IMPLEMENTATION SCIENCE CONSORTIUM IN CANCER

MEETING SUMMARY REPORT

Tuesday, September 22–Wednesday, September 23, 2020

Virtual Meeting

NIH NATIONAL CANCER INSTITUTE
Division of Cancer Control & Population Sciences

ISCC

INTRODUCTION

In the midst of the COVID-19 pandemic, the second Implementation Science in Cancer Consortium (ISCC) meeting was held virtually from Tuesday, September 22, through Wednesday, September 23, 2020. This working meeting focused on short-term and long-term cancer control priorities, challenges, and opportunities during the COVID-19 pandemic, synergies and gaps in the implementation science (IS) space across National Cancer Institute (NCI)- and other federally funded initiatives, and discussions on infrastructure for cross-collaboration.

Virtual attendees included 411 cancer control and implementation researchers, practitioners, and funders representing more than 150 institutions around the world. The objectives of the consortium included (1) creating "public goods" for IS, (2) fostering collaborations across the IS and cancer control field, (3) improving networking and dissemination of IS information and resources to the field at-large, (4) targeting and working with underrepresented topics and areas, and (5) maintaining ongoing engagement with underrepresented communities.

The format of the two-day meeting included a welcome address, two panel discussions, action group discussions, and a closing town hall meeting. The first day of discussion focused on identifying the synergies, gaps, and opportunities within IS. The second and final day of discussion brought attendees together to consider COVID-19 and IS in cancer control and set the stage for the coming year. Each day of ISCC, attendees participated in action group discussions broken out by eight IS subjects. These eight subjects included (1) community participation in IS, (2) technology and IS, (3) context and equity in IS, (4) implementation of complex/multilevel interventions, (5) policy and IS, (6) study designs in IS, (7) learning healthcare systems as natural laboratories, and (8) IS in global health.

For a full list of ISCC Steering Committee members, meeting facilitators, and panelists, see Appendix A.

WELCOME ADDRESS

The consortium began with a welcome address from Dr. David Chambers, Deputy Director for Implementation Science in the Office of the Director in the Division of Cancer Control and Population Sciences (DCCPS) at NCI, who began with a brief history of IS at NCI and highlighted key efforts and activities completed in the IS field since the first ISCC in 2019. Additionally, he highlighted the wisdom and recommendations from the Cancer Moonshot[SM] Blue Ribbon Panel. Dr. Chambers recognized the importance of a field-wide approach to making IS a reality. He highlighted the importance of ongoing mentoring and technical assistance; capacity building in community and clinical settings; and designing the next generation of studies that are impactful, rigorous, relevant, and ambitious. Using the interactive presentation software Mentimeter, Dr. Chambers led the group through a brainstorming activity to answer the following question, *How can the IS consortium serve cancer research?* A sample of responses included:

- unifying and standardizing measures,
- capacity building and training for underrepresented groups,
- mentoring new and novice scientists,
- developing best practices for IS,
- sharing learnings across studies,
- supporting synergy and collaboration across the field,
- helping identify opportunities for scale,
- meaningful engagement of stakeholders in the consortium, including community lab partners,
- inclusivity and diversity, and
- networking.

Dr. Chambers closed his remarks by reminding the group about the ISCC principles that were set out during the 2019 ISCC meeting. These principles are inclusion, diversity, transparency, strategy, and efficiency.

He was followed by Dr. Bryan Weiner, Professor of Global Health and Health Services at the University of Washington, who gave an overview of the 2020 ISCC attendees, outlined the ISCC meeting objectives, and walked through the meeting agenda. Over the course of 2 days, attendees were given the opportunity to participate in two panel discussions and a town hall meeting, and dive into deeper conversation in two of the eight action groups. He closed his remarks by sharing a list of reflective questions for attendees to consider while participating in ISCC discussions.

PANEL DISCUSSIONS

Two panel discussions were conducted to assess the current state of the IS field and to stimulate thought and ideas for advancing the IS field forward in cancer control. For each of the two panels, members of the IS community discussed synergies, gaps, and opportunities for IS in cancer control during the COVID-19 pandemic. There were opportunities for the audience to comment and ask questions following all presentations.

The Day 1 panel looked at the synergies, gaps, and opportunities for involvement in IS and cancer control through a dialogue with representatives from various federally funded initiatives that are either focused on IS and cancer control or may have a significant IS component. Some of these are NCI Cancer Moonshot-funded, and some predate the Cancer Moonshot.

The Day 2 panel discussion brought together practitioners in cancer control to discuss how COVID-19 and the related mitigation responses have impacted cancer control efforts among communities and in clinical settings. Additionally, the panelists discussed the role that IS could play in addressing the cancer control priorities of practices in cancer care delivery organizations and addressed the unique issues that have arisen in the midst of the pandemic.

Day 1 Panel: Synergies, Gaps, and Opportunities in Implementation Science

Dr. Cam Escoffery opened the conversation by highlighting the session prework, introducing the panelists, and setting the meeting objectives: (1) look for areas of synergy, (2) address areas of need, and (3) identify opportunities. The discussion kicked off by setting the stage with learning how IS plays a role in the panelists' work. There was consensus across all panelists that IS plays a role in their work; however, it varies by project, specifically the initiative infrastructure, methods, evaluation of process and outcome measures, and so forth. Several panelists noted the varying degrees of IS in their work. Some panelists described IS to be the core or the center of their initiative, while others noted that components of their work were influenced by IS, such as methods and evaluation.

Next, Dr. Escoffery transitioned the panelists to sharing what they thought to be their initiative's most significant contribution to the field. A common achievement across several panelists was unifying, or bringing together, projects, people, initiatives, and common data elements. Dr. Katharine Rendle explained that in addition to developing a harmonized, robust data set within Population-based Research to Optimize the Screening PRocess (PROSPR) one of the most significant contributions has been to help tear down the traditional silos in cancer screening research. She stressed the importance of encouraging collaboration and continuing to advance the population-based screening and IS. Dr. Sujha Subramanian shared that the greatest achievement of Accelerating Colorectal Cancer Screening and Follow-Up Through Implementation Science (ACCSIS) over the past 2 years has been bringing

together their five very diverse projects to collaborate and identify common data elements that could be collected at multiple levels. Additional notable contributions included the following:

- Dr. Stephanie Wheeler highlighted the Cancer Prevention and Control Research Network's (CPCRN) training curriculum, Putting Public Health Evidence in Action. The training is an interactive curriculum and set of tools that support community program planners and health educators in developing skills to use in evidence-based approaches and practices. The training is available on the CPCRN website and, to date, has been viewed more than 8,600 times.

- Dr. J.D. Smith highlighted Improving the Management of symPtoms during And following Cancer Treatment's (IMPACT) opportunity to present their longitudinal implementation strategy tracking system at the Annual Conference on the Science of Dissemination and Implementation in Health.

- Dr. Kristie Long Foley shared that the Smoking Cessation at Lung Examination (SCALE) Collaborative has developed a set of core metrics that are publicly available on their NCI-hosted website. Additionally, they have engaged in a number of joint publications on the impact of COVID in cancer prevention and control within the new environment.

- Dr. Foley shared that, in their recent Implementation Science Centers in Cancer Control (ISC3) grantee and steering committee meetings, health equity continues to be a key focus of IS work.

