Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

offering Continuing Medical Education credits through the national Sociedad Mexicana de Radioterapeutas (SOMERA).

Results: The contouring workshop was conducted on November 28, 2020. Participants had two weeks before and after to complete pre- and post-workshop homework. Results and participant metrics for those who completed both pre- and post- homework are shown in Table. Significant improvements were seen on all target volumes.

Conclusion: We pilot the first reported Latin American e-contouring workshop educational intervention with pre- and post-workshop Dice metrics, noting statistically significant improvement in all target volumes. We had substantial improvement in participation compared to prior experience by partnering with SOMERA, further legitimizing the effort, and through its offer of Continuing Medical Education credits. We look to expand this program through similar efforts to other Spanish-speaking Latin American countries and follow the success longitudinally in Mexico.

Abstract 2712 – Table 1

Group	Structure	N	*P*-value	Mean Dice pre-workshop	Mean Dice post-workshop
HGG	CTV1	32	< 0.0001	0.737	0.846
HGG	GTV	33	< 0.0001	0.618	0.819
HGG	OpticChiasm	34	0.724	0.637	0.635
HGG	OpticNerveRt	33	0.925	0.629	0.632
HL	CTVboost	40	0.001	0.639	0.702
HL	Heart	42	0.627	0.891	0.939
HL	ITV SR	39	< 0.0001	0.381	0.705
MB	CochleaLt	44	0.007	0.549	0.619
MB	CTV CSI	43	< 0.0001	0.675	0.803
MB	GTV	45	< 0.0001	0.564	0.663
MB	HippoHeadLt	43	0.001	0.495	0.570
MB	Hypothalamus	42	< 0.0001	0.266	0.537

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Survey of Radiation Therapy Providers Evaluating Barriers and Facilitators of Use of Automated Radiotherapy Planning Tool

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Purpose/Objective(s): Access to radiation treatment is inequitable, limited by shortages in technology and training in low-to-middle income countries (LMIC). Automated treatment planning software may ease this inequity. The Radiation Planning Assistant (RPA) is an automated treatment-planning tool designed for limited resource environments. In anticipation of deployment, understanding barriers and facilitators of implementing RPA in LMIC is critical to optimizing its value. We conducted a survey to elucidate radiation oncology provider attitudes, needs, barriers, and facilitators of RPA deployment and uptake in LMIC clinical settings.

Materials/Methods: Providers in three countries expressing interest in piloting RPA were approached for survey participation, with 100% response. Providers received an initial 1-hour remote, live videoconference learning session supported by interactive learning using breast and head and neck cancer dummy radiation plans. Providers were surveyed using a validated measure of acceptability (score range from 0, least, to 60, most acceptable) and yes/no questions to assess barriers to and facilitators of implementation of RPA, and user experience. Acceptability scores were compared using one-way ANOVA test. Facilitators and barriers to RPA uptake were analyzed by Fisher's exact test.

Results: Across 25 providers in five institutions in South Africa (n = 13), Tanzania (n = 1), Guatemala (n = 12), respondents were most frequently between 31-50 years old (72%) and in practice > 5 years (68%). Respondent roles included physician (32%), dosimetry (24%), physicist (32%), resident/registrar (4%), radiation therapist (4%), and administrator (4%). Most respondents agreed that RPA could be used in their practice either now (64% agree or completely agree) or in 2 years (64%), and indicated a high interest level in RPA (88% agree or completely agree). There was no significant difference in mean acceptability score by role ($P = 0.21$). However, among the subset of respondents in South Africa, dosimetrists rated RPA as significantly less acceptable ($P = 0.0112$, mean score 33.5) as compared to physicians (mean 48), physicists (mean 51.8), and resident/registrar (mean 60). The most frequently anticipated benefits of RPA were decreased workload (80%), decreased planning time (72%), and the ability to treat more patients (64%). Many respondents also anticipated RPA would help transition from 2D to 3D treatment planning (44%) or 3D to IMRT (48%). Barriers to implementation were lack of reliable internet (80%), potential subscription fees (60%), and need for functionality in additional disease sites (48%).

Conclusion: This survey of international respondents indicated considerable interest in the RPA in LMIC settings. Implementation must be tailored to variations in perceived benefits and barriers may vary by provider role, practice location, and infrastructural resources.

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COVID-19 in Sub-Saharan Africa: A Multi-Institutional Survey of the Impact of the Global Pandemic on Cancer Care Resources

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Purpose/Objective(s): The COVID-19 pandemic has direct and indirect impact on patients with cancer. Low- and middle-income regions, especially sub-Saharan Africa, are especially vulnerable to a negative impact on cancer resources and outcomes. We report the initial indirect impact of COVID-19 on cancer care in the sub-Saharan Africa region approximately 14 months into the pandemic.

