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Development of Patient-centered Communication Curriculum for Radiation Oncology Residents

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Background: Radiation oncologists often speak with patients who are terminally ill and may be near the end of their life. In fact, up to 63% of patients who died of cancer receive palliative radiation in their last year of life. Despite this, training on palliative care including patient-centered communication skills for radiation oncology residents is lacking. This prompted the development of a serious illness communication curriculum designed for radiation oncology residents.

Methods: Curriculum development followed Kern's Six-step approach. A national survey of radiation oncology residency program directors outlined the lack of communication training and served as a general needs assessment. We performed an institution-specific targeted needs assessment with a cross-sectional survey and semi-structured interviews that reaffirmed a convincing need at the residency program level for a practice-based patient-centered communication skills training program. The objectives, educational strategies, implementation, and evaluation of the curriculum were then developed to target identified deficiencies in resident communication skills.

Results: Data from the targeted needs assessment showed that most residents felt only "somewhat prepared" (Likert 3/5) to discuss important topics such as prognosis (93%), reconciling the seriousness of one's illness (71%), and discontinuing life-sustaining treatments (64%). When asked how they might improve these skills some residents remarked, "practicing conversations," "observing others," and "learning best practices for these situations." A baseline radiation-specific simulated patient encounter was performed at the university's simulation-based learning center. Then, two virtual half-day teaching sessions led by expert faculty facilitators were held. These consisted of didactic learning and mentored resident practice with simulated patients and real time feedback. All teaching and practice were designed for radiation oncology residents. A post-course simulated patient encounter will be performed. Faculty trained in serious illness communication who did not participate in the course will then review the simulated patient encounters and complete a blinded standardized assessment to compare pre- and post-course measurable communication skills.

Discussion: We developed a practice-based patient-centered communication skills curriculum for radiation oncology residents. We expect this work in progress will show measurable improvement of these skills. We plan to integrate this curriculum on a regular, repeating basis for additional skill development and to facilitate durable learning. We hope this course can serve as an adaptable model that can be instituted among radiation oncology residency programs.

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Optimizing patient-centered, inclusive care in oncology: Healthcare professionals' knowledge, attitudes, and practices in caring for LGBTQ2+ individuals

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Background: The sexual and gender diverse community of lesbian, gay, bisexual, transgender, queer/questioning, two-Spirit, plus (LGBTQ2+) patients experience cancer-related health disparities and inequities compared to heterosexual and cisgender patients. Our objective was to examine healthcare professional (HCP) knowledge, attitudes, practices, and education interest when caring for LGBTQ2+ patients with cancer, and identify gaps and opportunities to improve care.

Methods: A 38-item online survey was sent to all Gynecologic oncology staff (n=92) within a tertiary care cancer centre in Toronto. Items included respondent demographics (n=7), and LGBTQ2+ knowledge (n=7), attitudes (n=15), practice behaviours (n=5), education interest (n=1), and open comments (n=3). Descriptive statistics summarized survey responses. Fisher's exact test was used to assess interactions between demographics and survey responses. Thematic analysis was used to analyze open-ended questions.

Results: 75/92 (82%) HCPs completed the survey. Although most respondents felt comfortable (96% strongly agree/agree) treating LGBQ2+ patients, only 45% felt knowledgeable about their specific health needs. In comparison, staff reported less comfort (87%) and knowledge (27%) caring for transgender patients. Respondents believed it is important to know a patient's sexual orientation (58%) and gender identity (41%); however, significantly less felt comfortable inquiring (sexual orientation 41%, p=0.023 and gender identity 36%, p<0.001). LGBTQ2+ health-related knowledge items yielded responses of "neutral" and "not sure" ranging from 19-73% and most were "not sure" about institutional practices regarding collecting patient sexual orientation (61%), sex assigned at birth (52%) and gender identity (60%). Almost all (96% strongly agreed/agreed) were interested in receiving LGBTQ2+ specific education. Age, having friends/family who identify as LGBTQ2+ and non-white race were found to have some influence on attitudes. Thematic analysis of open-comments identified two main themes: (i) HCPs are concerned of offending LGBTQ2+ individuals because of their lack of knowledge and experience, and (ii) HCPs desire LGBTQ2+-specific health training and the creation of inclusive environments.

Conclusions: Although HCPs report feeling comfortable caring for LGBTQ2+ individuals, most report a lack of knowledge and awareness in caring for this population. We recommend institutions implement cultural competency training for HCPs to improve high quality and inclusive patient-centered care for LGBTQ2+ patients and their caregivers.

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Screening for Vaccination Status and Providing Appropriate COVID-19 Vaccine Education to Radiation Oncology Patients

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Background: Patients with cancer who are receiving Radiation Therapy (RT) are at an elevated risk of morbidity and mortality (M&M) from COVID-19 infection. Patients also may be unable to self-isolate, as they often require multiple hospital visits and close exposure to healthcare practitioners (HCPs). COVID-19 vaccination has been shown to mitigate risk of both COVID-19 infection and morbidity. It is important that patients

undergoing RT or those recently diagnosed with cancer receive complete COVID-19 vaccination. Given their rapport with patients, HCPs are in a unique position to assess and treat the patient's cancer and engage in discussions regarding important health decisions. Our goal was to use the patient-provider relationship to identify reasons to forego vaccination, address specific concerns as a trusted source, and encourage COVID-19 vaccination for patients with cancer.

Methods: We identified and screened all new patients who were either unvaccinated or had undocumented COVID-19 vaccination status from 11/2021 to 2/2022. Instruction on reconciling vaccination status in EPIC was provided to HCPs. Weekly reports of unvaccinated patients were generated and distributed for upcoming consultations. HCPs were given vaccine education resources and instructed to document that education was delivered. Information regarding pre-simulation COVID-19 PCR testing, vaccine status, vaccine education, and reasons for not being vaccinated was collected.

