



Innovative Programs to Contribute to the Road Safety Education in the Public Highways of Puerto Rico

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Good Afternoon!



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Acronyms

CIAPR	College of Engineers and Surveyors of Puerto Rico
TSC	Traffic Safety Commission
DTOP	Department of Transportation and Public Works
FLAS	Luis A. Señeriz Foundation
ITE	Institute of Transportation Engineers
MADD	Mothers Against Drunk Driving
TZD	Toward Zero Deaths
UPR	University of Puerto Rico at Mayagüez

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Background

Puerto Rico Road Network Geographic Location

- Extension: 23,000 kms.
- Impact: provide accessibility and mobility to 95% of users and load
- The absence of a rail network on the island contributes to the premature deterioration of the road network



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Background: Fatal Crash Statistics

Parameters	United States of America	North Carolina, EE UU	Wisconsin, EE UU	Puerto Rico
Total Fatalities	33,808	894	561	365
Ratio (HMVMT)	1.14	1.82	1.18	1.92
Off-Road	18,087 (53%)	543 (61%)	319 (57%)	101 (28%)
Intersection	7,043 (21%)	146 (16%)	125 (22%)	42 (12%)
Pedestrians	4,092 (12%)	89 (10%)	38 (7%)	109 (30%)
Velocity	10,591 (31%)	337 (38%)	203 (36%)	156 (43%)
Alcohol	10,848 (32%)	377 (42%)	213 (38%)	109 (30%)
Rural Reason (HMVMT)	1.98	3.62	1.38	15.08
Urban Reason (HMVMT)	0.72	0.06	0.59	0.94

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Crash Trends in Puerto Rico: 2000-2010



- Crashes Average per year : 280,000
- Fatalities: 5,100
- Pedestrians: 1,602 (31.4%)
- Alcohol and controlled substances: 2,028 (40%)

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Crash Trends in Puerto Rico: 2000-2010

- Human Factor (drivers and pedestrians): 90% a 93%
- Geometric and operational deficiencies: 2% al 3%



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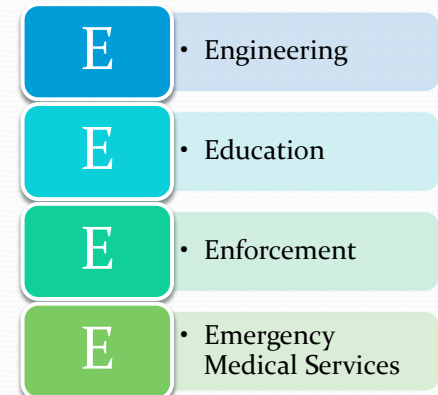
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Fundamental Elements in Road Safety Awareness

Fundamental Elements:

- Engineering
- Education
- Enforcement
- Emergency Medical Services

The four (4) E's



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Data Analysis: Pedestrian Crash Trends on Public Roads Decade 2000-2010



Figure 1: Distribution of Fatalities in Puerto Rico Highways 2001-2010

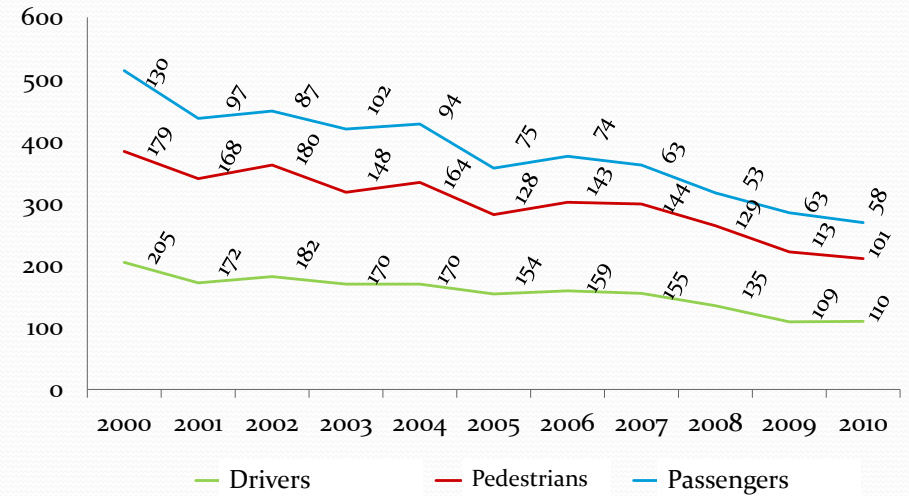


Figure 2: Distribution of Total Fatalities Alcohol Consumption and Controlled Sustances, and Pedestrians

