SITC Crisis in Clinical Research Virtual Summit: Executive Summary

Aug. 17, 2022 10:00 a.m.-3:30 p.m. EDT

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Society for Immunotherapy of Cancer

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Executive Summary

Conflicts of Interest

About SITC

Society for Immunotherapy of Cancer

The Society for Immunotherapy of Cancer (SITC) is the world's leading member-driven organization specifically dedicated to professionals working in the field of cancer immunology and immunotherapy. Established in 1984, SITC is a 501(c)(3) not-for-profit medical professional society comprised of over 4,300 influential research scientists, physician scientists, clinicians, patients, patient advocates, government representatives and industry leaders dedicated to improving cancer patient outcomes by advancing the science and application of cancer immunotherapy.

Through emphasis on high-caliber scientific meetings; dedication to education and outreach activities; focus on initiatives of major importance in the field; and commitment to collaborations with like-minded domestic and international organizations, government and regulatory agencies, associations and patient advocacy groups, SITC brings together all aspects of the cancer immunology and immunotherapy community. SITC aims to make cancer immunotherapy a standard of care and the word "cure" a reality for cancer patients everywhere.

Mission Statement

It is the mission of the society to improve cancer patient outcomes by advancing the science, development and application of cancer immunology and immunotherapy through our core values of interaction/integration, innovation, translation and leadership in the field.

Core Values

- Interaction/Integration: Facilitate the exchange of information and education among basic and translational researchers, clinicians, young investigators, patients, societies and groups sharing the mission of SITC
- Innovation: Challenge the thinking and seek the best research in the development of cancer immunotherapy
- Translation: Facilitate the transfer of cancer immunology and immunotherapy research from the bench to the clinic and back
- Leadership: Define what is new and important and effectively communicate it to all relevant stakeholders

Summit Overview and Introduction

Problem Statement

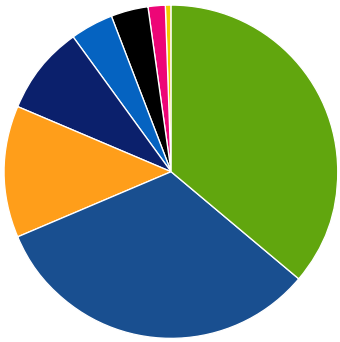
There is a national crisis slowing clinical research due to staffing shortages, administrative burden and current clinical trial business models. If the crisis is not rapidly addressed, the field of oncology faces a significant threat to patient treatment access and novel drug development that can affect the clinical landscape for years to come.

SITC's Call to Action and Summit Overview

Based on preliminary discussions with various stakeholders concerning the significance of the crisis, The Society for Immunotherapy of Cancer (SITC) hosted the **Crisis in Clinical Research Virtual Summit** on Wednesday, Aug. 17, from 10:00 a.m.–3:30 p.m. EDT. The summit was designed as a free, public event that featured expert panel discussions, invited speakers, and attendee question and answer periods. In all, the multi-stakeholder virtual summit convened over 600 attendees and 30 panelists demonstrating the critical need across the field for solutions pertaining to the crisis. Attendees included oncologists, administrators, the National Cancer Institute (NCI), the US Food and Drug Administration (FDA), pharmaceutical companies, contract research organizations (CRO) and other major oncology professional organizations.

Professional Roles of Attendees

**Attendees allowed to select multiple roles*



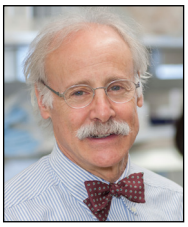
Academic Research - 553
Industry - 498
Clinical Care - 194
Administration - 135
Scientist-in-Training/ Student - 60
Other - 57
Patient/ Patient Advocate/ Caregiver - 27
Investor - 5

Summit Goals

The summit's primary objective was to define actionable solutions towards addressing the current staffing shortages, administrative issues and process inefficiencies facing oncology clinical trials, as well as consider alternative clinical trials administrative models to reduce the current burden.

