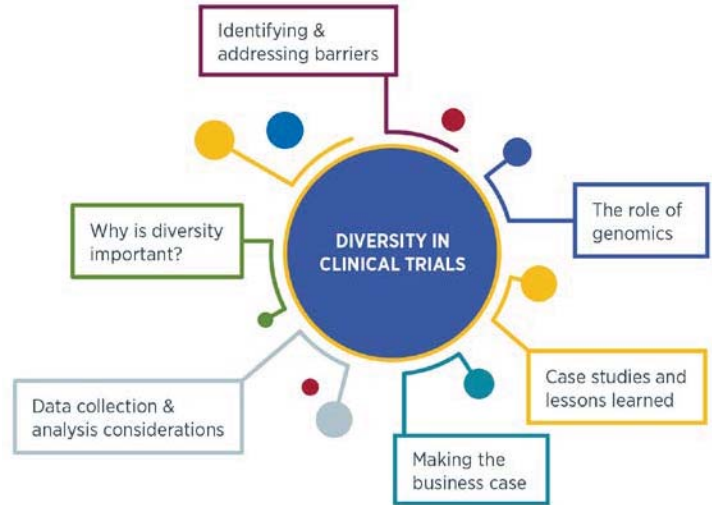




Representation of Diverse Populations in Clinical Trials

Ethical Foundation

The composition of the majority of clinical trials does not reflect the diversity of the population at large nor those likely to use the investigational product. Historically under-represented groups remain understudied, and variability in treatment response, safety, efficacy, and tolerability go undetected. The ethical foundations of justice, beneficence, and autonomy support inclusion such that the role of factors like age, sex, gender, race, ethnicity, and sociodemographic factors be considered in clinical trials.



Diverse stakeholders are tackling the issues from both a scientific and socioeconomic perspective to define guiding principles, establish standards of approach & practice, and explore practicable solutions

Demonstration of the Problem

Clinical Trial Participation Demographic Subgroups for 46 novel drugs that were approved by the FDA in 2017. Overall, 59,030 patients participated in these trials*

| DEMOGRAPHIC SUBGROUPS | WOMEN | WHITE | ASIAN | BLACK or AFRICAN AMERICAN | HISPANIC | AGE 65 AND OLDER | UNITED STATES |
|-----------------------|-------|-------|-------|---------------------------|----------|------------------|---------------|
| PARTICIPANT AVERAGE | 55% | 77% | 11% | 7% | 14% | 32 % | 34% |

*Data presented in this report are from 47 snapshots as one drug was approved for 2 different diseases (populations).

* www.fda.gov/drugtrialssnapshot

Barriers to Participation

- Costs of participation
- Inadequate reimbursement
- Lack of child care support
- Research visits schedule
- Research center feasibility
- Research center location

- Inclusion/Exclusion Criteria that exclude diverse populations
 - Normal laboratory variants discounted
 - Co-morbidities excluded

Awareness

- Language barriers and inadequate translation
- Low health and research literacy among underserved communities
- Cultural differences
- Lack of community engagement
- Research advertisements fail to reach populations

Access

Recruitment

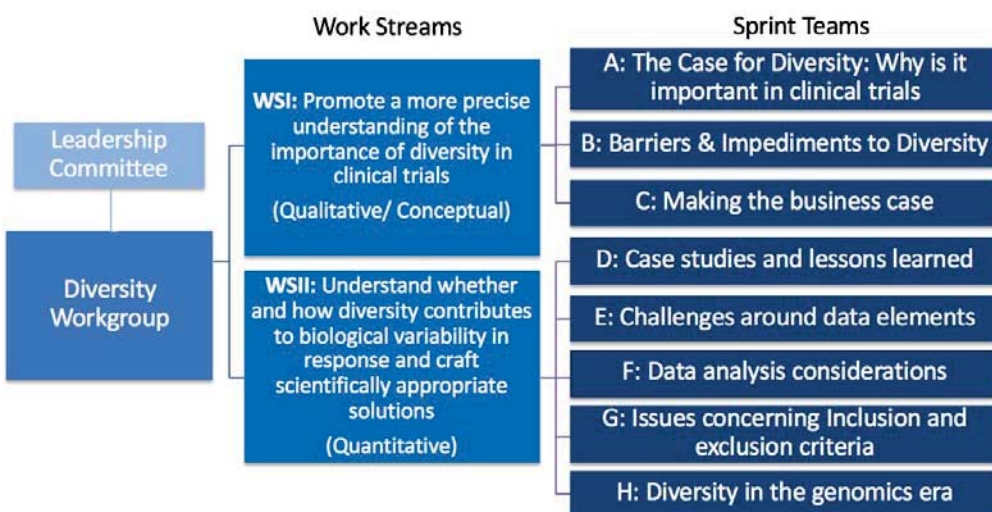
Screening

- Poor/Inconsistent relationship between underserved communities and researchers
- Mistrust of academic medical research model
- Lack of cultural competency & representation among research faculty and staff
- Perceived operational/timeline costs to having representation mimicking general population

MRCT Center Approach



Workgroup Structure & Issues Addressed



Representative Workgroup Organizations

Accelerated Cure Project for Multiple Sclerosis
 Advances in Health
 Amgen
 Biogen
 Boehringer Ingelheim
 Boston Scientific
 Brigham and Women's Hospital
 Cancer Connection
 Case Western Reserve University
 CDISC
 Columbia University Medical Center
 Emerson Clinical Research Institute
 Genentech/Roche
 GlaxoSmithKline
 Harvard Medical School
 IQVIA
 Kinetiq
 Massachusetts General Hospital
 Merck & Co.
 NIAID/NIH
 Novartis
 Parkinson's Foundation
 Pfizer
 Pinkie Hugs, LLC
 Sanofi
 Stanford University
 Takeda
 University of Illinois Cancer Center
 Vivli
 Yale Center for Clinical Investigation

Workgroup Leadership

Richardae Araojo, FDA
 Barbara Bierer, MRCT Center
 Luther Clark, Merck Co.
 David Strauss, MRCT Center
 Sarah White, MRCT Center
 John Whyte, WebMD/ formerly FDA

Project Management

Hayat Ahmed, MRCT Center