



ROAD TRAFFIC INJURIES: A PUBLIC HEALTH CRISIS IN MENA

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Introduction: Over the last 20 years, the Middle East and North Africa (MENA) has made dramatic progress in lowering premature death and disability from most communicable, newborn, nutritional, and maternity causes. The Global Burden of Disease study (GBD, 2010) confirms that the number of deaths and years of healthy life years lost are decreasing for the above causes. However, the numbers for non-communicable diseases (NCD) are at 73% and while deaths due to injuries (9%) is a small proportion of the overall total, there has been a dramatic increase in its magnitude and relative proportion over the last 20 years. To contextualize, communicable diseases such as lower respiratory infection are currently the third leading cause of death in MENA (across all ages and gender), and this has been steadily decreasing - by 30% since 1990.

Road traffic injuries, on the other hand, are the fourth leading cause of death in MENA killing 82,000 people in 2010² and increasing by 53% since 1990. This is the highest percentage among all regions. The road traffic annual mortality rate in the region is 22 deaths per 100,000 population (compared to less than 5 deaths per 100,000 population in the best performing countries worldwide).

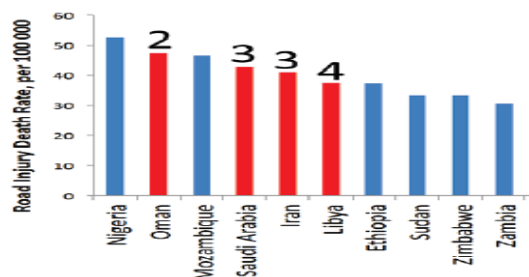


Road Conditions in Yemen

Source: International Relief and Development and Engicon - Yemen

Compared to other developing countries, the composition of road injury deaths in the MENA region stands out even more. MENA traffic injury victims are mostly vehicle occupants (63%), pedestrians (22%) and motorcyclists (8%). In other developing countries, around 50% of road traffic deaths are pedestrians.

Figure 1: Road traffic fatality rates for the ten worst performing countries including four (red) from MENA region. Number over the bar shows the rank of road traffic injuries as cause of death among all causes in that country. (Source: GBD study 2010)



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²WHO Global Status Report on Road Safety, (2013).

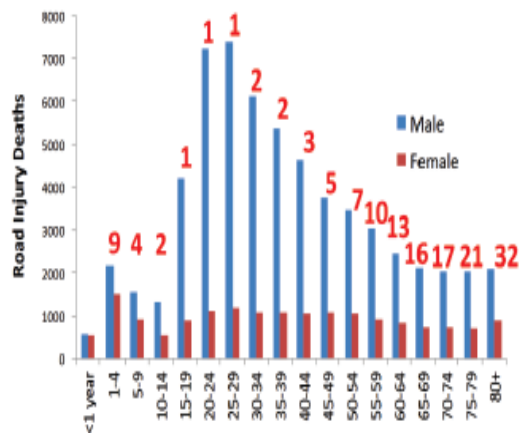
The poor road safety performance of Oman, Saudi Arabia, Iran, Libya (Figure 1) and others in MENA is largely due to excessive speeding and lack of police enforcement, with ineffective penalty systems; and rapid motorization growth and road building combined with poor road design and vehicle regulations. In Iran, the situation is worsened by motorcycles whose riders constitute 23% of road traffic fatalities. Iranian traffic police says that helmet usage is 30% and 10% for drivers and passengers, respectively.

The Social and Economic Costs of Road Crashes in MENA: International comparisons provide insights into the differences in the economic burden of road crashes across countries. Based on international comparisons, the costs of road crashes have been estimated between 1% of Gross Domestic Product (GDP) in low income countries to 2-3% in high income countries. The current figures for MENA are grim. On average, MENA high income countries lose around 3.9% of GDP to road crashes (Oman ranks worst with a loss 7.4% of GDP, Malta fares best losing 0.9% of GDP to road traffic injuries). The economic loss is even worse for some of the lower and upper middle income countries in MENA. On average, these MENA countries lose around 5.4% of GDP, with Iran losing a significant 8.4% of GDP to road traffic injuries, which is among the highest in the world. The total cost of road traffic injuries in the MENA region has been estimated at USD 120 billion for 2010 (iRAP analysis of road crashes - WHO (2013), McMahon and Dahdah (2008).