Materials/Methods: At the start of the pandemic, we created a consortium of African and North American cancer centers and NGOs for the distribution of factual and timely information and data on COVID-19 and cancer care. A survey was distributed to consortium members and other colleagues from the sub-Saharan Africa region to understand the impact of

COVID-19 in cancer care resources. Survey respondents represent cancer experts from 8 centers in Ghana, Nigeria, Kenya, Ethiopia, South Africa, Rwanda, and Zimbabwe.

Results: All sites report SARS-COv-2 transmission amongst cancer patients and staff. A total of 48 staff developed COVID-19 infection with one site reporting a single death. Additionally, 62.5% of sites report loss of oncology physician or nursing staff due to redeployment for COVID-19 care resulting in minimal (20%), moderate (60%), or other (20%) impact on cancer care. All 8 sites report a government mandated lockdown with a median duration of 2.3 months (IQR .9-4.2 months). Impact of the lockdown on cancer care was reported as none (12.5%), minimal (12.5%), moderate (50%) and severe (25%). Additionally, we surveyed the impact of COVID-19 on resources in radiation, medical and surgical oncology services. A total of 25% of responders reported decreases in radiation resources while 37.5% reported changes in medical and surgical oncology resources. For radiation oncology, the most common impact was access to CT imaging for 3D-conformal planning (25%), access to brachytherapy (12.5%), and medical physics support (12.5%). For medical oncology, the most frequent impact was access to chemotherapy (37.5%) and blood products (12.5%), and loss of oncology ward space (12.5%). The most frequent impact for surgical oncology was access to operating rooms (37.5%), ventilators (12.5%), anesthesia (25%), blood products (25%), and other supply chain issues (25%). Of centers who reported impact on cancer care, severity of impact was none (50%) and moderate (50%) for radiation oncology; mild (25%) and moderate (75%) for medical oncology; and moderate (75%) and severe (25%) for surgical oncology.

Conclusion: Our survey identified diffuse impact of COVID-19 on all facets of cancer care across sub-Saharan Africa. Based on physician assessment of impact, the discipline of surgical oncology may be impacted the greatest. Additional studies measuring the impact of COVID-19 on cancer outcomes are ongoing.

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A Roadmap for Implementing Radiation Oncology Residency Training in Low and Middle Income Countries (LMICs)

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Purpose/Objective(s): LMICs need more qualified radiation oncology professionals to confront the cancer pandemic. However, institutionalized training programs are needed for this. Despite the accessibility of reports, from IAEA, ASTRO and ESTRO and the related recommendations, practical 'how-to' guidance for establishing and managing competency-based training programs is non-existent in many LMICs. This is especially true for countries where no programs exist, and there is no frame of reference on how to initiate one. To approach this problem, we sought to transfer the mostly-rigid recommendations available into an easy-to-implement roadmap.

Materials/Methods: Three main axes of work were targeted for improvement with specific gaps to address. 1) Didactic lectures and practical training: Many reports discuss the "what" to teach. Absent is an illustration of how involved the topics (e.g., physics) are in the daily clinical practice of a radiation oncologist beyond the didactic lectures. 2) Managing workflow: Most LMIC centers treat patients with minimal quality management. Absent are peer review, disease site-specific clinics and guidelines, and how to promote a learning environment when many patients are lost to follow up. 3) Assessment and evaluation: Many LMICs rely on paper-based exams for assessing trainees. Absent are ways to assess the competencies of a radiation oncology trainee more comprehensively. Using the perspectives of LMIC-origin professionals, a "roadmap" document was drafted to address these axes with practical examples based on real-world experience in LMICs.

Results: A 157-page roadmap document was developed. The document details the amount of lecturing, material content, and the timeline for completing each training topics. It includes tables for site-specific rotations and a daily-work schedule to cover all aspects of clinical work such as new patient clinics, simulation, planning, on-treatment and follow-up clinics. Forms for documentation and assessment are proposed with an explanation of each assessment level. This roadmap document was developed built over the years and was piloted successfully, eight years ago, at a cancer center north of Iraq, which graduated its first batch of residents in 2017. It has since been going through various improvements and reevaluation.

Conclusion: LMIC-origin professionals can help identify practical gaps and build roadmap documents to support radiation oncology training programs. This roadmap document was peer-reviewed at the University of Qatar Press in Doha, Qatar and was published as an open-access book in Feb 2021. As of this writing the document has been accessed 1702 times; the table below shows the top country views. Future work remains to assess the benefit of this roadmap document and its ease of implementation.

Abstract 2715 — Table 1

Country	Views
USA	840
Iraq	281
Canada	257
India	196
Jordan	175
Egypt	173
Ireland	168
Mexico	120
U.K.	104
Germany	101

Source: https://quspace.qu.edu.qa/handle/10576/17692/statistics accessed on Feb 26, 2021.

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Needs and Strengths Assessment for Radiotherapy Centers in Africa Transitioning to IMRT

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