

Building Interdisciplinary Research Careers in BSS and Cancer Prevention and Control Research

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What are we talking about?

Interdisciplinary

Interprofessional

Multidisciplinary

Transdisciplinary

Cross-Disciplinary

Team Science

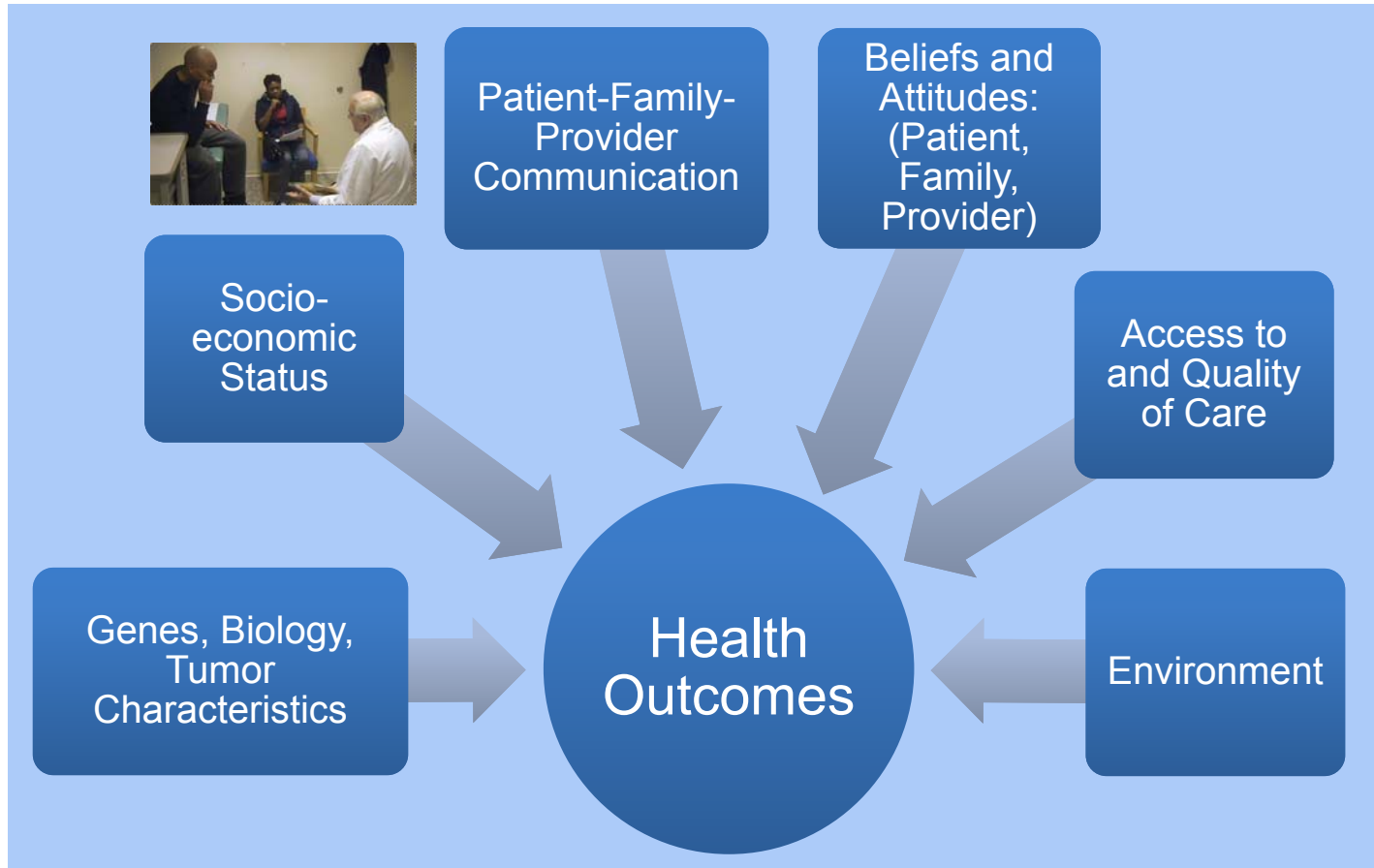


Why not stick to what we know?

