

Continuing Umbrella of Research Experiences CURE Advisory Committee





History

- Established in 1998 as a consortium of all Harvard cancer research units:

Boston Children's Hospital (**BCH**)

Beth Israel Deaconess Medical Center (**BIDMC**)

Brigham & Women's Hospital (**BWH**)

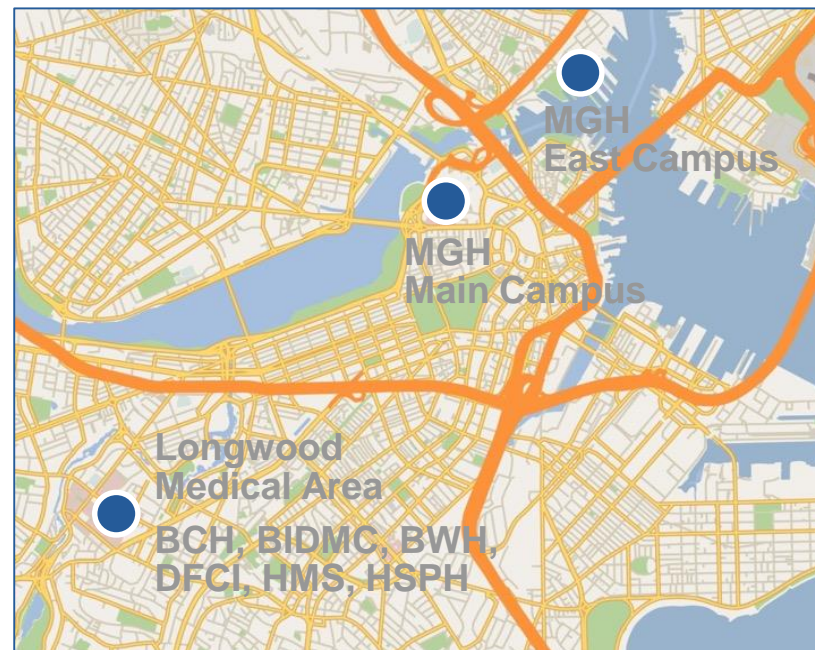
Dana-Farber Cancer Institute (**DFCI**)

Harvard Medical School (**HMS**)

Harvard TH Chan School of Public Health (**HSPH**)

Massachusetts General Hospital (**MGH**)

- Successor to DFCI Cancer Center (CCSG in its 55th year).
- DF/HCC awarded CCSG in 2000; renewed in 2005, 2011, and 2016 2016..



Mission of the Consortium Cancer Center



To conduct inter-institutional, collaborative, collegial, and interactive science to accelerate new discoveries into better ways of cancer prevention, diagnosis, and treatment.

Student Training



Launched 2002:

Mission:

Provides ACCESS to high school and undergraduate students to achieve measurable IMPACT on young STEM professionals and build a PIPELINE of talented and diverse cancer researchers.

Research Training Programs



CURE - Summer

Continuing Umbrella of
Research Experience

- Summer 8-12 weeks
- High school and undergrad
- Foundational programming providing exposure to all of the framework elements

YES for CURE

Young Empowered
Scientists for
Continued Research
Engagement
(NCI – R25CA221738)
PI - DeCaprio

- 2.5 year
- High school and undergrad
- Skills and solution
- Middle school teach-back
- Family engagement

SPARC

Summer Program to
Advance Research
Careers
(NCI -R25CA214256)
PI - Benz

- 12 weeks
- Undergrad
- Emerging technologies
- In partnership with UMass and 3 local community colleges
- Opportunity fair
- “TEC” Talks