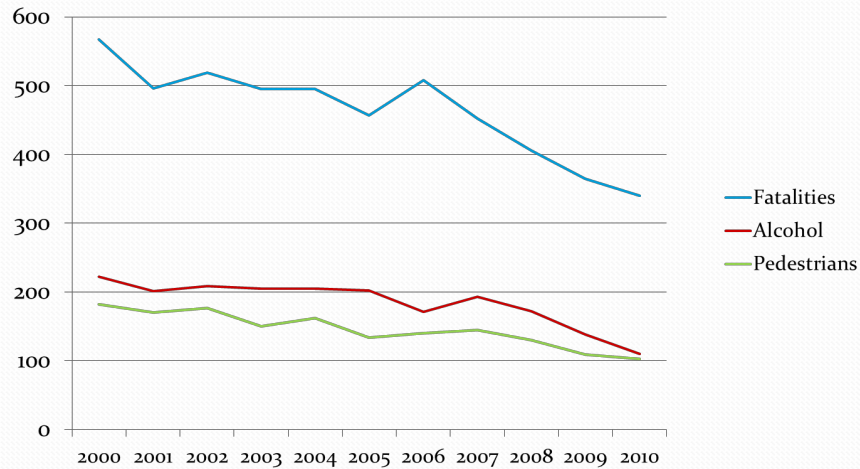


Figure 3: Distribution of Total Fatalities Associated with Alcohol Consumption and Controlled Sustances and the quantity of Pedestrians.

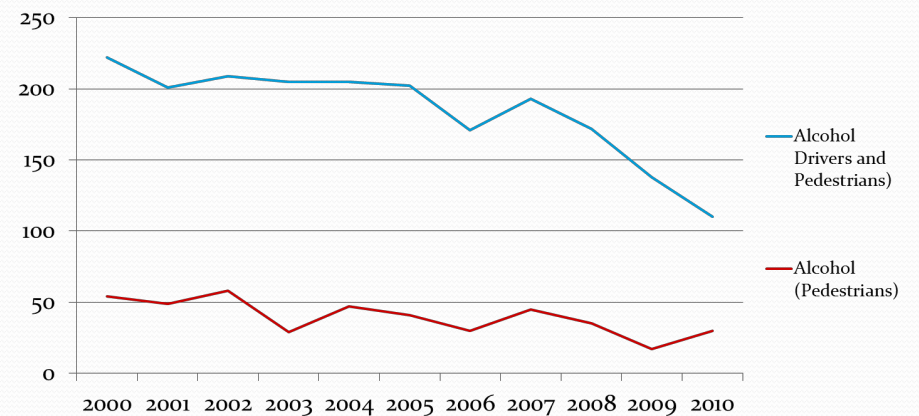


Figure 4: Pedestrians Fatalities Associated with Alcohol Consumption; Week Day
Analysis Period: 2000-2010

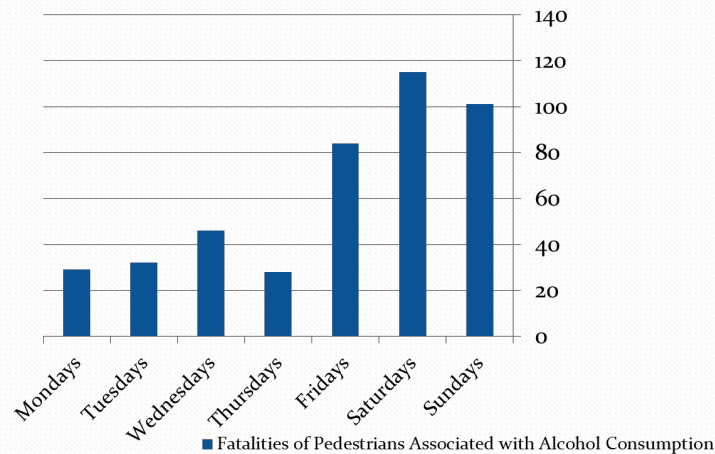
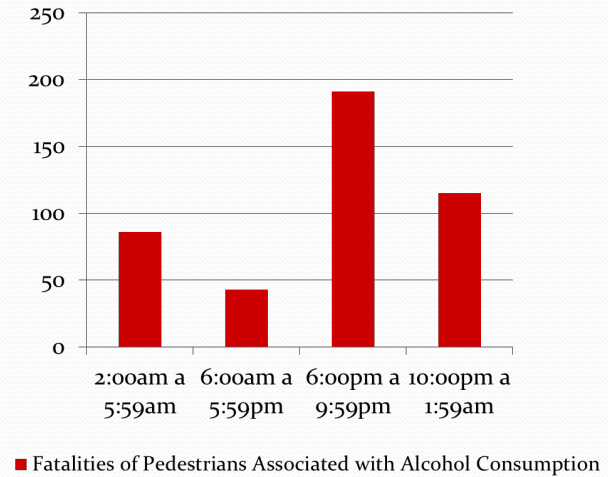