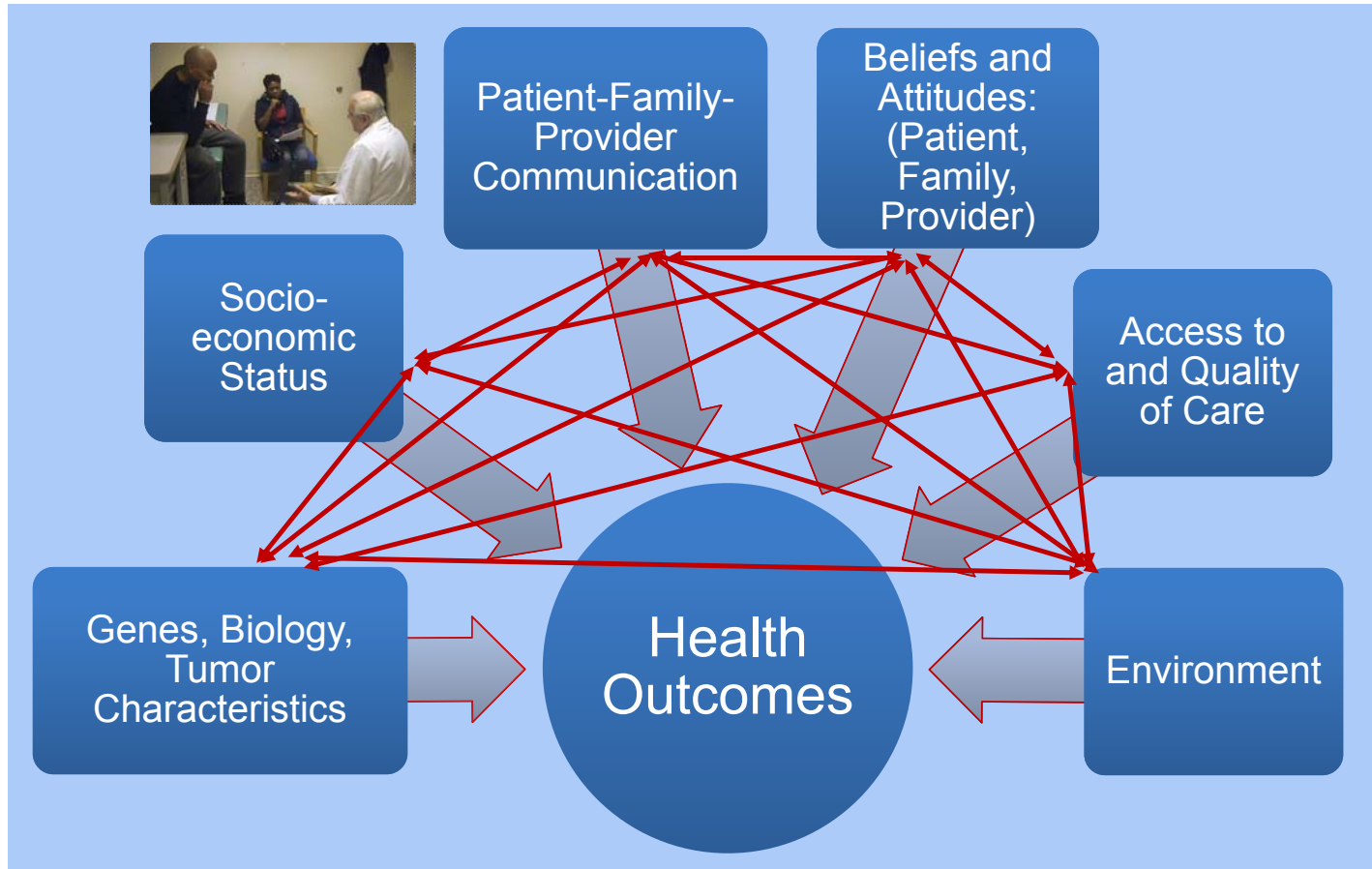
What causes poor health outcomes? Isn't it all about interpersonal communication?



