

U of S SoTL Cluster Charter

Medical Imaging: Assessing the Use of Technologies and Self-Directed Learning on Student Learning Outcomes

Description/Background:

Training healthcare professionals involved in the management of patients with musculoskeletal disorders requires the teaching, and learning, of medical imaging concepts and content. However, with the time constraints of our current professional training curricula, the ability to deliver sufficient knowledge and facilitate understanding of imaging for healthcare professional trainees can be very challenging. This challenge is further compounded by rapid advancement of medical imaging technologies and modified guidelines for the utilization of imaging technology.

The Department of Medical Imaging, College of Medicine, has developed some new teaching resources and technologies that may have potential to assist instructors in the delivery of core medical imaging knowledge and help to develop better understanding of imaging for our trainees using a self-directed learning approach.

Our team is interested in exploring several avenues of enquiry: 1) what new technologies facilitate development of innovative pedagogies; 2) how much medical imaging is enough for specific healthcare trainees (e.g. physical therapy)?; 3) how will the skills learned within the curriculum translate to future clinical encounters with patients?

This interdisciplinary collaboration will broaden our understanding of healthcare trainees' experiences and enhance the wider dissemination, and publication of new strategies and practices to further our mutual goal of advancing teaching, learning, and scholarship.

Cluster Lead (Academic Unit leader):

Soo Kim, PhD, School of Physical Therapy

Members of the Cluster:

Brent Burbridge, Medical Imaging,

Katie Crockett, PhD, School of Physical Therapy

Stacey Lovo Grona, School of Physical Therapy

Goals, and Estimated timeline:

Over the next two years this research team will:

- Collect data from first cohort of students (Year 1: starting May 2017)
- Collect data on second cohort of students (Year 2: starting May 2018)
- Conduct a literature review (Year 1: September- December 2017)
- Write and submit one peer-reviewed paper as a group (Year 2)
- Sharing of findings via conference presentations, poster presentations, and/or professional development opportunities (Year 2)

Envisioned process:

- Cluster members will meet monthly as a group; certain cluster members working on specific projects may meet more frequently as required
- Exchange of ideas and suggestions for studies will be conducted at monthly meetings or through emails and sharing of documents through Google Docs
- Discussions about expenses and other administrative matters will occur at monthly meetings or via email.

Financial:

- All financial requests will be presented to the cluster leader
- The cluster leader will present the request to the group and decisions will be made collectively as a collection, data entry, data analysis, literature search)
- Auditing existing online medical imaging teaching courses as part of background work and stimulation of new ideas
- Publication charges
- Poster printing
- Partial coverage of conference fees and travels

Scope:

In Scope: (what is the intended focus of the Cluster)

- Collaborative and individual projects related to the cluster’s goals

Not In Scope: (what will NOT be included in the focus of the Cluster; limits on expenditures may be included here or in the Finances section.):

- Funding individuals outside of the cluster
- Individual research beyond the goals of the cluster

Constraints, Assumptions, Risks and Dependencies of Note Constraints

Constraints	<ul style="list-style-type: none"> • Time: all members involved have additional teaching and research responsibilities
Assumptions	<ul style="list-style-type: none"> • All members will work collaboratively to meet cluster goals • Appropriate ethics approval will be sought
Risks and Dependencies	<ul style="list-style-type: none"> • Collecting and using student data