Figure 5: Pedestrians Fatalities Associated with Alcohol Consumption: 2000-2010



Road Safety Education : Puerto Rico and Latin America Innovative Programs



Innovative Programs that Contributes to Road Safety Education

1. MAPFRE Foundation with Villa Segura: Road Safety Rolling Park
2. Luis A. Señeriz Foundation (FLAS) / MADD of Puerto Rico, the red promise campaign
3. Automobile Accident Compensation Administration (ACAA) - "If driving, not texting"
4. Institute of Transportation Engineers (ITE) with the national campaign "Moving Towards Zero Deaths" (TZD)
5. United Nations – Decade of Action for Road Safety 2011-2020
6. Transportation Technology Transfer Center (T²), seminars in road safety to local transportation agencies in Puerto Rico and US Virgin Islands
7. Traffic Safety Commission (TSC) - Educational Park for Traffic Safety (PESET), orientation campaign, analysis of pedestrian fatalities.

1. The Safety Village: A Road Safety Rolling Park, MAPFRE Foundation

Conceptual Perspective

- MAPFRE Foundation Initiative
- It aims to give children a realistic experience of going through the city while being educated in this way to help prevent and reduce crash rates on public roads.
- Participants: children between 8 and 12 years old.



1. The Safety Village: A Road Safety Rolling Park, MAPFRE Foundation (Cont.)

Purpose

- Train children in the fundamental aspects associated with road safety

Inspired in the imaginary town of Berto



1. Educational Process: The Safety Village: Rolling Park

- First Aspect: Conceptual
 - Theoretical framework of the topic
- Second Aspect: Practice
 - Participate in the circuit through a series of fun interactive experiences



1. MAPFRE Foundation Institutes:

Institute	Mission
Road Safety Institute	Promote the safety of people and their heritage, with particular attention to road safety education
Prevention, Health and Environment Institute	Promote the safety of people and their heritage, with particular emphasis on medicine and health, improving quality of life and environment
Culture Institute	Promote dissemination of culture, arts and letters, in addition to research and dissemination of knowledge regarding the history of Spain, Portugal and the countries linked by historical ties
Security Science Institute	Promote formation and research in areas related to Security
Social Action Institute	Contribute to improving the economic conditions, social and cultural rights of people and disadvantaged sections of society

Figure 6: Layout of the Safety Village

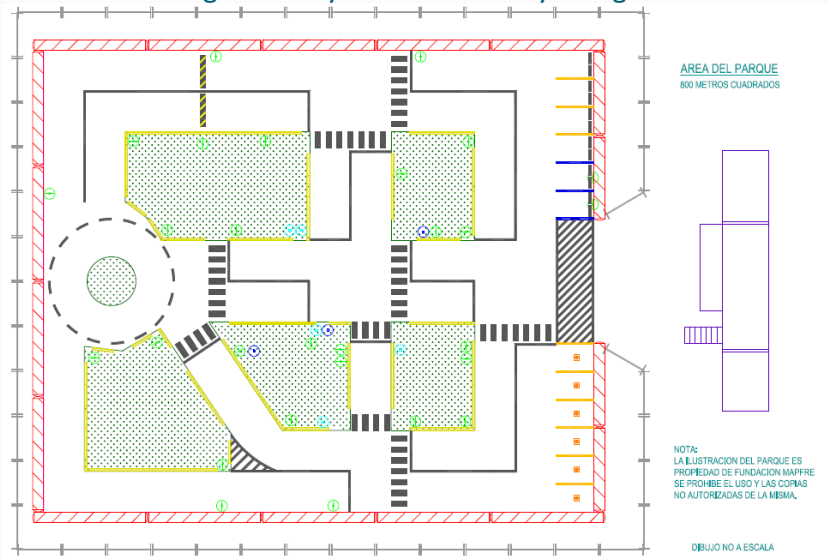


Figure 7: The Safety Village Rolling Park View



Figure 7: Drivers in action within the park with their protective equipment



Figure 8: Children playing the role of cyclist in Safety Village



Figure 10: Children in the Classroom Taking the Interactive Course



Figure 11: Children and Instructors in Games within the Rolling



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Figure 12: Opening of Rolling Park: Safety Village