Causes are too complex for one discipline to address....



Causes are too complex for one discipline to address....



Considering the enormous complexity and multifactorial causation of the most vexing social, environmental, and public health problems (e.g., terrorism and interethnic violence; global warming; cancer, heart disease, diabetes, and AIDS; health disparities among minority populations), efforts to foster greater collaboration among scientists trained in different fields are not only a useful but also an essential strategy for ameliorating these problems.

The Science of Team Science: Origins and Themes

**The Science of Team Science
 Overview of the Field and Introduction to the Supplement**

Daniel Stokols, PhD, Kara L. Hall, PhD, Brandie K. Taylor, MA, Richard P. Moser, PhD

Abstract: The science of team science encompasses an amalgam of conceptual and methodologic strategies aimed at understanding and enhancing the outcomes of large-scale collaborative research and training programs. This field has emerged rapidly in recent years, largely in response to growing concerns about the cost effectiveness of public- and private-sector investments in team-based science and training initiatives. The distinctive boundaries and substantive concerns of this field, however, have remained unclear. An important challenge for the field is to characterize the science in terms of its major theoretical, methodologic, and translational research questions, and to address this challenge, especially in the context of designing, and evaluating cross-disciplinary research initiatives. This supplement addresses the major goals and organizing themes of the supplement, summarizes the major goals and organizing themes of the supplement, and identifies new areas of study within the field. (Am J Prev Med 2008;35(2S):S77-S89) © 2008 American Journal of Preventive Medicine

Background

The past two decades have witnessed a surge of interest and investments in large-scale team science programs.¹⁻⁷ Ambitious multiyear initiatives to promote cross-disciplinary collaboration in research and training have been launched by several public agencies and private foundations.⁸⁻¹⁵ Considering the enormous complexity and multifactorial causation of the most vexing social, environmental, and public health problems (e.g., terrorism and interethnic violence; global warming; cancer, heart disease, diabetes, and AIDS; health disparities among minority

might be more co-investigator. As public and private initiatives have proliferated, it is clear that a more formal and societal definition of team science is needed. These programmatic concerns are addressed in this supplement. The science of team science, a rapidly emerging field, is characterized by

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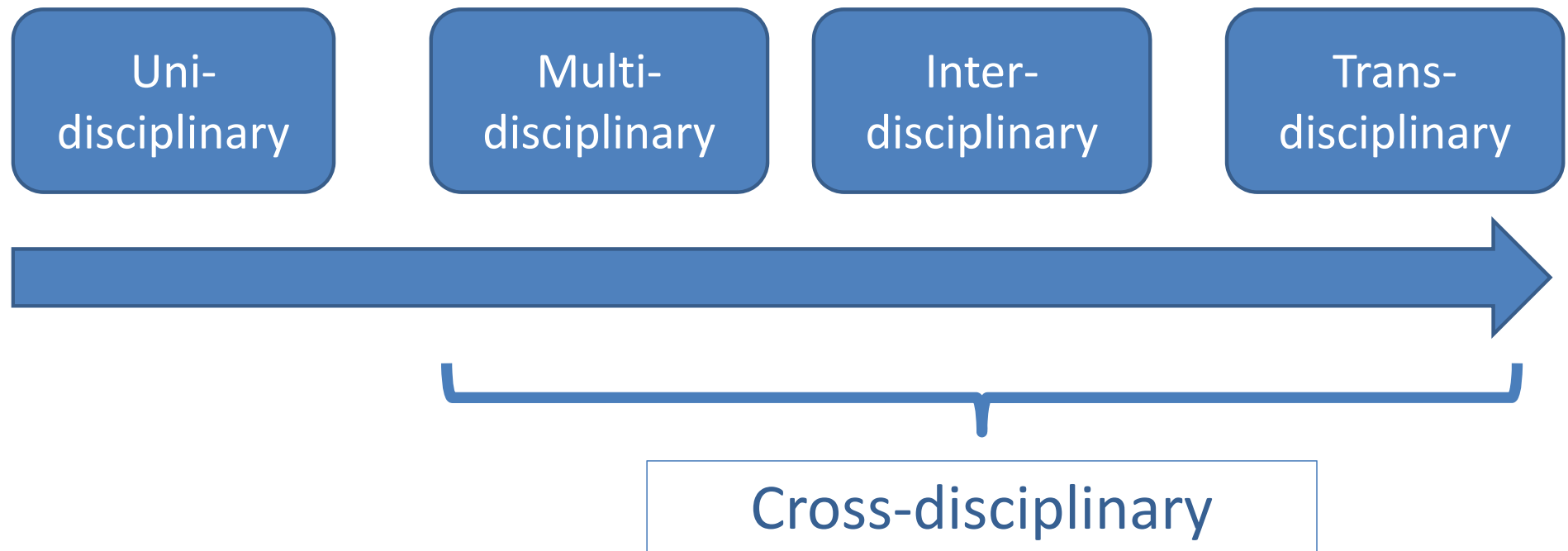
The Science of Team
 Science
 Assessing the Value of
 Transdisciplinary Research