Summit Organizers

Leisha Emens, MD, PhD
UPMC Hillman Cancer Center



Marc Ernstoff, MD
National Cancer Institute

David Feltquate, MD, PhD
Palleon Pharma

Michael S. Gordon, MD
Honor Health

Kristen Hege, MD
Bristol Myers Squibb

David Hong, MD
MD Anderson Cancer Center

Krystyna Kowalczyk
OncoBay

Mario Sznol, MD
Yale University

Stephanie Terzulli, PhD
Memorial Sloan Kettering Cancer Center

Marc Theoret, MD
US Food and Drug Administration

Summit Outcomes and Next Steps

Summit Takeaways

Summit attendees formalized possible solutions towards addressing the crisis and clinical research inefficiencies throughout the program. At the conclusion of the meeting, SITC was provided four key efforts that would create momentum in this arena:

Standardization and Centralization of Clinical Research Resources

- Develop consensus on structured data inputs
- Standardize clinical research contracting and budgeting language
- Adopt standard timelines across the field for implementation of EDC automations
- Implement consistent EMR builds and compatibilities
- Incorporate and accept centralized IRBs and SRCs

Cross-institutional Data Availability

- Collect clinical research accrual and activation data to drive future innovation
- Expand upon current data collection efforts
- Promote impartial and accepted data sharing culture across institutions and stakeholders

Maximizing Efficiency Across Clinical Research Operations

- Embrace automation
- Incorporate business-like operations within clinical research workstreams
- Perform work in parallel towards identifying potential efficiencies/inefficiencies
- Reduce silo's and streamline communications across stakeholders
- Develop processes that maximize personal and professional success for the available workforce

Diversification of Clinical Research Sites and Populations

- Expand access of clinical trials to underrepresented communities
- Increase patient education towards enhancing clinical trial acceptance
- Provide education to community centers towards becoming fully equipped clinical research sites

SITC's Next Steps

As a direct follow-up to this impactful summit, SITC is actively working with volunteers on formulating direct actions to address the four identified efforts. Immediately, published works are in development to provide awareness to the current crisis as well as to provide expanded insight concerning summit conclusions. Additionally, SITC has emphasized collaboration as a critical element of effective response to the crisis and is actively communicating with like-minded groups towards developing impactful solutions. Overall, SITC is committed to serving as a leader in addressing the crisis facing clinical research. Further information on how the attendees came to these recommendations can be found below in a detailed report of each talk and panel that occurred throughout the summit.

Key Stakeholder Perspectives

Welcome, Setting the Stage, & Defining the Problem

Mario Sznol, MD – Yale Cancer Center

- Clinical trial accrual remains down ~20% compared to pre-COVID-19 pandemic accrual via an informal survey of NCI cancer center directors
- Increases in trial complexity, pre-existing inefficiencies/redundancy within clinical research processes, lack of adequate staffing and associated experience, and increases in overall costs have contributed to reduced clinical trial capacity
- Stakeholders agree that the COVID-19 pandemic did not cause this crisis, but rather amplified existing issues within the clinical research system
- Data collection from across institutions concerning trial activation timelines, amendment activation, and overall accrual would help better frame the extent of the current crisis
- Key stakeholders across the clinical trial industry will need to be introspective and come together towards implementing solutions and efficiencies without compromising patient safety or data accuracy

Academic Medical Center Perspective on Crisis

Patricia LoRusso, DO – Yale Cancer Center

- The current model of an academic clinical trial system is equitable to that of an “assembly line.” However, each clinical trial is treated as unique, resulting in duplicative approaches for activation and management
- Siloing and miscommunication between departments within an academic medical center significantly contributes to trial inefficiencies. Center size also impacts trial processes, as smaller institutions may be able to more readily adapt to challenges and facilitate more efficient communications/processes
- NCI-funded trials are generally underfunded and result in financial loss for cancer centers, resulting in an unsustainable clinical research model
- The field requires operational data to make informed decisions and implement substantial changes towards improving trial activation timelines. Cross-institutional comparative data would be most impactful, but there are concerns as to whether protection of this information may lead to competition in the field rather than collaboration

