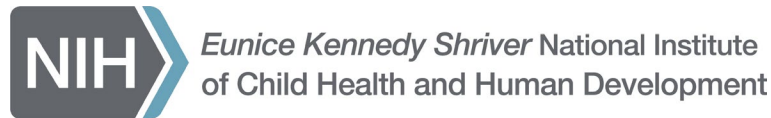


Pathways to Prevention: Can Physical Activity Improve the Health of Wheelchair Users?

Joe Bonner, Ph.D.

National Center for Medical Rehabilitation Research (NCMRR)



Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

When:

March 30-31, 2020

Where:

Natcher Conference Center
NIH Main Campus, Bethesda, MD

How to register:

<https://prevention.nih.gov/>

How to watch remotely:

<https://videocast.nih.gov/>



Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

- Introduction to the P2P program
- Topic and Rationale
- Structure of the P2P program
- Partners
- Deliverables



ODP Pathways to Prevention (P2P) Program

“Pathways to Prevention (P2P) workshops identify research gaps in a selected scientific area, identify methodological and scientific weaknesses in that scientific area, suggest research needs, and move the field forward through an unbiased, evidence-based assessment of a complex public health issue”

“P2P workshops are designed for topics that have incomplete or underdeveloped research and that have a need for a synthesis and critical assessment of the published literature”



Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

2018 Physical Activity Guidelines

- Included some populations of wheelchair users
- Benefits of recommendations are largely unknown because the evidence base was not strong



2018 Physical Activity Guidelines

RISK REDUCTION OR HEALTH IMPROVEMENT INVESTIGATED FOR SELECTED COMMON CONDITIONS					
Disease or Condition	Risk of Mortality	Quality of Life	Physical Function	Progression of Disease	Cognition
Osteoarthritis	IE	Less pain, improved quality of life, and improved physical function among people with hip or knee osteoarthritis		No evidence of progression of osteoarthritis up to 10,000 steps per day	-
Hypertension	Reduced cardiovascular mortality	IE	IE	Reduced progression of blood pressure	-
Type 2 diabetes	Reduced cardiovascular mortality	IE	IE	Improved HbA1c, BP, BMI, and lipids IE for neuropathy, nephropathy, retinopathy, foot sores	-
Multiple sclerosis	IE	IE	Improved walking, strength, fitness	IE	Improved cognition
Spinal cord injury	IE	IE	Improved walking, wheelchair skills	IE	-



National Academies Report



- Predicts quadrupling of WC users between 2005-2030
- The “right” wheelchair can improve workforce participation
- Highlights lack of data regarding wheelchair use
 - Not reported in literature, few available datasets



Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

- What are the benefits and harms of physical activity for individuals that use a wheelchair?
- Which factors of the activity drive benefits and harms?
 - Type of activity, amount, etc...
- Which human factors drive benefits and harms?
 - Cause of WC use, age, etc...
- What are the knowledge gaps and methodological weakness?



Goals of this Pathways to Prevention Initiative

1. Inform future Clinical Practice Guidelines specific to individuals who use a wheelchair
2. Identify research gaps
3. Inform future research
4. Create synergistic action plan with our Federal partners



ODP Pathways to Prevention (P2P) Program



***Responsible Party** [Agency for Healthcare Research and Quality (AHRQ); Evidence-based Practice Centers (EPC); Institutes and Centers (IC); Office of Disease Prevention (ODP)]



ODP Pathways to Prevention (P2P) Program

PROPOSAL REVIEW AND APPROVAL



National Center for Medical Rehabilitation Research

- Through basic, translational, and clinical research, NCMRR aims to foster development of scientific knowledge needed to enhance the health, productivity, independence, and quality of life of people with physical disabilities.

National Institute of Neurological Disorders and Stroke

- The mission of NINDS is to seek fundamental knowledge about the brain and nervous system and to use that knowledge to reduce the burden of neurological disease



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ODP Pathways to Prevention (P2P) Program



Systematic Evidence Review (SER)

- Conducted by one of AHRQ's Evidence-Based Practice Centers
- Uses a PICOTS framework developed with ODP, NCMRR and NINDS
- EPC and SER are confidential until public comment period in early 2020
- Systematic Evidence Review is currently undergoing peer review



ODP Pathways to Prevention (P2P) Program



Systematic Evidence Review

- 4 Key Questions
- Limited to 3 conditions: Spinal Cord Injury, Multiple Sclerosis, Cerebral Palsy
- Physical Activity defined as any gross motor activity that increases energy expenditure (additional limiters include dose, frequency, etc.)



