

General:

This *ICEC Essential News Letter* provides updates from activities over the last six months. Having an office in downtown Washington in the University of California building alongside the Consortium of Universities for Global Health (CUGH) gives us a home from which to expand connections. The uncertainty in investment in global health programs by the 2018 US Government budget may require an increased need for conducting global health and country-to-country activities by non-government organizations and industry. The continued rise in interest in cancer care as a key component of global health is encouraging.

Organization and Operations

The ICEC Central Operations Working Group (COWG) convenes weekly. Notably, members of our “volunteer” staff are providing extensive expertise: Costing out the hours of volunteerism, we already have had more than 1081 donated hours for 2017. Using the NIH FTE rate (not the actual salaries which would be greater), this amounts to approximately \$125,000. We have established an award system for donated time on an annual basis with the following categories: Bronze- 50 hours; Silver- 100, Gold- 200, Platinum-300, and Diamond- 400 (or equivalent to >8 hours per week or “20% FTE”). In addition, ICEC has hired summer interns to assist with COWG communications and our technology innovation research efforts.

Telecommunications:

- Working through the various US Government and NIH procedures, we are establishing our teleconference and TELESYNERGY™ facility which builds on support from the NIH Center for Information Technology, the Center for Biomedical Informatics and Information Technology (CBIT) at NCI, and the Open Systems Health Laboratory (OHSL), an NGO in Rockville with whom ICEC is working. We are getting this system ready for use by ICEC. The real future potential for TELESYNERGY is its unique “same room” presence allowing simultaneous participation by multiple users. This model was presented at the International Conference on Advances in Radiation Oncology (ICARO2) in Vienna (June 19-23, 2017).

Board of Directors and Advisory Board

- The Board of Directors has been expanded in 2017 to include a broader range of expertise and international membership, namely: Manjit Dosanjh, Life Sciences Advisor, European Organization for Nuclear Research (CERN) and Miles Pomper, Senior Fellow, James Martin Center for Nonproliferation Studies. We continue to seek the participation of our international colleagues and encourage you to contact ICEC if you are interested in joining us in our efforts.

The ICEC Board of Directors meets bi-monthly via teleconferencing and/or a minimum of two in-person meetings annually. The Board’s dedication and steadfast support has provided the organization with opportunities to thrive and grow. The Board is diligent in its oversight of ICEC’s administrative processes, scientific programs, development and fundraising efforts and expansion. Ultimately, its members have built trust among each other and provide both criticism and accolades with candor.

A list of Board member and their biographies are available on the ICEC [website](#).

Program development:

ICEC is working in two closely related pathways, mentoring and innovation in the application of technology, illustrated in two slides (below) from a presentation at the ICARO2 meeting in Vienna in June 2017. The first pathway, (figure 1.) is the sustainable mentoring network including a career path so that programs in underserved

communities that are established and can progress to become regional and global leaders in oncology care. Plans, metrics, assessment of progress and deliverables are now essential to validate investment of resources and for success with grants, foundations and supporters. The “5- Step Plan” (figure 2.) will be piloted in a few of our “twinning projects. A twinning project is a collaborative relationship between a university department or cancer program (or private practice) in an upper income country (an ICEC Hub with ICEC Experts) and a cancer program/facility in a low- or middle-income country (an ICEC Center with ICEC Associates). This capacity building strategy facilitates the creation a sustainable platform for the sharing of best practices and learnings from each other through information and technology transfer. The ultimate aim is for the ICEC Centers and Associates to progress to become ICEC Hubs and Associates for their regions.

Figure 1.



Figure 2.



The need for robust, first-rate radiation treatment systems capable of functioning in the challenging environments encountered in many developing countries is another well recognized global need. ICEC’s program that addresses this challenge is the second arrow in figure 1. This topic was the subject of an ICEC-sponsored, CERN-hosted workshop held at CERN in November 2016. An overview of the workshop is available on our [website](http://cerncourier.com/cws/article/cern/67710) and in the CERN Courier (<http://cerncourier.com/cws/article/cern/67710>). Publication of a detailed report of the workshop is under review.

The idea for the workshop arose from the International Conference on Translational Research in Radio-oncology & Physics for Health in Europe (ICTR-PHE) in 2014. The idea was revisited again in the 2016 ICTR-PHE meeting which led to ICEC’s sponsoring and CERN’s hosting the referenced workshop. Seventy participants representing universities, governments, international organizations, industry, NGOs and nuclear non-proliferation groups attended the workshop. The deliberations over two days led to the formation of three Task Forces, each of which had three conference calls before June 2017:

- Task Force 1 – Technical (“Bury the complexity”)
- Task Force 2 – Education, Training and Mentoring.
- Task Force 3 – Global Connectivity and Development

In an open ICEC meeting during the ICARO2 conference in Vienna in June 2017, members of each task force summarized their planning to date and plans for the immediate future. To further explore technology innovation, ICEC’s Task Force 1 will co-sponsor with the UK Science and Technology Financing Council (STFC) a workshop to be hosted by CERN in October 2017.