Key Stakeholder Perspectives

Sponsor Perspective on Crisis

David Feltquate, MD, PhD – Palleon Pharma

- Costs for sponsors continue to increase due to increased time and complexity of clinical trials. The average cost per patient is now between $150,000 - $200,000 per patient excluding CRO costs
- Clinical research staffing also exists as an issue for sponsors due to increased bureaucracy, complexity and redundancy within each individual trial
- Activation times for clinical trials have lengthened due to the increased complexity of legal budget, scientific, and staff review
- Sponsors are also facing enrollment issues due to institutional patient "caps" resulting from reduced institutional staffing. This is causing industry to shift to increasing the number of sites for a given clinical trial that ultimately increases both activation timelines and costs
- Often, industry has defaulted to increasing costs to ensure clinical trials continue, but this is an unsustainable model. This is especially true for smaller biotech companies
- Sponsors have begun implementing uniformity/harmonization across select processes to help eliminate redundancy and inefficiencies for all stakeholders. This includes processes initiating in parallel rather than sequentially, as well as embracing automation whenever available
- Ultimately, sponsors are incentivized to help support innovative and creative solutions towards addressing the current crisis and enhancing patient care

Clinical Research Organization (CRO) Perspective on Crisis

Krystyna Kowalczyk - OncoBay

- CRO's are facing increasing difficulties concerning site engagement. Major academic trial sites are limiting enrollment due to internal staffing shortages. Engagement with community trial sites has been historically limited despite representing 85% of the patient population. This represents a large opportunity loss for enhancing trial enrollment
- Trial sites are seemingly forced to focus their limited staff resources on either trial management or trial activation. This causes one or the other to suffer greatly concerning timelines. For example, some sites now require over a year to activate a clinical trial due to staffing shortages
- Increases in trial complexity has led to large increases in data capture/query resolutions. This is also impacting CRO's in addition to site investigators due to the amount of staffing resources required to handle increased data collection and management
- Sponsors are showing increased interest in broadening patient demographics within clinical research and expanding access to minority populations. Facilitating education and infrastructure support for community centers would create new opportunities for minority physicians treating minority populations

Key Stakeholder Perspectives

Regulatory Perspective on Crisis

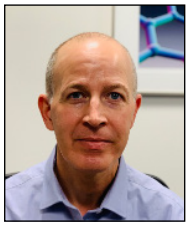
Marc Theoret, MD – US Food and Drug Administration

- The overall stress on the clinical research system is at an all-time high, and the pressure is continuing to increase. There are currently almost 5000 active trials for PD-1/PD-L1 regimens, 80% of which are combination trials
- FDA rapidly adapted process to address the challenges presented during the COVID-19 pandemic. The agency provided multiple guidance's on how to conduct trials during the pandemic that where aimed at assuring safety of trial participants and compliance of good clinical practice, all while minimizing the risks to trial data integrity. The agency hopes to continue building from the described procedural changes to help address clinical research inefficiencies
- To this end, FDA, in conjunction with a number of key stakeholders, published a recent manuscript reviewing and analyzing the current clinical trial process and exploring how efficiencies adopted during the pandemic can be implemented moving forward. Some of these potential efficiencies include:
  - Electronic informed consent
  - Electronic visits/consultations
  - Remote assessments
  - Remote monitoring
- Many of these flexibilities were being explored prior to the pandemic, but were first implemented out of necessity in 2020-2022. These flexibilities also represent a shift in mindset for how a clinical trial should operate. Instead of thinking of the trial site as the center of the model, these new processes focus the system more on patients as the center of the trial system
- From the FDA's perspective there are a number of steps to take as a path forward to help address the crisis
  - The FDA will need to continue to develop new tools and innovations towards building new efficiencies along the development pathway
  - FDA will continue to ensure generalizability to the US patient population, especially considering that clinical trials from the US needed to prove efficacy and safety within the country's populous. FDA requires adequate diversity within US clinical trials, and implementation of decentralized approaches would help better facilitate this
  - The continued utilization of expedited development processes is imperative. This includes aspects such as accelerated approval pathways and confirmation/utilization of novel surrogate endpoints. It is important to note that timely completion of confirmatory trials are crucial to enhancing and strengthening these processes
  - A focus on patient-centric development is important for the field moving forward. Many of the efficiencies that could help address issues within this current crisis can be solved by putting patients first