The group talked about challenges that the initiatives have faced doing IS, how they have addressed these challenges, and whether the solutions worked. Collectively, COVID-19 has posed a challenge to all panelists in one way or another. Dr. Kimberly Kaphingst brought attention to the increased use of telehealth and telemedicine in the current COVID-19 environment, and its increasing importance. She noted that her team has had to rethink their standard of care approaches and models to meet

the needs of those with whom they are working. Dr. Foley highlighted ISC3's work with laboratory partners and shared how they have faced a tremendous shift in their workload because of COVID-19. It has forced them to rethink ways of engaging and cross-country collaboration. Additional notable contributions included the following:

- Drs. Rendle, Wheeler, and Betsy Rolland highlighted the challenges of coordination, collaboration, and lack of time and energy to often navigate the long processes and procedures. Dr. Wheeler suggested an inclusive approach for collaboration that allows ideas to emerge naturally from within the group. Additionally, consider tasking people who have the time and the expertise to complete the necessary work.

- Drs. Mark Doescher and Smith shared that they have experienced challenges due to the high degree of variability under COVID-19.

The conversation shifted to considering important challenges that IS should be considering. Dr. Escoffery noted a previous Mentimeter poll and its results relating to training and technical assistance.
Dr. Foley began the conversation with lessons learned from the ISC3 grantee and steering committee meetings. She stressed the importance of being thoughtful and intentional in IS work around equity and involving the community in the work.
Dr. Wheeler echoed Dr. Foley's point about being intentional around equity. She elaborated on the topic by sharing examples of how CPCRN is thinking about equity. Additional notable contributions included the following:

- Dr. Subramanian highlighted economics as an important issue to consider as it relates to IS. She also stressed the importance of developing common measures across the field.

- Dr. Rolland stressed the importance of showcasing IS as team science, expanding the definition and including all those at the table.

- Dr. Smith shared how collaboration among research teams has been within his initiative. This collaboration has been critical for advancing science, particularly cross-project and consortium synergies.

- Dr. Kaphingst shared her initiative's effort to expand access to genetic information and the communication of genetic information, which includes moving outside the traditional academic cancer center setting and into larger healthcare systems.

- Dr. Doescher suggested that IS look at the global impact that a project may have on other aspects of care, either positive or negative—measuring what a project does, not just in terms of the outcomes of interest, but in terms of impact.
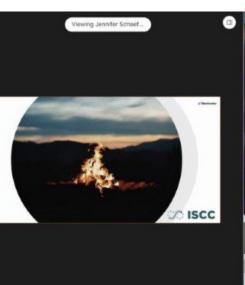
Next, Dr. Escoffery asked the panelists to share ways that they are innovating in the field, making contributions, and highlighting opportunities for collaboration and coordination. Dr. Smith stressed the importance of cross-consortium collaboration and coordination. He acknowledged the amount of work that has already been done around harmonization to come up with common data elements, measurements, definitions, and interventions, but stressed that continued collaboration and coordination are needed.

- Dr. Foley shared an example of collaboration and coordination from the SCALE Collaborative. The collaborative is made up of eight funded initiatives that voluntarily came together as a group and created shared metrics.

- Dr. Rolland highlighted sustainability as one of the key needs of the Cancer Center Cessation Initiative, considering ways to convert short-term supplements to an ongoing research consortium.

- Echoing Dr. Rolland, Dr. Smith stressed the importance of developing products that are applicable to the work that is being done and disseminating

them through the consortium and others. Several panelists emphasized that these materials and resources developed through these initiatives and the consortium should be made available in the public domain for all to access them.

The final discussion topic for the panel asked how members of the consortium and the IS community can interact with each initiative represented on the panel.

- Dr. Subramanian suggested three ways that the IS community can get involved in ACCSIS: (1) a brief survey of clinics regarding COVID-19; (2) looking at cataloging innovative approaches, models, and interventions; and (3) funding for local evaluation.

- Dr. Rendle suggested that individuals interested in PROSPR can reach out to the individual principal investigators for each organ group—cervical, lung, and colorectal—and the Fred Hutchinson Cancer Research Center. Additionally, they are working on building out a public data set for their cancer screening outcomes at their sites.

Cancer Prevention and Co...
@CPCRNcancer

Day 1 of the @NCI_ImplSci Implementation Science Consortium in Cancer is underway! An exciting panel discussion on synergies, gaps, & opportunities in #impsci made even more exciting with #CPCRN PI @camescoffery as moderator! Much more to come at #ISCC20

- Dr. Foley noted that the SCALE Collaborative would be happy to share their metrics and methods. She said that they are online and publicly available once a request has been submitted. For ISC3, she shared that they are preparing for usability testing on a capacity-building warehouse that will be populated with IS resources, materials, toolkits, and trainings.

- Dr. Doescher offered access to their measures. Additionally, he noted that his team has expertise in working and partnering with tribal communities, tribes, and domestic sovereign nations, and that they would be willing to consult with those who are interested.

- Dr. Kaphingst shared that a cross-cutting area of interest for them is developing informatics infrastructures, clinical decision support platforms, and working with different communication technologies. She noted that they would be interested in speaking with those who have a similar interest.

- Dr. Smith offered sharing access to their initiative measures, definitions, and so forth. Additionally, he offered their implementation strategy tracking mechanism to those interested in pilot testing it.

- Dr. Rolland shared that that the C3I initiative publications are listed on their website. Additionally, they have training tools and resources available for public use. Dr. Rolland also expressed an interest in getting more involved in their network and participating in work group activities.

Day 2 Panel: Practitioner Perspectives—Considering COVID-19 and Implementation Science in Cancer Control

Dr. Rachel Issaka opened the discussion by asking Mr. Broderick Crawford to briefly describe where he works and how the COVID-19 global pandemic has impacted his work in the community of practice in which he is involved. Mr. Crawford stated that he resides in Wyandotte County, in Kansas City, Kansas, and shared that Wyandotte has had the worst health rankings in the state since 2009. When the pandemic hit Kansas, the first death was in Wyandotte County; however, COVID-19 testing became available first in neighboring, more affluent counties, and not in Wyandotte. Equity and how testing was originally provided in the area were key problems. Mr. Crawford worked with members of his community to determine what could be done to get COVID-19 testing in Wyandotte County. He shared with his community stakeholders that people were not going to come to places they do not know or trust. From there, the idea of pop-up community testing centers started, and such centers began to appear in the parking lots of churches, libraries, and community centers, and members of the community flocked to these locations. Mr. Crawford explained that he was very proud that they were able to pull together the people and resources in such a short amount of time.

In response to the same question, Dr. Jessica Palakshappa of Wake Forest University shared that COVID-19 has influenced every aspect of care. She shared that, as a result of COVID-19, attention and resources are being spread thin. They have asked a lot of their staff—from administrative staff to nurses and doctors—to be present in a way that they have not been in the past. Dr. Palakshappa also shared that the greatest impact that she has noticed from COVID-19 is with end-of-life care and not being able to have families at the bedside of a dying patient. She shared that she has struggled with not being able to communicate with families face to face. From an outpatient perspective, she noted that patients are experiencing a lot of delays, even for routine care.

David Chambers
@NCIDAChambers

Echoing many others on what an amazing panel of practitioners perspectives on COVID, Cancer Care, implementation science and the community. with super moderator @IssakaMD #iscc20 #iscc2020.