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Figure 13: Contributors for Safety Village Project: Rolling Park



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1. Impact of the Safety Village: Rolling Park

- Investment: \$500,000
- Time: Four (4) months
- Capacity: 120 children per day
 - Four (4) sessions with groups of up to 30 children.
- Impacted children: 2,238 children (in two months)
- Evidence of visit:
 - Children: participation certificate
 - Teacher: group photo, souvenir of the visit

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2. Luis A. Señeriz Foundation (FLAS) / Mothers Against Drunk Driving (MADD) of Puerto Rico

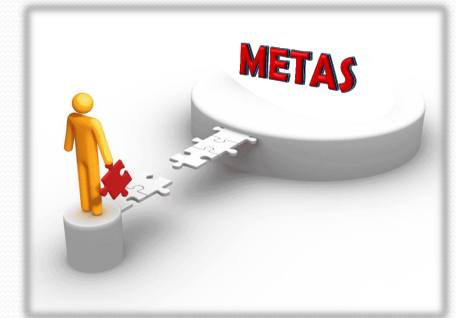
- Community-based organization recognized on the island and nationally
- Promotes greater awareness among the community about the health risks of drinking and drive motor vehicles



2. Foundation Luis A. Señeriz (FLAS) / Mothers Against Drunk Driving (MADD) of Puerto Rico (Cont.)

Objectives

- Encourages and supports legislation to:
 - address the serious problem of public health regarding the use of alcohol and
 - provide possible aid to transit crash victims
- To amend legislation so that laws be more stringent against violators of these on public roads



2. Luis A. Señeriz (FLAS) Foundation/ Mothers Against Drunk Driving (MADD) of Puerto Rico (Cont.)

Members

- Mothers and relatives of people who have died on public roads.

Founder and Promoter

- Ms. Sonia Señeriz is the founder of the foundation Luis A. Señeriz (FLAS), following the death of his son Luis Señeriz in 1984 (28 years ago).



2. Luis A. Señeriz (FLAS) Foundation / Mothers Against Drunk Driving (MADD) of Puerto Rico (Cont.)

Red Promise Campaign:

Purpose

- Create awareness of NOT driving drunk during the Holidays and the whole year.
- Nos alerta sobre el uso indebido del alcohol en las carreteras para que este comportamiento no reclame una víctima más.

Message

- Prudence and solidarity with the thousands of drivers who travel on public roads in times of celebration and joy.



2. Ten (10) Areas that FLAS has Impacted Road Safety in Puerto Rico

1. Implementation of the educational curriculum "Protect You, Protect Me" to children in first through fifth grade, emphasizing about the adverse effects of alcohol on the brain. (Curriculum available in spanish and english).
2. Bringing to the public forum the need for clearer legislation and specific persons who died in traffic crashes as a consequence of a drunk driver.
3. Support to families of fatalities and survivors to mitigate their sufferings and needs of justice and court monitoring to monitor the purity of the processes in favor of both the victims and the offenders
4. Educate young middle and high school and university students to fulfill the roles as leaders in road safety prevention.
5. Red Promise Campaing which is the commitment we make to not driving under the influence of alcohol, that invites us to tie a red ribbon in a visible place in the car to support the cause.

2. Ten (10) Areas that FLAS has Impacted Road Safety in Puerto Rico (Cont.)

6. Lobbying for the approval of Act No. 22 of Vehicle and Traffic Law of Puerto Rico of January 7, 2000, as amended, which provides lower levels of alcohol, zero tolerance for under age 18 and 0.02% for people 18 to 20 years.
7. Eco constant awareness messages to school children and community groups to prevent deaths on the roads. Alert other drivers not to drive under the influence of alcohol, passing the key and have a designated driver.
8. Vigils, Masses and Acts of Remembrance Fatalities in traffic crashes.
9. As an educational strategy is carried out the Victim Impact Panel, an activity that is offered to persons convicted for the first time driving under the influence of alcohol with the intention to give up their conduct.
10. Works closely with government institutions, civic organizations, academic and community in educational work and prevention of alcohol abuse among young people and traffic crashes.

3. Automobile Accident Compensation Administration

Background and Mission

- Public corporation created under Law No. 138 of June 26, 1968.
- Seeks to reduce the tragic social and economic effects produced by traffic crashes on the family and other dependents of the victims.