Panel Discussions

Panel 1: Streamlining Data Collection & Entry

Chair: Stephanie Terzulli, PhD
Memorial Sloan Kettering Cancer Center



Michael Buckley, MD
Memorial Sloan Kettering Cancer Center

Edward Cha, MD, PhD
Genentech

Tess Cummings, RN, DBA
UPMC Hillman Cancer Center

Jason Luke, MD, FACP
UPMC Hillman Cancer Center

Jeffrey Moscow, MD
National Cancer Institute

Danelle Palmer, MBA
OncoBay

Leonard Sacks, MD
US Food and Drug Administration

Key Takeaways

- The first step towards better data collection is field-wide standards for structured data
- Implementation of technology to automate data entry whenever possible
- Exploration of utilizing CRO resources to assist with data entry holistically
- Have NCI/FDA create a best practice commission, or create a timeline that institutions need the capability to do direct data entry into electronic data capture (EDC). This will assist in creating uniformity and a timeline for the field
- Of note, with implementation of technology institutions worry about cost, but compared to the cost of staff turnover and the inefficient systems in place today, it is no contest on what is the more cost effective solution
- "Data is the gift we give back to the patients, it is the reward for participating in a clinical trial"
- As a field we need to map out each area electronic systems could be harnessed and provide an implementable solution for sites to follow or strive for

Defining the Problem

- Panelists highlighted the major hurdles facing data collection:
  - Little harmonization between sites and trials concerning data structure
  - Reliance on labor-intensive, manual data entry that can be error-prone
  - Poor engagement from data management staff who are tasked with increasingly difficult jobs
- While all stakeholders are striving for enhanced patient care, panelists discussed how many existing relationships in this space can be adversarial. For example, organizations responsible for data monitoring are often incentivized to slow down as much as possible to ensure data quality. This in turn affects site investigators and staff who are required to complete redundant entries and/or reviews

Panel Discussions

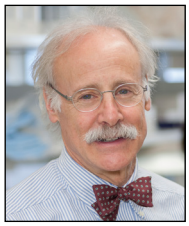
- Some sites have implemented models where they work directly with sponsors concerning data entry and management. This helps increase efficiencies as well as creates a more open line of communication. This open line of communication helps ensure all stakeholders in the trial being aligned on goals, outcomes, and processes. There are concerns, however, about sustainability using this model

Identifying Solutions

- Panelists stressed that moving forward in the field will be impossible without standardization and simplification of data structures. They described how variability of data collection will only become more convoluted the longer that standards fail to exist
- Panelists discussed how staffing data entry outside of the site could help significantly relieve workforce issues. One proposed solution was to have CROs provide data entry capabilities, and that they ultimately may be better equipped to handle these responsibilities. Additionally, CROs have more experience managing remote staff and can offer career ladders for data entry specialists that sites may be unable to compete with
- The FDA indicated that incorporation of electronic and automated data entry systems may offer the biggest opportunity in the field for relieving workforce issues and increasing clinical trial efficiencies. They noted that the agency has shown a willingness to embrace electronic systems and provided examples implemented during the COVID-19 pandemic such as electronic informed consent. They noted that a centralized data monitoring solution may also serve as an opportunity to help fuel standardization
- Panelists postulated about a data entry solution using a mechanism where direct electronic medical record (EMR) data are immediately uploaded into case reports
  - One example includes the BLMA trial where the trial sponsor - Leukemia & Lymphoma Society - worked with Clinical Pipe and Epic to develop an application that can be installed at academic centers to allow for connection to the sponsor case report form. This allowed sites to transmit discreet data fields, especially lab results, directly to the sponsor. These efficiencies assisted the trial investigators in finding a genetic biomarker for predicting poor outcomes for certain treatments. This application is not currently a part of the EPIC app orchard
  - CRO stakeholders also recommend adoption of Clinical Pipe for their trials. They stated that implementation of this technology tremendously reduces the burden on sites, which in turn benefits CROs
  - However, challenges exist concerning direct electronic transfers. Panelists indicated that new inefficiencies would likely emerge as new and different platforms are adopted across centers/sponsors. They stressed standardization across the field as these technologies are discussed and potentially adopted. This issue is compounded by the fact that some sites are more resistant to novel technologies and process changes
- Panelists also detailed how adverse event (AE) reporting are some of the most difficult data to automate, but may also be the most important to address towards increasing efficiency. They discussed how improved implementation of patient-reported outcomes directly into the EMR could help relieve some of the burden
  - Panelists noted that adverse event monitoring can often be a rate-limiting factor in data entry automation
  - Memorial Sloan Kettering (MSK) was provided as an example site that is currently working to automate adverse event reporting for all investigator initiated trials. Novel automation includes the ability to securely and directly incorporate patient labs into the EMR, which makes up ~20% of the manual data entries that coordinators perform. Thus far, this new process has decreased queries 50% and subsequently increased staff and sponsor engagement. This pilot program has also helped alleviate concerns about automation incorporation into other aspects of clinical trial reporting
  - Building on this, stakeholders encouraged a translatable solution across the field. MSK representatives described their use and advocacy for the HL7 Fire platform, which is freely available and open source
  - Panelists also discussed how Clinical Pipe implements artificial intelligence solutions to transcribe adverse event reporting from clinical notes into the EMR
  - Panelists highlighted how a larger entity such as the NCI, a large CRO or an industry sponsor could conduct a trial study incorporating novel AE reporting technologies as a pilot program to help fuel standardization across the field
  - Stakeholders stressed, however, that separation between site and sponsor continue to exist concerning AE reporting. Individuals stated that this is especially important in Phase 1 clinical trials
- Panelists stressed that it is critical to protect and ensure scientific integrity while working to increase efficiencies