Edited by
 Daniel Stokols, Kara L. Hall, Brandie K. Taylor,
 Richard P. Moser, and S. Leonard Ross



Stokols et al, Am J Prev Med 2008

Collaborative Research Continuum



Definitions and Example

- Problem: Minorities, and in particular African Americans, are underrepresented in clinical trials
 - Lack of access represents a disparity in treatment
 - Findings from trials are limited in generalizability
- Cause: Although there are multiple factors, one may be the quality of communication during patient-physician interactions with African American versus White patients.
- Solution: How can we address and overcome this problem?

Unidisciplinarity

- Researchers from a *single discipline* work together to address a problem
- Example:
 - Using communication theory, communication scientists interview patients, family members, and providers to learn more about how they discuss trials in racially discordant interactions
 - Design/Methods: Descriptive, qualitative
 - Findings inform interventions to improve communication; contribute knowledge to communication science
- Advantages: Fewer meetings and disciplinary conflicts; fundable through internal, foundation, or small research grants (R03)
- Disadvantages: Narrow; not innovative; may not address complex problems

Multidisciplinarity

- A *sequential* process where researchers from *different disciplines* work independently, and then combine efforts to address problem
- Example:
 - Using communication theory, **communication scientists and oncologists collaborate** to video record and analyze interactions where clinical trials are discussed with black and white patients; findings used to inform future interventions.
 - Design/Method: Descriptive; interaction analysis combined with post-visit interviews
 - Findings used to inform future interventions; knowledge contributes to clinical medicine and communication science
- Advantages: More innovative, larger network, more funding opportunities
- Disadvantages: Disciplinary conflicts; more meetings; slower; where/how to publish?

Interdisciplinarity

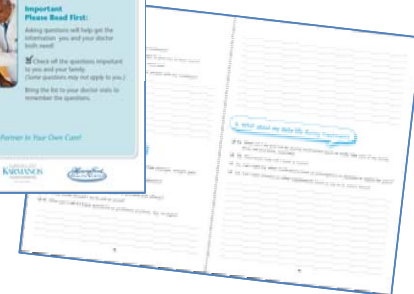
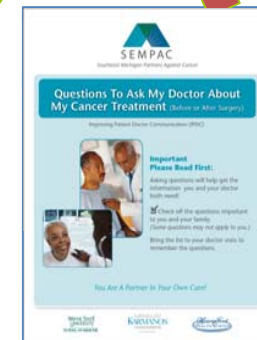
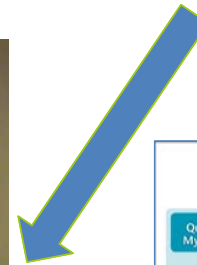
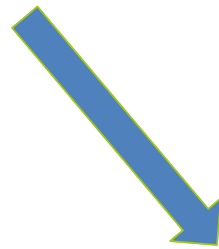
- An *interactive* process where researchers work *jointly*, each drawing from their own discipline, to address the problem
- Example:
 - Communication scientists, social psychologists, medical oncologists, linguists, and community members collaborate to develop a conceptual model and an intervention to better understand and improve clinical communication about clinical trials
- Advantages: More complex, innovative approaches; increased network and funding
- Disadvantages: Conflicting schedules, concepts, and terms; slow pace; where to publish/disseminate?