Results: A total of 909 patients were seen in consultation from 11/1/2021 to 2/28/2022. Of these, 152 patients were unvaccinated/undocumented vaccination status, of which 147 (16.2%) were eligible for our vaccination education (1 declined prior to consultation, 3 pediatric, 1 patient with dementia excluded). 27 (18.4%) patients received vaccination education at time of consultation. Of these patients, 6 (22.2%) eligible patients who received vaccine education initiated the COVID-19 vaccination within 60 days of consultation. On pre-simulation COVID testing, 32 patients tested positive for COVID-19.

Discussion: COVID-19 infection has significant M&M and has serious implications for patients with cancer. We developed a COVID-19 vaccination initiative to identify and reconcile vaccination status and provide vaccine education to cancer patients. 27/147 (18.4%) eligible patients received vaccine education, of which 6 (22.2%) received partial or full vaccination. Despite educating clinicians and sending weekly reports, COVID-19 vaccine education to patients remained low, which may suggest there are several challenges for specialized HCPs in performing vaccine education despite its clear medical importance. As the outlook of COVID-19 continues to evolve, providing accurate information regarding the COVID-19 virus and vaccination is crucial for the well-being of cancer patients.

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The application of patient reported outcomes (PROs) to build personalized patient education aids

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Background: After diagnosis, cancer patients receive a large volume of information in a short period of time when they are usually feeling anxious and stressed. In particular, prostate cancer patients can be overwhelmed by multiple treatment options and the expectation of making a life-altering personal choice during shared decision-making. Consent forms attempt to summarize potential side effects but are rarely personalized to each patient. Clinicians can underestimate symptoms/side effects experienced by patients, compared to patient-reported outcomes (PROs). PROs are the best estimate of how our patients will feel during/after treatments.

Methods: We used real world data including PROs and clinical/radiation data from the Enterprise Data Warehouse and our departmental radiation database to explore patient characteristics associated with PRO changes over time. We created several different visualizations showing how PROs changed over time, and tried to pick visualizations that were most accessible to patients with different backgrounds, languages, data/health literacy. In the future, we hope to conduct patient interviews to improve visualizations, and to automate real-time generation of personalized patient education aids for use at consultations.

Results: Our cohort included ~3,900 patients who completed >35,000 PROMIS-10, >5,000 EPIC-26, and >11,000 weekly radiation treatment visit questionnaires about urinary, bowel, erectile, and overall quality of life. Among significant predictors of toxicity were initial symptom severity.

Discussion: Patient reported outcomes (PROs) improve outcomes and have become standard in clinical trials and are gradually being incorporated into more cancer clinics. The next phase of PRO research is continuing to expand applications into general clinical practices and routine daily workflows using real world data (collected from each clinic because clinical practices/outcomes can vary). It is time to use our PROs work back to directly benefit patients. We are working on real-time generation of personalized patient education resources in the routine clinical workflows. Resources include data visualizations that aim to be accessible to patients with diverse backgrounds, languages, data/health literacy. Prostate cancer patients could especially benefit from personalized resources for standard-of-care shared decision-making after initial diagnosis. This work in progress describes how to combine PROs and clinical data to create personalized PRO visualizations for patient education, and potential mechanisms for real-time generation of these resources.

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Prospective Pilot Study to Measure Baseline Radiation Knowledge Prior to Radiotherapy After Standard Education at Consultation

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Background: Pre-operative patient education has been shown to reduce patient anxiety and increase patient medical comprehension. This prospective pilot study hypothesized that patient knowledge related to the radiotherapy treatment process would be low after receiving traditional radiation educational materials and counseling at the time of initial consultation.

Methods: Patients with non-metastatic cancer receiving definitive or adjuvant radiotherapy at three suburban radiation therapy clinics affiliated with an academic medical center completed a 34-question survey. Patients received traditional radiation educational materials. The survey included questions on demographics, the Spielberger State-Trait Anxiety Inventory short-form (STAI-S-6), a modified radiotherapy Amsterdam preoperative anxiety and information scale (mRT-APAIS), and radiotherapy knowledge. Patients also provided qualitative responses. Surveys were administered prior to the patient's CT-simulation scan. Descriptive statistics were performed.

Results: 22 patients were enrolled in this prospective pilot study. 19 (86%) patients were female. The median age was 66 (range: 38-80). 14 (64%) patients were white, 7 (32%) black, and 1 (4%) American Indian/Alaskan Native. 6 (27%) patients received a high school degree or GED, 10 (46%) obtained a 2-year degree and 5 (22%) received a 4-year degree or higher. 16 (73%) patients had breast cancer with the others having lung, brain, gastrointestinal, gynecologic, or other malignancies. The median radiotherapy knowledge score was 35.0 [IQR: 31.0 - 39.5] and 58% of patients endorsed low overall radiotherapy knowledge (score < 35). Patients reported low levels of knowledge related to radiotherapy set-up (41%), immobilization (41%), x-ray use (64%), and sensation (tactile 41%, auditory: 59%). The median STAI-S-6 score was 43.3 [IQR: 36.7 - 46.7] and the median mRT-APAIS score was 18 [IQR: 14.8 - 20.0]. 68% of patients were "anxious" by STAI-S-6 (score ≥ 40) and 77% by mRT-APAIS (score ≥ 12).

Discussion: A majority of patients reported low levels of knowledge related to the radiotherapy treatment process prior to CT simulation. These findings suggest an educational intervention at the time of consultation may be beneficial to reduce patient anxiety and increase patient knowledge related