Report of the NCAB Ad Hoc Working Group

June 13th Ad Hoc Population Science, Epidemiology, and Disparities Subcommittee Presentation (2:05-3:00 PM)

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Agenda

- Review Mission Statement
- Workgroup membership
- Progress to date:
  - Meetings
  - Outline of Report
  - Scoping Project
- Emerging gaps for consideration in recommendations
- Open discussion

Mission Statement

- “The National Cancer Advisory Board (NCAB) ad hoc Subcommittee on Population Science, Epidemiology and Disparities will convene an ad hoc Working Group that will advise on strategic approaches and opportunities for research on cancer among racial and ethnic minorities and underserved populations. The NCAB ad hoc Subcommittee has identified this area of focus as having high potential impact on reducing health disparities. The Working Group is charged with identifying and evaluating the current status, barriers to progress, new potential strategic approaches to better address cancer research on racial and ethnic minorities and underserved populations, and potential actions to implement the new strategic research approaches effectively.”

Source: NIH Website, June 11, 2022

Membership

Co-chairs:

- Chyke Doubeni, M.D., M.P.H.
- Elena Martinez, Ph.D.
- Electra Paskett, Ph.D.

Designated Federal Official:

- Philip E. Castle, Ph.D., M.P.H.

Members:

- Melissa L. Bondy, Ph.D.
- Luis G. Carvajal-Carmona, Ph.D.
- Bettina F. Drake, Ph.D., M.P.H.
- Jeffrey A. Henderson, M.D., M.P.H.
- Chanita Ann Hughes-Halbert, Ph.D.
- Karen E. Knudsen, M.B.A., Ph.D.
- Lisa A. Newman, M.D., M.P.H., F.A.C.S.
- Augusto C. Ochoa, M.D.
- Colin Weekes, M.D., Ph.D.
- Cheryl L. Willman, M.D.

Progress to Date

- Workgroup membership confirmed – April, 2021
- First meeting – July 2021
- Monthly co-chair meetings
  - Set agenda for group
- Monthly full committee meetings
  - Report outline
  - Speakers from NCI
    - Center for Research Strategy (CRS) – Michelle Bennett, PhD, Diane Palmieri, PhD, Christine Burgess, PhD
    - DCCPS - Shoba Srinivasan, PhD
    - CRCHD – Sanya Springfield, PhD

Progress to Date (Continued)

- Portfolio Analysis Task Group – Chanita Hughes-Halbert, PhD (Lead)
  - Charge: Operationalize a definition of health disparities, refine the search criteria, and research grants to be included

Outline of Report

1. Executive Summary of Findings and Recommendations
2. Overview of Charge
3. Definition of Disparities
4. Cancer Continuum and Frameworks
5. Cancer Disparities in Populations of Focus
6. Methodology
7. Results by Population Group
8. Overall Summary and Recommendations
9. Supplementary Material
10. References

Scoping of Information Gathering

- Process used by CRS
- Pilot done: *Black or African American people*
- Search terms refined by our WG
- Population groups expanded: *Hispanic/Latino; American Indian/Alaska Native; Asian/Pacific Islander; rural; older adult; LGBTQ; AYA*
- Pilot redone
- Presented to full group
- Given “go” to use final methodology for all populations
- Results to be reported to group at end of the month

Initial Report from Scoping Project

OVERVIEW, METHODS, AND DEFINITIONS

NIH Funded Cancer Research Related to Selected Populations

Center for Research Strategy

CRS Project Team: Josh Collins, Christine Burgess, Diane Palmieri

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June 7, 2022

This information is provided to the NCAB working group for their deliberation and should not be made public without further discussion with the NCI

