



Photos by: LLia Goronov, Eill Cheyney y Clamur



The Newsletter of the Road Traffic Injuries Research Network (RTIRN)

www.rtirn.net

January-March 2011

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Message from the RTIRN Board



Dear readers,

This issue of the RTIRN newsletter is devoted to highlighting research on bicycle safety. It is worth noting that although bicycles were invented nearly a century before Karl Benz built the first gasoline-powered car in 1896, cycling still remains one of the most neglected means of transport in terms of safety, road design and traffic management.

The origin of the bicycle dates back to 1818 when Germany's Baron Karl von Drais built what was known as the Draisines or 'hobby horses'. It was made of wood, and having no pedals, riders propelled it by pushing their feet against the ground. Later, a series of inventions in the 2nd half of the 19th century resulted in the development of a prototype of the modern bicycle – the velocipede, made of a tubular steel frame on which were mounted wire spoked wheels with solid rubber tires, propelled by pedals connected to the front wheel. Initially, the front wheel was too big as compared to the rear wheel, it was unstable and the weight distribution was poor. A fall from the bicycle ensured that the rider landed on solid ground head first and often broke his nose. Further modifications were subsequently made to improve its stability as well as the comfort and safety of the rider. By the early 20th century, the bicycle was developed into a fine shape and was one of the most popular modes of transport, recreation and commuting.

The demand for and use of bicycles around the world has tremendously increased over the years. The annual world production of bicycles is more than double that of motor vehicles. In 2007, the world produced 130 million bicycles compared to around 52 million automobiles. Currently, there are approximately one billion bicycles in the world, mostly in Asia. Over 60% of the bicycles are produced in China – where it is widely used as a common means of transport and also exported to other countries.

Generally, in high in-come countries, people from upper social classes are most likely to own at least one bicycle, while in low- and middle-income countries, bicycle ownership is higher among people in the lower social class who are less likely to own cars. In many low and middle-income countries, bicycles are the only available and affordable means of transport. Bicycle use has a number of benefits: it reduces traffic congestion, road maintenance, air pollution, and lowers fuel costs for motorists due to decrease in driving. Cycling also has significant health benefits, and lowers the average health care costs due to its protective effects on the development of cardiovascular diseases and other conditions associated with physical inactivity.

In spite of the popularity of cycling and its known health benefits, the associated risks that result in serious injuries and deaths, often discourage people from engaging in it. Head injury is the most common cause of death and serious disability in bicycle related crashes. Although there is compelling evidence showing that wearing bicycle helmets can reduce the risk of head injury by up to 88% and facial injury by 65% among child cyclists, only a small proportion of cyclists wear them. The decision to wear a helmet is influenced by a range of factors, including demographics, behavioral, community awareness, availability, costs, and legislation mandating its use among different groups.

Recent global road safety statistics show that pedal cycle deaths account for 10% of the total road deaths reported in low- and middle-income countries compared to 3-5% in high-income countries. These differences may be attributed to the extent and impact of measures being implemented to improve bicycle safety in these countries. More context specific data and research are needed to evaluate the state of bicycle safety in different regions, identify barriers to implementation of known effective interventions and provide recommendations for



establishing sustainable measures to reduce bicycle-related injuries. I wish to encourage you to support efforts to make bicycle riding attractive and safe.

Wilson Odero MD, PhD

Former RTIRN Board Member

Message from the RTIRN Secretariat

Dear friends,

We at the RTIRN would like to congratulate each and every one of you for this New Year 2011. The RTIRN would like to thank all the support to our network during 2010. Without our partners support we could not accomplish what we did. Last year was an important year for the RTIRN; it was a year of change and of reaps the fruits of the work that RTIRN has been doing in recent years.

Dr. Junaid Razzak passed the torch of the secretariat to us and ended a great period of hard work and excellence dedicated to the Network. We had some changes in our Board as well; Dr. Wilson Odero's period with the RTIRN ended and Dr. Fimka Tozija was selected amongst great candidates as our new RTIRN Board member in December, We thank Dr. Wilson for all the support and hard work he invested in the RTIRN during his period and welcome Dr. Fimka who we are sure will contribute significantly to the effort the RTIRN is carrying out.

