Title: Impact of Just-in-Time Teaching Screencasts on patient outcomes for an Inpatient Hematology-Oncology Teaching Service

Presenter: Andrew Faucheux, MD, Wake Forest School of Medicine

Co-authors: Leslie Ellis, MD, Wake Forest School of Medicine; Thomas Lycan, DO, Wake Forest School of Medicine

Background/Needs Assessment:
Medical trainees have identified hematology and oncology as areas of need for improved education [1,2]; however, the clinical workload of trainees limits the efficacy of traditional teaching models [3]. Just-in-time teaching (JiTT) screencasts are a novel educational intervention that is acceptable among trainees on an adult inpatient hematology-oncology service (IHOS) [4]. Nonetheless, more research is needed to justify implementation. A JiTT format fits well within the conceptual framework of self-determination theory, which states that adult learners have intrinsic motivations to learn based upon drives for competence, autonomy, and relatedness [5]. We hypothesize that the implementation of JiTT screencasts will change trainee behavior based on self-determination theory and improve patient outcomes.

Objectives:
This study will measure whether JiTT screencasts improve higher-level educational outcomes among internal medicine (IM) residents.

Methods/Description of Program:
We have identified a list of common medical problems encountered on an IHOS using retrospective data. We have identified a list of potential patient outcomes that we can
retrospectively measure via the electronic medical record (EMR), for example, time to
dexamethasone administration for symptomatic cerebral edema. We will conduct a
survey-based needs assessment with IM residents to identify medical problems and
corresponding patient outcomes with the most need for an educational intervention. We
will utilize these data to produce a JiTT screencast curriculum and administer it to
residents. The primary outcome will be the proportion of patients who receive a clinical
intervention optimally (e.g., improvement in time to dexamethasone administration)
(Kirkpatrick level 3) [6]. Secondary outcomes will include improvement in medical
knowledge (level 2b).

**Anticipated Results/Evaluation Plan:**
We will perform a single-arm, pre- and post-intervention assessment using qualitative
and quantitative measures. We will assess learner satisfaction and clinical management
comfort level using Likert scale style questions in surveys administered at the end of
residents' rotations. We will assess medical knowledge using clinical vignette-style,
multiple-choice questions. We will collect retrospective data from the EMR to assess for
changes in patient outcomes. We anticipate that learners will have increased knowledge
in topics watched and that this will translate into behavioral changes as well as
improved patient outcomes.

**Next Steps:**
Future aims will be to inform the implementation of these screencasts at other academic
institutions.

**References:**
1. Tam, V. C. *et al.* Oncology education in Canadian undergraduate and postgraduate