Provider

Background, Experiences,
Attitudes, Beliefs,
Judgments, Decisions, &
Behavior

Patient

Background,
Experiences, Attitudes,
Beliefs, Judgments,
Decisions, & Behavior



Provider Treatment Recommendations
Patient Decisions & Behaviors
Health Outcomes



Southeast Michigan Partners Against Cancer

Questions To Ask My Doctor About My Cancer Treatment (Before or After Surgery)

Improving Patient Doctor Communication (IPDC)



Important Please Read First:

Asking questions will help get the information you and your doctor both need!

Check off the questions important to you and your family. (Some questions may not apply to you.)

Bring the list to your doctor visits to remember the questions.



You Are A Partner In Your Own Care!



NCI/NIH U54CA153606 (PI Albrecht & Chapman)



Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pateducou



Randomized trial of a question prompt list to increase participation during interactions with black oncologists

Susan Egly^{1,2,*}, Lauren M. Hamel³, Robert Chapman^{4,5}, Richard J. Griggs⁶, Jennifer J. Griggs⁶, Louis A. Penner⁷, Felicity W.K. Harper⁸, Nao Hagiwara⁹, Michael S. Simon¹⁰, Shirish Gadgil¹¹, and Terrence L. Albrecht¹²

J. Canc. Educ (2013) 28:282–289
DOI 10.1007/s13187-013-0456-2

Development of a Question Prompt List as a Communication Intervention to Reduce Racial Disparities in Cancer Treatment

Susan Egly · Rifky Thatch · Louis A. Penner · Felicity W.K. Harper · Nao Hagiwara · Robert Chapman · Jennifer J. Griggs · Michael S. Simon · Shirish Gadgil · Terrence L. Albrecht

JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

The Effects of Oncologist Implicit Racial Bias in Racially Discordant Oncology Interactions

Louis A. Penner, John F. Dovidio, Richard Gonzalez, Terrence L. Albrecht, Robert Chapman, Tanina Foster, Felicity W.K. Harper, Nao Hagiwara, Lauren M. Hamel, Anthony F. Shields, Shirish Gadgil, Michael S. Simon, Jennifer J. Griggs, and Susan Egly

ABSTRACT

Purpose: Health providers' implicit racial bias negatively affects communication and patient reactions to many medical interactions. However, its effects on racially discordant oncology interactions are largely unknown. Thus, we examined whether oncologist implicit racial bias has similar effects in oncology interactions. We further investigated whether oncologist implicit bias negatively affects patients' perceptions of recommended treatments (i.e., degree of confidence, expected difficulty). We predicted oncologist implicit bias would negatively affect communication, patient reactions to in-

Louis A. Penner, Terrence L. Albrecht, Tanina Foster, Felicity W.K. Harper, Lauren M. Hamel, Anthony F. Shields, Shirish Gadgil, Michael S. Simon, and Susan Egly, Wayne State University; Robert Chapman, Henry Ford Health Care System, Detroit; Richard Gonzalez and Jennifer J. Griggs, University of Michigan, Ann Arbor, MI; John F. Dovidio, Yale University, New Haven, CT; and Nao Hagiwara, Virginia Commonwealth

