

Global impact and burden of motor vehicle accidents (mvas)

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Global impact and burden of motor vehicle accidents (MVAs) Motor vehicle accidents killed around 1.24 million deaths last year worldwide, (WHO 2013). This trend of motor vehicle accidents is projected to increase to 3rd of the world's burden of disease (Shanthi Ameratunga, Martha Hajar, Robyn Norton 2006) from its current position of 10th in top causes of death worldwide just behind diseases like Diabetes 9th, Tuberculosis 8th, Lung cancers 9th and HIV/AIDS 8th (WHO 2010). This essay aims to investigate, compare and contrast the global impact (mortality, economic cost and morbidity) and the burden (DALY disability-adjusted life years) of motor vehicle accidents, with special emphasis on the newly emerging economy (Thailand) and developed country (Australia). We will discuss the magnitude, distribution and the determinants that exist between the two countries, and introduce implementation program that has been successful in reducing the death toll. The central theme of this paper will be to highlight the impact of MVA on the population health, and to compare the different strategies used by the two nations in order to bring down the impact of MVA. The global impacts of MVA and the Magnitude of Mortality rate is alarming, one estimates that around 3000 people are killed every single day, with 30,000 been injured or disabled globally, this means around 20-50 millions are injured or disabled each year (Vinand M. Nantulya¹, David A. Sleet², Michael R. Reich³, Mark Rosenberg⁴, Margie Peden⁵ and Rick Waxweiler⁶ 2003). Mortality rate is unevenly distributed with low to middle income countries having to burden 90% of the death toll, while only having half of the world's vehicles (Who2013) the key determinants causing this are the government's inability to meet the UN's plan to reduce the MVA around the world. It is

called "Decade of Action for Road Safety" the plan calls for better management of the road, build safer roads, build safer vehicles, educate better road-user behaviour and increase post-crash care (GRSP2011) in saying this, the poor - middle income countries don't have the financial resources "GDP", to implement the UN's plan. The mortality can be broken down into regional areas to closely examine the distribution, the highest MVA mortality rate was reported in African region (28.3) in 100,000 followed closely by Eastern Mediterranean (26.4) (Shanthi Ameratunga, Martha Hajar, Robyn Norton 2006). The mortality rate of MVA is very closely correlated with the income of the regions, Eastern Mediterranean's GDP of \$11,194 in 2011 putting them in middle income group while the African region range from lowest GDP of \$600 US in Eastern Africa to highest GDP of \$7641 in the Southern Africa, with an average of \$2872.60 GDP per capita, making Africa the poorest group in the world (UN 2012). If you compare this to the high income regions that only has a death rate of 11.0 Northern European regions (UN 2012), you can clearly see that the main determinant factors are the level of income of the region. (Chart 1 was created using data from UN 2012, WHO 2013) (WHO2013) estimates that in Australia the Mortality rate is extremely low, in 2010 the total deaths due to MVA was only 1363 which is about 6.1% of the estimated road traffic death rate per 100,000 populations. According to the (Department of infrastructure and transport Australia 2006), the magnitude of MVA is around 653,853 road crashes with 4619 people suffering disability and 1455 deaths in 2006. The distribution and the morbidity of MVA is 367,209 road crashes 471 fatal in capital city, 147,460 road crashes 246 fatal in urban and 119,184 with 738 fatal in rural

areas. The key determinants of the high fatal crashes in rural areas may be speed related and the large distance between capital cities. If we compare that to Thailand which is dangerously high at 26, 312 with 38. 1% of the estimated road traffic death rate per 100, 000 populations (WHO 2013), which makes Thailand the highest death rate in the world. Even in a recent publication by health department of Thailand shows that accidents and poisonings is the 3rd highest leading cause of death at 59. 8% per 100, 000 populations (Thailand HPR2008-2010). MVA distribution is also heavily scaled towards the young, (WHO2013) states that MVA is the “ 1 cause of death among those aged 15-29”(WHO2013), the second leading cause of death for those aged 5-14 and third for those aged 30-44 (Alyson Hazen, and John E. Ehiri, 2006). This creates an enormous financial and economic cost to population health, (WHO 2013) believes that the total cost of MVA is about \$518 billion in 2010 for the high income countries and about \$65 billion dollars for the poor countries, that is \$65 billions dollars out of the health budgets of countries who can least afford it.