12:33 PM · Sep 23, 2020 · Twitter Web App

In response to the same question, Dr. Rajiv Panikkar of the Geisinger Cancer Institute shared that Geisinger, a large rural healthcare system that serves central Pennsylvania, experienced COVID-19 through those who were vacationing or retreating from New York City, the epicenter of COVID-19 in the United States. Those who had COVID-19 were bringing it from the city into the central part of Pennsylvania.

This type of exposure to COVID-19 forced Geisinger to confront several issues, such as screening, testing timeliness for diagnostic testing, the increased need for telehealth, and a change in policies and procedures.

Answering the same question, Dr. Samuel Takvorian of the University of Pennsylvania shared that the tremendous uncertainty around COVID-19 had an impact on how they delivered high-quality cancer care. He noted additional dimensions of patient care, such as having to evaluate for every single patient the appropriate and safest setting in which to deliver care (in-person vs. telehealth), as well as considering when to begin therapy or delaying therapy given the environment. Finally, he addressed the merging of professional and personal lives that COVID-19 has caused, and the domino effect it can have (e.g., childcare, working from home).

Dr. Vicki Young of the South Carolina Primary Care Association echoed the effects of COVID-19 previously mentioned by other speakers. Early on, the association's centers had to pivot from their preventative primary care role, to focusing more on prevention around the pandemic. Now that they are experiencing the "new normal," the centers are working to refocus on conducting routine primary care and preventative care visits. Currently, they are discussing COVID fatigue on the primary care providers and staff. They are looking at innovative approaches for their care teams, such as expanding the clinical care team to include other practitioners and community health workers and looking at remote monitoring tools to make the most of telehealth visits.

Next, Dr. Issaka asked Drs. Panikkar and Takvorian about what they see as being the most important priorities for implementing effective cancer-related care during this time. Dr. Panikkar shared that with patients they have already met and for whom they have established care, it is a matter of understanding how their treatment program should or should not be modified because of circumstances and situations.

However, for new patients and those without an established care program, they needed to navigate how to establish care in the most effective manner. When involving telehealth, he shared that they learned very quickly what would and would not be effective. Overall, the priority challenges were about how they viewed the patient, and then making sure that they had an agreed-upon set of priorities with the patients and their families. Dr. Takvorian agreed with what Dr. Panikkar shared. He echoed his remarks on telemedicine. He noted that bringing precision to telemedicine is the next phase in how the field adopts and uses telemedicine in their day-to-day lives. He stressed the importance of learning from every patient to whom they deliver care.

Dr. Issaka asked Mr. Crawford about the ways that he believes implementation scientists could partner with him to achieve the mission, goals, and objectives of his organization. Mr. Crawford said that it is important to be engaged with the community being served. He challenged the panel by asking them how many members of the community are involved in the decision-making process. He says that, many times, the table is oversaturated with government employees, researchers, scientists, and so forth, but not the very people who are being served. Often times, implementation scientists are making decisions for them and about them, but without their participation. Mr. Crawford shared a mantra with the group: Not about us, without us. He encouraged members of the panel and meeting attendees to develop relationships with their community. He shared that without building strong relationships with the community, you are not going to get to the crux of the problem.

Next, Dr. Issaka asked Dr. Young to share examples of relationships between researchers and the community in which they serve, and provide pointers to begin thinking about how to engage in that type of relationship. Dr. Young noted their work with the University of South Carolina. Looking at the colorectal cancer screening program in South Carolina, the university came to the community and asked them what they needed, talked about the issues they faced, and took a real look at the work from the community's perspective.

Dr. Issaka asked Dr. Palakshappa to share examples of what she has seen change during this time that may be an opportunity to scale up or test the intervention more fully. She noted that telehealth keeps coming up and is maybe the more obvious one to test. Dr. Palakshappa explained that telehealth has changed her day-to-day workflow. Now, she is looking at patient charts 1 to 2 weeks prior to their visit to prepare and make the most of the telehealth visit. She recommended a deeper dive from the population health perspective, specifically what doctors should do before their patient's telehealth visit. Additionally, she noted the change in partnership with their palliative care colleagues in the intensive care units. Physicians and the palliative care team worked together to help navigate communication with patients and families, including when families were not allowed in the hospital. Dr. Palakshappa noted that she would be interested in seeing an increase or scale up of empathy training.

Dr. Issaka asked Dr. Panikkar whether he had noticed any opportunities to scale up or test new interventions more fully. Dr. Panikkar noted that he was calling patients at the time of referral and having discussion with them over the phone about what they know and don't know, and answering their questions. Over time, he found that most patients wanted to get things done rather than meet with him or another doctor. Many times, they just want to see the physician, and telehealth helped facilitate that. Dr. Panikkar noted that he believes that, in some ways, physicians are building deeper relationships with their patients and the people in their patients' lives, because during telehealth visits, physicians are seeing their patients in a much more comfortable environment.

Dr. Issaka asked Mr. Crawford what would be the most effective way to communicate an investigator's research findings with the communities with which they partner. Mr. Crawford responded by encouraging researchers to engage with the community from the very beginning and at every step in the process. By being involved from the beginning, researchers get their research question answered, and communicate how the question will benefit the community they are studying.

Finally, Dr. Issaka asked Dr. Palakshappa how implementation scientists can best communicate findings with practitioners, with the goal being that whatever is found would then be implemented into practice. Dr. Palakshappa shared that she has been thinking a lot about this. She explained that, for practitioners, often it is the power of story. Certainly, publishing findings and trying to get them in journals is important; however, framing the findings as a story would help.

With the remaining time, Dr. Issaka asked the panel some questions provided by the audience. The first question was for Dr. Takvorian. An audience member asked, What sources are you turning to for evidence-based practice change?

Dr. Takvorian shared that he is a believer in learning healthcare systems, so he stressed the importance of patient care in the routine delivery of cancer care, including learning from their experiences and being able to extrapolate from the experiences of a thousand or more patients. More evidence is needed to make changes in evidence-based practices.

Dr. Issaka asked all members of the panel about the increase in mental health issues, anxiety, and depression, and what strategies they are using to provide services. Dr. Panikkar explained that they are fortunate that, within their cancer institute, they have a couple of behavioral health psychologists on staff who are stationed at their two busiest hospitals. Mr. Crawford explained the health literacy challenge of bringing health information to the community at a 5th- to 8th-grade level. Additionally, he highlighted the lack of communication between physicians and their community, and between community members and building the bridge of rapport and understanding. Dr. Young shared that her association offered community health worker trainings to help staff address aspects of social isolation with patients. Additionally, she expressed concern about staff burnout.

The next audience question asked panelists to comment on the ever-changing insurance compensation for telehealth visits, state-to-state variations, and telehealth regulations. Dr. Palakshappa started the conversation by sharing that it feels nearly impossible to keep track of the constant changes to telehealth. She noted that her billing department has been helping physicians keep track of the billing changes, and that she is doing everything she can with every visit.

The final audience question and final question of the session was directed at Mr. Crawford. The audience member asked whether Mr. Crawford had any thoughts around future vaccination distribution to

help reduce and avoid disparities within distribution. Mr. Crawford shared that the COVID-19 Task Force that he serves on is talking about this issue. They are looking at ways to engage in the community in community settings. For example, they are currently looking at using an abandoned Kmart as a flu and COVID-19 vaccination site.