Outreach and Development:

ICEC continues its efforts to raise funds to support its many activities. ICEC encourages all types of mechanisms to facilitate support of our mission including [individual donations](#), [corporate](#) and [foundation](#) support and [planned-giving opportunities](#). ICEC has expanded its reach through the limited support of its Early Career Leaders which has garnered the interest of foundations and corporate support.

Two ICEC exclusive funds, the Ellen Lewis Stovall Early Career Leaders Fund and the Rodney R. Million, MD Fund for Innovation in Clinical Care, provide ICEC with the resources to directly support practitioners in their efforts to

improve global cancer care in challenging environments. These funds are designed to provide financial support to early career healthcare practitioners focused on global cancer care, a group that often faces funding challenges while pursuing academic medical careers.

- The [Ellen Lewis Stovall Early Career Leaders Award \(ECL\)](#) –

Members of the Early Career Leaders Working Group, funded in part by the Ellen Lewis Stovall Early Career Leaders Award, continue their admirable efforts. The European Network for Light Ion Hadron Therapy's (ENLIGHT) online publication, [ENLIGHT Highlights](#), interviewed [Onyinye Balogun](#), one of ICEC's Early Career Leaders. The ENLIGHT program, nearly 15 years old, has more than 600 participants from nearly 25 European countries. The article highlights Balogun's efforts to train healthcare providers in underserved regions to provide the best radiation treatment of cancer in LMICs. Her work is an example of the global effort in which physicians and other healthcare providers worldwide are making to provide high quality treatment to patients with cancer who historically have had limited access to technologically advanced care. ENLIGHT embraces ICEC's mission and vision to ensure the delivery of the highest-quality care possible for the local circumstances and recognizes the importance of sharing knowledge and developing best practices of this complex science through a mentoring network of cancer professionals working with local and regional in-country groups.

[Dr. Surbhi Grover](#), another Early Career Leader, who is a member of the [Botswana-UPenn Partnership](#) and the head of the gynecological oncology multidisciplinary team at the Princess Marina Hospital in Gaborone, Botswana, was highlighted in an article by [NewsDeeply](#). This online news magazine provides news coverage and community engagement focused on women and girls in the developing world. The article, "[In Botswana, Simple Meetings Drastically Improve Cervical Cancer Care](#)" describes how weekly meetings reduced significant delays in the initiation of cancer treatment.

- The [Dr. Rodney R. Million Fund for Innovation in Clinical Care](#) has been established by a generous contribution from the Million family to support cancer educational activities in Africa. The first application for an award has been reviewed and will be provided to Chika R. Nwachukwu, MD, Medical Resident PGY-3, [Department of Radiation Oncology of Stanford University](#). Dr. Nwachukwu, also an [ICEC Expert](#) will be working on projects in Kenya, Nigeria and Tanzania. We look forward to watching her progress in the upcoming months.

- To make a donation to support the Stovall Award, the Million Fund or to make a contribution for general support of ICEC, please visit the ICEC website's [donation page](#).

ICEC Centers and Associates/Hubs and Experts:

- We are building the roster of the initial ICEC programs from existing "twinning programs" and are assessing where they fit into the "5-Step Plan" in order to phase in the education, training and mentorship metrics to track progression of the ability of programs to deliver high-quality care with the long-term goal of each program's becoming a recognized regional cancer center. Additionally, in collaboration with the National Comprehensive Cancer Network (NCCN) and the American Brachytherapy Society, ICEC will pilot the [NCCN Framework for Resource Stratification of NCCN Guidelines \(NCCN Framework™\)](#). NCCN's goal, "is to identify appropriate treatment at four resource levels—Basic, Limited, Enhanced, and Maximal—and deliver a tool for health care providers to identify treatment options that will provide the best possible outcomes at a given resource level". The NCCN Framework is a particularly valuable tool to be used in LMICs and other challenging environments. ICEC appreciates the unique opportunity to work toward formal guideline and protocol development with an expert group and one connected closely with the major academic cancer centers.

Partners & Career Path:

- ICEC established a new formal partnership with Global Oncology, which, now hosts the [Global Oncology Map](#). The Global Oncology (GO) Map is an interactive online tool and public resource for the global cancer community. Its purpose is to help visitors initiate partnerships, make informed decisions, and develop collaborations in cancer control.

- Evidence of the impact of early career leaders and ICEC senior members is seen below in two major journal issues (see references below):

- Clinical Oncology. Radiotherapy in Low and Middle Income Countries edited by Michael Barton and Eduardo Zubizarreta. And,
- Seminars in Radiation Oncology: Global Health Disparities, edited by ICEC BoD member Tim Williams and Senior Scientific Advisor, Norman Coleman

Recognition/In the News

- The [ASTRONews](#), Summer 2017 addition, highlighted the excellent efforts of Dr. Surbhi Grover and Dr. Onyinye Balogun, included an opinion piece penned jointly by many ICEC Board members, Experts and volunteers, and highlighted the ICEC's meeting at CERN to explore the design of a linear accelerator to be used in challenging environments.

