
Current guidelines in the *Standards of Accreditation for the Orthotic/Prosthetic Residency Program* for the Research & Development Track (R & D):

2.6.2.2 A directed study spanning the course of their residency which will include quarterly updates.

-Required Documentation

- Director's Quarterly Evaluation of the Resident entered into the electronic residency tracking system
- Directed Study Cover Sheet and Statement Forms

Upon further review, NCOPE has determined that the guidelines, as currently stated, omit important components of the research process such as informed consent, organization of the paper, types of studies that would be recommended, etc. An outline to clarify the R & D requirements is provided below.

- I. R&D track guidelines:
 - a. R&D projects that involve human subjects must obtain informed written consent
 - i. http://www.ncope.org/directed_study/
 - b. R&D papers should follow standard scientific reporting
 - i. Abstract
 - ii. Introduction
 - iii. Materials and Methods
 - iv. Results
 - v. Discussion
 - vi. Conclusions
 - vii. Literature citations
 - c. Types of studies
 - d. Quarterly updates should include (*All submissions done through Typhon*)
 - i. 12 month Track
 1. First Quarter- Submit Research question
 - a. 1-2 sentences that clearly defines the clinical question

2. Second Quarter- Introduction and Materials and Methods
 - a. Appropriate introduction to define clinical question and review background research in the area of study
 - b. Description of materials and methods used in study
 3. Third Quarter- Results
 - a. Data collection should be complete or near complete by the end of the 3rd quarter. Results section should include data in the form of graphs and tables as well as a description of the data observed
 4. Fourth Quarter- Submit the final project by uploading as an external document in Typhon
- ii. 18 Month Track
1. First Quarter- Submit research question
 - a. 1-2 sentences that clearly defines the clinical question
 2. Second Quarter- Submit Introduction
 - a. Appropriate introduction to define clinical question and review background research in the area of study
 3. Third Quarter- Submit the materials and methods
 - a. Description of materials and methods used in study
 4. Fourth Quarter- Results
 5. Fifth Quarter- Discussion
 - a. Discussion of the results should include comparisons between the data collected and similar data in the literature
 6. Sixth Quarter- Submit the final project by uploading as an external document in Typhon
- II. Other factors that influence Quality
- a. Study Design
 - i. Obtain IRB approval when possible
 1. For further IRB information, please go to the Academy website: www.oandp.org
 - ii. Normalize data when possible
 - b. Provide and discuss appropriate graphs, tables and illustrations
 - c. Provide controls when possible
 - d. Writing Style
 - i. Avoid passive sentences (<20%)
 - ii. Maintain objectivity

- iii. Use quality citations, i.e. not Wikipedia
- III. Citation Examples
 - a. Materials and methods
 - i. When using software, components, or equipment for data collection or analysis it is appropriate to cite the manufacturer and location
 - 1. Example: A functional electrical stimulation device, the Walkaide (Innovative Neurotronics, Austin, TX) was used to provide an electrical impulse to the common peroneal nerve during the swing phase of gait.
 - b. Citing previous studies
 - i. Depending on the Journal, there are several methods used to cite literature, NCOPE will accept either method
 - 1. Example¹ (using a superscript)
 - 2. Author, year
 - a. If more than 2 authors: (Smith, et al, 2000)
 - b. If 1-2 authors: (Smith and Jones, 2000)

These guidelines are to encourage residents to think about the design of their study as well as the quality of writing. If you choose to submit the article for publication, it is important to consider the requirements for the individual Journal. For your convenience, JPO's requirements are listed here:

<http://www.oandp.org/ipo/authorinfo/>