Action Groups

Described as the heart of the consortium meeting, the IS action groups gave meeting attendees the opportunity to participate in deep conversations with their IS colleagues about two of eight IS priority subjects. These subjects included (1) community participation in IS, (2) technology and IS, (3) context and equity in IS, (4) implementation of complex/multilevel interventions, (5) policy and IS, (6) study designs in IS, (7) learning healthcare systems as natural laboratories, and (8) IS in global health. Over the course of the meeting, the action groups met twice to brainstorm how to move the topic forward by developing "public goods" to benefit the field, identify

concrete next steps, and identify volunteers to lead/co-lead/collaborate on specific actionable ideas. These initial action group meetings served as a launching pad for future cross-field collaboration. NCI and the ISCC organizers encouraged action group participants to continue to meet over the course of the next year to continue moving their identified action items forward.

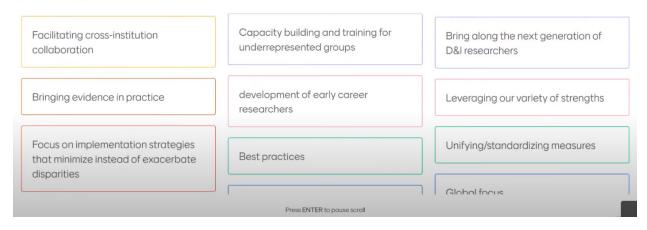## Community Participation in Implementation Science

Facilitators: Heather Brandt, Shoba Ramanadhan

The action group met to identify important work and related public goods in community participation in IS to move the field forward. Together, the group reviewed the gaps in community participation in IS, specifically insufficient or late engagement in IS; the need for training and skills development among IS, finding a place along the continuum of partnership engagement, and measuring competencies, engagement, and impact.

Go to www.menti.com and use the code 31 02 78 3

How can the IS consortium serve cancer research?

Mentimeter

Facilitating cross-institution collaboration	Capacity building and training for underrepresented groups	Bring along the next generation of D&I researchers
Bringing evidence in practice	development of early career researchers	Leveraging our variety of strengths
Focus on implementation strategies that minimize instead of exacerbate disparities	Best practices	Unifying/standardizing measures
		Global focus

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Over the course of the two days and drawing on the Mentimeter entries and conversations, via the meeting room chat box and voice, the group identified six main themes of interest:

1. Training and capacity building experiences for implementation scientists and stakeholders

   - Complete an inventory of current community engagement training to inform development/adaptation of training or toolkit for implementation scientists.
   - Develop/adapt online training for stakeholders on dissemination and implementation.
   - Connect to ISC3 (and other funded projects) resources focused on capacity building in implementation science.

2. Promoting best practices in engaged IS

   - Create short videos of implementation scientists and stakeholders sharing best practices (to include "how to" examples) and experiences (good, bad, and ugly), and longer discussions about more complex topics.
   - Synthesize existing tools and models to support engaged implementation science.
   - Examine best practices in funding and sustainability approaches in engaged IS.

3. Identifying approaches for a more prominent focus on centering health equity in engaged IS (possible cross-action group topic with "Context and Equity") (topic introduced in Day 1, but not elaborated on)

4. Strategies to address mistrust and history of negative experiences (topic introduced in Day 1, but not elaborated on)

5. Conflict management and resolution when working with stakeholders (topic introduced in Day 1, but not elaborated on)

6. Institutionalizing engaged IS and ensuring that operational supports are in place (e.g., Clinical and Translational Science Awards [CTSA], Community Outreach and Engagement [COE] in NCI Cancer Centers) (topic introduced on Day 1, but was not elaborated on)

Technology in IS

Facilitators: Heather D'Angelo, Rachel Gold, Angela Stover

The action group met to identify important work needed in technology in IS to move the field forward. The facilitators defined the action group's scope and began brainstorming ideas to answer the question, What are the critical problems to address in order to advance knowledge of the role of technology in cancer control from an IS perspective? The identified problems included five major themes:

1. Obtaining patient-generated/reported health data

   - Learn how to best use patient portals to obtain these data.
   - Learn how to best use these data in shared decision-making/preventive care.

2. Using data in implementation efforts

   - Learn how to best use/present patient-reported/generated data in Clinical Decision Support (CDS).
   - Learn how to best make any CDS acceptable and useful, with minimal alert fatigue.
   - Partner with informaticists/American Medical Informatics Association.

- Learn how to best measure CDS/Shared Decision Making (SDM) use, using audit logs and other electronic health record data.
- Learn how to use Quality Improvement strategies, such as generating reports, to support implementation.
- Learn how imaging data are stored, and whether natural language processing is better at finding imaging results.

3. Equity/Disparities
- Identify and address ways that technology exacerbates disparities.
- Learn how to use technology to reduce disparities.
- Identify data sources that can be linked to patient-level data (e.g., community-level measures, social determinants of health).

4. Telehealth
- Learn about the kinds of care that can be accomplished via telehealth without negatively impacting quality and outcomes.
  - Is there a loss or a gain?
- Learn how telehealth can improve/augment cancer care.
  - Assess skin cancers?
  - Provide access to specialists/rural healthcare?
- Learn whether IS supports the adoption of telehealth benefits.
- Learn about the impact on patient-provider communication.

5. Applying technology components to IS frameworks
- There is an overlap with tech-specific frameworks.
- Synthesize existing efforts.

Context and Equity in IS

Facilitators: Prajakta Adsul, April Oh, Rachel C. Shelton, Stephanie Wheeler

The action group focused on how the IS community could advance and make more explicit the incorporation of health equity and context across cancer prevention/control research. An important first step for this group was to review the ideas presented from last year and discuss new ones through a 2020 lens. Action group participants noted the importance of looking at equity with current events in mind (e.g., the COVID-19 pandemic and structural racism as it relates to law enforcement and social and health inequities experienced by the Black community).

Over the course of 2 days, the group brainstormed, discussed, and learned that although health equity is foundational for the field of IS, it is not always explicit. They noted that there is a long history of work in health equity and they advised the group to avoid recreating the wheel, instead building off of existing scholarship in health equity and related fields (community-based participatory research) when identifying actionable next steps. They addressed some of the fundamental issues in the IS field, such as explicit language and definitions in research initiatives, peer review criteria, and so forth, and they wanted to ensure that the group does not reinforce health inequalities and disparities through IS. Furthermore, it was recognized that there is a need to expand the focus on context and organizational context in IS to include social context and the structural and social determinants of health.

