Getting to a Healthy Driver Population

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Overview

• Three focus areas
  • Setting the stage
    • Obstacles to optimum health
      • Truck drivers -- long haul, regional
      • Bus drivers
  • Making the connection
    • CMV Driver’s medical conditions and Crash Risk
  • Resolving the dilemma
    • Marketing
    • Motivating
    • Developing options
    • Implementing Options
Setting the stage

• Statistics
  • 5.9 million CMV drivers in US (Bus and Truck with and without CDL)
    • 3.7M Interstate
    • 2.2M Intrastate
  • 2015 Crashes involving at least one bus or large truck in US
    • 3,838 Fatal - 11.9 % of total
    • 476,000 non-fatal crashes - 7.6% of total
Setting the stage

• What physical requirements do the 5.9 M drivers need?
  • Alertness, quick reaction time,
  • Fine motor skills
  • Muscular strength,
  • Agility/flexibility, Hand eye coordination
    (20 gears in large truck)
  • Bus drivers -
    • must also interact with many types of people
Setting the stage

• Driver environment
  • Exposures:
    • Excessive noise
    • Vibration
    • Extremes in temperature
  • Encounters
    • Adverse road, weather/traffic conditions
    • Unavoidable delays
    • Aggressive small car traffic
• Bus drivers
  • Critical complaining passengers
• Some transport Hazardous cargo (flammables, explosives, hazardous chemicals)
Setting the stage

• Barriers to healthy lifestyle
  • Trucks over the road (OTR)– regional and long haul
    • Sedentary lifestyle - Long hours of sitting in one position
    • Sleep in cab of truck
    • Limited food/meal options
    • Away from home days at a time
    • Not close to regular health care provider
    • Few exercise options
  • Bus drivers – over the road – interstate
    • Long hours
    • No designated place to sleep or eat
Setting the Stage

• The CMV driver Profile
  • Median Age *
    • Truck driver - 47.2
    • Bus drivers - 50.8
  • Smoking prevalence is higher than national average
  • Higher prevalence of obesity

Setting the Stage

• Obesity
  • Related to:
    • Heart Disease
    • Hypertension
    • Diabetes
    • Musculo-skeletal problems
      (Back, hip, knee)
    • Some cancers (e.g., colon cancer)
  • But, does driver’s obesity and related conditions correlate to crash risk?
Making the Connection

• Studies on truck driver health and crash risk:
  • High prevalence of obesity (BMI >30.0kg/m²)
  • Considerable health issues related to
    • improper diet,
    • inadequate physical activity
    • Poor sleep habits
    • Shift work

Making the Connection

• Thiese, Moffitt, Hanowski research on 88,246 drivers demonstrates
  • 53.3% obese (categories: underweight, normal weight, overweight, obese, morbidly obese)
  • Probability of 2 year medical certificate
    • 82% for normal and underweight drivers
    • 46.2% for morbidly obese drivers
  • Overweight/obese drivers more likely to have
    • Abnormal findings-general appearance, heart, mouth, abdomen, vascular system
Making the Connection

• Thiese, Moffit, Hanowski study continues
  • Statistically significant number of drivers given limited medical certification
    • sixfold risk of shorter length of certification if overweight/obese
• Prevalence of diabetes increased in overweight/obese
  • Under weight - 0.2%
  • Normal weight - 0.7%
  • Morbidly obese - 6.7%
Making the Connection

- 32 studies /151,644 drivers found
  - High Prevalence:
    - Overweight - 78.4%
    - Obesity - 45.2%
    - Hypertension -23%
    - Diabetes -33.4%
    - OSA/sleep disorders -19.2%

References

• A.B. AbuDabrh, B. Firwana,, C. Cowl, et.al, BMJ Open 2014. 4(3)e003434. Published on-line .2014 Mar06
Making the Connection

• 2015 Thiese Moffit, Hanowski study of driver certification demonstrated
  • Prevalence of medical conditions and obesity.
  • Relationship of obesity to length of driver certification

• Is there connection between a driver’s medical condition and risk of crash?
  • YES
Making the Connection

• 2017 Thiese, Hanowski, Kales et al. study *
  • Studied 38,000 driver records from 2005-2012
  • Demonstrated 2.5-3.0 times greater crash risk for drivers who have 3 or more medical conditions
  • CMV drivers with 3 or more medical conditions cash risk frequency
    • 93 incidents per million miles
  • All drivers
    • 29 incidents/million miles

Making the Connection

• The Meta Narrative Systematic review by AbuDabrh, Firwana, Cowl, et.al, found
  • Average BMI -30.5
  • the 32 studies Studies reviewed agreed
    • There is an association between Obesity, Diabetes Mellitus and crash risk.
    • Increased severity of crash is associated with hypertension.