Panel Discussions

Panel 2: Reducing the Burden of Scientific Review and Maximizing Efficiency in Meeting Regulatory Requirements



Chair: Marc Ernstoff, MD
National Cancer Institute

Chris A. Learn, PhD, PMP
Paraxel

Lacey Mcquinn Renard, MPH
MD Anderson Cancer Center

Leonard Sacks, MD
US Food and Drug Administration

Alex Spira, MD, PhD, FACP
US Oncology

Charles Theuer, MD, PhD
Tracon Pharma

Key Takeaways

- ❖ Implementation and utilization of centralized institutional review boards (IRB) help to reduce the burden on individual sites
- ❖ Emphasis on performing as much work in parallel as possible, then identify what are the limiting factors. Dedicating resources to then address those factors
- ❖ The field needs cross institutional data to compare activation timelines across institutions. This will greatly aid in finding the best solutions to speed the process up

Defining the Problem

- Activation speed of new clinical trials is a significant detriment in the field. Panelists identified increased and complicated site review as a major factor in this arena. There are many aspects that have increased the burden and requirements over time, including:
  - Increased scientific review by both Scientific Review Committees and Internal Boards
  - Increased number of regulatory documents
  - Increase in protocol amendment quantity and size
  - Increased complexity of contracts and budgets
- Increases in clinical trial protocol amendments – both in size and quantity – are a significant factor in slowing trial activation. Panelists stated that in their experience some amendments have reached a size that rival an entirely new protocol, so much so that Scientific Review Committees occasionally require additional review due to increased complexity
- Difficulties in trial activation at NCI designated comprehensive cancer centers was highlighted. Currently, the NCI requires that each study reach a certain level of performance assessed by a Scientific Review Committee. This review takes place sequentially prior to the IRB. These dueling reviews, compounded by the fact that site departments/offices often work within silos, leads to significant inefficiency and slowed trial activation.

Panel Discussions

- Scientific review of new clinical trials also inhibits site staff from performing their day-to-day work. Representatives from MD Anderson Cancer Center stated that more than 50% of their staff serve on Scientific Review Committees
- Centralization of some of the above aspects would be difficult to accomplish primarily due to lack of standardized process across sites. Panelists described how sites currently use processes that aim to protect themselves from a regulatory perspective. One provided example concerned a study being conducted by a private provider, where the protocol requires a biopsy be taken at the site, but the site would require IRB approval prior to proceeding
- Panelists reminded attendees that many of these issues are results from the medical research field's own success. Investment and opportunity in the medical research field has exponentially increased over time, and this is especially true for the field of oncology. Panelists noted how there are currently more new oncology agents in development than there are patients to treat, and that the massive increase in trial demand coupled with current institutional practices has crippled the system