For the first time our newsletters were translated to different languages (Spanish, French, Chinese, Persian and Vietnamese) in order to make them more accessible to our RTIRN community. We thank our partners Dr. Hamid Soori (RTIRN Board member), James Yu, Pascale Lanvers-Casasola, Ha Nguyen, Ruben Ledesma and Fernando Poo that helped on the translation of the newsletters. We also have completed the final compiled reports for the Junior and Senior Researchers projects (both accessible on our webpage: www.rtirn.net). In both reports you could find final results and personal experiences of all Junior and Senior researchers that were part of these RTIRN projects.

During 2010 the RTIRN also organized the Regional Workshop entitled "Pedestrian Injuries: Research in Low- and Middle- Income Countries", with collaboration of the Entornos Foundation and the National Institute of Public Health in Mexico. The workshop took place in Cuernavaca, Mexico on June 16th. A multidisciplinary audience of more than 70 individuals attended this workshop and all were benefited of the participation of national and International experts in the field who shared their work and experience. The event was a total success.

During September, the RTIRN successfully organized its parallel session at the 10th World Conference on Injury Prevention and Safety Promotion in London, England. The session was a great opportunity to meet all the people that have been benefited by the Network's activities and projects and many others interested in the work we all are doing. We would like to thank all the people that participated in the parallel session and those who helped us in the organization of this event Andrew Bennet, Danielle Kelly and Becki Cross. Without them this wouldn't have been possible.

In order to facilitate communication between partners, we developed, with the assistance of technicians from the National Institute of Public Health, the RTIRN Online Forum. The Online forum opened on October 1st of 2010. On December the RTIRN organized its first webinar entitled "Introduction to the research process: road traffic injury research in low and middle



income country settings". The webinar was presented by Dr. Rebecca Ivers (RTIRN Board Member), Ha Nguyen and Jagnoor Jagnoor (the last two researcher scholars from the George Institute for Global Health in Sydney, Australia).

We would like to thank all of our partners that helped us accomplish what we did in 2010 and we hope to accomplish more in 2011. We hope that this New Year brings more success and happiness to all of you.

Happy 2011!!!

Ricardo Pérez-Núñez
RTIRN Secretary, 2010-2011

Contributions

Cyclists in Thailand



Pimpa Techakamolsuk (Thailand)

Ministry of Public Health
Email: t.pimpa@gmail.com



Facing the challenges of global warming, cycling is an alternative to the use of fossil fuels. Biking provides numerous benefits compared to motor vehicles but there's still the problem of reducing protection in crashes. From National Injury Surveillance (IS) which has been continuously developed by Bureau of Epidemiology, Ministry of Public Health since 1995 and the population under surveillance is severe injury (admitted) including dead from external causes (V01-Y36) presented at emergency rooms (in 7 days after injury) of 28 sentinel provincial hospitals, we found 4.66- 5.36 percent of severe cases from RTI were cyclists in year 2007-2009 while motorcyclists were 88.7-89%. One reason it may be only severe injury's data collecting which the motorcyclists most likely to be the severe cases from speed and design. Injury due to these vehicles mainly occurred in the children, age between 1 to 15 years old with 45.7% of overall injuries and 37% of severe injury were students. 86% of all injured cases were riders. Males were more commonly involved in the collisions (72%) as compared to females (28%). Most of the injury due to biking occurred at the time 4 pm-7 pm.(35%) and 7 am.- 9 am.(18%). The alcohol drinking also had been found in cyclists with 20 percent in 2008 and 17 percent in 2009. There had been found that the extremities were the most body parts injured(41%), followed with the head/neck (29%) while selecting only dead cases, we found 87% of death had been shown with the severe injury on head /neck.



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✦ Reducing road danger from Lorries in London



Amy Aeron-Thomas (UK)

Road Peace

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Lorries pose a specific threat to vulnerable road users in urban areas. Their bulk makes them awkward to manoeuvre, can obscure the driver's view of adjacent road users and ensures that contact is frequently fatal. Lorries are disproportionately involved in cyclist deaths; they account for only 5% of traffic, but nationally account for 45% of cyclist deaths. In London, in 2009, of the 13 cyclists killed, 9 were killed by Lorries.



London is committed to achieving a cycling revolution and has a target to increase modal share of trips by cycling. But this requires safer roads. Transport for London conducted an analysis of cyclist collisions and identified 8 common types. It then organised its cycle safety action plan around common collision types with 52 recommendations, many of which address lorry danger <http://www.tfl.gov.uk/assets/downloads/corporate/Cycling/Cycle-Safety-Action-Plan.pdf>.