The group identified eight major themes from their discussion:

1. Methods and measurement for equity in IS (literature review/database/work group)
   - Relevant equity-specific measures for IS (e.g., stigma, mistrust, structural racism)
   - Broad dissemination and open access to previously validated measures
   - Alternative study designs that promote equity and economic/cost considerations
   - Pooled data analysis—small populations, area level measures, intersectionality

2. Revisiting theories/frameworks with an equity lens (literature review/work group/revise existing tools and website/videos)
   - Cross-learning between the IS and health equity fields; learning from/partnering with fields outside IS
   - Expanding context within existing frameworks; including equity-relevant constructs at the healthcare, social, community, and policy levels

3. Theory linkages to IS (case studies/work group)
   - Connection of IS and health equity theories to the selection of implementation strategies
   - Starting with an equity orientation, explicit consideration of local context and resources when choosing appropriate strategies

4. Infusing diversity, inclusion, and equity in the IS training pipeline (training/curricula)
   - More support and funding of Black, indigenous, and scholars of color, promoting training opportunities, diversify the field, and issues of retention
   - Building capacity/resources for IS training to incorporate equity

5. Community engagement approaches
   - Power, decision-making, who is at the table, what funding is available (e.g., community grants, building local capacity where academic partners are not available)
   - Leveraging and partnering with COE offices at NCI-Designated Cancer Centers; shifting resources from academia to community

6. Values orientation (statement from the field about the importance of equity for IS)
   - Key principles/values that guide IS research with an equity lens
   - Self-reflection as a researcher and within funding institutes so that efforts are not exacerbating inequities through research

7. Advance adaptation within IS
   - What types of adaptations support equity?

8. How a focus on policy can promote equity
   - Potentially expand scope of existing evidence-based interventions to have greater focus on implementation of policies.

Implementation of Complex/Multilevel Interventions (MLIs)

Facilitators: Melinda Davis, Maria Fernandez

The action group met to help the IS community significantly advance research on, and an understanding of, implementation and dissemination of multilevel and complex interventions in cancer control. The meeting facilitators set the stage by defining MLIs and complex interventions. Together, the group dived deep into discussing what they believe to be problems in multilevel interventions

that need to be addressed. Collectively, the group believes that the key problems are (1) a lack of understanding about how to best develop, implement, and disseminate MLIs to have a maximum public health impact; and (2) an inherent complexity in the implementation of multilevel and complex interventions. Tools, resources, and examples are needed to help navigate this complexity to better develop and deliver MLIs.

Over the course of 2 days and drawing on the Mentimeter entries and conversations, via the meeting room chat box, the group identified three themes of interest:

1. Article (thought piece) that serves as an introduction to the implementation of multilevel interventions

   - Implementation of multilevel interventions: Challenges and opportunities

     - Include definitions.
     - Discuss the differences between multilevel interventions and implementation strategies.
     - Discuss challenges raised and articulate a research agenda.
     - Develop or select implementation strategies at different levels with an emphasis on the importance of defining and describing (not just naming) strategies.
     - Include making decisions about intervention and implementation strategies, considering synergy and interactions, and prioritizing intervention components and IS at multiple levels (processes for doing so).
     - Measurement considerations should include the following:
       » Defining and measuring levels and synergies between levels
       » Role of qualitative research

     - Include best practices for engaging stakeholders at multiple levels.
     - Design for dissemination.
     - Include considerations for the implementation of multilevel interventions in both healthcare (primary care and specialty care) and other settings (community, schools, churches), and improve these linkages.

2. Resources and tools to help researchers conduct studies related to the implementation of multilevel interventions and complex cancer control interventions

   - Toolkit to review/clarify the blurred boundary between multilevel interventions and implementation strategies
   - Measurement toolkit

     - Guidance on measuring outcomes at multiple levels
     - Measures for outer context
     - Measures to assess the financial/business impact
     - Packet with information on multilevel interventions (provide examples)

   - Tool to guide the user in better understanding and documenting the components of an existing multilevel intervention to improve adaptation plan implementation
   - Toolkit to approach health systems about engagement with multilevel intervention implementation
   - Tools to help guide the selection of IS frameworks and models to inform the implementation of multilevel interventions
   - Guidance or frameworks on how to plan implementation strategies to deliver multilevel interventions

3. Case studies to illustrate best practices for planning and implementing multilevel interventions and complex interventions

  - Case examples of well-designed multilevel interventions

    – Include processes for "interweaving" multilevel interventions and implementation strategies into contexts.

    – Select implementation strategies (considering synergy and interaction and use for prioritizing).

  - Engagement strategies: How to start working/building relationships within different settings

  - Measurement: Case examples of measurement of IS and outcomes across levels

  - Difference between multilevel interventions vs. implementation strategies with examples

  - Examples of strategies that work at multiple levels (e.g., program champion at multiple levels), including at the senior-most level

  - Case studies highlighting considerations for designing efficacy studies (efficacy studies begin to consider implementation, including multilevel considerations); factors need to be examined in subgroups, for example, which would inform subsequent multilevel interventions

Policy and IS

Facilitators: Karen Emmons, Jonathan Purtle

The action group focused on how the IS community could advance and make more explicit the incorporation of policy and IS across cancer prevention/control research. During the Day 1 brainstorming and discussion, the action group identified policy problems that they believe need to be addressed. The group identified the following: (1) D&I researchers often do not ask questions that are relevant to policy makers, (2) an insufficient number of high-quality policy and diversity and inclusion research applications are submitted to the National Institutes of Health (NIH), and (3) there is lack of clarity about what policy in D&I looks like. Once identified, the group began to identify themes of interest to advance the field. These themes included the following:

1. Include more stakeholder engagement with policy makers throughout the dissemination and implementation (D&I) research process, especially at the stage of conceptualizing research questions.

  - Conduct a concept mapping exercise with policy makers to identify the important features of research evidence.

  - Build bridges between D&I researchers and organizations that represent policy makers (e.g., National Conference of State Legislatures, National Governors Association).

2. Increase knowledge and skills about policy research in the D&I field.

  - Include training and education initiatives (webinar series forthcoming from NCI), especially targeting early-stage investigators.

  - Explore the NIH Director's Initiative or foundation (e.g., Robert Wood Johnson Foundation, William T. Grant Foundation) support for policy diversity and inclusion training academy.

3. Provide examples and tools for policy D&I research.

  - Develop a compendium of policy-relevant implementation strategies.

  - Catalogue case studies/examples of policy D&I studies.

  - Identify cancer-related polices with the most potential to promote health equity or exacerbate health inequities.

4. Develop a research agenda for policy D&I research.

5. Enhance the understanding of the roles of policy makers at different levels (e.g., elected, administrative, "street-level bureaucrats" who implement policy) among D&I researchers.

6. Synthesize/Integrate conceptual frameworks from other disciplines (e.g., political science, sociology) to inform policy D&I research.

Learning Healthcare Systems (LHCS) as Natural Laboratories

Facilitators: Alanna Kulchak Rahm, Brian Mittman

The action group worked to develop ideas for projects that can help the IS community significantly advance research on and an understanding of LHCS as natural laboratories. On Day 1, meeting facilitators offered an overview of LHCS, shared key characteristics of such systems, and outlined their scope. Together, they looked at the Institute of Medicine report (IOM, 2010) and used the information as a launching point to brainstorm. On Day 2, the group expanded on the topics identified in Day 1 and created additional action items for the group.

Over the course of 2 days, the group brainstormed, discussed, and learned about the barriers, opportunities, and needs of LHCS. Additionally, they took a closer look at the intersection of LHCS and IS. From these discussions, the action group identified the following key themes:

1. LHCS is a continuum—a process rather than a destination.
   - Define key features of an LHCS and the process and progress of different organizations evolving toward the LHCS vision, describing examples and identifying challenges and solutions.
   - Explore how the concept can be operationalized in non-integrated systems, low-resource delivery systems, and other settings.

- Synthesize unintended consequences and identify potential solutions LHCS in action (e.g., too much data, strained resources).

