SMALL GRANT PROGRAM
Knowledge Translation Grant Criteria

AOPT would like to acknowledge contributions from the Academy of Neurologic Physical Therapy for providing this grant application format and review criteria.

Purpose

The Knowledge Translation Grant Program sponsored by the Academy for Neurologic Physical Therapy utilizes the Integrated Knowledge Translation (iKT) approach developed by the Canadian Institute of Health Research (CIHR). The Integrated Knowledge Translation approach applies the principles of knowledge translation to the research process during grant submission. The central premise of iKT is that involving knowledge users as equal partners alongside applicants (or researchers) will lead to research that is more relevant to, and more likely to be useful to, the knowledge users.

In this grant proposal mechanism, we define the applicant as a "researcher", which specifically includes those who have applied for this funding mechanism and are proposing to translate available research evidence into clinical practice. The applicants ("researchers") may be composed of individuals with varying skill-sets and will likely include those who consider themselves clinicians but may also include those with a primary interest in other areas of knowledge generation and translation, including those with dissemination (teaching) responsibilities or those with research-related responsibilities. In contrast, "knowledge users" are considered those individuals who are likely to use the knowledge in practice, including clinicians, patients, or administrators. Given these broad definitions, specific applicants may be considered both researchers and knowledge users

Knowledge translation (KT) factors for consideration

Proposals should demonstrate that the project has been shaped by the participating knowledge users and responds to their knowledge needs. In applying for funding, proposals should also outline how the project responds to the objectives of the specific funding opportunity. The following five factors should be considered when developing this research proposal.

1. Research Question/Specific Aims
2. Research Approach
3. Feasibility
4. Outcomes
5. Dissemination
6. Budget
7. Investigators / Co-Investigators / Key Personnel Qualifications

Knowledge Translation Grant Application Format
When formatting the application, margins must be at least 1 inch. Font must be either Times New Roman 12 point or Arial Regular 11 point. The applicant's last name and page number should appear at the top of every page, starting with page 1 with the first page of Section 2 (Specific Aims and Hypotheses).

1. Research Question/Specific Aims (1.5 pages)
This section should describe the intent of the research project, including the objectives and an explanation of the knowledge to be translated, which details the scientific rationale and evidence underlying the knowledge to be translated. An important objective specific to a KT project is responding to a problem or knowledge gap identified by knowledge users. This must be clearly articulated and stated as specific aims of the project. The research question is meant to be targeted to the knowledge users' context and environment, but the research should be transferable enough that similar audiences will benefit. The context and environment of other audiences become pertinent when there is the intention to disseminate the research results more broadly.

2. Research approach (3-5 pages)
The methodology selected for the project should clearly address the proposed research question, while the overall study design should be appropriate and sufficiently rigorous. However, the methodology may evolve as the project proceeds and may not be entirely determined at the outset. Nonetheless, the investigators should discuss primary methodology to be utilized at the outset, and subsequent metrics to gauge success and alternative strategies as needed.

The general structure of the Research Approach should include the following sections:

1. <u>Sample population and recruitment</u> – please specify who will be the target of your KT strategy. This may be a patient population, or an allied health/physical therapy team, who may then influence a specific patient population. Please indicate the number and characteristics/demographics of those you will target either directly or indirectly, and delineate inclusion/exclusion criteria as necessary and methods of recruitment. If there are preliminary data that you will present, sample size calculations may be appropriate in this section.
2. <u>Experimental design</u> – Please indicate the potential experimental design that you wish to employ for your study; examples include pre-test/post-test design to assess historical comparative effectiveness, post-test only with comparisons to normative data, and many others.
3. <u>Study measures</u> – Please identify the specific measures you wish to collect during the process of the study. For interventions targeted towards an allied health team, this may include measures of therapeutic interventions (e.g., amount, time, frequency, or type), beliefs/values, and/or compliance to indicate how clinical behaviors may have changed as a result of your intervention. If you are targeting a patient population directly or indirectly, patient-specific outcome measures will be necessary. Describe how you will acquire/collect this data, including time points and sources.
4. <u>Study intervention</u> – Please indicate how you will attempt to "intervene" on your subject population. What specific KT interventions/strategies will you use? Please indicate the date/durations of these interventions (start/end dates). Please discuss potential alternative strategies to be used if the primary methods are not successful, and how you will determine this.
5. <u>Data analysis</u> – Please describe how you will analyze your collected outcomes to determine potential change observed following your KT intervention. Primary analyses may be focused on a few variables/outcomes, although others may be listed. Appropriate descriptive and inferential statistical methods should be described.
6. Sustainability. There should be <u>strategies for sustaining the meaningful engagement of participating knowledge users throughout the research process</u> during the time period of the grant, and following the completion of the project (the latter often called Sustainability Plan). A project has many stages, and each is an opportunity for knowledge exchange between the applicants and the knowledge users. <u>Proposals should specify when, how and for what purpose the applicants and knowledge users will meet</u>. All feasible opportunities for knowledge exchange should be explored. The proposal should also demonstrate that the researchers and the knowledge users have collaboratively developed the proposal.

A principal goal of all KT projects is to incorporate the expertise of knowledge users, who will obviously be experts on their own knowledge needs. They can provide insight into the knowledge needs of other knowledge users in their sector. Knowledge users also have expertise in the context of implementation – the realities of the environment in which the research results will be implemented. Sometimes these are not known to the researchers at the time of application.