RoadPeace is founded on the principle of road danger reduction, which is based on the belief that those who are best placed to manage risk should do so. Whilst we support campaigns that educate cyclists on the dangers of lorries, our own campaign is focused on encouraging fleet operators to adopt good practice which will result in safer operations, safer lorries (for example sensors and mirrors) and safer drivers (for example driver training). This is being developed in conjunction with Transport for London, the freight industry, and other campaign groups and our work includes developing a website promoting good practice in reducing lorry danger

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✦ Cyclists injury rate in Spain



Carlos Martinez-Perez, Patricia Perez-Fuster and Jaime Sanmartin (Spain)

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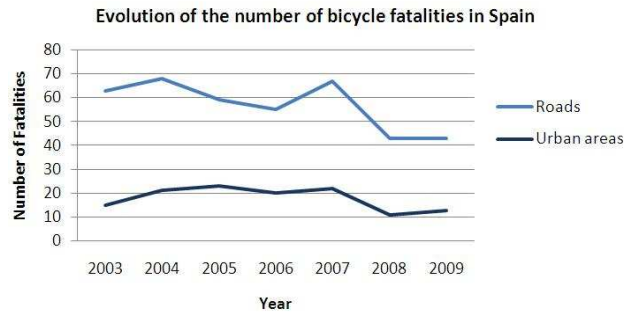


The use of bicycle in Spain is constantly growing. In urban area, its use has been increasing because of public bicycles and of the improvement of the infrastructures. On the roads, more sport and tourist trips have been recorded. According to the DGT, in 2009, cyclists were involved in 3.448 collisions (4% of the total collisions recorded), from which 31% on roads and 69% in urban area. For these collisions, 3.318 victims were recorded from which 56 were fatalities (43 on roads and 13 in urban area). The data shows a 16% increase in the



number of collisions and a 4% in the number of fatalities comparing with 2008.

Given the differential characteristics of the fatality rate in roads and urban area, different types of specific measures are being implemented. In 2003, a regulation on the obligation of using the helmet, the lighting and reflective clothes while circulating on the roads was introduced. The DGT, in its 2010-2020 Road Safety Strategy, is creating a combined regulation for the Nation that will regulate the use of bicycles in the cities. The aim is to create coexistence regulations and give a legal coverage to this vehicle. In November 2010, the DGT launched the “Hazte ver y mejora tu seguridad” (Make yourself be seen and improve your safety) campaign to raise awareness among the cyclists about the obligation of respecting the regulation. Its objective is to reduce the number of collisions (69% of the collisions involved bicycles) between bicycles and other vehicles.



Fatalities	2003	2004	2005	2006	2007	2008	2009	2009/2008	2009/2003
Roads	63	68	59	55	67	43	43	0%	-47%
Urban area	15	21	23	20	22	11	13	15%	-15%
Total	78	89	82	75	89	54	56	4%	-39%

✳ The association between head injury and the use of helmet in bicycle collisions among preschool children in India



Bhawna Gupta (India)

Public Health Foundation of India

Email: bhawna1974@gmail.com

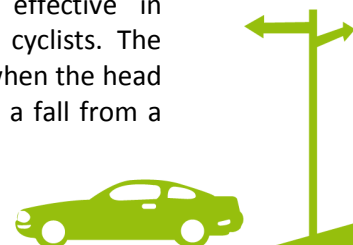


Children are uniquely susceptible to cranial facial trauma because of their greater cranial mass to body ratio. The incidence is ranging from 0.6-1.2%. Boys (11.5) had a higher mean number of road trips per day than girls (9.6), and the latter were more likely to walk and less likely to use a cycle ($p < 0.001$). The odds of overall RTI were significantly higher for those who rode a cycle (2.45, 95% CI 1.75-3.42).



The high rate of facial injuries in preschool children can be attributed to the wheels on their 'vehicles'/bicycles as they are small in diameter. Thus, if an obstruction such as a stone is hit, the 'vehicle' is likely to stop abruptly sending the child's head forward so that the face impacts with the handlebars or steering wheel.