2. IS offers tools to facilitate and operationalize LHCS activities.
   - Invite system leaders from "advanced" LHCS for a panel at ISC3 to discuss experiences, understanding, processes, and goals for LHCS transformation and application of embedded research to improve patient care/system performance.
   - Guidance on how IS can work in collaboration with QI, systems engineering, and other approaches is already integral to clinical care delivery systems.
     - A "how to" for system leaders when using the tools that IS offers
     - Guidance on how IS augments these other approaches, rather than being just another variation or label for them
   - Guidance/Assistance is provided for using IS tools in organizational prioritization/strategic planning.
     - Tools from IS can provide strategies to prioritize clinical problems in context.
     - Tools and learnings from IS can provide guidance on what is likely to work (or not) in the system to address a priority problem.

3. There is a need to develop bidirectional communication and true partnerships.
   - Develop a training/program to facilitate the engagement of clinicians and system leaders with researchers, and vice versa.
     - Two-way listening and learning, win-win situations
     - Examples of successful partnerships leading to both local innovation/care improvement and contributions to scientific knowledge

IS Study Designs

Facilitators: Stephen Bartels, Wynne Norton, Ramzi Salloum

The action group focused on how the IS community could advance and make more explicit the incorporation of study design across cancer prevention/control research. The discussion started with an overview of IS study designs, recognizing that most study designs used in IS were developed decades ago and are being applied to IS. Few study designs are unique to IS. Additionally, the group discussed the need to reframe IS to explicitly address inequities in healthcare design and increase interest in health equity within IS to ensure the equitable implementation of programs across a range of diverse populations.

Over the course of 2 days, the group worked to answer the question, How should IS study designs be reconsidered and specifically adapted to meet the challenges of advancing equity-focused IS? The key themes that the group identified to answer this question include the following:

1. Stakeholder engagement: What study designs engage stakeholders in identifying/tailoring strategies/interventions while maintaining rigor?

   - Designs that engage stakeholders and communities across the IS spectrum
   - Acceptable methods for co-designing implementation strategies and choices

2. Adaptation: How do research designs address adaptations of strategies or interventions during the study?

   - Need for methods for rapid adaptations, rapid-cycle research
   - Flexibility in meeting the target population's needs while balancing scientific rigor
   - Adaptation and flexibility in agile research designs
   - COVID as a case study in addressing inequities, adaptability, and flexibility

3. Methods/Measures to study equity-based implementation and proximal indicators

4. Methods/Measures to study equitable sustainability and proximal indicators

5. Role of team science in developing and applying equity-based IS designs

6. Ideas for public goods:

   - Developing guidelines/best practices for optimal designs that advance health equity
   - Literature review(s), systematic/scoping
   - White paper, modeled after the Qualitative Methods in Implementation Science white paper

7. Are "usual care" comparisons acceptable from an ethical standpoint?

8. How do quasi-experimental/observational designs incorporate potential mechanisms and contribute to health inequities and social determinants of health?

9. Types 2 and 3 hybrids: What minimal level of evidence is adequate?

10. Vulnerable populations are disproportionally affected by large-scale social, public health, and economic events. There is conflict with fixed IS designs.

11. Identifying potential public goods to help guide the field (and the review process).

12. Collaboration with other groups:

    - Context and Equity in IS
    - Community Participation in IS
    - Implementation of Complex/Multilevel Interventions
    - Learning Healthcare Systems
    - IS in Global Health

IS in Global Health

Facilitators: Antoinette Percy-Laurry, Anne Rositch, Donna Shelley

The action group focused on how the IS community could advance and make more explicit the incorporation of IS in global health and cancer prevention/control research. The group began by reviewing the strong rationale for convening a global health action group because despite an abundance of proven cancer prevention and control strategies, dissemination, implementation, and scale-up of these strategies are insufficient in real-world contexts. The group discussed that the gaps in translation are due to a lack of diversity, and inclusion research and practice capacity. The discussion outlined many opportunities to close the evidence-to-practice gap by adapting and applying D&I methods in low-resource settings.

The group generated a range of priority areas for further development. Several topics overlapped with those of several other action groups. These priority themes are as follows:

1. Build capacity.
   - Identify and disseminate models for capacity building/mentorship (e.g., team science, ECHO, global network, Training Institute for Dissemination and Implementation Research in Cancer): Conduct a literature review on effective and sustainable capacity building in low-income and middle-income countries (LMICs).
   - Identify gaps and current opportunities to train/mentor/build capacity across the full range of stakeholder groups/audiences (e.g., mid-level staff, policy makers, researchers, practitioners).
   - Compile resources/database (e.g., training, funding, toolkits), particularly remote opportunities and those relevant to LMICs: Leverage other organizations and the NCI website to disseminate resources (e.g., Global Implementation Society, Society for Implementation Research Collaboration [SIRC] African Organization for Research and Training in Cancer [AORTIC], NCI Center for Global Health).
   - Create a learning series on pitfalls and best practices from real-world projects.
   - Provide support for clearinghouse/living documents.

2. Demystify dissemination and implementation science (D&IS).
   - Create a primer on D&I nomenclature, frameworks, and methods to increase accessibility.
   - Develop case studies to expand transparency and clarity of terms and methods: series of papers or journal supplements.
   - Catalogue evidence-based practices and implementation strategies relevant to LMICs (as compared with high-income countries [HICs]).
   - Develop guidance on how to ask a "good" D&I question (potential webinar).

3. Provide guidance on "context" in diverse settings.
   - Identify gaps in research on measuring context and how it influences D&I in LMICs settings (e.g., standard tools, use of context data for adaptation, translation across contexts).
   - Identify best practices for assessing context, standardization, and use of data to inform adaptation.
   - Identify examples of research/methods grounded in the assessment of local context and translation to other context/generalizability: Conduct a literature review.

4. Engage stakeholders/implementers/ policy makers/practitioners.

   ▪ Identify best practices for effective bidirectional or reverse learning for D&IS research.

   ▪ Identify effective participatory approaches in an LMIC context.

   ▪ Increase international participation: Create a global network platform and/or community of practice to connect LMIC and global investigators and foster partnerships and information dissemination (including funding/training opportunities).

   ▪ Identify funding, research, communication, and infrastructure needs to expand the participation of researchers, policy makers, and practitioners: Should there be a global survey?

   ▪ Identify opportunities to talk about D&IS at meetings such as AORTIC.

   ▪ Include partnerships/team science/non-traditional "team" members.

5. Identify research needs related to technology-driven strategies for D&IS in LMICs.

   ▪ Engage stakeholders in understanding the current use of technology (e.g., personal, in healthcare and community settings, telehealth, mHealth, texting).

   ▪ Identify gaps in adapting and integrating technology to improve D&I (e.g., what/how to adapt HIC strategies to LMICs, what strategies are LMICs using and in what context).

   ▪ Share best practices among practitioners.

   ▪ Engage local entrepreneurs regarding innovation in global networks and other capacity-building and information-sharing activities.

6. Identify opportunities to expand D&IS research in LMICs, particularly research on methods for sustaining and scaling evidence-based interventions (EBIs) in LMICs.

   ▪ Identify gaps and opportunities to expand this area of research in LMICs (e.g., adapting existing theory, measures, methods, and strategies): Conduct a literature review.