Identifying Solutions

- Panelists agreed on various aspects that could increase clinical trial activation timelines
  - Creation of a central repository for regulatory documents for all involved staff
  - Utilization of a centralized IRB that can be submitted in parallel with an investigation new drug application (IND)
  - Allow use of contracts/budgets from previous trials in new trials
- FDA representatives noted a "30 day" decision timeline for all submitted INDs. They indicated that the primary review concerns trial safety, but that informed consent may also be requested in specific circumstances. Thus far, the FDA has been able to maintain this review, indicating that many of the review inefficiencies may exist at the site and IRB level
- Implementation of a "Centralized IRB" at lead sites for clinical trials could be one mechanism to increase efficiency and speed of trial activation. This could be further enhance by incorporating aspects discussed in Panel 1 concerning implementation of automated data entry mechanisms. Some NCI sponsored trials have been recently incorporating mechanisms similar to the panelist's suggestions
- MD Anderson representatives also detailed a novel staffing model to help reduce silos between various departments and roles, and providing all trials a "specialist" who is focused on streamlining and managing activation processes
- The burden of trial amendments on sites is being partially addressed by some institutions through refusing acceptance of changes after the IRB process has concluded. Exceptions are made based on amendment complexity. In order to provide a more amenable solution, Panelists highlighted the importance for sponsors to be feasible and fair with trial amendments, as well as ensure that they exist as a "necessity" and not a "convenience"
- Panelists noted the paucity of data concerning issues with clinical trial activation across institutions and stakeholders. They agreed that data need to be collected across institutions and be comparative on the above issues to better understand current barriers and maximize effectiveness of any specific solution. FDA representatives agreed with this concept and stated that it would help the agency better understand whether burden may come from the interpretation of regulatory processes rather than the processes themselves. If data exist and were made available, FDA proposed analyses of regulatory processes that were identified as burdensome

Panel Discussions

Panel 3: Increasing Efficiency in Study Activation & Conduct

Chair: David Hong, MD
MD Anderson Cancer Center

Patricia LoRusso, DO
Yale Cancer Center

Jamie Harper, MHA, CCRP
WCG

Collette Houston
Memorial Sloan Kettering Cancer Center

David Feltquate, MD, PhD
Palleon Pharma

Heidi D. Finnes, PharmD, BCOP, FHOPA
HOPA

James Yao, MD
MD Anderson Cancer Center

Leonard Sacks, MD
US Food and Drug Administration

Jeffrey Infante, MD
Janssen

Elad Sharon, MD, MPH
National Cancer Institute

Key Takeaways
❖ Increased standardization and communication will assist in trial activation times
❖ Cross institutional data is necessary to appropriately address this issue - Collaborate with other ongoing efforts attempting to measure the time to activation and providing definitions for the activation process to allow for cross institution comparisons
❖ Introspective evaluation and field wide consensus is necessary for overcoming a cultural barrier of fear and mistrust

Defining the Problem

- Panelists started by highlighting the timeline of drug approval. Currently, the average timeline from a protocol being submitted to a drug being approved is 7.6 years. Panelists agreed that this is far too long for many patients
- Panelists noted that many of the previously discussed aspects during the program – including increased efficiencies, facilitating harmonization, enhancing communication between stakeholders and simplifying existing processes – would provide immense benefit to the current timelines for introducing drugs into clinical care
- Specifically, the lack of standardization concerning clinical trial systems and forms leads to massive amounts of duplicative work. Panelists described how each industry sponsor, and sometimes even trials from the same sponsor, will use different systems that cannot communicate with one another. From a pharmacist's perspective, this leads to information being entered multiple times and ultimately detracts from time spent on other important trial aspects. Panelists continued by stating that this problem is exemplified within EMR builds. EMR builds are often unique to every trial and site compounding complexities across trials

Panel Discussions

- Panelists again stressed that the field currently lacks cross-institutional data necessary to make informed decisions on how to improve activation timelines. They discussed how there is a "culture of fear and skepticism" persistent throughout the clinical trial industry that may be limiting sharing and collection of the required data.
  - They specifically described how sites may not be amenable to sharing institutional data as they may be perceived as potential weaknesses
  - The question of data value was also discussed. Panelists detailed how stakeholders may need to conduct an honest assessment concerning the specific purpose that each required data point serves within a trial and whether those data points are necessary to achieve the goals of the study
  - IP rights and protection was also noted as a hindrance. IP protection discussions during trial contracting and negotiations often lead to significant delays in trial activation
- The importance of working with clinical trials activation staff, and specifically data coordinators, was stressed concerning collection of activation data. Data coordinators have a critical perspective to share concerning both the studies and patients themselves, including how a protocol "flows" within a clinic
- Panelists agreed that enrolment is also a significant issue and noted the current and historical lack of representation of minority communities within clinical trials. Trial eligibility criteria was noted as a barrier for trial enrolment when aspects go well beyond disease specificity

