

## Collaborating on Critically Appraised Topic (CAT) groups: librarians, clinicians and researchers integrating research into practice

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### Introduction

During 2021, the newly appointed Director of [The STARS Education and Research Alliance](#) (SERA) for the Metro North Health Surgical, Treatment and Rehabilitation Service (STARS) approached the Senior Manager, Faculty Services at The University of Queensland (UQ) Library to invite librarians to work on Critically Appraised Topic (CAT) groups. The purpose of the CAT groups is to bring together experts in their field to work on a clinical question. The Library welcomed this opportunity to partner with STARS to contribute to making informed evidence-based decisions.

### Critically Appraised Topic (CAT)

A CAT is a summary of the best available evidence to answer a clinical question and presents a clinical 'bottom line', which is then shared, and the implications taken forward into clinical practice and research. CATs can be used to answer questions about diagnosis, prognosis, causation, treatments, patient pathways, or adverse reactions. CATs can also be used to appraise evidence about health service processes (Foster, 2001).

The CAT process involves bringing together clinicians, researchers, health librarians, and consumers to form a collaboration between research and clinical practice to share knowledge and directly improve patient care. The group work together to develop a clinical question that is answerable, searching and critically appraising and summarising the best available evidence. This work is taken forward to inform clinical practice, quality improvement and research in STARS, UQ and further afield (Foster, 2001)

The purpose of the CAT groups is to translate evidence into practice, to identify areas of clinical practice that require further research, and to foster the critical appraisal skills of clinicians. It also provides an opportunity to collaboratively engage clinicians and researchers in critical appraisal of clinically relevant topics to ensure that clinical practice is based on the best available evidence and to promote an environment to share knowledge (Foster, 2001).

### Librarian support

Clinical Librarian support is an essential component of the success of the CAT groups, contributing information specialist skills to refine the clinical questions and provide rapid search results. As such funding from STARS and UQ ensured the fulfillment of two part-time Clinical Librarian positions to support the CAT pilot, equivalent to a total of two weeks full time hours over several months.

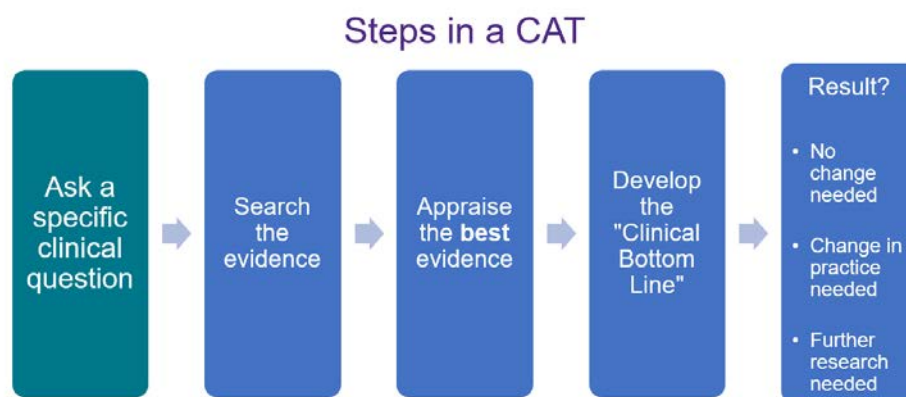
The groups commenced in late 2021 with a pilot of five CAT groups that later increased to six CAT groups. These were coordinated by The STARS Education and Research Alliance (a partnership between Metro North Health and The University of Queensland). The pilot included clinicians and researchers from STARS, with a total of 45 nursing, allied health, and medical clinicians, along with health librarians and a consumer. The CAT groups were Orthoptics Team (EyeCAT group), Skin Integrity CAT, Falls Prevention CAT, FIM (Functional Independence Measure) Nursing Workload CAT, Dysphagia in Lateral Medullary Stroke CAT, and Acceleration Rehab in TKA (Total Knee Arthroplasty) CAT.

