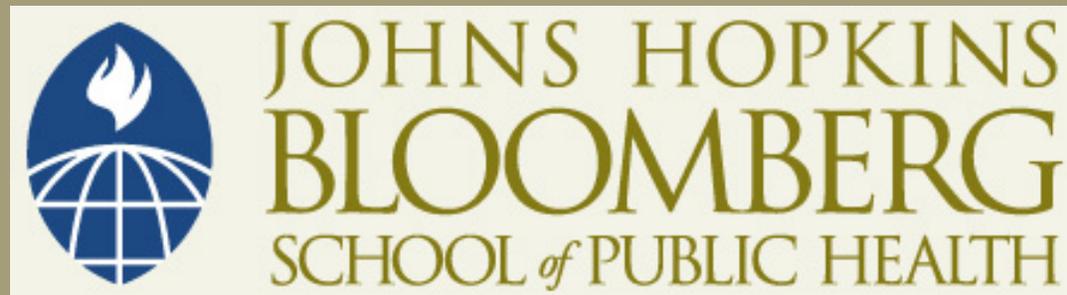


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## *Section C: Examples of Interventions in the Developing World*

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Adnan Hyder, MD, PhD

# *Effect of Motorcycle Rider Education*

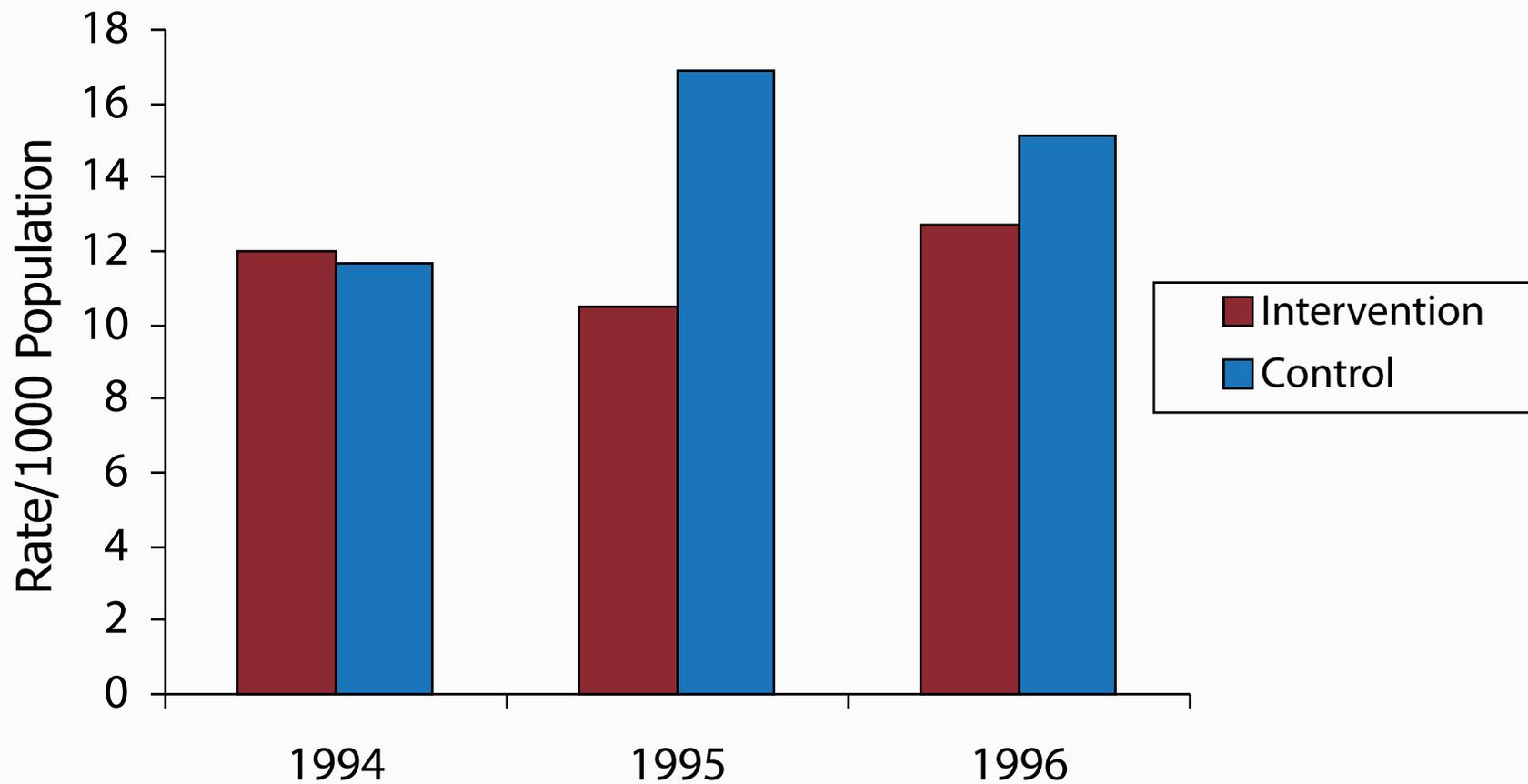
- “Changes in Risk Behaviors and Motorcycle-Related Injuries in Thailand”
  - Community-based program for motorcycle rider education was provided for three randomly selected sub-districts in Northern Thailand from January 1995 to March 1995