   ▪ Identify particularly great D&IS research models in LMICs as a starting point for building research.

   ▪ Identify pragmatic measures and methods that are acceptable and feasible in low-resources settings, as well as gaps in this area.

   ▪ Identify examples of effective strategies for sustaining and scaling EBIs in LMICs: Conduct a literature review.

   ▪ Identify pragmatic strategies for integrating cancer prevention and control in a primary healthcare (PHC) context and, at the same time, strengthen PHC delivery systems to deliver these EBIs.

   ▪ Identify funding, research, and infrastructure needs to expand research.

Trainee and Early Investigator Post-Consortium Session

This year, ISCC announced a new component for trainees and early investigators. The ISCC planning team supported a post-meeting session to elevate the voices and perspectives of junior implementation scientists. This session celebrated the advances that occur during the early stages of a research journey.

The session included a Q&A with Dr. Chambers of NCI, Dr. Serena Rodriguez of UT Southwestern, Dr. Jessica Austin of Columbia University, and Dr. Michelle Doose of NCI. Audience members participated via the chat feature, and the dialogue was moderated by Dr. Pete DelNero of NCI.

The session began with panelists describing their reaction to the ISCC meeting. They noted the multitude and diversity of stakeholders at the consortium. Additionally, they mentioned the benefits of connecting with researchers across different settings, and the strength of the network to support their goals.

Next, the conversation turned to the COVID-19 global pandemic. Panelists discussed the individual and collective impacts of COVID-19 in the IS community. For junior investigators, the pandemic has a pronounced effect on plans to finish training and start new jobs. They described their efforts to perform high-quality research while finding new ways to gather evidence.

The next question addressed equity in IS. Health equity is an important dimension of dissemination and implementation; however, researchers are often limited in how they understand various contexts. During the conversation, members stated their commitment to advance a culture of equity and respect in the consortium, communities, and the world. Dr. Chambers acknowledged Drs. Ana Baumann, Rachel Shelton, Corey Bradley, Sarabeth

Broder-Fingert, and others who are vocal advocates for anti-racist practices in IS.

Finally, Dr. Rodriguez raised the topic of resources to help trainees establish a secure foundation in IS. In addition to existing programs, such as the Training Institute for Dissemination and Implementation Research in Cancer and the Implementation Science Centers in Cancer Control, panelists were eager to connect with colleagues across institutions.
They remarked on the difficulty of contributing to national programs, especially when their institution does not belong to a particular network.
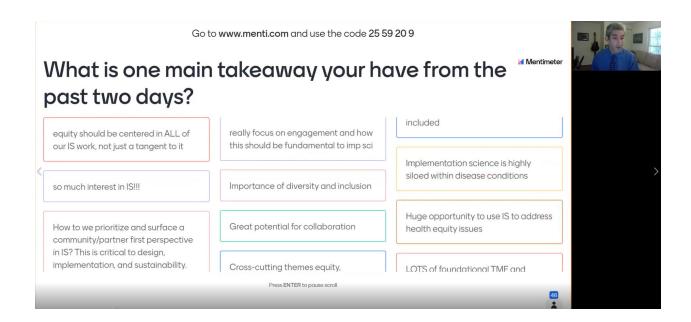
In closing, Dr. Chambers encouraged trainees and early investigators to boldly contribute to the ISCC discourse.

For a full list of discussion questions, see Appendix B.

Town Hall: Setting the Stage for Implementation Science in Cancer Control in the Coming Year

Led by Dr. David Chambers of NCI, meeting participants were guided through a series of questions to receive feedback on their experience over the 2-day meeting. With the help of Mentimeter, Dr. Chambers was able to collect and audibly review attendee responses to the questions. Below is a summary of the session discussion. For a full list of Mentimeter responses, see Appendix C.

Dr. Chambers opened the session with a series of questions that asked participants to recall their time participating in the consortium meeting. The opening question, What is one main takeaway you have from the past 2 days?, garnered strong responses regarding health equity, community and IS field engagement, and capacity building. The follow-up question, What should this IS consortium accomplish going forward?, received recommendations to increase

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What is one main takeaway your have from the past two days?

- equity should be centered in ALL of our IS work, not just a tangent to it
- really focus on engagement and how this should be fundamental to imp sci
- included
- so much interest in IS!!!
- Importance of diversity and inclusion
- Implementation science is highly siloed within disease conditions
- How to we prioritize and surface a community/partner first perspective in IS? This is critical to design, implementation, and sustainability.
- Great potential for collaboration
- Huge opportunity to use IS to address health equity issues
- Cross-cutting themes equity,
- LOTS of foundational TMF and

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stakeholder involvement, continue to offer space and opportunity for ongoing action, and consider developing IS best practices guides and research methods.

Next, Dr. Chambers led participants through a series of questions related to the IS community at-large. He began this phase of the conversation by asking, How do we build more capacity for the IS community at-large? Participants responded with strong support for expanding and improving IS training, specifically, train-the-trainer sessions, in-person workshops, mentorship programs, and in-person and virtual trainings for researchers, providers, healthcare leadership, community stakeholders, and so forth. Additional trending responses included the development of new and easy-to-use resources and materials, and a call to increase funding for communities, research, and pilot programs.

The following question, Are there other options that the consortium should prioritize for the development of "public goods" for the field?, was met with wide support for open-access measurement, partnership and stakeholder engagement, training and capacity building, sustainability, and a call to focus on unique populations

(e.g., adolescents and young adults, Latinx, Black, Asian, rural). Additional responses included establishing a business case for IS, improving career pathways, and diversifying the field at-large.

Next, Dr. Chambers led participants through a series of questions asking them to look ahead and identify actionable steps going forward. The first question, What support is needed to enable participants to keep the momentum going on consortium action plans?, produced answers such as funding for pilot programs, research, and so forth; more frequent field at-large meetings; support to build and maintain partnerships with the field and the communities they serve; and a clear, established IS mission, vision, and communication strategy.
The second question, What additional types of follow-up activities should the consortium engage in?, encouraged answers such as more frequent interactions to retain momentum, opportunities for co-authored publications from working group members, early career support, and linkages to the global IS field.

The session concluded with the question, What advice would you give to advance the consortium during the next year? Participants' responses were divided between recommendations for the 2021 consortium meeting and suggestions for the consortium body. Regarding the 2021 consortium meeting, a trending response was the virtual platform. Several responses encouraged the consortium to lean into the virtual platform and for them to explore more ways to enhance the meeting (e.g., the use of video, real-time captioning, Slack channels, more virtual tools in addition to Mentimeter). Additional recommendations included more robust panel discussions, opportunities for networking, and considering shorter meeting times over several days with generous breaks in between sessions. Responses specific to the consortium body encouraged them to develop an implementation plan with benchmarks and timeframes for each action group, develop a social media and early career/trainee committee, and seek more participation from outside the United States.

Next Steps

Following the consortium, a Slack workspace was established to help move "public goods" forward that were identified during the action groups. Individuals interested in collaborating with the action groups may send an email to ISCC@icf.com to be linked with specific action groups via the Slack platform. These action groups will continue to convene over the coming year.