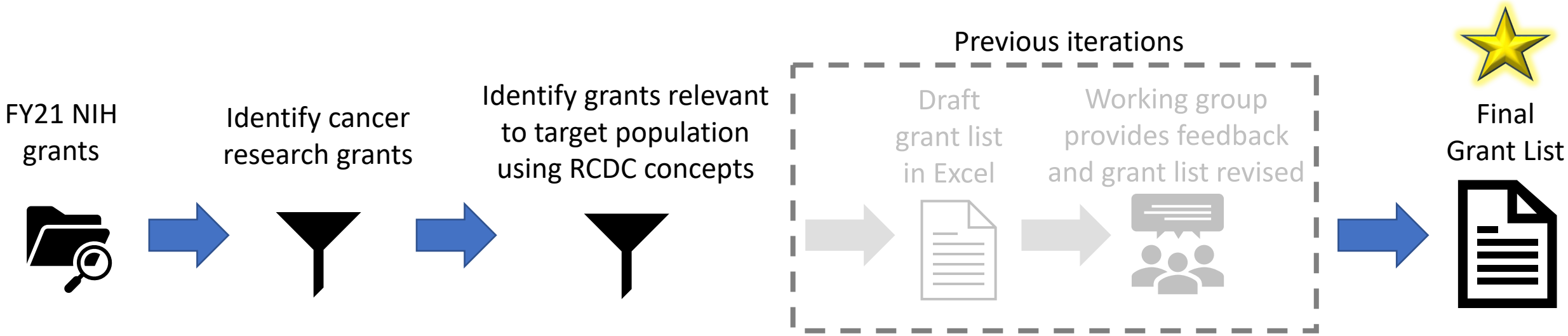
Portfolio Analysis Overview

- The primary goal is to identify awarded cancer research grants within the **NIH** research portfolio relevant to populations of interest
- The secondary goal is to provide a broad overview of the research portfolio for each population of interest

- This slide deck:
  - Describes the approach used to identify research relevant to populations of interest by leveraging RCDC categories and concepts
  - Provides a broad portfolio overview for each population

Overview of CRS Approach to Identify Cancer Research Relevant to Populations of Interest

- Research was included if it contained concepts relevant to the population of interest



- Populations of Interest: Black or African American, American Indian or Alaska Native, Asian, Hispanic, Pacific Islander, Rural American, Sexual & Gender Minorities

Important Considerations

- Analysis approach relies on the language used by applicants in the title, abstract, and specific aims of a grant
  - Will not distinguish from grants that mention a particular population vs those *focused* on a population

- Provides insight into grants relevant to populations of interest but will not provide a precise measure of all investments

- Analytical decisions by the working group involving exclusion criteria (training, career, international, etc.) resulted in limited portfolios that primarily focus on research grants

Methods:
Identifying FY21 NIH Cancer Grants for Populations of Interest

What is a Base Project?

- NIH grants are either single component (such as an R01) or multi-component (such as a P01 or a U54)

- Multi-component grants are comprised of a parent project and sub-projects which all share the same base project number (such as U54CA654321)

- In this analysis we are counting unique base projects and a base project is included if at least one component (i.e., subproject) was identified in a search strategy

Research, Condition, and Disease Categorization (RCDC)*

- The Research, Condition, and Disease Categorization (RCDC) system is utilized by the NIH in its reporting process to categorize funding in biomedical research for each fiscal year

- Automated text mining of projects produces a weighted list of *concepts* from the RCDC Thesaurus called a project index

- The *categories* are also weighted with lists of concepts that define a research area, condition, or disease

* Research Condition and Disease Categorization (RCDC) is an NIH project categorization system https://report.nih.gov/funding/categorical-spending/rcdc

Research, Condition, and Disease Categorization (RCDC)* (Continued)

- The category concepts are matched to project indices to produce the category project listing

- **All portfolios leverage the RCDC category CANCER (all NCI grants fall within this category)**

* Research Condition and Disease Categorization (RCDC) is an NIH project categorization system https://report.nih.gov/funding/categorical-spending/rcdc

RCDC Category and Concept Usage for Populations of Interest#

Population of Interest	Available RCDC Category	Example RCDC Concepts
Black or African American	--	African American, African Caribbean, black men, black women….
American Indian or Alaska Native	American Indian or Alaska Native	--
Asian	--	Asian Americans, Chinese, Chinese American, Chinese People, Korean American, Koreans, Japanese American….
Hispanic	--	Hispanic Americans, Mexican Americans, Cuban Americans, Puerto Rican, Costa Rican, Latino, Latinx….
Pacific Islander	--	Native Hawaiian or Other Pacific Islander, Pacific Island Americans, Pacific Islander, Hawaiian, Samoan, Polynesian…
Rural American	Rural Health	--
Sexual and Gender Minority	Sexual and Gender Minorities (SGM/LGBT*)	--