# *Effect of Motorcycle Rider Education*

- “Changes in Risk Behaviors and Motorcycle-Related Injuries in Thailand”
  - Interview survey conducted in sample of sub-districts and control villages in March of 1997

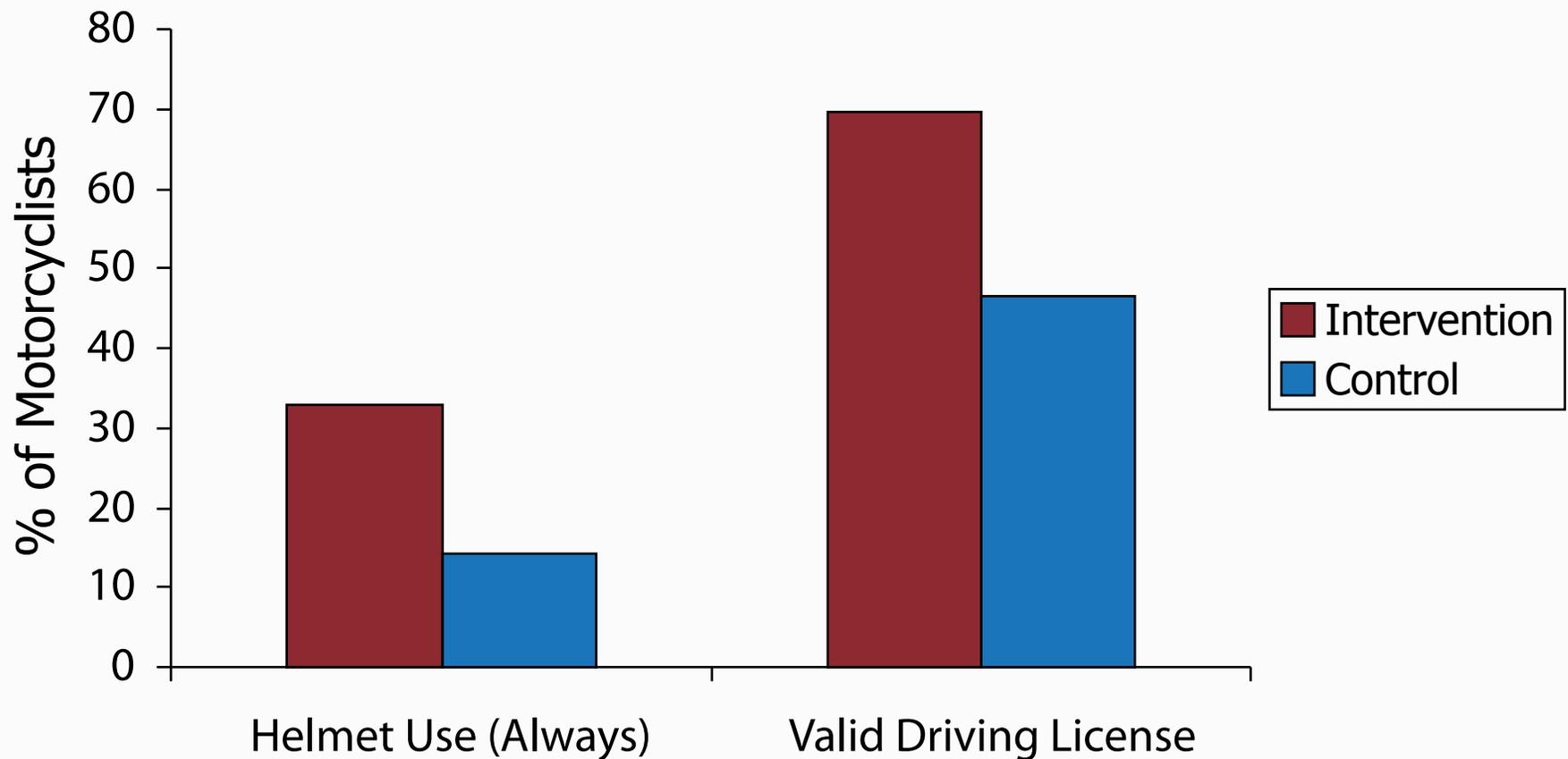
# Motorcycle Injuries: Intervention and Control Districts

