

- Demonstrates an appropriate balance between sensitivity and specificity
- Minimizes the risk of excluding candidates who could succeed, while identifying those who may lack the baseline dexterity required

4. Equity and Fairness Considerations

- Assess whether performance on the assessment differs across applicant groups (where data permits), including potential implications for equity, diversity, and inclusion.
- Identify and address any potential sources of bias in test design, administration, or interpretation.

5. Implementation Considerations

- Evaluate the feasibility of implementing the assessment at scale, including:
 - Standardization across testing sites
 - Administration time and logistics
 - Scoring consistency and reliability
- Provide recommendations on how the assessment could be operationalized as a national admissions screening tool.

3. Key Deliverables

- **Project Work Plan:** Including methodology, timelines, and communication plan.
- **Interim Reports:** Monthly progress reports submitted to CDA.
- **Stakeholder Interview Summary:** Documentation of insights gathered through staff and Board interviews.
- **Final Report:** A comprehensive evaluation with findings, analysis, and actionable recommendations.

4. Reporting and Governance

- The successful project team lead will report to a designated CDA project lead.
- Updates will be provided to the Committee on Dental School Admissions Assessment Tools, including progress, risks, and preliminary findings.

- The researcher may be requested to attend select committee meetings to present interim findings.

5. Proposal Requirements

Interested parties should submit a proposal that includes:

- A one-page project summary
- The main proposal (maximum of 5 pages)
- An overview of the research team comprising a one-page description of the team highlighting relevant expertise and experience, plus two-page CV's or biosketches of the applicants
- The project timeline and milestones.
- The project budget.

All these materials should be submitted using 1.0 line-spacing and 12-point font.

6. Evaluation Criteria

Proposals will be evaluated based on the following:

- Relevant experience and expertise of the research team, including inter-institutional collaboration, and diversity of length and type of experience of applicants (25%)
- Methodological approach including justification for approaches proposed (25%)
- Coherence of the proposal to achieve the goal of improving admissions for DMD-DDS (20%)
- Clear indicators of success of the proposal (20%)
- Appropriateness of budget (10%)

7. Submission Details

- **Submission Method:** Please e-mail your proposal to Isabelle Gingras: igingras@cda-adc.ca
- **Questions and Clarifications:** All inquiries should be directed to Isabelle Gingras at igingras@cda-adc.ca.

8. Timeline

Milestone	Date
RFP Issued	September 1, 2026
Proposal Submission Deadline	November 6, 2026
Communication of results	January, 2027
Project Start Date	February, 2027
Interim Reports	Semi-Annual Reporting
Final Report Due	2 years after the beginning of project 9 with potential of 2 year extension)

9. Confidentiality

All information shared during the proposal process and throughout the project must be treated as confidential. Before information is shared, bidders must sign a confidentiality agreement. Internal documents will be shared after a non-disclosure agreement is executed.

10. Budget

The budget allocated for this project is estimated to be between \$50,000 and \$225,000. Respondents are encouraged to submit proposals that fall within this range and provide clear justification for the proposed costs. The final budget will be determined based on the scope of work, value offered, and alignment with the project's objectives. Proposals exceeding the upper limit may not be considered unless exceptional value is clearly demonstrated.