Very strong KT projects will *<u>demonstrate an established relationship with the participating knowledge users that precedes and hopefully outlasts the project</u>*. How the *<u>knowledge users will be involved in developing the research question, collecting and analyzing data, interpreting results, crafting the overall message, developing recommendations, and identifying audiences for dissemination should be specified</u>* in the grant proposal. However, grant proposals should recognize that KT approaches will require varying levels of engagement with different knowledge users at various times throughout the process and to ensure that the engagement is appropriate for both the project objectives and the availability of the knowledge users.

Proposals should distinguish between the knowledge users participating in the project and other target audiences (including other clinicians, patients, or administrators) that will be reached by the dissemination plan. Proposals should also present realistic strategies that integrate knowledge translation into the project.

3. Feasibility (0.5-1 page)

A number of _potential risks can jeopardize the feasibility of a KT project, and these must be considered_. One of the biggest risks is that a knowledge user will change job positions and leave the environment. _Evidence of an ongoing commitment from the organizations and additional knowledge users in the local environment is ideal_. Another risk is the possibility of a dispute between the knowledge users and the researchers. _A collaborative agreement between researchers and knowledge users_ outlining such things as access to data, the timing of the release of findings, and intellectual property – or some other mechanism for resolving disputes – will protect the project against such a contingency. _Financial or in-kind support from the knowledge users' organizations/administrators, including providing staffing, space, and equipment resources, is a good sign of engagement and commitment_. Such support can include allowing protected time for staff to implement the project, increased staffing, or allowing space and equipment. With KT projects, there is a greater expectation that the findings or recommendations will be acted on. The knowledge users should be in a position to influence decision-making authority to integrate knowledge into the environment where they practice. Finally, the scope of the research project should be appropriate for the established goals and the resources available, and the application should communicate how the project can be accomplished in the given 1-year time frame with the resources described.

For these proposed projects, _a fair amount of detail will be provided about the knowledge users and researchers will be expected_, and both the leaders of the knowledge user team and researchers should submit their CVs. Their role in the project should be clearly stated, and there should be evidence that they have agreed to fulfill their role. Other personnel critical to the project should also be described.

Knowledge translation proposals should demonstrate that the knowledge users are the right participants to inform the project and act on the findings and that they understand the roles assigned to them in the project

4. Outcomes (0.5 - 1 page)

In conducting research, efforts toward knowledge translation are likely to increase the uptake of research findings and improve the likelihood that the research will have an impact. In this regard, _a knowledge translation proposal should clearly illustrate how it will have a demonstrable and sustainable impact on practice, programs, and/or policy_ that could ultimately lead to a change in health outcomes.

While the research question may respond to the needs of the knowledge users, project findings can have an even greater impact depending on the extent to which the results are transferable to other contexts. Capturing the outcomes of research can help in validating the original goals of the study and can serve as a basis for further work stemming from the research findings.

Proposals should include an evaluation plan to assess the process of the knowledge translation approach and to learn about barriers and facilitators for collaboration.

5. Dissemination (1 page)

Dissemination involves identifying the appropriate audience and tailoring the message and medium to the audience. Methods appropriate to translating research findings range from simple communication activities, such as diffusion (i.e., let it happen) or dissemination (i.e., help it happen), to more intensive knowledge application efforts that include workshops and tool development. Conference presentations and publications in peer-reviewed journals have often been the primary modes of communication to researchers and other knowledge users. These forms of KT remain the best approach for research at the early stages of discovery when the knowledge has more relevance to academics who are contributing to a body of evidence that is not yet appropriate for the application. Publishing in open-access journals or repositories has the potential of reaching a much broader audience, thus increasing the likelihood of research uptake by those in the academic community as well as knowledge users and the general public.

When there are potential knowledge-user audiences beyond the research community, dissemination activities should be more intensive and emphasize nonacademic modes of communication: the language of publications should be adapted to the target audience (e.g. lay language) and can be presented in popular formats, such as websites or creative media (e.g. film, theatre, art). Sharing of knowledge may be done face to face in a meeting/workshop setting by a knowledge broker (an individual specializing in the communication of findings to knowledge users, in their context) or via emerging online technologies (e.g. podcasting, webinars, YouTube). To disseminate more broadly to the general public, media such as television, radio, and print may be engaged.

Additional dissemination activities can include such things as summaries for or briefings to stakeholders, educational sessions with patients, practitioners, and/or policymakers, engaging knowledge users in developing and executing dissemination/implementation plans, tool creation, and media engagement.

The research proposals should delineate a dissemination plan, including appropriate *journals for manuscript submission* if applicable, but of equal importance are the *specific additional activities directed toward other knowledge users*, patients, and potential policymakers.

6. Budget and Budget Justification

7. Investigators / Co-Investigators / Key Personnel Qualifications
Please attach one or multiple documents providing resumes/bio sketches/other descriptions to demonstrate the qualifications of the team.

Review Process
The Academy of Orthopaedic Physical Therapy Research Committee will review each proposal to determine if it meets the Career Development Award eligibility as described under Guidelines. All eligible applications will then be forwarded to the External Grant Review Committee that will review and rate each eligible application, using the criteria for review stated above. The highest rated applications will be selected for funding. All applicants will be notified of the results by June 15, 2023.
Grants should indicate a start time no sooner than September 15, 2023.

Review Process
The deadline for submission of materials is March 15, 2023.