Bicycle helmets have been shown to be effective in preventing head, brain, and facial injuries to cyclists. The mechanism by which the helmet works is that when the head impacts with a hard surface as, for example in a fall from a



bicycle, it decelerates rapidly

This deceleration can cause cerebral contusions as the brain hits the skull and/or diffuse axonal injuries as a result of tearing and shearing within the substance of the brain resulting in temporary or permanent brain damage. In addition, also provides protection against traumatic brain injuries and penetrating injuries such as from stones.

Head injuries among children can be declined after the adoption of bicycle helmet legislation, environmental modification (eg, separate lanes on the roadway for bicyclists). Nonetheless the dental profession could contribute significantly to promotional campaigns for the use of helmets.

iRAP Star Rates roads for cyclists' safety



Steve Lawson (UK)

International Road Assessment Programme

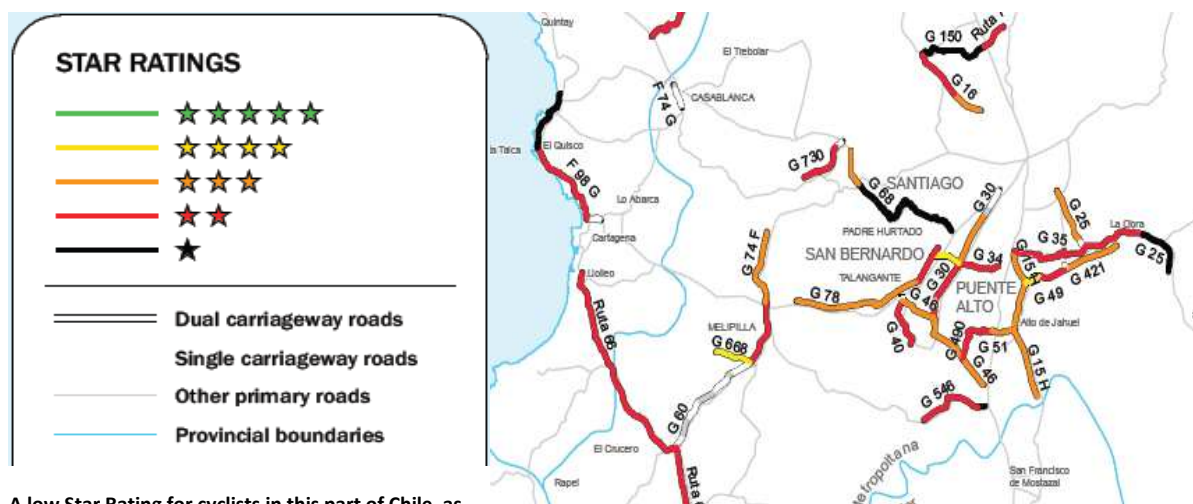
Email: steve.lawson@irap.org



iRAP (the International Road Assessment Programme) rates road infrastructure for safety, providing Star Ratings for the safety of car occupants, pedestrians, motorcyclists and cyclists. The programme is active in more than 60 countries. Maps are produced of the ratings, with accompanying Safer Roads Investment Plans to guide countermeasures.

Road infrastructure scores more highly if there are facilities for cyclists, mainly in the form of cycle lanes or cycle tracks segregated from the carriageway. Elvik and Vaa (The Handbook of Road Safety Measures (Elsevier, 2004)) show that physically separating bicyclists from other traffic reduces bicycle collisions by 30%, but cycle lanes on the same road reduce cycle collisions by a much smaller percentage. Some of the other features rated in iRAP surveys are shown below.