Road injuries take a lasting toll as they mainly affect young populations (Figure 2). Globally, road traffic injuries are the number one killer for ages 10 to 24 years. For MENA, the problem is more acute as road traffic injuries are the leading cause of death for a wider age group - 10 to 35 year olds. This has serious social repercussions, especially in developing economies, given that traffic injuries weaken economic growth and the resulting costs are borne disproportionately by the poor, who make up the majority of road traffic injury victims. The combined effects of health costs and loss of livelihood can put poor and vulnerable families into the vicious cycle of debt and poverty.

Without strong social safety nets in these countries, the disabled – often the chief breadwinners – can face a lifetime of physical pain, as well as loss of wage earnings, mobility, and capacity to provide for their families.

Figure 2: Age distribution of road deaths in MENA region by sex. Numeral over the bar indicates the rank of road traffic injuries among all causes of death in that age group. (Source: GBD study 2010)



While considering the cost of road traffic injuries, one must also take into account that in middle-income countries, government spending on health care is relatively low. MENA governments commit on average only 8% of their national budgets to healthcare (World Bank, 2013). This compares with an average of 17% in OECD countries. One major consequence of this low spending is that individuals are responsible for the majority of their healthcare costs, which for poor families often is unaffordable. Thus low public financing for health compromises access and quality of care.

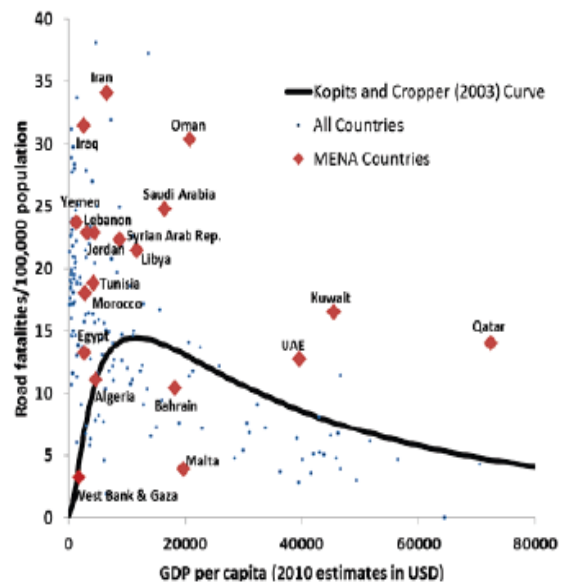
Data suggests that low and middle income countries are the worst performers in road safety - 90% of the road deaths occur in these countries. This implies that wealthier nations have better road safety, with more resources to manage infrastructure, safety systems and institutional capacity. While this is true for most high-income countries in Europe, North America and South West Pacific, it does not hold for high income MENA countries. In Oman and Saudi Arabia, for example, road traffic injuries are the second and third leading causes of death respectively.

Iran, a middle-income country, has a road traffic mortality rate of 44 per 100,000 among the highest in the world.

Policy research such as by Kopits and Cropper (2003), predicted the impact of income growth on road deaths across 88 countries using historic time trend data (1963-1999). The results from the fixed effect regression model estimated that road traffic deaths per population rises at lower values with increasing GDP per capita. The trend is reversed at a threshold income, after which increases in income levels led to steady improvement in road safety. The study shows that the GDP per capita income at which road traffic fatality rates begin to decline is approximately USD 12,383 when a common time trend is assumed across all countries and USD 17,458 when region specific time trends are used. This note compares the relative performance of MENA countries in their current situation and implications of observed differences from the generalized historic trend.

Figure 3 plots the annual road traffic fatality rate per 100,000 people as a function of GDP per capita income for all countries, with MENA countries in red. The distribution for all countries clearly demonstrates that those with lower income levels have significantly poorer road safety performance. The quadratic regression model with linearized regional time trend developed by Kopits and Cropper is superimposed on the 2010 fatality rates. The comparison shows that most MENA countries, in any income category, have poor road traffic fatality rates compared to other countries with similar incomes. Saudi Arabia and Slovakia have similar income levels but the road traffic fatality rate in Saudi Arabia is 25 per 100,000 people, but 9.5 for Slovakia. Road traffic fatality data (from GBD 2010) shows no appreciable decline in fatality rates in high income MENA countries in the past 20 years. As to low and middle income MENA countries, their high road fatality rates will continue to go up (GBD 1010). Thus, it is imperative that as the income and motorization levels continue to rise for MENA developing economies, strong measures for improving road safety management are immediately put in place to avoid the increasing burden of road traffic injuries.