Full list of RCDC categories and concepts provided in Methods document

Example Target Population

FY21 NIH awarded grants and subprojects were selected using RCDC* category CANCER and RCDC concepts (with synonyms**) in the Title, Abstract, or Specific Aims:

For example, a search query using RCDC category CANCER in combination with the following RCDC concepts (with synonyms) was used to produce the Black or African American cancer portfolio:

- African American (Afro American, Afroamerican, Black American, Black Populations)
- African Caribbean (Afro-Caribbean, Black Caribbean, Black Carib)
- African race
- African
- Black race
- Black subgroup (Black racial subgroup)
- Black men (Black male)
- Black women (Black female)
- Black patient
- Black/White disparity

* Research Condition and Disease Categorization (RCDC) is an NIH project categorization system
https://report.nih.gov/funding/categorical-spending/rcdc

** RCDC concepts follow a specific spelling and capitalization scheme

Exclusion Criteria

- Award supplements (Type 3)
- International/Domestic Training & Career (Fs, Ks, Gs, Hs, Ts, D43, D71, M01, R00, R13, R25, R90, U13)
- P30 (Cancer Centers)
- NCORP
- International Projects
  - Fogarty International Center grants
  - Center for Global Health grants
  - Grants with foreign countries in title
- Subproject Cores

Composing the FY21 Portfolio for Each Population of Interest

Starting:

FY21 NIH Cancer Grants

- RCDC = Cancer
- ~9,650 Base Projects
- ~75% are NCI (n = ~7,250)

Exclude:

- Award supplements (Type 3)
- International/Domestic Training & Career (Fs, Ks, Gs, Hs, Ts, D43, D71, M01, R00, R13, R25, R90, U13)
- P30 (Cancer Centers)
- NCORP
- International Projects
- Subproject Cores

Intermediate:

Removed exclusion criteria

- "NIH Cancer Research Portfolio"
- ~7,300 Base Projects
- ~74% are NCI (n = ~5,400)

Include:

- RCDC Categories and Concepts for Population of Interest

Final:

FY21 NIH Cancer AND Population of Interest

- *X* Base Projects
- ~*Y* % are NCI

Perspective on Type of Research Using the ICRP Common Scientific Outline (CSO)

- ICRP Cancer Types and CSO Codes refer to the International Cancer Research Partnership Coding Guidelines used to apply a common language (Common Scientific Outline) for discussing, comparing, and presenting cancer research portfolios

- Determined using a machine learning model

- Applications, and therefore base projects, can be assigned to more than one category

- In some cases, there is not enough information to assign an application to a particular category

ICRP International Cancer Research Partnership

CSO Codes

1. Biology
2. Etiology
3. Prevention
4. Early Detection, Diagnosis, and Prognosis
5. Treatment
6. Cancer Control, Survivorship, and Outcomes Research

https://www.icrpartnership.org/sites/default/files/cso/ICRP_Coding_Guidelines.pdf

Emerging Gaps for Consideration in Recommendations

1. Facilitate identification and tracking of research focused specifically on AYA and older adult (pre-defined).
    a. Less confident in the search criteria
    b. Not included in results
2. Better data collection on LGBTQ+ needed
3. Focus on gaps across the continuum and lifespan
4. Increase participation in clinical trials of these populations
5. Research needed to understand cancer disparities
    a. Social vs. biological components; intersectionality (biology, genetics, and social); rurality; cancer models; translation into practice
    b. Access to care
6. Future tracking of grants at NCI:
    1. Funded grants: Dollars, numbers, and denominators over 10-15-year horizon across continuum of care
    2. Assess drivers of changes in funding trends (e.g., RFAs)
    3. Create time horizon of research investment for sustainable improvement
    4. Model cost-effective research investment across populations
    5. Assess outcomes of research in health disparities within the NCI and each division
    6. Use consistent or shared approaches across Divisions and Centers at NCI to enable sharing of lessons learned


Open Discussion

Thank you!

WE LOOK FORWARD TO PRESENTING OUR REPORT IN DECEMBER, 2022

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