Webinar Outline

- Motorcycle Crashes in Florida
- What is Public Health Approach?
- Public Health Theories
- Motorcycle Safety Programs Using Public Health Approach
Motorcycle Crashes:
A major public health issue in Florida

Motorcycles in Florida

- Florida has the 2nd largest motorcycle population in the US
  - 610,000 registered motorcycles
  - 1.2 million endorsed motorcyclists
Motorcycles in Florida

- Motorcycles make up 3% of registered motor vehicles in Florida
- Less than 1% of traffic on Florida roadways
- Question: Motorcycle fatality % in Florida?

Motorcycle Crashes in Florida

- Answer: Nearly 17% of traffic fatalities in Florida were motorcyclists in 2017.
What is Public Health Approach?

https://www.facebook.com/newshour/videos/10154247237078675/
Public Health?

• “The focus of public health is on the health, safety and well-being of entire populations. A unique aspect of the field is that it strives to provide the maximum benefit for the largest number of people. Public health draws on a science base that is multi-disciplinary. It relies on knowledge from a broad range of disciplines.” (Center for Disease Control and Prevention, 2018)

• “While a doctor treats people who are sick, those of us working in public health try to prevent people from getting sick or injured in the first place. We also promote wellness by encouraging healthy behaviors.” (American Public Health Association, 2018)

Traffic Injuries, the leading cause of death
Motorcycle Crashes in Florida (1997 – 2014)

Public health approaches (4 Steps)

The Public Health Model

- Define the problem
- Identify risk and protective factors
- Develop and test prevention strategies
- Assure widespread adoption

https://www.cdc.gov/violenceprevention/overview/publichealthapproach.html
Public Health Theories

- What is theory?
  - “A systematic way of understanding events or situations” (Rimer & Glanz, 2005, p.4)

- Why is it important?
  - Provides an understanding of health and the factors that influence health and health behaviors
  - Used to guide why people behave in a specific way, what we should know, and what should be done to change human behavior
Public Health Theories

- Concepts
  - Primary elements of a theory

- Constructs
  - Key concepts of a given theory

- Variables
  - The operational forms of constructs

- Models
  - Often draw on a number of theories to help understand a particular problem

Ecological perspective of health

- Background
  - Derived from general systems theory which views phenomena as open systems composed of mutually interacting components (Coreil, Bryant, & Henderson, 2001)

  *Bronfenbrenner's framework* (White, 2002)
    - Microsystem: individual role and relations
    - Mesosystem: interrelations between two or more settings
    - Exosystem: external setting that does not include the person
    - Macrosystem: culture
Ecological perspective of health

• Example
  – 20 year old man who does not exercise
  • *Intrapersonal level* – believes exercise is not important
  • *Interpersonal level* – no friend/ family member to exercise with
  • *Community level*
    – Institutional factors: on-campus rec center hours not conducive to school schedule
    – Community factors: social norms do not support exercise
  • *Public policy level* - no policies to incentivize activity

Summary of Theories

<table>
<thead>
<tr>
<th>Table 11: Summary of Theories: Focus and Key Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theory</strong></td>
</tr>
<tr>
<td><strong>Individual Level</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Health Belief Model (HBM)

- **Example**: Self-efficacy questions regarding riders’ helmet use behavior
  - I know what to consider when choosing a helmet.
  - I know how to tell if a helmet fits me properly.
  - I know how to recognize a DOT compliant helmet.
  - I can explain the benefits of wearing a helmet.
  - I know how to adjust my helmet correctly.

Stages of Change (TTM)

- **Example**: How soon do you plan to start consistently wearing a helmet (i.e. wearing a helmet every time you ride)?
  - NOT within the next 6 months (Pre- contemplation)
  - Within the next 6 months (Contemplation)
  - Within the next 30 days (Preparation)
  - I already wear a helmet every time I ride (I started within the last 6 months) (Action)
  - I already wear a helmet every time I ride (I started more than 6 months ago) (Maintenance)
Summary of Theories

<table>
<thead>
<tr>
<th>Theory</th>
<th>Focus</th>
<th>Key Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Cognitive Theory</td>
<td>Personal factors, environmental factors, and human behavior exert influence on each other</td>
<td>Reciprocal determinism, Behavioral capability, Expectations, Self-efficacy, Observational learning, Reinforcements</td>
</tr>
<tr>
<td>Community Organization</td>
<td>Community-driven approaches to assessing and solving health and social problems</td>
<td>Empowerment, Community capacity, Participation, Relevance, Issue selection, Critical consciousness</td>
</tr>
<tr>
<td>Diffusion of Innovations</td>
<td>How new ideas, products, and practices spread within a society or from one society to another</td>
<td>Relative advantage, Compatibility, Complexity, Trialability, Observability</td>
</tr>
<tr>
<td>Communication Theory</td>
<td>How different types of communication affect health behavior</td>
<td>Examples: Agenda Setting, Media agenda setting, Policy agenda setting, Problem identification, definition, Promulgation</td>
</tr>
</tbody>
</table>