Educational Campaing

- Message
 - "If you achive, don't text"



3. Automobile Accident Compensation Administration

Benefits

- Medical-hospital services
- Income
- Compensation



3. Automobile Accident Compensation Administration (Cont.)

Educational Campaign



Message to Citizens:

“...when driven and texting everything becomes a target, put on your bandage, make your commitment to drive and not texting”.

4. Institute of Transportation Engineers (ITE): “Moving Toward Zero Deaths” (TZD)

Facts

- Fatalities in US: 33,308 (2010)
- Integrated national plan:
 - Public sector
 - Private sector
 - Academia
- “A National Strategy on Highway Safety”



4. “Moving Toward Zero Deaths” (TZD) Ten (10) Basic Strategies

1. Adopt a safety culture
2. Reduce the speed
3. Reduce the presence of impaired drivers to drive motor vehicles
4. Increasing the use of safety belts and restraint devices for passengers
5. Design and build safest vehicles
6. Identify mechanisms to reduce driver distraction.
7. Increase the safety for young drivers
8. Implement cost-effective engineering improvements
9. Improve pedestrian safety
10. Develop and update comprehensive and integrated database safety systems

5. United Nations– Decade of Action for Road Safety: 2011-2020

- Approved by the United Nations General Assembly in March 2010.
- Arises from the concern by the World Health Organization (WHO) associated with 1.3 millions fatalities per year in highways and streets worldwide.



5. Decade of Action for Road Safety: 2011-2020

Facts

1. Resolution of the United Nations signed: March 2010.
2. Near to 50 millions of people are injured and are handicapped for life.
3. 90% of the victims of road traffic crashes are from developing countries.
4. The annual fatalities in public roads are expected to increase to 1.9 millions by the year 2020.
5. By 2015 road traffic crashes will be the major health burden for children over 5 years in developing countries.
6. The road traffic crashes are the first cause of death among young people worldwide.

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5. Decade of Action for Road Safety: 2011-2020 (Cont.)

Facts

6. The economic cost for developing countries is at least \$ 100 billion a year
7. Traffic crashes create an enormous burden to hospitals, trauma centers and different health systems of a country
8. Traffic crashes can be prevented.
9. A Global Action Plan that includes specific measures, if implemented, could save millions of lives
10. Creating strategic alliances and coalitions between public, private and academic sectors can help to reduce this alarming number of fatalities worldwide.

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6. Transportation and Technology Transfer Center (T²), Puerto Rico LTAP

- Attached to the Mayagüez Campus (RUM) of the University of Puerto Rico (UPR)
- During the last 26 years in has provided training and technical assistance to local transportation agencies.



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7. PESET: Road Safety Educational Park Facilities

- Initiative promulgated by the CST and DTOP, in collaboration with the ASTC Nationwide for the purpose to strengthen education and road safety on the Island.



7. PESET: Road Safety Educational Park Facilities (Cont.)

- Train elementary students between 7 to 10 years on drivers fundamentals.
- In accordance with Law 22 Vehicle and Traffic of Puerto Rico of 2000, as amended.



7. PESET: Road Safety Educational Park Facilities (Cont.)

- Located in the municipalities of Caguas and Arecibo, Puerto Rico.
- The figure 16 illustrates several shots of the Peset parks in Puerto Rico.



PESET Educational Park Facilities (Cont.)



PESET Educational Park Facilities (Cont.)



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Activities Associated with the First Year of the Decade of Action for Road Safety in Puerto Rico

- Publications of Technical Articles about Road Safety
- Citizen Commitment together with other associations of the Government and non profit
- Work Zone Safety Awareness Week
- Press conference

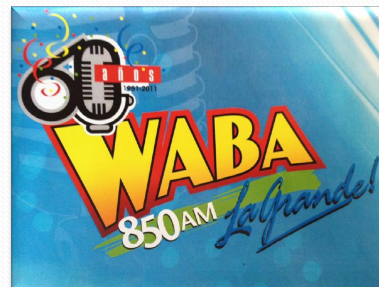


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Activities Associated with the First Year of the Decade of Action for Road Safety in Puerto Rico

- Radio Capsules of 45 seconds to promote road safety
- Illuminating Puerto Rico State Capitol with the Decade of Action Allusive Yellow Colors
- Recognition to the Mothers who lost family members in crashes in public roads in Puerto Rico



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Citizen Commitment: Culture and Road Safety Awareness



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DECADE OF ACTION
FOR ROAD SAFETY 2011-2020
COMMITTED TO SAVING LIVES TODAY



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I, name and lastname, pledge to place my sand grain to save the lives of my people on our highways.