ODP Pathways to Prevention (P2P) Program



Pathways to Prevention Workshop

- Planning began with a meeting of Federal Government stakeholders from NIH, DoD, VA
- Non-federal content area experts nominated speakers and shaped the agenda
- Office of Disease Prevention nominated an unbiased panel to lead the workshop, and prepare a meeting report.



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Key Questions and Workshop Agenda

Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

Workshop Introductory Session

Opening Remarks:

Diana Bianchi, MD
Director, NICHD

Charge to the Panel:

David M. Murray, PhD
Associate Director for Prevention
Director, ODP

Overview of Workshop:

Alison Cernich, PhD
Deputy Director, NICHD

Overview of Panel Activities:

Thomas LaVeist, PhD
Workshop and Panel Chair
Dean and Professor, Weatherhead
Presidential Chair in Health Equity
Tulane University

Keynote Speaker:

Kerri Morgan, PhD, OTR/L, ATP
Washington University, St. Louis



Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

Key Question 1: What is the evidence base on physical activity interventions to prevent obesity, diabetes, and cardiovascular conditions, including evidence on harms of the interventions in people with MS, CP, or SCI who are at risk for or currently using a wheeled mobility device?

Key Question/ Workshop Session 1 Agenda:

Evidence Based Practice Center

James H. Rimmer, Ph.D.

University of Alabama, Birmingham

Deborah Backus, PT, Ph.D.

Sheppard Center

Robert Motl, Ph.D.

University of Alabama, Birmingham



Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

Key Question 2: What are the benefits and harms of physical activity interventions for people who are at risk for or currently using a wheeled mobility device?

Key Question/ Workshop Session 2 Agenda:

Evidence Based Practice Center

Diane Damiano, PT, Ph.D.
NIH Clinical Center

Cheri A. Blauwet, M.D.
Harvard Medical School

Charles Bombardier, Ph.D., M.S.
University of Washington

Karin Korb, M.S., CCF
Lakeshore Foundation



Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

Key Question 3: What are the patient factors that may affect the benefits and harms of physical activity in patients who are at risk for or currently using a wheeled mobility device?

Key Question/ Workshop Session 3 Agenda:

Evidence Based Practice Center

Ed Hurvitz, M.D.
University of Michigan

Marcia Finlayson, Ph.D., OT Reg(Ont), OTR
Queen's University

Brett Smith, Ph.D.
Durham University

Angela White
The Mighty Spirit



Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

Key Question 4: What are methodological weaknesses or gaps that exist in the evidence to determine benefits and harms of physical activity in patients who are at risk for or currently using a wheeled mobility device?

Key Question/ Workshop Session 4 Agenda:

Evidence Based Practice Center

Audrey Hicks Ph.D.
McMaster University

Katherine Froelich-Grobe Ph.D.
Baylor Scott and White Institute for
Rehabilitation

Dan Ding Ph.D.
University of Pittsburgh

Marcas Bamman, Ph.D.
University of Alabama, Birmingham
Topic: Trial Design



Pathways to Prevention (P2P): Can Physical Activity Improve the Health of Wheelchair Users?

Workshop Session 5: Closing Panel and Future Directions

Stephen Wampler

Steven J Wampler Foundation
Camp Wamp

Michele Shusterman

CP NOW

Rachel E. Cowan, Ph.D.

University of Alabama, Birmingham

Discussion moderated by:

Kathleen Zackowski, Ph.D., OTR

National MS Society

Closing Remarks

Lyn Jakeman, PhD

Director, Division of Neuroscience
NINDS



ODP Pathways to Prevention (P2P) Program



***Responsible Party** [Agency for Healthcare Research and Quality (AHRQ); Evidence-based Practice Centers (EPC); Institutes and Centers (IC); Office of Disease Prevention (ODP)]



ODP Pathways to Prevention (P2P) Program



Deliverables:

- Systematic Evidence Review: Posted for public comment early 2020
- Workshop: March 30-31, 2020
- Panel Report: Spring 2020
- Federal Partners Meeting: Summer/Fall 2020



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