Presentations related to ICEC at various meetings:

- IAEA - International Conference on Nuclear Security: Commitments and Actions; Vienna, Dec 5-9.
- UCSF - "Addressing the global need for cancer and non-communicable disease care: from gap to vision to implementation" Norm Coleman, May, 2017
- CUGH poster: *International Cancer Expert Corps: Sustainable Mentorship and Transformational Technology for Cancer Disparities Worldwide* David A. Pistenmaa, C. Norman Coleman International Cancer Expert Corps, Inc. (ICEC), Washington, DC. April, 2017
- CGH poster: *Effective global cancer care requires radiation therapy: defining a path from no radiotherapy to radiotherapy of high quality globally.* C. Norman Coleman¹, David Pistenmaa¹, David Jaffray², Mary Gospodarowicz², Bhadrasain Vikram³, Steve Myers⁶, Maurizio Vretenar⁴, Ugo Amaldi⁵, Manjit Dosanjh⁴; ¹International Cancer Expert Corps, Washington, DC; ²Princess Margaret Cancer Center, Toronto; ³Radiation Research Program, DCTD, NCI; ⁴CERN, Geneva, Switzerland, ⁵TERA Foundation, Geneva, Switzerland, ⁶ADAM, Geneva, Switzerland.

Publications: (since the last *Essential News Letter* related to ICEC and/or from ICEC members relevant to global health; readers, please provide additional citations)

CLINICAL ONCOLOGY, special issue (2017)

- Radiotherapy in Low- and Middle-income Countries. What Can We Do Differently?
M.B. Barton, E. Zubizarreta, M. Gospodarowicz
- The Benefits of Providing External Beam Radiotherapy in Low- and Middle-income Countries
M.L. Yap, T.P. Hanna, J. Shafiq, J. Ferlay, F. Bray, G.P. Delaney, M. Barton
- Balancing Equity and Advancement: The Role of Health Technology Assessment in Radiotherapy Resource Allocation
D. Rodin, A. Aggarwal, Y. Lievens, R. Sullivan
- Global Access to Radiotherapy in Low- and Middle-income Countries
M. Abdel-Wahab, E. Fidarova, A. Polo
- Cobalt-60 Machines and Medical Linear Accelerators: Competing Technologies for External Beam Radiotherapy
B.J. Healy, D. van der Merwe, K.E. Christaki, A. Meghzifene
- Mobilising Expertise and Resources to Close the Radiotherapy Gap in Cancer Care
D. Rodin, J. Longo, T. Sherertz, M.M. Shah, O. Balagun, N. Wendling, J. Van Dyk, C.N. Coleman, M.J. Xu, S. Grover

SEMINARS IN RADIATION ONCOLOGY, special issue (2017)

- Implementing Cancer Care for the Underserved Globally: From the "5 R's" of Radiobiology to the "7 P's" of Global Cancer Care
Tim R. Williams, C. Norman Coleman- Bridging Innovation and Outreach to Overcome Global Gaps in Radiation Oncology Through Information and Communication Tools, Trainee Advancement, Engaging Industry, Attention to Ethical Challenges, and Political Advocacy
- Luqman Dad, Trevor J. Royce, Zachary Morris, Meena Moran, Todd Pawlicki, Deepak Khuntia, Patricia Hardenbergh, Bernard Cummings, Nina Mayr, Kenneth Hu

- Improving Quality and Access to Radiation Therapy—An IAEA Perspective
May Abdel-Wahab, Eduardo Zubizarreta, Alfredo Polo, Ahmed Meghzifene
- Global Health in Radiation Oncology: The Emergence of a New Career Pathway
Danielle Rodin, Mei Ling Yap, Surbhi Grover, John M. Longo, Onyinye Balogun, Sandra Turner, Jesper G. Eriksen, C. Norman Coleman, Meredith Giuliani
- Radiation Oncology Quality and Safety Considerations in Low-Resource Settings: A Medical Physics Perspective
Jacob Van Dyk, Ahmed Meghzifene
- Cancer Care Access and Outcomes for American Indian Populations in the United States: Challenges and Models for Progress
B. Ashleigh Guadagnolo, Daniel G. Petereit, C. Norman Coleman
- Radiation Oncology in India: Challenges and Opportunities
Surbhi Grover, Shivakumar Gudi, Ajeet Kumar Gandhi, Priya M. Puri, Adam C. Olson, Danielle Rodin, Onyi Balogun, Preet K. Dhillon, Daya Nand Sharma, Goura Kishor Rath, Shyam Kishore Shrivastava, Akila N. Viswanathan, Umesh Mahantshett
- Challenges and Prospects for Providing Radiation Oncology Services in Africa
Onyinye Balogun, Danielle Rodin, Wilfred Ngwa, Surbhi Grover, John Longo