I pledge to:

- ☐ 1. No texting with cellphone while driving a motor vehicle
- ☐ 2. Pass the key if I am under the influence of alcohol
- ☐ 3. No distractions while driving a motor vehicle
- ☐ 4. I will share the road with pedestrians, cyclists and motorcyclists
- ☐ 5. I will always buckle my safety belt
- ☐ 6. I will always buckle my children with safety belt
- ☐ 7. I will require my vehicle occupants to always buckle the safety belt
- ☐ 8. I will comply with the speed limits
- ☐ 9. I will use the protective safety devices while riding on a motorcycle
- ☐ 10. I will use the protective safety devices while riding on a bicycle
- ☐ 11. I will use the protective safety devices while driving on a motor vehicle
- ☐ 12. I will obey the traffic laws applicable to pedestrians
- ☐ 13. I will obey the traffic laws applicable to drivers
- ☐ 14. I will obey the traffic laws applicable to vehicle occupants

Email:

City:

State:

Leave your footprint, upload your photo and be part of the history of moving towards a safety culture.

Photo of you:

All fields are required, except your photo.

Together,
we can save
millions of lives



(Gravito a granito y cambiando unidades lo logramos!)

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Work Zone Safety Awareness Week

April, 21 to 25, 2012



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Press Conference: Work zone Safety Awareness Week



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Exhortan a la seguridad en las carreteras

Por Mariam Ludim Rosa Vélez (mariamludim@uprm.edu)

PRENSA RUM

viernes, 4 de mayo de 2012

El Recinto Universitario de Mayagüez (RUM), a través de su Centro de Transferencia de Tecnología en Transportación adscrito al Departamento de Ingeniería Civil y Agrimensura (INCI), se unió a la celebración de la Semana de la concientización en zonas de construcción en las carreteras.

Este esfuerzo interagencial tiene como fin educar a la ciudadanía sobre los peligros que enfrentan día a día los conductores, pasajeros y trabajadores de vías que estén en proceso de construcción.

Esta iniciativa es parte del conjunto de actividades que el Centro realiza para promover la *Década de acción para la seguridad vial 2011-2020*, que aspira a reducir el número de fatalidades en las carreteras.

"Gran parte de los accidentes ocurre por una combinación entre altas velocidades, descuido por los conductores y otros factores humanos. Juntos podemos erradicar este mal", explicó, durante una conferencia de prensa, el doctor Benjamín Colucci, director del Centro.

Illuminating the Puerto Rico State Capitol with the Decade of Action Allusive Yellow Color



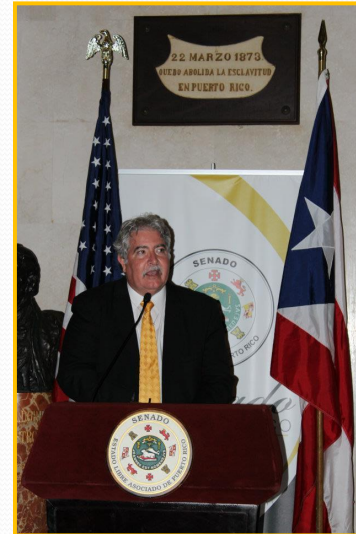
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Protocol acts and Delivery of Resolution

Senate of Puerto Rico

First Anniversary of the Decade of Action for Road Safety



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Recognition to Mothers who lost family members in crashes in public roads in Puerto Rico



First Anniversary of the Decade of Action for Road Safety

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First Anniversary of the Decade of Action for Road Safety



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First Anniversary of the Decade of Action for Road Safety



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First Anniversary of the Decade of Action for Road Safety



Interviews:

Victims
and
Offenders

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Press Conference with the First Lady and the Executive Director for the Commission for Traffic Safety



Caribbean Conference for

Reflection

- “...to become effective and leave a permanent mark in our society, these innovative programs in road safety education will require a genuine commitment to:
 - volunteers from different entities and non profit civic organizations,
 - municipalities,
 - Government agencies,
 - private sector alliances and
 - the academy”
- “...is possible achieve a change in re-focusing on the teaching of values in the society addressed to a culture where it emphasizes in road safety at all levels of education”.
- All together we can to save millions of lives!
- Saving lives is a social commitment of all.

¡Thanks for the Opportunity!



Acknowledgements

1. Transportation Technology Transfer Center:
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