- Motorcycle injuries in intervention and control sub-districts from 1994–1996



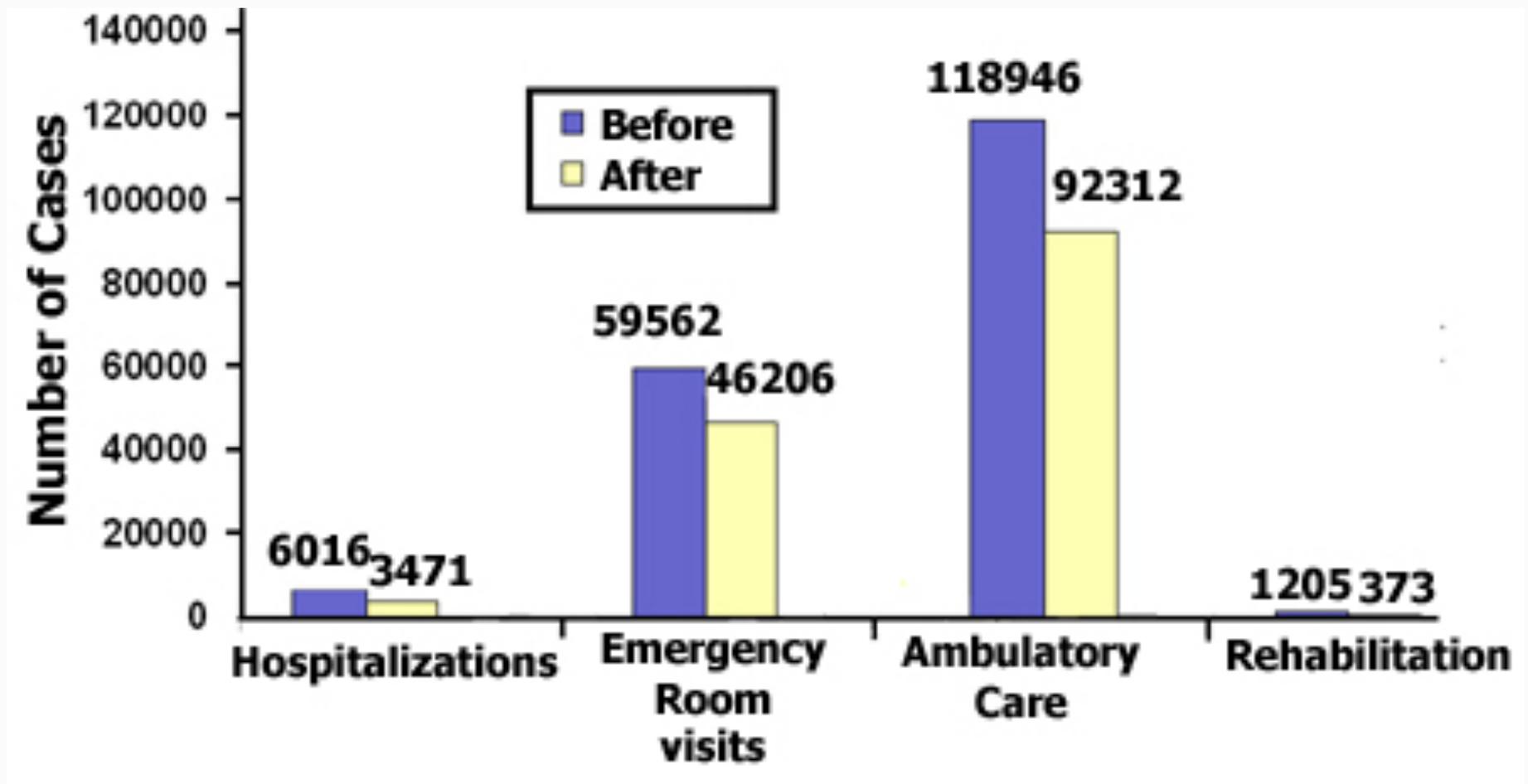
# Motorcyclist Behavior: Intervention and Control Groups

- Driving behaviors among motorcyclists in the intervention and control groups, March 1997



# Estimation of Benefits of Crash Helmet Legislation

- Estimation of benefits of crash helmet legislation for bicyclists for five years in Israel



# *Effect of the Mandatory Helmet Law in Taiwan*

- Taiwan passed a mandatory helmet law in June 1997
- After six months:
  - Motorcycle fatalities decreased 14%
  - Head injuries fell 22%
  - Nonfatal motorcycle injuries fell 31%