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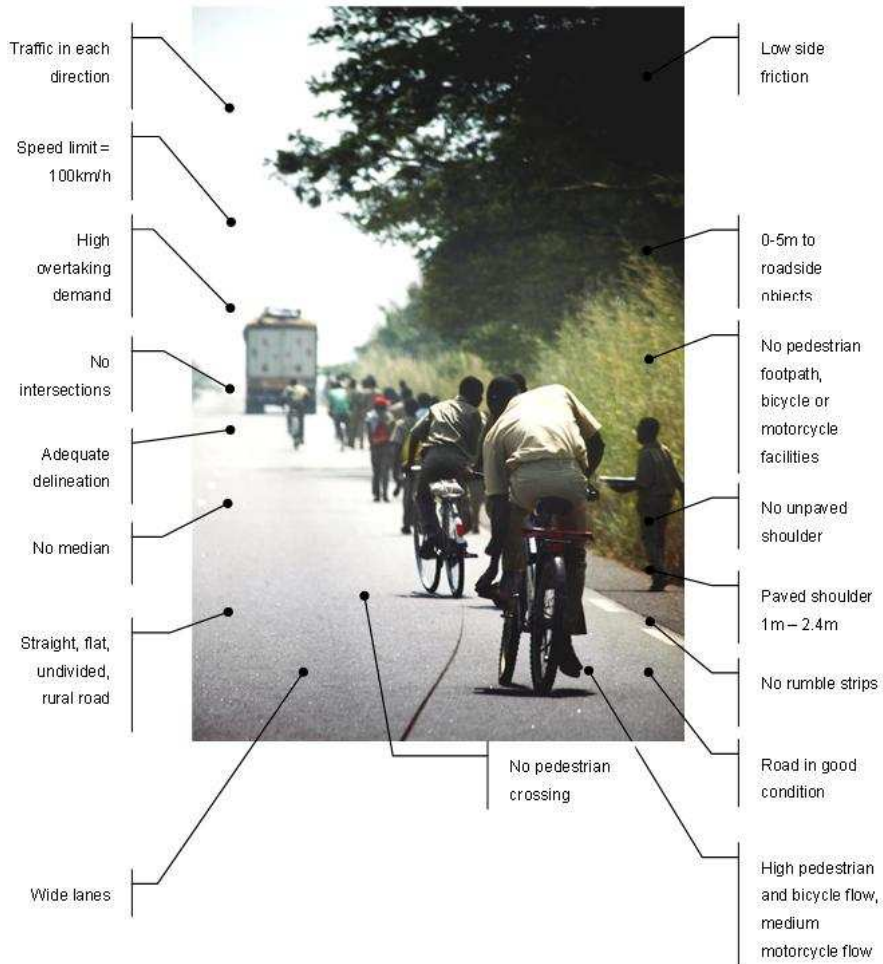


A low Star Rating for cyclists in this part of Chile, as in most Low and Middle Income countries, indicates that there is little infrastructure provision for the safety of these road-users

Details of engineering measures to support cyclists and cycling are at <http://toolkit.irap.org/>

Visit www.irap.org and icanhelp@irap.org. Details of the iRAP Star Rating methodology are at: http://www.irap.org/media/9573/irap504.04_star_rating_roads_for_safety.pdf





✦ The bicycle as part of the solution towards sustainable mobility

Bernardo Baranda Sepulveda (Mexico)

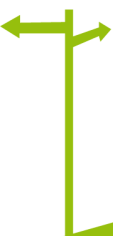
Policy Institute for Transportation and Development (www.itdp.org)

Email: bbaranda@itdp.org



“From 40,00 people to cross a bridge in an hour moving at 25 km per hour, it needs to be a 138 in width when traveling by car, 38 meters if you travel by bus and on the other hand if you go by bicycle, bridge not need more than 10m wide” Iván Illich, *Energy and Equity*.

The city inhabitants suffer from the excessive use of cars leading to a deterioration in their quality of life due to pollution¹ thousands of man hours lost collisions and stress. In this issue, the bicycle is emerging as an alternative that has become a value thanks to its great potential and many benefits such as being an efficient vehicle², healthy, cheap and clean. In Mexico City has promoted its use as an attractive option as part of a comprehensive policy for urban mobility, which made it necessary: a) Develop an adequate infrastructure to make travel safe, comfortable, attractive and b) Promote a culture of respect to facilitate its use.





¹ According to the OECD in 2006 24% of the global emission of CO2 from burning fossil fuels came from the transportation sector. Source: <http://www.internationaltransportforum.org/Pub/pdf/09GHGsum.pdf>

² Besides the efficiency in terms of space exemplified by the quote of Ivan Illich, is the efficiency in terms of time shown in the table on which the bicycle in a range of 5 kilometers, is often the quickest means of transport door to door. ("Transport Systems, Policy and Planning, a Geographical Approach" R. Tolley y B. Turton, Longman Group 1995, p. 211).

