Implementing Exercise Trials in Disability Populations: Story, Strategy, and Science

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Implementation Story: A Lived Experience
“Behavioral coaching to improve adherence to exercise”
Universal Model

- Results
- Systems
- Goals
- Priorities
- Identity

Feel good, look good
- Alarm, coffee, gym, Fitbit
- Cardio 30 min. /5 days
- Physical health
- Healthy person

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Certificate in Implementation Science

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Learning Objectives

• Discuss health disparities of people with disabilities.

• List and describe barriers to health promotion at the intrapersonal and interpersonal level for people with disabilities.

• Describe implementation science strategies used in delivery of exercise trials targeting people with disabilities.

• Discuss the power of strategic partnerships for implementation science.
Disability Impacts ALL of US

Disability is especially common in these groups:

- **women**: 1 in 4 women have a disability
- **minorities**: 3 in 10 non-Hispanic blacks have a disability

One in five American adults has a disability.

Adults living with disabilities are more likely to:

<table>
<thead>
<tr>
<th>Condition</th>
<th>With Disabilities</th>
<th>Without Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be obese</td>
<td>38.4%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Smoke</td>
<td>30.3%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Have high blood pressure</td>
<td>41.7%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Be inactive</td>
<td>36.3%</td>
<td>23.9%</td>
</tr>
</tbody>
</table>

Adults living with disabilities are 3x more likely to have heart disease, stroke, diabetes, or cancer.
Rehabilitation to Community through Exercise

• People with disabilities are predisposed or at risk for developing three sets of health conditions that must be considered in the design and implementation of health promotion programs:
  • Associated Conditions
  • Secondary Conditions
  • Chronic Conditions*

* affect the general population

Figure 1. Getting beyond the plateau (Rimmer, 2012)
Secondary Health Conditions

Physical Secondary Conditions

- Arthritis
- Autonomic Dysreflexia
- Bladder/Bowel Problems
- Chronic Pain
- Contractures
- Deconditioning
- Fall/Injury
- Fatigue
- Mobility Problems
- Muscle/Joint Pain
- Osteoporosis
- Pressure Ulcers/Skin Problems
- Respiratory Infections
- Sexual Dysfunction
- Spasms
- Spasticity
- Urinary Tract Infections
- Weight Problems

Secondary Health Conditions

Psychosocial Secondary Conditions

- Anxiety
- Communication Difficulties
- Depression
- Difficulties with Access
- Isolation
- Problems Making/Seeing Friends
- Sleep Problems

 adultos with Disabilities
 adults without Disabilities

Median Percent of Sample
Barriers to Exercise for People with Disability

- There are barriers to exercise at every level for people with disabilities.
  - Transportation
  - Accessible facilities
  - Knowledge of resources

Healthy, Active Lifestyles FOR ALL

- Improve Physiological and Psychological Health
- Promote Adherence
- Increase Usability
- Provide Access
Goal of Exercise Research

- Function
- Participation
- Quality of Life
Using Telehealth Technology

Telehealth is the distribution of health-related services and information via electronic information and telecommunication technologies.
Problems With Research to Practice (Impact)

Translational Issues*:
• 14% of Interventions succeed in benefiting patients
• 17 Years to move into practice
• ~80% of medical research dollars do not make a public health impact for various reasons**

Implementation Issues***:
• Only 44% of adults with disabilities who visited a doctor in the past year received a physical activity recommendation from their doctor.
• Nearly half of all adults with disabilities get no leisure time aerobic physical activity.
Implementation Strategies by the dozen

- Call
- Email
- Text
Implementation Science: The power of people, participants, and partners
Rehabilitation Center and Model Systems

SCIMS
Spinal Cord Injury Model System
Since 1970

MSKTC
Model Systems Knowledge Translation Center

Coming Soon
New UAB Inpatient Rehabilitation Hospital
Lakeshore Foundation Sports Science Performance Center
What do you want to implement for a powerful partnership?

**Results**

**Systems**

**Goals**

**Priorities**

**Identity**

1. _______
2. _______
3. _______
4. _______
5. _______
Questions

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