Identifying Solutions

- Panelists stated that identification of internal barriers and introspective analyses at each institution will be required to overcome many of the existing barriers. This includes detailing drivers for each of the following categories:
  - Trial costs
  - Trial activation delays
  - Barriers in enrollment
  - Resistance to obtaining cross-institutional data
- Panelists stressed the importance of simplification and harmonization of clinical trial processes. One suggestion was centralization of processes within individual cancer centers towards enhancing communication and reducing duplicative efforts. Another suggestion included a "proof of concept" study that could highlight some standardized/harmonized processes for the field. Collaboration with cooperative groups was proposed for these trials
- FDA representatives noted that the agency has tried to expedite trial activation by emphasizing "point of care" trials. Trials during the COVID-19 pandemic were provided as an example, where the first patients for COVID-19 therapies were enrolled within 9 days of approval of the protocol. It was suggested that continued decentralization around trials occurring at individualized sites would benefit trial activation, and this could be accomplished through a variety of mechanisms including further developing platform trials (which allow for additional arms within an existing trial infrastructure), and trial networks (which identify a network of providers along a specific set of conditions and focus on them)
- One suggestion towards streamlining processes and enhancing communication between stakeholders was the adoption of sponsor/monitor guides prior to trial activation. These guides would essentially serve as a "one-stop shop" for sponsors when assessing sites for their respective clinical trials. Guides would provide details on site processes and capabilities, including details such as SOPs, equipment on site, and locations of specific items, among other aspects
- Education for sites on prioritization of specific studies to advance was recommended. This includes Principal Investigator (PI) education on how to assist in determining which trials should be prioritized for a given site in an objective fashion
- Standardized language concerning budgets and contracts was recommended that could help reduce duplicative efforts across stakeholders and ensure fair practices across the field
- A central repository for Medicare coverage analysis, site qualification, and regulatory documents was proposed towards further streamlining existing processes

Panel Discussions

- Panelists discussed looking internationally for improvements in activation procedures. One example that was discussed was clinical trials in Australia, where once a trial is activated at a single site, it can be activated at multiple, alternative sites using existing regulatory documents

- Expansion of enrollment was highly emphasized to provide expanded access for patients. Panelists stated that this will require a field-wide effort and provided the following suggestions:
  - Challenging sponsors to decentralize trials and expand further into community centers to directly engage with patients and sites
  - Empowering community centers with the knowledge and infrastructure needed to conduct trials. This includes educating sponsors that while enrollment at individual community centers may be minimal, more centers would ultimately become accessible

Panel Discussions

Panel 4: Changing the Clinical Trial Business Model

Michael Gordon, MD
Honor Health

Krystyna Kowalczyk
OncoBay

Sandy Smith,
RN, MSN, AOCN
WCG

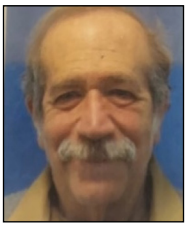
John Powderly, MD
Carolina BioOncology Institute

Leisha Emens,
MD, PhD
UPMC Hillman Cancer Center

David Hong, MD
MD Anderson Cancer Center

Leonard Sacks, MD
US Food and Drug Administration

Shaheen Limbada
Veristat



Howard Streicher, MD
National Cancer Institute

Key Takeaways
❖ The current clinical trial business model is unsustainable
❖ An adjustment in how the economics are currently being spread between sites, CRO's, and sponsors needs to be made to create a more equitable/sustainable model. This can be accomplished through adjustment in payment models and the shifting of work
❖ Shifting operations of clinical trial offices to function as businesses will assist with these changes
❖ Expansion of access to clinical trials can be incorporated in to these novel clinical trial business models

