

Quantitative Example: MScPT Student Research Project Outline (Example only)

Project Title	Evaluation of a rheumatology triage system: the role of an Advanced Practice Physiotherapist
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Research Location	Women's College Hospital
Purpose of Study	Since April 2013, all paper referrals to the Rheumatology program at Women's College Hospital are evaluated and assigned a priority ranking by the Advanced Practice Physiotherapist that is used to determine the timeframe to an appointment. Priority rankings are determined based on existing literature for urgency: suspicion of an inflammatory arthritis (Priority 1 or P1-seen within 31 days), non- inflammatory arthritis (Priority 2 or P2- seen within 90 days) and chronic pain (Priority 3 or P3-seen within 240 days). To date, there has been no formal evaluation of this triaging process. The goal of assigning a priority ranking to referrals is to ensure patients receive timely interventions in order to manage their condition, prevent complications, and improve their health and wellbeing. The purpose of this study is to determine the reliability of triaging paper referrals in Rheumatology, performed by an Advanced Practice Physiotherapist, with the outgoing priority ranking associated with the diagnosis, determined following assessment by the Rheumatologist.
Specific Objectives	1. To evaluate the extent to which the Advanced Practice Physiotherapist paper triage prioritization agrees with Rheumatologist's diagnosis/prioritization following consultation. Determine the rate at which consults were triaged as a lower priority when in fact they were a higher priority (false negatives). 2. Review the referrals of patients triaged as low priority that were in fact a higher priority (false negatives) to determine the cause. Causes may include inaccurate triaging, decreased quality of information on the referral, or progression of disease. Referral information will be reviewed in these cases to compare the referral letter to the established criteria and available information within the referral. Charts will be reviewed to determine progression of the disease from the time of referral. False negatives have safety and care implications within the triage practice, as a delay in care compromises the initiation of disease modifying anti-rheumatic drugs (DMARDs) and thereby impacts patient outcomes.
Rationale and Relevance to PT Practice	The Advanced Practice Physiotherapist role is emerging. Maximization of health human resources has facilitated physiotherapists to practice to their full scope of practice and, in some cases, perform duties beyond their scope of practice. Accurate triage in Rheumatology improves patient outcomes. For example, a delay in initiation of disease modifying anti-rheumatic drugs in Rheumatoid Arthritis have been associated with increased level of disability due to bony erosions and progressive joint damage. Typically, paper triage is performed by Rheumatologists and is based on their individual professional judgement. This process takes time away from physicians performing assessments, and results in inconsistent patient prioritization and wait times. This study will determine if an APP is reliable in prioritizing rheumatology referrals thereby improving clinic efficiency, wait times, and patient outcomes.

Journal Article Citations	<p>1. Carpenter T, Katz SJ. Review of a Rheumatology triage system: simple, accurate, and effective. <i>Clin Rheumatol</i> 2014 Feb 33(2): 247-52.</p> <p>2. Bruschi E, Casu C, Filippini D, Pisoni L, Shito E, Zahalkova L, Muscara M, Gentile MG, Livio V, Marceglia S, Giacomelli L, Epis O. Improving diagnosis of early inflammatory arthritis: results of a novel triage system. <i>Clin Exp Rheumatol</i> 2013 Jul-Aug 31(4): 606-9</p> <p>3. Villeneuve E, Nam JL, Bell MJ, Deighton CM, Felson DT, Hazes JM, McInnes IB, Silman AJ, Solomon DH, Thompson AE, White PH, Bykerk VP, Emery P. A systematic literature review of strategies promoting early referral and reducing delays in the diagnosis and management of inflammatory arthritis. <i>Postgrad Med J</i>. 2013 Apr 89(1050): 231- 40.</p> <p>4. Maddison P, Jones J, Breslin A, Barton C, Fleur J, Lewis R, McSweeney L, Norgain C, Smith S, Thomas C, Tillson C. Improved access and targeting of musculoskeletal services in northwest Wales: targeted early access to musculoskeletal services (TEAMS) programme <i>BMJ</i> 2004 Dec 329:1325- 1327</p>
Study Design	Quantitative, longitudinal, retrospective chart review
Participants (inclusion/exclusion criteria)	All referrals received by the Rheumatology department between April 2013 to Research Ethics Board (REB) approval will be used for the sample. Inclusion criteria: adult patients (> or = 18 years of age), referred to the WCH ambulatory Rheumatology clinic for assessment by a rheumatologist with an assessment with diagnosis in the patient chart, Exclusion criteria: referrals not triaged with the Advanced Practice Physiotherapist, urgent referrals as these referrals commonly bypass the triage process and involve direct physician to physician contact, referrals <18 years of age, and patients that were referred but subsequently not seen for consultation.
Data Collection Tools	Chart Abstraction Tool including the following: Health File Number, patient demographics , Incoming Priority Ranking, Suspected incoming diagnosis, Outgoing diagnosis, Outgoing Priority Ranking. For discordant referrals, an analysis will be performed comparing the referral to the triage criteria. Further data will be extracted including: subjective findings at time of consult, exact referral information, wait time, subsequent testing ordered and other items as determined by the research team.
Data Source (e.g. charts, existing database, survey)	Our existing database will be used to extract the Health File Number, Incoming Priority Ranking, Suspected incoming Diagnosis and wait time to appointment.
Proposed Number of Participants	180-200 charts will need to be reviewed in order to achieve statistical significance. This is based on using a quadrated kappa to determine the reliability of the incoming and outgoing (2 raters) patient prioritization (3 variables-P1, P2, P3), using a 2-tailed test, with a null hypothesis value of .40 and a minimum expectation of 0.6 for significance, a minimum power of 80% and an expected proportion of agreement of 70%.
Recruitment Method	All referrals received by the Rheumatology department between April 2013 to REB approval will be used for the sample.
Costs associated with project (e.g. stamps, special equipment, etc.) Identify who will assume these costs.	In- costs kind include: photocopying expenses, encrypted USB key, computer access, and poster expenses for presentation.
Role of Students	1. Conduct a literature review to outline the criteria for prioritizing rheumatology referrals to substantiate existing time frames to schedule appointments for assessment by a rheumatologist in the ambulatory care clinic for the best patient outcomes. 2. Complete an ethics protocol; complete mandatory Tricouncil Policy Statement Online Tutorial; obtain ethics approval; collect data (if applicable); analyze data; prepare a manuscript and poster, complete study completion form.

Role of Advisors (specify type of faculty assistance required, e.g. methodology)	Facility Advisors role: 1) Review proposal with subsequent submission to ethics committee for review. 2) Weekly or bi-weekly meetings with the students to facilitate ethics proposal, data collection, data analysis and manuscript review. 3) Facilitate manuscript drafts for publication 4) Facilitation to library resources for the purposes of literature review. Faculty advisors role: 1) Facilitate and clarify research methodology 2) Facilitate data analysis 3) Facilitate manuscript drafts for publication
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