# Taxation and Economic Incentives

- Potential effectiveness
  - Price increases of harmful products are frequently associated with injuries and can decrease their use
  - 35% tax on the retail price of alcoholic beverages could reduce alcohol-related fatalities by 50%
  - 50% tax could reduce injuries by 75%

## *Product Designs*

- The relative risk of head injury among motorcycle riders was significantly reduced by wearing a full face helmet, but not by wearing a partial coverage helmet in Taipei, Taiwan
- In rural Nepal, where burns are the second most common source of injuries, a program to introduce low-cost, enclosed wood-burning stoves known as “chulos” led to a substantial and significant decrease in the number of burns

# *Environmental Modification*

- Modifying road networks to divert high-speed traffic away from areas with a large number of unprotected people, such as pedestrians and cyclists
- Constructing barriers around bodies of water to prevent small children from falling in and drowning
- Fatal head injuries can be prevented by planting coconut trees away from home and busy village trails in rural Africa

# *The Effect of Speed Cameras on Injuries*

- The effect of speed cameras on injuries from road accidents in London
  - The Highway Agency reported the findings of a six-year experiment in the use of speed cameras on west London truck roads

# *The Effect of Speed Cameras on Injuries*

- The effect of speed cameras on injuries from road accidents in London
  - Comparison of deaths and injuries in the three years before the installation of cameras and the three years afterward showed:
    - ▶ The number of deaths reduced threefold, from 68 to 20, and the number of serious injuries by over a quarter, from 813 to 596
    - ▶ Lesser injuries also fell significantly, from 4,983 to 4,375

# Prevention of Injuries in Malaysia

- Road safety
  - The National Road Safety Council is responsible for road safety
  - It meets annually and acts in an advisory capacity on major policies and issues
    - ▶ Suggested better enforcement measures (e.g., speed cameras along highways and alternate highways) as priorities
- National Road Safety Council
  - Set target to reduce road accidents by 30% by the year 2000

## *Injury Prevention Efforts in Mexico*

- Earliest initiative at national level was a governmental decree to establish a **National Accident Prevention Council** in 1961; affirmed by a second decree in 1987
- Mexico has held national conferences on injury and injury prevention

## *Injury Prevention Efforts in Mexico*

- 1994—An injury surveillance system was set up as part of the National Epidemiological Surveillance
- 1995—Mexico introduces “basic packet of health services” that represents the minimum health services that should be made available to all citizens

## *Injury Prevention Efforts in Mexico*

- “Accident prevention and initial treatment of injuries” one of 12 packet components (a symbol of heightened government commitment to injury prevention)

## *PAHO Involvement in Injury Prevention*

- 1980s—PAHO sponsored a variety of workshops on motor vehicle injuries and information systems
- 1985–1986—PAHO sponsored a study in four selected countries (Brazil, Chile, Cuba, Venezuela) to examine the incidence of injuries in children and adolescents under age 20

# *PAHO Involvement in Injury Prevention*

- 1994—PAHO published an epidemiological bulletin
  - Describing the lack of information about the extent, type, and severity of unintentional and intentional injuries in America
  - Lack of information on the response of health and legal response to injury and violence

## *PAHO Involvement in Injury Prevention*

- 1995—PAHO assigned responsibility for activities related to unintentional injuries to a non-communicable disease program (HCN)
- Since 1995—Several WHO collaborating centers have been designated to the region to define the problem, develop a policy, and disseminate relevant information

## *PAHO Involvement in Injury Prevention*

- 1996—Injury surveillance demonstration project initiated in various Caribbean countries
- 1998—PAHO co-sponsored an injury policy development forum with Rollins School of Public Health at Emory University, Atlanta

## *Government Response: South Africa*

- Establishment of:
  - Child Accident Preventive Foundation of South Africa in 1978
  - The National Trauma Program of Medical Research Council in 1987

## *Government Response: South Africa*

- Establishment of:
  - The Cape Metropolitan Violence and Injury Mortality Surveillance System in 1993
- Indicates the level of commitment to tackling injury and violence by civil society and the South African government

## *Government Response: Ghana*

- In Ghana, traffic-related injuries have received some attention on the part of the government and the World Bank
- The World Bank funded the “Ghana Road Safety Project,” which has been ongoing since 1990

# Government Response: Ghana

- Ghana Road Safety Project
  - Strengthening the Building and Road Research Institute (BRRI) in its work of collecting, analyzing, and providing crash statistics for Ghana
  - Enhancing vehicle inspection capabilities for the Vehicle Examination and Licensing Division

## *Government Response: Ghana*

- Ghana Road Safety Project
  - Improving the training and equipment for speed monitoring and control by the Motor Transport Traffic Unit of the Ghana police service