PROJECT PROFILE

LAC+USC Medical Center

Partner service line	Radiation oncology
Target audience	Radiation oncology residents
Target population	Radiation oncology patients presenting for radiation therapy who identify pain on initial and subsequent screenings
Palliative care process	Pain assessment and management
Target behavior	Routine adoption of a structured pain assessment and documentation of a plan for managing pain that includes assessing pain at each visit and adjusting pain and symptom management plan as needed. Introduce PEG (pain, enjoyment of life, and general activity) screening tool and comprehensive assessment to assist residents with developing a pain plan.

Training (provided to radiation oncology residents)

- **Center to Advance Palliative Care (CAPC) modules.** Assigned six self-directed CAPC palliative care education modules.
- **Internally developed pain presentations.** Provided two lectures on assessing, documenting, and managing pain.
- **Mentoring by chief resident.** The chief resident provided hands-on mentoring and modeling for residents on using the pain assessment template dot phrases in the Cerner electronic health record (EHR), completing pre- and post-knowledge and attitude tests, and completing CAPC modules.
- **Palliative care consultations.** The palliative care team provided some initial shadowing in the radiation oncology clinic and consultations as needed for residents.
- **SharePoint.** Project team populated the health system SharePoint site with lectures, exercises, and other generalist palliative care resources.

Identification (patient target population)

- **Report of pain.** Oncology patients presenting for radiation therapy who identified pain on initial or subsequent screenings were targeted for the intervention.
- **PEG tool.** At the end of the project, the PEG screening tool was made accessible in the Cerner EHR. Radiation oncology staff will use it on an ongoing basis for consistent pain screening.

Documentation

- **Pain assessment template dot phrases in Cerner EHR.** Dot phrases were created in the Cerner EHR to integrate pain assessments (pain characteristics such as location, intensity, quality, timing, duration, exacerbating factors) and plans (plan elements addressed analgesics, constipation, nausea, etc.) into radiation oncology residents' workflow.

Lessons Learned

CHALLENGES

- **COVID-19 pandemic was the most significant challenge.** The pandemic overwhelmed both service line partners with clinical demand and created significant stress because of staffing shortages and burnout. In response, the team adjusted expectations, using a "less is more" approach. By focusing on a smaller number of core project priorities, the team discovered they had flexibility in data gathering, more time for deadlines, and more buy-in from learners not already overwhelmed with asks.

- **Integrating palliative care material into the radiation oncology curriculum.** The project initially struggled with how to integrate palliative care into radiation oncology's existing curriculum, since adding a new education component to the curriculum typically means something else must go. A balance was struck by adding CAPC self-directed learning modules. Both service leads supported this as a more sustainable way of continuing the curriculum while aligning with both radiation oncology and palliative care capacities.

KEY INGREDIENTS AND TAKEAWAYS

- **Embed EHR tools and processes or system metrics.** To increase the proportion of radiation oncology patients with documented pain assessments and plans, templated dot phrases were used to integrate assessments into the workflow. The project was able to leverage prior work done at Olive View-UCLA (part of the same LA County public hospital network as LAC+USC) to insert the PEG screening tool in an accessible location in the EHR. Radiation oncology can now track this measure with residents.

- **Start small and build.** The project team intentionally kept a narrow focus on pain, learning that starting small and succeeding is a better path to building something comprehensive over time than being too ambitious from the outset.

PROJECT LEAD TAKEAWAYS

- **Palliative care lead.** "I have a deep appreciation for how limited the chief resident and the division chief's time is and how much they're trying to do all over the hospital. I always felt that they made time for this project and that it wasn't like their throwaway project [or] a chore to them. That's not something you always find in a partner."

- **Service line lead.** "It was really important to have the CAPC self-paced learning modules rather than scheduled lectures, because trying to find a place to put a scheduled lecture in the schedule is very difficult. Going forward, I would recommend a hybrid approach that has residents or other service line partners completing the modules paired with a quarterly office hours or discussion seminar to discuss the learning, review questions and difficult cases, and hand out module certificates of completion."

Measures and Key Outcomes

- **Training completion rate.** All residents completed the six assigned CAPC modules, and several completed additional, unassigned modules.
- **Surveys assessing respondent knowledge and confidence.** Improvement in all assessed areas.

Table 1. Pain Management Knowledge Assessment

	PREINTERVENTION *n* = 9	POSTINTERVENTION *n* = 9
Average test score	58%	67%
Median test score	60%	70%
Range	30%–70%	50%–80%

Table 2. Pain Management Self-Assessment

PERCENTAGE RESPONDING "OFTEN" OR "ALWAYS" TO THE FOLLOWING STATEMENTS:	PREINTERVENTION *n* = 9	POSTINTERVENTION *n* = 9
I assess patients' pain using a comprehensive approach	33%	78%
I use appropriate nonopioid measures in management of pain, including co-analgesics and nonpharmacologic measures	44%	89%
I understand appropriate indications for referral for interventions to help with pain	0%	67%
I start patients on laxatives when opioids are started	77%	100%
I educate patients and/or family on appropriate use of pain medications	44%	89%
I feel confident in my abilities to comprehensively evaluate a patient with cancer-related pain	0%	78%
I feel confident in my pharmacologic pain management skills	0%	56%
I feel comfortable initiating or modifying an opioid regimen	11%	44%
Pharmacologic pain management is within the scope of practice of radiation oncology physicians	100%	100%

- **Patients with documented complete pain assessments and plans.** Improvement in 12 of 16 areas.

Table 3. Chart Review Findings for Patients with Pain Reported	FEBRUARY 2020 number (%) *n* = 36	FEBRUARY 2021 number (%) *n* = 34
Inquired about pain characteristics		
▸ Location	24 (67%)	32 (94%)
▸ Intensity	24 (67%)	28 (82%)
▸ Quality	9 (25%)	28 (82%)
▸ Timing (intermittent, constant)	7 (19%)	28 (82%)
▸ Duration	5 (14%)	3 (9%)
▸ Exacerbating factors	13 (36%)	23 (68%)
Inquired about current analgesics	24 (67%)	23 (68%)
Inquired about constipation	16 (44%)	11 (32%)
Characterized pain		
▸ Chronicity (acute, subacute, chronic)	31 (86%)	20 (59%)
▸ Mechanism (nociceptive, neuropathic, mixed)	5 (14%)	9 (26%)
Addressed type of analgesics		
▸ Nonopioid analgesics	19 (53%)	16 (47%)
▸ Adjuvants for neuropathic pain	5 (14%)	17 (50%)
▸ Sustained-release opioids	2 (6%)	9 (26%)
▸ Immediate-release opioids	13 (36%)	23 (68%)
Addressed constipation	8 (22%)	15 (44%)
Addressed nausea	8 (22%)	17 (50%)

PROJECT TEAM

Palliative care lead Carin Van Zyl, director of palliative care

Radiation oncology lead Richard Jennelle, radiation oncology residency director

Team members Emily Beers, palliative care attending physician, project colead
Christopher Marques, radiation oncology resident, resident lead
Aaron Storms, palliative care attending, project colead

Contacts Carin Van Zyl, Carin.VanZyl@med.usc.edu, 323.409.8529
Richard Jennelle, jennelle@usc.edu, 323.409.6818