Health Expectations

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ORIGINAL RESEARCH PAPER

prognosis and treatment goals with patients with advanced cancer: A qualitative analysis of oncologists' health expectations

Susan Egly PhD, MPH¹ | Lauren M. Hamel PhD² | Chan L. Thai PhD, MPH² | Robert A. Chapman MD³ | Terrence L. Albrecht PhD² | Jennifer J. Griggs PhD⁴

Abstract: Background: The National Academy of Medicine recommends that cancer patients be knowledgeable of their prognosis to enable them to make informed treatment decisions, but research suggests few patients receive this information. Objective: This qualitative study describes oncologists' language during discussions of prognosis and treatment goals in clinical interactions with African American patients diagnosed with cancer. Design: We analyzed transcripts from video recordings of clinical interactions between patients with Stage III or IV cancer (n=26) and their oncologists (n=9). In-depth discourse analysis was conducted to describe and interpret oncologists' communication.

Partnering Around Cancer Clinical Trials (PACCT): A Communication Intervention to Increase the Participation of African Americans In Prostate Cancer Clinical Trials, R01CA200718-01 (Eggle, PI)



WSU/KCI

- Louis A. Penner, PhD
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- Lauren Hamel, PhD
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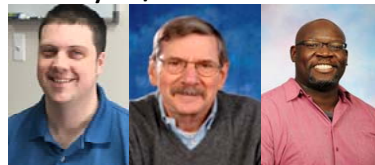
Med Oncology Nursing



Communication Science/Linguistics



Social Psych/Statistics



Transdisciplinarity



- An *integrative process*; researchers work *jointly* to develop a shared conceptual framework that extends discipline-specific theories, concepts, and methods, to create new models and language to address the problem
- Example:
 - Investigators tackling health disparities and trials include a **geographically and ethnically/racially group of communication scientists, clinical oncologists, geneticists, epidemiologists, nurses, social psychologists, community members, health economists, implementation scientists, sociologists, etc.** Together they create a novel biosocial, multi-level, multi-disease model/intervention
- Advantage: Greatest potential to solve broad, complex problems
- Disadvantage: Difficult to achieve and sustain due to complexity; expensive

How to do it?



- Create relationships outside of your department.
 - Ask around for introductions, and follow up
 - Attend cross-disciplinary lectures and other opportunities
 - Go to them--meet people in their native habitat
- Be open-minded. Listen, observe, learn their language
 - Read articles and journals outside your discipline
- Offer to do the work; write articles; get funding
- Get outside your silo and your comfort zone!



Things to Consider

- Institutional infrastructure and resources (funding, data sharing)
- Disciplinary differences (methods, theories, writing style)
- Language differences (jargon)
- Politics: power and control (proprietary rights, authorship)
- Processes: Interpersonal dynamics, schedules
- Funding trends: talk to the NCI
- Describing the collaboration for reviewers (PI, co-I, consultant, managing conflicts)

The Team Science Toolkit is an interactive website that provides resources to help users support, engage in, and study team-based research.

NATIONAL CANCER INSTITUTE National Cancer Institute at the National Institutes of Health | www.cancer.gov

Team Science Toolkit

An interactive website to help you support, conduct and study team-based research.

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Interdisciplinary Research and Team Science

In this blog entry, Julie Thompson Klein, PhD, Professor of Humanities and Faculty Fellow for Interdisciplinary Development at Wayne State University, discusses the relationship between team science and disciplinary integration. She describes the history of interdisciplinarity into the U.S. and identifies key online and print resources about collaboration and disciplinary integration.

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The Toolkit currently includes 2325 resources.

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Email this page

- Consolidates information on team-based research and the Science of Team Science (SciTS) field in one accessible location
- Integrates resources from multiple disciplines and fields, such as psychology, management, public health and communication
- Includes a user-generated set of resources, such as practical tools and strategies, measures and metrics, bibliographic citations, and publications
- Includes sections written or coordinated by the NCI, such as introductions to team-based research and the SciTS field, key resources, and expert blogs

