

applicable for researchers, practitioners, policy makers, and junior trainees.

205 THE UL SAFETY INDEX: QUANTIFYING SAFETY AROUND THE WORLD

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10.1136/injuryprev-2016-042156.205

Background Assessing the state of safety amongst countries is complex, leading to poor prioritisation of resources amongst safety professionals and policy makers. The UL Safety Index is a quantification of relative safety based on societal influences and unintentional death and injury.

Methods The relationship between the indicators (societal influences and safety frameworks) and outcomes was modelled. Indicators were transformed into an index ranging from 0 (worst) to 1 (best):

$$\text{Indicator Index Score} = \frac{x_i - \min x_i}{\max x_i - \min x_i}, \text{ where } x \text{ are the explanatory indicators}$$

Drivers were computed as the arithmetic mean of the Indicators:

$$\text{Driver Index Score} = \frac{1}{n} * \sum_{i=1}^n x_i, \text{ where } x \text{ are the Indicator Indices}$$

The UL Safety Index is the geometric mean of the three Driver Indices:

$$\begin{aligned} \text{UL Safety Index} \\ &= (\text{Institutions \& Resources Index} * \text{Safety Framework Index} \\ &\quad * \text{Safety Outcomes Index})^{\frac{1}{3}} \end{aligned}$$

Statistical analysis of indicators and drivers against injury data confirmed correlation with outcomes.

Results Western industrialised nations are at the top of the Safety Index. Sub-Saharan Africa has much to gain from investment in safety drivers. As the Index includes factors of wealth, education and governance, human development and infrastructure issues influence the results. Consequently, solutions that address basic needs will also improve safety. South Central Asia also lags in the Index. Many of the same influences for Africa apply here as well and their Index is also affected by limited participation in international standards development.

Conclusions The relationship between societal drivers and safety outcomes confirm the need for multi-layered improvement strategies. Investment in governance, education, technology, infrastructure and economic development are correlated with fewer unintentional deaths and injuries. This implies that safety outcomes are improved through investment in key development areas. Safety science will continue to be part of a comprehensive approach as hazard mitigation and behaviour change also improve safety outcomes. The UL Safety Index improves visibility into needed investments, leading to initiatives that will save lives globally.

Environmental Safety, Client Safety

Parallel Mon 3.6

206 COST-BENEFIT ANALYSIS OF FALL INJURIES PREVENTED BY A PROGRAMME OF HOME MODIFICATIONS

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10.1136/injuryprev-2016-042156.206

Background Injuries due to falls in the home amongst the general population impose a huge social and economic cost on society. We previously found important safety benefits of home modifications such as handrails for steps and stairs, grab rails for bathrooms, outside lighting, edging for outside steps and slip-resistant surfacing for outside surfaces such as decks.

Methods Following a single-blinded cluster randomised controlled trial (the HIPI trial), we analysed insurance payments for medically-treated home fall injuries. The benefits in terms of the value of DALYs averted and social costs of injuries were extrapolated to a national level and compared with the costs of the intervention.

Results Costs per injury per time exposed to the modified homes compared to the unmodified homes showed a reduction in the insurer costs of home fall injuries of 36% (95% CI: 5%–59%). The social benefits of injuries prevented were estimated to be at least 9 times the costs of the intervention. The benefit cost ratio can be at least doubled for older people and those with a prior history of fall injuries.

Conclusions This is the first randomised controlled trial to our knowledge to examine the benefits of home modification for reducing fall injury costs in the general population. The results show a convincing economic justification for undertaking relatively low-cost home repairs and installation of safety features.

207 PARTNERING TO FOCUS ON CHILD INJURY PREVENTION – THE SAFEKIDS NEW ZEALAND AND HOUSING NEW ZEALAND DRIVEWAY RUN OVER CAMPAIGN

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10.1136/injuryprev-2016-042156.207

Background This presentation demonstrates the success of a Driveway Run over Campaign by using intersectoral collaboration to support the implementation of this child injury prevention initiative. Incorporating increased awareness, behaviour change, environmental change, and advocacy.

Housing New Zealand Corporation (HNZC) is New Zealand's largest landlord, and houses over 200,000 people. HNZC customers are lower income households, and indigenous peoples are over-represented. Most HNZ households include children. Safekids and HNZC have a shared interest in increasing the safety of vulnerable children and their families. Since 2006, Safekids and HNZC have collaborated to reduce the risk of driveway run over injuries in HNZC properties.

This presentation will describe the key components of the partnership, including the national context for this work, shared