This multidisciplinary approach enabled team building and different professional perspectives to work together. The outcome of a CAT leads to identifying areas of clinical practice that require quality improvement based on evidence-based practice or identifying areas of clinical practice that require further research. As CATs are created, they are shared via a CAT Bank on the [STARS website](#) with the aim to increase consumer involvement and support evidence-based practice. Results are used to inform research and quality initiatives and to improve clinical certainty.

The librarian's role in the CAT is to help refine the research question into a PICO (patient/population, intervention, comparison, and outcomes) format with the goal of producing a searchable topic. The group will meet to discuss the topics and the issues related to the question to define what the agreed need and meaning of the topic is. Once the question has been finalised the librarian will then interrogate the literature to produce a short list of relevant results which is distributed to the group. This list is created from the EndNote Library, including titles and abstracts by copying formatted references in an annotated style into Word. The group members, including the librarian, review the list and look for papers that answer the question that provide the current best available evidence. This often includes focusing on higher levels of evidence provided by meta-analyses, systematic reviews, and randomised

controlled trials. The goal is to find a paper or papers that can be appraised by the group. Once the paper or papers have been selected the group will meet to discuss the merits of the paper using an appraisal tool such as the [CASP](#) (Critical Appraisal Skills Programme) checklists. Once the group has agreed upon the appraisal, a clinical bottom line is produced and communicated. The process for CATs at STARS is described in detail on the SERA website -

<https://metronorth.health.qld.gov.au/stars/wp-content/uploads/sites/18/2022/09/sera-cats-process.pdf>



*Image: Steps in a CAT* (Source: YouTube video created by UQ librarians for a [short introduction on developing questions for CATs](#) linked on the SERA website - <https://metronorth.health.qld.gov.au/stars/education-research-alliance/activities>)

### Outcomes

Health librarian support was understood to be critical to success and STARS are continuing with this model in 2023. CATs form part of our STARS partnership with clinicians, researchers, health librarians and consumers, bridging the gap between research and clinical practice, providing opportunity to share clinical knowledge and research skills, and ultimately improve patient care.

The librarians who participated in the initial round of CAT groups produced a short video for clinicians covering an introduction on developing questions for critical appraisal topics. This video is linked to the [STARS Alliance Activities](#) webpage.

From a library perspective, CAT groups provide a unique opportunity for librarians to work closely with clinicians, researchers, and consumers to answer important clinical questions to ensure clinical practice is based on the best available evidence.

The CAT process has worked well, and it has provided an opportunity for the librarians involved to work as peers with clinical staff. The teams are very receptive to the input from the librarian and include the librarian in both the selection and appraisal of the evidence. The opportunity for librarians to help coordinate the CAT

process has made the outcome easier to achieve and of better quality. The librarians have enjoyed the opportunity to work on topics that are clinically relevant and may impact patient outcomes. The key capabilities in working as a librarian involved with a CAT include flexibility, the ability to use the research databases to find evidence and communicating with diverse teams.

As a result of this collaboration, librarians are also able to promote library services and resources to a diverse client group, including hospital staff, academics, researchers, students, and community members. After working together on a CAT group, a clinician establishing a STARS Journal Club invited a librarian to support the group by demonstrating database searching to find key articles for their priority clinical topic.

### Conclusion

The pilot of the CAT groups received positive feedback and was considered a success. As a result, a second round of CAT groups commenced in 2023 with another seven clinical questions. Librarian participation in the CAT groups ensures expert and specialist skills are embedded in the process and gives librarians the opportunity to collaborate and partner with clinicians and researchers to improve health outcomes through integration of the best available research evidence into clinical practice.

### References

Foster, N., Barlas, P., Chesterton, L., & Wong, J. (2001). [Critically appraised topics \(CATs\): One method of facilitating evidence-based practice in physiotherapy](#). *Physiotherapy*, 87(4), 179-190.