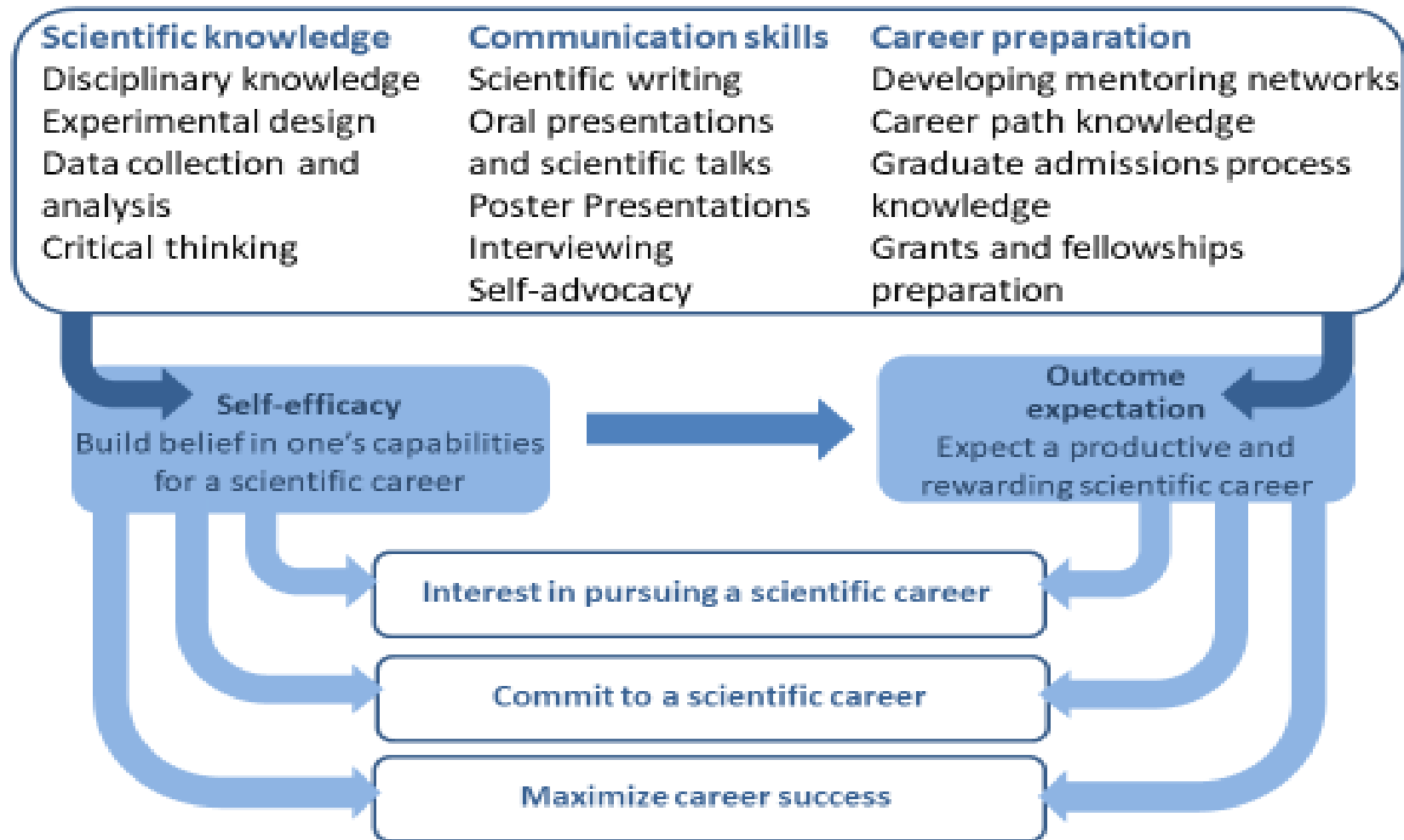
Common elements across all programs include: alumnae engagement, team building and networking, scholarly activities including book clubs



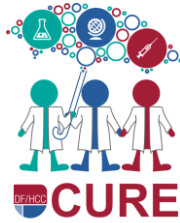
Program Aims

- Engagement of talented and highly motivated high-school and undergraduate students from underrepresented populations in mentored research experiences
- Build scientific knowledge in key concepts, decisions processes and skills necessary for academic and professional success in sciences through a year round scientific and professional skill development curriculum
- Develop a supportive, informed, and engaged community of culturally competent cancer scientists and science enthusiasts comprised of alumni, mentors, families, and community partners who will nurture and empower program participants to achieve academic success and pursue careers in scientific research.