The Dilemma

- Divers have serious health risks
- Health Risks pose problems for
  - The driver
  - His/her family
  - Those of us who share the road with CMV drivers
- Drivers have lots of barriers to healthy lifestyle
- But, reducing medical problems reduces
  - Crash risks
  - Medical costs
  - Enables longer DOT certification time
Resolving the Dilemma

• Reaching and motivating the CMV driver is challenging but imperative
• Start with weight reduction strategies??
  • Obesity is related to
    • Diabetes Mellitus
    • Back, knee and ankle problems
    • Sleep Apnea
• But how?
Resolving the Dilemma

• Focus on weight reduction through:
  • Healthy Eating (not diets)
  • Exercise
  • Proper sleep

• Develop Campaign:
  • Identify underlying reasons for unhealthy living/habits
    • What motivates CMV drivers to change?
    • What disincentives affect drivers?
  • Focus campaign on those motivators/disincentives
  • Develop all encompassing campaign involving
Resolving the Dilemma

“Uptake and Maintenance of Healthy Behaviors in Mid-life” Kelly, Martin, Kuhn, et. al.
- UK systematic review of literature
- Found barriers to be:
  - lack of time
  - access
  - financial costs
  - restrictions in physical environment
  - low socio-economic status
  - lack of knowledge
Resolving the Dilemma

• Study found Facilitators to Healthy Behaviors:
  • Enjoyment
  • Health benefits
  • Social support
  • Clear messages
  • Integration of behaviors into lifestyle.

• Study conclusion:
  • Identified Barriers /facilitators inform the design of tailored interventions for people in midlife
Resolving the Dilemma

• Today we have a shotgun approach
  • Various providers
  • Variety of products
    • From telephone health coaching to written pamphlets/books.
• Using the study information develop planned, systematic, focused approach with
  • A marketing campaign for healthy living/weight reduction
  • Outreach materials
  • Educational materials
  • Individual health plans - one-on-one case management
Resolving the Dilemma
Continued

• Focused systematic approach includes
  • Motivational products
    • Insurance incentives
    • Employer incentives
  • Competitions
  • Educational Products
  • Individualized Plans
Resolving the Dilemma

• Marketing should include
  • Campaign Slogan
  • Social Media
    • Blogs
    • Tweets
    • You-tube videos
  • Radio interviews
  • Newspaper/magazine/internet articles
Resolving the Dilemma

• **Focused systematic approach involves**
  • Medical Examiners
  • Carriers/employers
  • FMCSA
  • Insurers
  • Travel Plazas/Truck stops
  • Others?
Resolving the Dilemma

• Who spearheads and coordinates this approach?
• How to we engage the entire trucking/bus industry?
• Let’s talk
  • Your ideas?
In Summary

• Drivers have a comprehensive role with mental and physical demands
• Barriers to healthy behaviors are inherent to long haul and motor coach driving
  • Studies demonstrate
    • High prevalence of obesity, diabetes and hypertension in CMV driver population
    • Higher incidence of crash risk associated with three co-morbidities than those with fewer medical conditions
In summary

• Today — shot gun approach to CMV driver fitness and health promotion
• Must focus on identified barriers and facilitators
• Must develop focused, cohesive, systematic approach
• Must involve everyone in the Industry
Getting to a Healthy Driver Population

• A challenge - What will you do to get to a healthy driver population??

• Your role:
  • Help CMV drivers maintain their livelihood/income
  • Help their families save money on health care
  • Help our community minimize
    • Cost of crashes,
    • Loss of life
    • Loss of property
References

