

Interdisciplinary Science and Health Care Teams: Preparing US Psychologists for the Future

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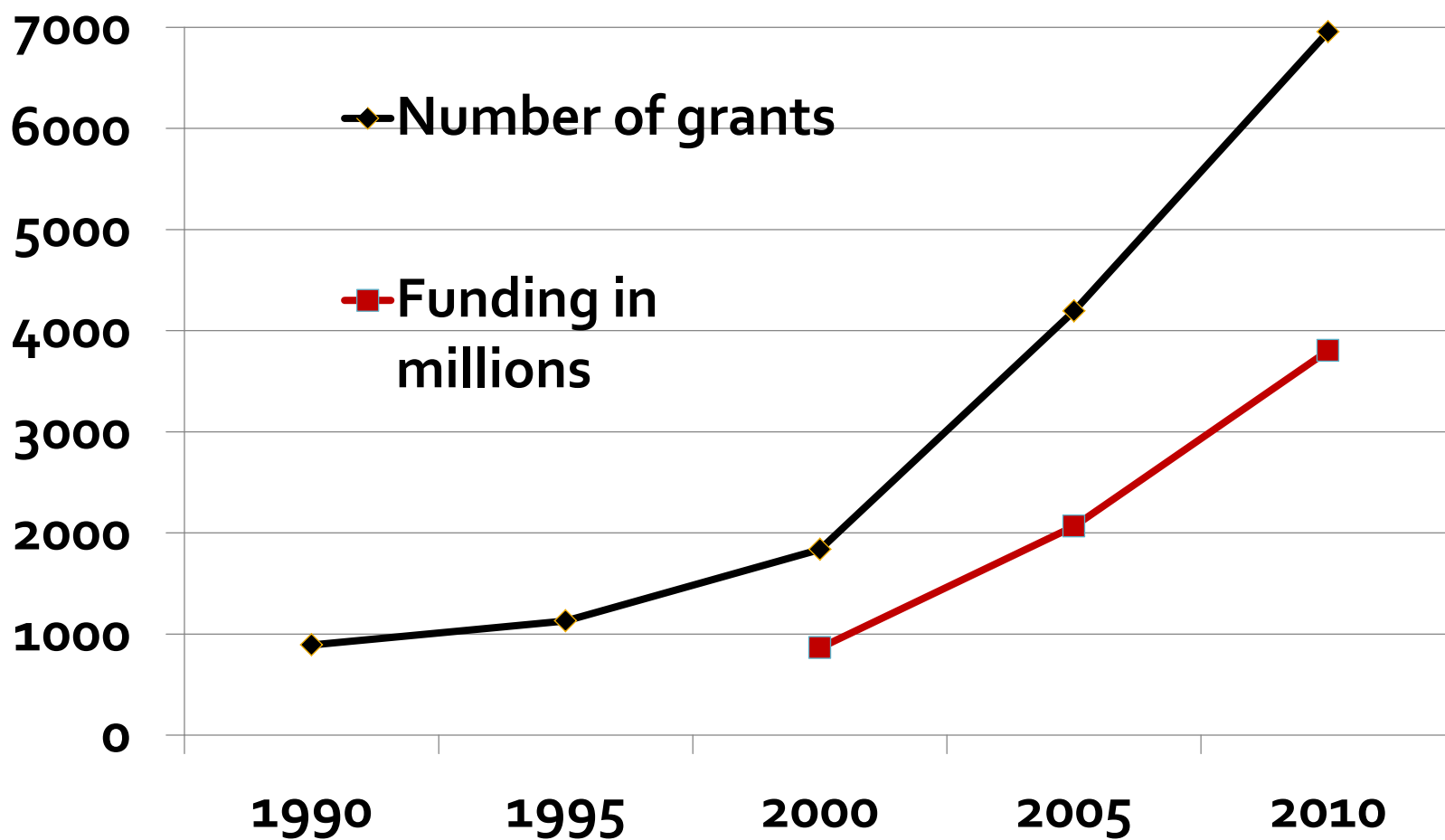
Presentation Overview

