Largely unnoticed in Europe and North America, trauma has become a rapidly expanding epidemic in the world’s low and middle-income countries (LMICs). Currently, trauma from road-traffic accidents alone is the 6th most common cause of death in middle-income countries, and 9th in the world. Many of these countries are experiencing a rapid fiscal growth and with it expansion of their infrastructures. The accompanying increase in personal wealth means, for many, a graduation from foot or bicycle transport to motorcycles and automobiles. Sadly, this is also reflected in a commensurate, rapid increase in road-traffic injury rates. The WHO estimates that by 2030 trauma from road-traffic accidents alone will be the 3rd most common cause worldwide of both mortality and disability (as measured in disability-adjusted life years, or DALYs).

Why is this relevant to AO?
AO’s mission has always been to “improve patient care”. In this, we have been very successful. The world over, if trauma patients are treated operatively today, they are mostly treated according to AO principles. At the same time, a majority of patients in rich countries (and relatively wealthy patients anywhere in the world) enjoy the privilege of implants and fixation techniques developed by AO, or according to AO principles. While there are fracture types that remain difficult to treat and medical indications exist that prevent a satisfactory outcome even in optimal circumstances, patients in the rich world generally have access to state-of-the-art treatment that promises vastly improved outcomes compared to 50 years ago.

This is mostly not the case for patients in LMICs. While state-of-the-art medical facilities exist in virtually all countries of the world, these are available only to a small fraction of the population in most LMICs. Most patients—and their surgeons and other medical caregivers—face challenges in several parts of the system, starting with the state of emergency treatment: Often, lack of trauma protocols and infrastructural deficiencies (such as the absence of ambulance services) lead to higher mortality and disability rates than in HICs. Secondly, LMICs face a number of technological chal-
The difference in patient care between HICs and LMICs is strikingly documented in statistics comparing disability and mortality. Disability resulting from injuries is almost 5 times higher in Africa than in Western Europe, and mortality from the same cause is almost double in middle-income countries compared to high-income countries. As studies have shown, even slight improvements to pre-hospital trauma care, predominantly the introduction of emergency trauma protocols and better surgeon education, can dramatically reduce mortality and disability. This constitutes fertile ground for AO’s mission: fracture treatment and patient care in LMICs is a global challenge of great humanitarian and economic proportions. If we take seriously the improvement of patient care, our engagement in LMICs is bound to have a great effect.

How can the trauma epidemic be tackled?
A number of studies has compared treatment of patients in different economic settings. These showed that mortality and disability can be reduced significantly by improvements in pre-hospital care, emergency room care and in the OR. There seem to be three main steps in dealing with the global trauma epidemic:

- **Prevention**
  - Evidence has shown that national road safety programs, legislation, use of helmets, seat belts and child restraints, enforcing sobriety in traffic, road safety audits and other measures can significantly lower the rate of traffic accidents.

- **Emergency treatment**
  - Mortality and disability can be reduced significantly by improving pre-hospital care, emergency response and emergency room care. The two main factors are infrastructure and education.

- **Operating room**
  - The greatest proportion of disability results from musculoskeletal injuries. This can be significantly reduced in the operating room. Again, the main factors are education and infrastructure.

What can AO do?
The essence of AO has always been its network of surgeons, sharing a main mission of improving operative fracture care. AO can take up the challenge of fighting the burden of disease in the operating room by education. There is much that we can do: Adapted principles courses, continuing education courses, fellowships and reverse fellowships, Internet reference and distance learning are all means that can contribute significantly. These will have to be discussed by the appropriate boards and units.

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<thead>
<tr>
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<th>Population (total)</th>
<th>DALYs (total)</th>
<th>DALYs (per 1000 population)</th>
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<tbody>
<tr>
<td>African LMICs</td>
<td>738 million</td>
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<tr>
<td>SE Asian LMICs</td>
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<td>Americas LMICs</td>
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<td>European HICs</td>
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Disability-adjusted life years (DALYs) resulting from injury