APPENDIX A

ISCC Steering Committee Members, Meeting Facilitators, and Panelists

ISCC Steering Committee

Prajakta Adsul
University of New Mexico

Sarah Bruce Bernal
National Cancer Institute

Heather Brandt
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David Chambers
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Donna Shelley
NYU Langone Health

Rachel Shelton
Columbia University, Mailman School of Public Health

Angela Stover
University of North Carolina, Chapel Hill

Stephanie Wheeler
University of North Carolina, Chapel Hill

Synergies, Gaps, and Opportunities in Implementation Science Panel Discussion

Moderator:
Cam Escoffery
Emory University

Panelists:
Mark Doescher
Oklahoma University

Kristie Foley
Wake Forest School of Medicine

Kimberly Kaphingst
University of Utah

Katharine Rendle
University of Pennsylvania Perelman
School of Medicine

Betsy Rolland
University of Wisconsin, Madison

J.D. Smith
University of Utah

Sujha Subramanian
RTI

Stephanie Wheeler
University of North Carolina, Chapel Hill

Practitioner Perspectives: Considering COVID-19 and IS in Cancer Control Panel Discussion

Moderator:
Rachel Issaka
University of Washington

Panelists:
Broderick Crawford
NBC Community Development Organization

Jessica Palakshappa
Wake Forest University

Rajiv Panikkar
Geisinger

Samuel Takvorian
University of Pennsylvania

Vicki Young
South Carolina Primary Care Association

APPENDIX B

Trainee and Early Investigator Session Discussion Questions

1. What is your message to trainees and early career implementation scientists who have been attending this week's consortium?

2. What are your reactions to the consortium? What did you appreciate, and how can it be improved?

3. What have we learned in the past 6 months from the pandemic? What is the impact in the field of implementation science, and what will that mean for early career researchers like ourselves?

   - How can trainees and early investigators continue to perform our best work and accomplish our goals while acknowledging these extraordinary circumstances?

4. How do you advance implementation science research without creating or perpetuating disparities?

   - I want to improve equity and create structural change, but I'm just a postdoc. What can I do?

   - How can implementation science dismantle structural racism? Is there work from the implementation science community addressing that? How can this group get involved?

5. What advice would you give individuals at the early stages of their careers as they're trying to create a foothold in implementation science?

   - Following up on this conversation, are there small grants or supplements that are appropriate for people at that stage of our careers?

6. In an ideal world, what services can NCI or the consortium provide to facilitate your goals in implementation science and cancer control?

7. How can we bring D&I science directly to community-based organizations and provide them with implementation science tools to support their initiatives?

8. What are your concerns about the role of implementation science in the context of learning healthcare systems?

9. When you reflect on the past year of ISCC, how can trainees and early investigators extend those successes in 2020?

Early Investigator Planning Team

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East Carolina University

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Venice Haynes
1000 Feathers

Daisy Morales-Campos
University of Texas at Austin

Serena Rodriguez
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APPENDIX C

Townhall Mentimeter Responses

1. What is one main takeaway you have from the past 2 days?

   - The intersection between equity and community participation

   - The need for consistent measures of equity across studies

   - View equity as an umbrella and a foundation of the work

   - Several cross-cutting themes: equity, community engagement, and training

   - There is a huge opportunity to use IS to address health equity issues

   - Field-wide collaboration

   - Several opportunities to train the next generation

   - Incorporate community voices in all that we do

   - Engagement needs to be a norm in the field

   - Complex questions still exist and there are no easy answers

   - Call to action to focus on the intersection of equity and IS

   - Improvement in communication strategies

   - The need for collaboration to address health equity through engagement

   - Crowdsource IS resources for the community, healthcare, and research communities

   - Development of toolkit that demystifies IS for LMIC researchers

   - Increase the incentive for community partners to be involved

2. What should this IS consortium accomplish going forward?

   - Establish work groups with a variety of perspectives

   - Reiterate a focus on diversity, equity, and inclusion

   - Case studies and other teaching tools

   - Provide space and opportunities for ongoing action

   - Produce guidance for IS research grounded in health equity

   - Set priorities for research and next steps

   - Join forces internationally to network and share lessons learned

   - Invite stakeholders to the 2021 consortium meeting

   - Develop a stakeholder working group

   - Promote dissemination of IS initiatives and approaches to the broader cancer field

   - Support collaborations and facilitate equitable voices in the IS space

   - Provide a venue for bringing together a broad group of IS researchers focused on cancer

   - Facilitate collaboration and synergies across these work groups

   - More funding support for equity-focused applications

   - Support for the development and sustainability of academic-community partnerships

3. How do we build more capacity for the IS community at-large?
   - Train-the-trainer; training for researchers, providers, healthcare leadership, and community stakeholders
   - Funding for communities, research, pilot programs, and so forth
   - Create community resources that are easy to find and use
   - Break down disease silos
   - Mentorship programs
   - Put all capacity-building tools and resources in one database
   - IS workshops at non-IS meetings to bring in new perspectives and voices
   - Make case studies available through panel discussions, trainings, or other channels
   - Identify appropriate incentives for providers to collaborate with IS investigators
   - Collaboration with other groups interested in key areas
   - Involve practitioners and community in the process
   - Partnerships between researchers and implementers
   - More practitioner- and community-centered research

4. Are there other topics that the consortium should prioritize for the development of "public goods" for the field?
   - Measurement (open access)
   - Structural racism
   - Partnership and stakeholder engagement
   - Training and capacity building
   - Career pathways

- Studying and obtaining sustainability
- Focus on unique populations (e.g., adolescents and young adults, Latinx, Black, Asian, rural)
- Diversifying the field
- Making the business case for IS; articulating the added value of IS
- Manage interventions in non-organized communities
- Identify trans-NIH basic behavioral science research gaps to prioritize
- Integration of IS in behavioral sciences and other programs

5. What support is needed to enable participants to keep the momentum going on consortium action plans?
   - Funding
   - Administrative support from NCI to coordinate meetings and actions
   - Pilot grants
   - Clear IS mission and vision
   - Shared publication opportunities
   - Transparent communication strategy
   - Mentorship—linking early career researchers to senior mentors
   - Support for building and maintaining partnerships
   - More frequent field at-large meetings
   - Easy access to resources, materials, and training
   - Tech support for developing online "public goods"
   - Involve trainees in supporting action groups and those leading/co-leading initiatives
   - Increase the visibility of consortium efforts

6. What additional types of follow-up activities should the consortium engage in?

- More frequent interactions to retain momentum (e.g., weekly seminar series, monthly action group meetings)
- Funding to support collaborative work
- Co-authored publications from working group members
- Stronger linkages to the global IS field
- Early career support
- Establish communities of practice for the working groups
- Establish clear leadership for each identified priority area
- Offer options for different levels of involvement in working groups
- Publish briefs or statements to identify priority areas and action steps
- Define the official channel of bidirectional communication

7. What advice would you give to advance the consortium over the next year?

- Learn in a virtual format
- Draw a more global audience
- Meeting structure: Shorter time over several days with generous breaks
- Invest in administrative support to a sufficient level to keep the group engaged, organized, and informed
- Smaller groups for brainstorming opportunities
- More panel discussions
- Involve more practitioners
- Provide opportunities for networking
- Develop an implementation plan with benchmarks and timeframes for each action group
- Early career and trainee committee
- Provide short summaries of in-progress work
- Clarify who the "Consortium" is
- Extend the duration for the action groups