We welcome our new partners to the RTIRN

Argentina:	Carlos Marcelo Leveau
Bangladesh:	Baset Kamran
Cameroon	Nginyu Ngange Ndamnsa
Costa Rica:	Mauricio Leandro
Ghana:	Alexander Yao Segbefia
India:	Ulimiri Venkata Somayajulu, Vishwanath N S, Jagnoor Jagnoor
Kenya:	Eric Aligula, Theobald Musungu Luchidio
Lebanon:	Nellie Ghusayni
Malaysia:	Nor Fadilah Mohd Soid
Mexico:	Patricia Gabriela Sanchez Vallejo, Luz Sepulveda
Nepal:	Prakash Kandel
Nigeria:	Maiga Djimbo Ibrahim
Oman:	Al Maniri Abdullah
Pakistan:	Shirin Mirza, Hunniya Waseem, Muhammad Navid Tahir
South Africa:	Kobus Labuschagne
Spain:	Carlos Martinez Perez
Thailand:	Waiyanate Natthakarn, Pimpa Techakamolsuk
Turkey:	Rebecaa Spicer
UK:	Steve Lawson
USA:	Bragg Mason, Lisa Caputo

News and events



Thank you note to Dr. Wilson Odera

On behalf of the Road Traffic Injuries Research Network, We would like to take this opportunity to thank Dr Wilson Odera for all the commitment and hard work invested to this network.

The RTIRN really appreciates Dr.Wilson Oderos's effort to strengthen the network in low and middle income countries during these 6 years. It will be hard to equal his dedication and excellence on the field of RTI and as a Board Member.



We hope Dr. Wilson Odera keeps been an active member of the RTIRN and continue helping us making the Network even better.

Thank you!!!



New RTIRN Board Member

Welcome to Dr. Fimka Tozija (Macedonia)



The Road Traffic Injuries Research network would like to welcome Prof. Tozija Fimka as our new board member. Prof. Tozija is senior researcher with an active interest in the field of injuries in general and especially in road traffic injuries. She has 20 years of professional work in injury prevention and safety promotion in the Institute of Public Health. Since 2004 Prof. Tozija is Head of the Department for Violence and Injury Control and Prevention established by her in the Institute of Public Health and is directly responsible for injury prevention in the country especially for road safety.

Prof. Tozija is Adviser for Public Health Policy in the Institute of Public Health and Head of the Cair for Social Medicine at the Medical School Skopje. She is professor of social medicine and public health teaching at Medical School and School of Dentistry. She is teaching three courses at MPH Program and an elective course for injury prevention and safety promotion. Dr Tozija has completed PhD course in Injury Research and Safety Promotion at Karolinska Institute. She has defended doctoral thesis titled as "Social-medical aspects of road traffic injuries among children and youth in the Republic of Macedonia". She is personally and professionally dedicated to research in injury prevention and safety promotion especially for children and youth. She was Principal investigator of many projects, among which the most recent are CDC/WHO Global school-based student health survey and WHO Community injury survey. Currently she is running TEACH VIP WHO project (teaching for violence prevention).and has translated curriculum for road safety.

Since 2003 Prof. Tozija is a WHO/MOH National counterpart for Injury control and prevention and road safety. She is member of the National task force for Road Safety and participated in the preparation of the National Strategy of the Republic of Macedonia for road traffic safety (2009-2014). She is member of the Working Group of the National Coordination Body for road safety responsible for the implementation of the Action Plan and Strategy. The most recent event was joint action with all partners in road safety for 21st November the World Day for remembrance of the road traffic victims.

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First RTIRN webinar

On December 6th 2010 the first RTIRN webinar entitled "Introduction to the research process: road traffic injury research in low and middle income country settings" took place. With the participation of Dr. Rebecca Ivers (RTIRN Board Member), Ha Nguyen and Jagnoor Jagnoor (the last two research scholars from the George Institute for Global Health in Sydney, Australia). In order to make this webinar more accessible to all partners, the webinar was transmitted both in English and Spanish. We are very proud of this accomplishment. We thank all our partners that supported us in this webinar and invite all of you to participate in future webinars.

To access the first RTIRN webinar please go to our web site www.rtirn.com



World Day of Remembrance of Victims of Road Traffic Injuries; Celebrated in Cotonou (Benin)

The NGO ALINAGNON celebrated on Sunday, November 21st 2010, the World Day of Remembrance for victims of road traffic injuries by organizing a procession around the city of Cotonou (BENIN)



The NGO ALINAGNON commemorated the special date by carrying placards and banners that read various requirements of road safety at the infamous "crossroads of life" formerly called "crossroads of death" because of the horrifying number of traffic injuries that occur every year.