Public Health Theory Used Studies

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Title</th>
<th>Public Health Theories Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brijs et al.</td>
<td>2014</td>
<td>Psychological determinants of motorcycle helmet use among young adults in Cambodia</td>
<td>Health Belief Model, Theory of Planned Behavior</td>
</tr>
<tr>
<td>Haas</td>
<td>2013</td>
<td>Toward harm reduction as a metatheory for health communication campaigns: An empirical study of harm reduction metatheory and the reconceptualized health belief model addressing motorcycle safety.</td>
<td>Harm Reduction Theory, Reconceptualized Health Belief Model</td>
</tr>
<tr>
<td>McNulty et al.</td>
<td>2003</td>
<td>Using the Transtheoretical Model of Change to Implement Home Safety Modifications with Community-Dwelling Older Adults: An Exploratory Study</td>
<td>Transtheoretical Model of Change</td>
</tr>
<tr>
<td>Mundorf et al.</td>
<td>2018</td>
<td>Sustainable Transportation Attitudes and Health Behavior Change: Evaluation of a Brief Stage-Targeted Video Intervention</td>
<td>Transtheoretical Model of Change</td>
</tr>
<tr>
<td>Özkan et al.</td>
<td>2012</td>
<td>Motorcycle accidents, rider behaviour, and psychological models</td>
<td>Theory of Planned Behavior, Health Belief Model</td>
</tr>
<tr>
<td>Tunnicliff et al.</td>
<td>2012</td>
<td>Understanding the factors influencing safe and unsafe motorcycle rider intentions</td>
<td>Theory of Planned Behavior</td>
</tr>
</tbody>
</table>
Motorcycle Safety Programs Using Public Health Approach

Social Ecological Model Approach

- Policy/Societal
- Community & Organizational
- Traditional Media
- Social Media
- Interpersonal
- Mentorship Program
- Individual
- Ride Smart tent education
Countermeasures that Work

“The most important demonstrable objectives for improving motorcycle safety are to: increase helmet use, reduce alcohol-impaired motorcycle riding, increase proper licensing, and promote lifelong learning through the completion of rider training courses.”

Ride Smart Outreach Events

Biketoberfest 2015 (Daytona Beach, FL)
Ride Smart Outreach Events

Daytona Bike Week
Daytona Beach Chamber of Commerce Press conference
Ride Smart Outreach Events

Leesburg Bikefest

Ride Smart Outreach Events

26th Annual Southeast Police Rodeo April 16–18, 2015
Ride Smart Outreach Events

2015 Florida State HOG Rally

What is MEPER?

- A training school-based mentorship program that pairs endorsed riders and RiderCoaches to promote safer motorcycle riding

- Continuous relationship through group meetings, skill building sessions, and fun activities led by qualified RiderCoaches
Ride Smart Florida

DO YOU RIDE SMART?
S Say no to drinking and riding
M Make yourself more visible to motorists
A Always wear your helmet when you ride
R Ride in control (within legal and personal limits)
T Train regularly and get endorsed

Ride Smart Florida Facebook Page Posts (Data)
Watch for Motorcycles Online Campaign

Social Media Campaigns

Motorcycle Insurance PSA
Social Marketing - Mechanics of Riding

• Social media marketing was launched in Feb. 2017 via Facebook, Instagram, and Twitter.

Social Marketing - Mechanics of Riding

• Social marketing offline events
Billboard (Watch for Motorcycles)

Stop Impaired Riding Campaign

Magazine Advertising
Stop Impaired Riding Campaign

Track Day

What is Track Day?

- Helps advance rider level and skill
- Lets riders enjoy speed of the motorcycle
  - Without worry of getting a ticket or serious injury or death
  - No surface hazards or roadside obstacles to hit
  - Ambulance just seconds away
  - Track is the safest place to ride
“May is Motorcycle Safety Awareness Month”
Proclamation Event

11201 McKinley Dr, Tampa, FL 33612
May 11th 2017 at 10am.

Who was Contacted?
Documents emailed to:
- Every State Representative (120)
- Every State Senator (40)

Feedback was positive!
Working with State Legislatures

Begin building a spreadsheet of all the state representatives and state senators who are willing to get involved.

Re-email all state representatives and State Senators after the Nov 8th election providing an update on our cause.

Provide each of the state representatives and senators supporting us a list of the other state representatives and senators interested in supporting us.

300 Words Policy Statements
Questions?

Contact: Siwon Jang, Ph.D.
sjang2@cutr.usf.edu