- US science is becoming more interdisciplinary
 - Increased funding for multi- and interdisciplinary science
 - The development of the science of team science
 - Opportunities and challenges for US psychology
- US health care is becoming more interdisciplinary
 - Historically, US health care based on biomedical model
 - Biomedical model failed to successfully address current US health care challenges
 - Paradigm shift from biomedical model to biopsychosocial model and use of patient-centered interdisciplinary teams
 - Opportunities and challenges for US psychology

US Science is Becoming More Interdisciplinary

- National Academy of Science report (2005):
Facilitating Interdisciplinary Research
http://www.nap.edu/catalog.php?_record_id=11153
 - Most problems facing society are so complex that no single discipline will be able to successfully address them
 - Interdisciplinary science teams can tackle difficult problems more successfully than a single discipline, yielding findings that are of greater scientific significance with greater impact

US National Institutes of Health: Funding for Multi- or Interdisciplinary Science





Development of the Science of Team Science

- Although interdisciplinary science is considered essential to answering society's complex challenges
- Developing successful scientific teams can be difficult
- The **science of team science** addresses **factors** that **facilitate** or **hinder** the effectiveness of team science initiatives (AJPM 2008, 35:577-389)
- National Cancer Institute has been a real leader in both interdisciplinary science initiatives and the science of team science
 - Largest funder of interdisciplinary science at NIH
 - NCI-NIH Conference on the Science of Team Science (2006)

Interdisciplinary Science: An Opportunity for US Psychology

- Psychology's expertise in the cognitive, affective, and social aspects of human behavior is critical to the success of many interdisciplinary science teams addressing a wide array of societal challenges from climate change to environmental-gene interactions.
- Psychology's expertise is critical to the science of team science which addresses inherently psychological phenomena: the factors that promote or hinder the development of successful interdisciplinary scientific teams.

Interdisciplinary Science: Challenges for US Psychology

- External challenges for US psychology
 - Lack of appreciation or understanding of what psychological science has to offer by other members of the team
 - Beliefs that psychology is “just common sense;” anyone can do psychology; it is not a “real science” – particularly devastating if held by the team leader
 - Cultural differences across scientific disciplines (e.g., who is the PI, authorship, publication outlet)

Interdisciplinary Science: Challenges for US Psychology

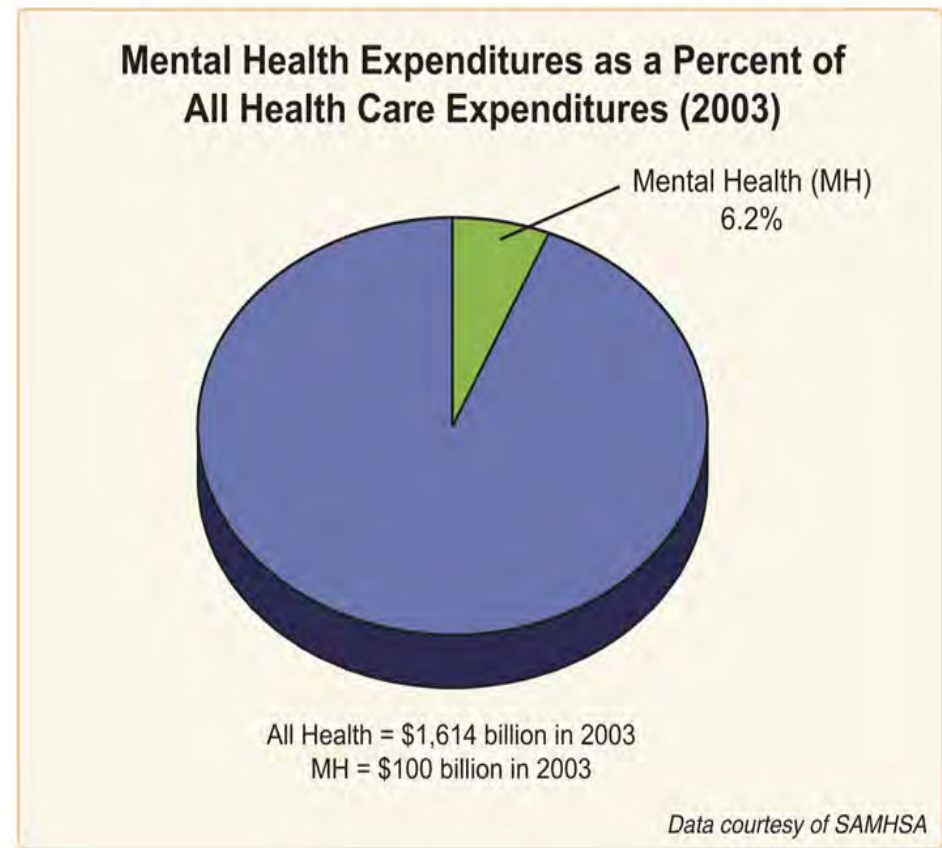
- **Internal Challenges**
 - Psychology departments emphasize discipline-specific teaching and research
 - Faculty hiring practices discourage cross-department appointments
 - Promotion and tenure practices emphasize first or single author publications and Principle Investigator grant funding
 - As a consequence,
 - few team science psychologist role models
 - few psychology graduate students are being trained to function successfully on interdisciplinary teams