Figure 3: Road fatalities (Global Status Report-WHO 2013) as a function of GDP per capita income (in 2010 USD) compared with adjusted time trend results from Kopits and Cropper (2003).



In developed countries across the world, high levels of motorization correlate with better road safety performance – except for developed MENA countries. Clearly then in MENA motorization alone does not reduce road injuries. World Bank data shows that high income OECD countries have a motorization rate of 630 motor vehicles per 1,000 people (excluding two-wheelers). This is comparable to rates in Kuwait (527), Qatar (532), and the UAE (313). Yet, road fatality rates for all three are much higher than in the OECD. Indeed, in most MENA countries, fatality rates are increasing despite increased motorization and incomes. It should be underscored that countries that have reduced the level of traffic fatalities have invested heavily in effective programs tackling laws, institutions and behaviors.

Improving Road Safety in MENA: In March 2010, the UN General Assembly adopted Resolution 64/255, proclaiming 2011-2020 the Decade of Action for Road Safety, to stabilize and reduce global road fatalities 50% by 2020. If MENA countries are successful, estimates are that 380,000 lives will be saved and 3.8 million serious injuries avoided. This is equivalent to a

saving of USD 200-300 billion, i.e. the largest lifesaving public health program in MENA.

A Global Plan for the Decade of Action: This was launched in May 2011 to guide countries and facilitate coordinated actions to achieve its goals and objectives. The Plan engages at local, national, regional and global levels, with a focus on the national and local-level. Countries are encouraged to adopt a five-pillared multi-sectorial approach: Road Safety Management, Safer Roads and Mobility, Safer Vehicles, Safer Road Users, and Post-Crash Response.

Global Plan Activities: The first step for MENA countries is to establish a national lead road safety agency accountable for the Decade of Action Goals. Without accountability mechanisms, the goals are unlikely to be achieved even if countries start on the Global Plan. Next should be the adoption of a national road safety strategy which sets realistic short, medium and long term targets with well-funded evidence-based activities. The second step is to pass appropriate legislation and enforce these through evidence-based, sustained activities promoting positive changes in behaviors and improved vehicle standards. This should be done in conjunction with capacity building social marketing programs in areas of risk factors, i.e. speed limits, drinking and driving, seat belt and helmet usage, etc.

The third step is a large road improvement program based on retrofitting high risk sections of the road network with protective features for all road users. Low-cost and sporadic black-spot treatments have not achieved a sustained reduction in road traffic crashes.

A 2008 expenditure review conducted by the World Bank-administered Global Road Safety Facility noted that MENA should invest USD 4 billion in 2010 and up to a USD 9 billion in 2020 to achieve the goal of a 50 % reduction in road traffic fatalities by 2020, i.e. decreasing from a forecast of 125,000 to 65,000 which is equivalent to a 20% reduction over 2010. Investment needs are a fraction of the annual cost from road crashes estimated at USD 120 billion for 2010.

World Bank Resources for Road Safety Engagements: World Bank resources include:

□ *Global Road Safety Facility (GRSF)*, a global partnership established in 2006 to address the crisis of road traffic deaths and injuries in low and middle income countries. It provides funding, knowledge and technical assistance to achieve sustainable results and leverage investments in member countries.

□ *Institutional Development Fund (IDF)*: The IDF's strategic focus is to strengthen the capability of client institutions, but with a new orientation to address specific delivery challenges. Road Safety projects aligned with the Bank's strategy may call on IDF support.

□ *The World Bank's own budget* provides technical assistance to client countries as in Iran's 2009-2011 Road Safety Project. There are also partnerships with the private sector, per example GRSF and the oil company TOTAL launched an initiative along the main transport corridors of Northern and Central Africa.

□ *Multilateral-Development Banks Road Safety Initiative* was launched in 2009 to leverage country and regional road safety programs, accelerate knowledge transfer, strengthen institutional capacity, and scale up road safety investment. Under this Initiative, the World Bank is partnering with the European Investment Bank to address road safety in Morocco and possibly Egypt and Jordan.

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