Defining the Problem

- Panelists agreed that the current clinical trial business model is not sustainable. The discussed inefficiencies across the previous three panels currently make up a system that does not effectively serve patients. Stakeholders stressed that striving for clinical trial sustainability should be the long-term goal for the field
- One major issue concerns clinical trial staffing. Currently, sites lack the number of required staff for clinical research, as well as lack adequate training of available individuals. There are various issues pertaining to this:
  - The lack of staffing is leading to gaps in processes and responsibilities across clinical research
  - Sites are unable to effectively compete in pay, workplace flexibility, and career advancement vs. industry and CROs for their clinical trial operations staff

- Panelists discussed how the current economics of clinical research include three major components: sponsors, CROs, and sites. When characterizing the financial flow across these three partners, it was determined that there is uneven distribution of funding across the three parties and primarily favors CROs. One example detailed how CROs are financially incentivized to conduct more queries and be less efficient than desired. CRO representatives acknowledged the flaws in the financial system and were willing to discuss alternative payment models, noting that some costs must remain (i.e. management fee). Panelists agreed this contributes to the sustainability issues for clinical research, and recommended that this issue be revisited to create a better balance across the three stakeholder institutions

Identifying Solutions

- Panelists agreed that this current crisis in clinical research serves as an excellent opportunity for the field to uproot the existing business models/systems. It was stated that this will require a comprehensive approach from all stakeholders in accepting change, to which many have been historically resistant

- Panelists agreed that shifting clinical trials operation to function more as a business within sites is necessary to create a more functional, efficient, and sustainable system. This would include all aspects of the trial, including budgets, contracts, hiring, and negotiating. The goal would be to achieve financial feasibility to help drive growth for the sites

- A number of ideas were proposed concerning aspects of clinical research staffing:
  - Shifting some work to the CRO may be beneficial and increase efficiency. Panelists noted that hospitals and systems have embraced the idea of outsourcing work in a variety of contexts, but haven't explored the possibility in the clinical research arena. Shifting work to CROs taking on additional tasks could assist in relieving the workforce burden on sites, as well as offer research coordinators more flexibility (i.e. remote work) and career advancement
  - Stakeholders noted a lack of workforce education concerning clinical research careers in general. Some colleges were discussed that have started to offer majors focused on research coordination. Continued investment and support for these programs, as well as opening other solutions, will lead to individuals becoming more knowledgeable about careers in clinical research
  - The importance of connecting research staff to the overall goal and purpose of each trial was stressed. This helps to create more interest in the process and could lead to more satisfaction in longer-term research careers

- There was significant discussion concerning the financial implications of shifting some work from sites to CROs. The current model is a fixed payment schedule based on a per query/entry basis. A proposed potential new model that was discussed was a "Pay for Performance" model, where the CRO or coordinating sponsor are compensated per enrolled patient

- As previously discussed, Panelists agreed that solving this current crisis should involve expanded access to clinical trials for community settings and underrepresented populations. The University of Alabama-Birmingham was provided as a successful example of expanded access into community settings. In this case, the state of Alabama and private donors combined to invest heavily into the center with the goal of attracting clinical trials to their region to support the community. A variety of solutions were further discussed:
  - Exploring new ways to engage with community sites in order to support education, infrastructure and interest in clinical research participation. It was stressed that sponsors need to be involved and supportive during this outreach
  - Community expansion may require a change in payment structure. Many community physicians are compensated via RBU's and are not on academic appointments. Expansion to these providers without adjusting their compensation structure would be asking them to divert time and resources away from the way in which they are paid
  - Reducing complexity of clinical research administration through mechanisms discussed in the previous three panels will assist with trial decentralization
  - There is a need in the field to better understand patient distribution across the US and to better understand population attributes. This will assist with site selection and decentralization
  - There was emphasis on shifting mindsets towards "Patient-Centric" clinical trials. These types of trials could be open-ended and involve multiple therapeutic options, with the ultimate path forward tailored for each individual patient

Conflicts of Interest

The Society for Immunotherapy of Cancer requires instructors, planners, managers and other individuals who are in a position to control the content of this activity to disclose any real or apparent conflicts of interest (COI) they may have as related to the content of this activity. All identified conflicts of interest are thoroughly vetted and resolved according to SITC policy.

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