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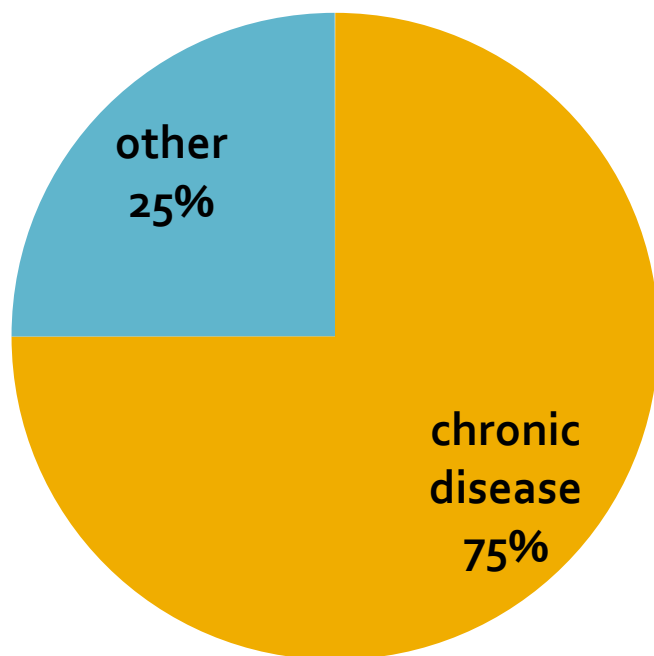
For more than a century US health care has been based on the biomedical model

- Biomedical model characterized by
- Reductionism
 - Biologic determinants of disease
- Mind-body dualism
 - Mental health services “cared out”