The coordinator of the NGO ALINAGNON, Mr. Casimir Migan said: *"To ensure our roads, so that the killing stops, reducing our speed, respect the rules of the road"*; Dine Imorou, Commander, Chief of the Brigade of traffic in Cotonou and Mr. Coovi YETE representative of the Director of National Centre for Road Safety (CNSR), recalled the need for motorcycle helmet, the use of the seat belt, control of brakes, headlight adjustment, checking the tires, respect for wading, speed limit especially in urban areas, and the respect unconditionally of the code of the road. *"This is small effort that our roads will not be cemeteries,"* concluded Mr. Migan.

The commemoration of this day was a good opportunity to remind to everyone the fundamentals needed to secure roads in Benin.

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U.N. Road Safety Collaboration Meeting Appreciates RTIRN's Capacity Development Success!

RTIRN is a member of the United Nations Road Safety Collaboration and participated in the recent meeting in Geneva on 5-6 Oct 2010. Dr. Adnan Hyder, Chair of RTIRN attended the meeting and represented the network.

The capacity development initiatives of RTIRN were reported to UNRSC including the support for junior researchers, sabbaticals for senior researchers, conference scholarships, webinars, and regional workshops. The UNRSC was very pleased with these initiatives and members were delighted to receive hard copies of reports on these activities. RTIRN and its partners were congratulated for this work in capacity development of research in low and middle income countries.

The board of RTIRN would like to express thanks to all its partners and especially the generous financial support of the World Bank Global Road Safety Facility and the WHO for these initiatives.

For copies of the reports please see www.rtrirn.net



Johns Hopkins Bloomberg School of Public Health International Injury Research Unit Named WHO Collaborating Center.



The Department of International Health and International Injury Research Unit at the Johns Hopkins Bloomberg School of Public Health and , has been designated a “collaborating center” by the World Health Organization. Dr. Adnan Hyder, RTIRN board chair, will be the director of the new collaborating center.

This new WHO collaborating center would be the third collaborating center in the United States to focus on injury prevention and know is part of more than 800 WHO Collaborating Centers in over 80 Countries.

Congratulations to Dr. Adnan Hyder and his department for this great and important accomplishment.

Designation of WHO Collaborating Center in Emergency Medicine and Trauma Care



Also the World Health Organization has designated the Department of Emergency Medicine, Aga Khan University, Karachi, Pakistan, as a WHO Collaborating Centre for Emergency Medicine and Trauma Care.

The collaborating center will carry out research in the area of emergency medicine and trauma, promote emergency medicine, trauma care and assist in building capacity in the area of injury prevention and control in the EMRO region. It is first such designation in Emergency Medicine, especially in a low income country.

We look forward to this new opportunity to engage with many of you and seek you assistance in moving this forward.

Congratulations to Dr. Junaid A. Razzak and his team for this designation.

Save the dates!

6th,7th and 8th April 2011- Peñaflor, Chile

The 1st Latin American Regional Community Conference on Safe Communities. For more information go to <http://www.penaflor.cl/web10/> or contact Eduardo Jorquera Cabello at edoJORQUE@yahoo.com

Thursday 30 June 2011, 9am – 4pm - Royal College of Surgeons, London, UK

Youth, Gender & Road Risk – A Road Safety Forum International Congress open for bookings!!!!

For more details go to www.roadsafetyforum.org/events.

May-June of 2011 WHO’s World report on disability. The goal is to support implementation of the Convention on the Rights of Persons with Disabilities by compiling evidence about the prevalence of disability and the situation for people with disabilities around the world; assess what works to meet needs and promote participation; and suggest directions for the way forward.



If you know about any future event and would like to share it with all RTIRN partners, please send an email to: administrator@rtirn.net

Make the RTIRN newsletter your own!

- Have news of road traffic injuries research in your region?
- Intervention projects?
- Upcoming events or new publications?

Share it with us at the following address: administrator@rtirn.net

Have you registered for the New RTIRN Online Forum?

The new forum enables RTIRN Partners to communicate more effectively, participate in online discussions and stay updated with current Network activities.

Please visit http://www.rtirn.net/online_forum.asp to register today!

To become a RTIRN partner

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To become a partner of network, please visit our website at www.rtirn.net

For further inquiries, please contact:

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Designed by: Paola Navarrete Guadarrama