Research Training Conceptual Framework



Evaluation



Three Approaches:

- **CURE Alum - Annual Survey**
(All Program Participants)

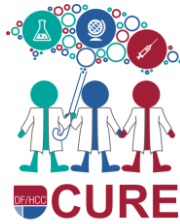
- **Strategic Evaluation Inc.**
(Yes for CURE only)

- **Program administered surveys**
(All Program Participants)

Evaluation Approaches



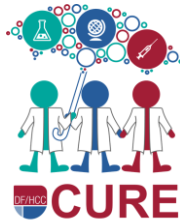
CURE Alum - Annual Survey



CURE Alum Annual Survey

Online Survey Period: Nov-Jan

- **Avg Response rate**
CURE – 60-65% - YFC – 95%
- **Information collected**
 - Education levels (current and completed)
 - Current employment (science-, cancer-, or health disparities-related)
 - Scholarly activity (conferences, grants, publications)
- **Other Data Sources**
 - Linked In
 - National Student Clearinghouse (NSC)
 - Pub-Med, Google Scholar, and online databases



2019 Annual Survey

Academic Outcomes (started CURE as an undergraduate (n=237)):

82% completed or are currently enrolled in post secondary educational programs (BS., MS., MD., PhD)

Completed:

- **51%** College
- **19%** Graduate school
- **7%** Medical school
- **5%** Professional school



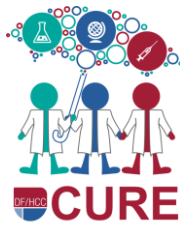
2019 Annual Highlights

Academic Outcomes (started CURE as a high-school student n=171):

76% completed or are currently enrolled in post secondary educational programs (BS, MS, MD, PhD)

Completed:

- **37%** College
- **15%** Graduate school
- **4%** Medical school
- **4%** Professional school



2019 Annual Highlights

All respondents:

- **87% graduated with STEM or health science degrees (including public health, psychology and social sciences)**

Career Outcomes - Working students

- 61% - Science-related field
- 26% - Cancer-related field
- 13% - Health disparities –related field

2019 Scholarly Activity



Publications:

Conference Presentations:

Conference Awards:

2019 Annual Survey



- **Response Rate:**
 - CURE: 60%; YES: 95%

Evaluation Approaches



Strategic Evaluations Inc.
(external evaluators)



SEI Program Evaluation

Student Baseline Survey

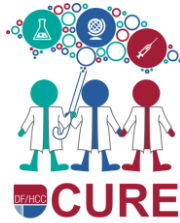
Concept Inventory - 5-6 sessions

Pre/Post

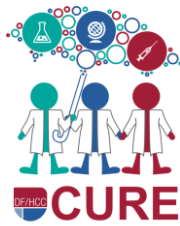
Start and End of Summer Surveys

On-Site visits - Mentor and Students – Small Groups

Baseline Assessment: Cohort #3 – 27/28



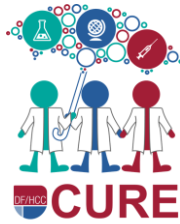
- **How did they learn about YFC**
 - Advisor/Teacher/Professor
 - Program Representative
- **Influence to participate**
 - Year-around programming – 70%
- **Science content**
 - Biology and Biomedical research (5.11-5.22/6.0)
- **Career interests (high and very high)**
 - Medicine – 96%
 - Clinical trials – 62%
 - Cancer-related – 41%
 - Health-disparities 70%
- **Degree aspirations – 93%** Looking to earn some level of a doctorate (33% Dual degree, 30% PhD, 25% MD)



Baseline Assessment - cont.

Across 21 scientific research process skills – YFC Students expressed:

- Highest level of confidence in their ability to work with other science professionals in a group and to work in small groups with 77% and 69% rating themselves highly competent, respectively (means over 4 on a 5-point scale)
- Trended lower in their confidence and ability to write a science research abstract, conduct an effective literature search, and facilitate a Q&A related to a science research poster or talk
- A moderate level of competence for most of the other scientific research process skills listed on the survey.



Baseline Assessment - cont.

What academic/professional areas do you most hope to strengthen through your involvement in the YES for CURE Program?

Selected Comments:

- Strengthening of their research skills through greater exposure and experience.
- Enhancing their oral and written scientific communication as areas they looked to strengthen.
- Increase their science content during this experience.
- Strengthen their knowledge in a variety of science careers



Thank You!