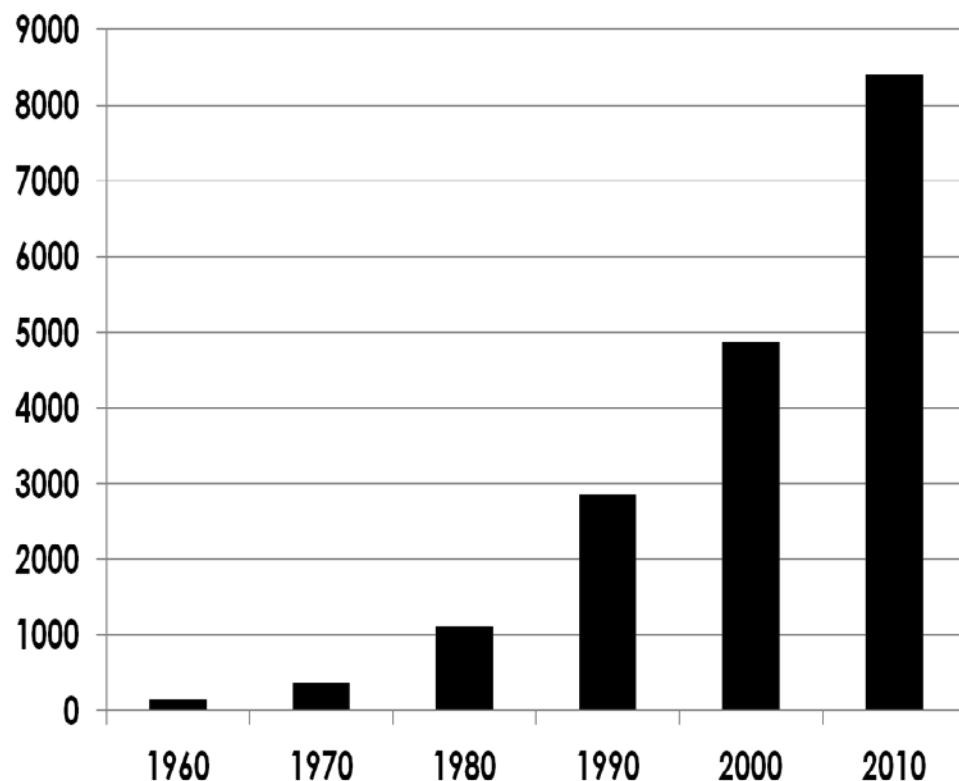


Biomedical model has failed to successfully address current US health care challenges

Per cent of US health care expenditures



US Dollars Spent Per Person on Health Care by Year





Biomedical model fails to recognize the role of behavior in health and disease

JAMA. 2004;291:1238-1245

Rank	Cause of Death by Disease (2000)	Actual Cause of Death (2000)
1	Heart Disease	Tobacco
2	Cancer	Diet/Activity
3	Stroke	Alcohol
4	Pulmonary Disease	Microbial Agents
5	Accidents	Toxic Agents
6	Diabetes	Motor Vehicles
7	Pneumonia/Influenza	Firearms
8	Alzheimer's	Sexual Behavior
9	Kidney disease	Illicit Drug Use

Paradigm shift to the biopsychosocial model in US health care

- **From biomedical to patient-centered care**
 - The patient is viewed as a whole person
 - All of the patient's needs are addressed
 - By interdisciplinary health care teams
 - That include health and mental health expertise
 - In a non-stigmatizing environment that considers the patient's preferences and culture
- **From biologic disease indicators to functioning and quality of life as health outcomes**

Interdisciplinary Health Care Teams: An Opportunity for US Psychology

- **Professional psychologists have the expertise to address mental health, medical decision-making, and behavioral issues relevant to health promotion, disease prevention and disease management**

Interdisciplinary Health Care Teams: External Challenges for US Psychology

- **Physicians may be unfamiliar with the particular skills sets psychologists can offer, seeing all “mental health” providers as equivalent**
- **Behavioral of mental health services are “common sense” and can be delivered by anyone**
- **Others (counselors, social workers) offer to provide mental health services cheaper**

Interdisciplinary Health Care Teams: Internal Challenges for US Psychology

- **Too many US professional psychologists :**
 - **View themselves as mental health practitioners rather than health practitioners**
 - **Do not have broader health psychology skills (e.g., medication adherence, pain management, coping with serious disease)**
 - **Are unfamiliar with the culture and expectations of the larger health care system**
 - **Have not been trained to work on interdisciplinary health care teams**

Interdisciplinary Science and Health Care Teams: Preparing Psychologists for the Future

- US science is becoming more interdisciplinary
- US health care is becoming more interdisciplinary
- The challenge for US psychology is to:
 - Educate other scientists and health providers as to the contributions psychologists can make to interdisciplinary science and health care teams
 - Change graduate education in psychology to:
 - Address the “solo” or “silo” nature of current US psychological science and practice
 - Provide education, skills, role models and training opportunities to assure psychologists can function effectively on interdisciplinary science and health care teams of the future