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## NON EMERGENCY CALLS AT AN EMERGENCY SETTING: MASS AWARENESS NEEDED

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10.1136/injuryprev-2016-042156.605

Background Timely provision of emergency care reduces losses associated with trauma, fire or disaster. Rescue 1122 is an integrated emergency service offering emergency services and safer community programs in 37 major cities of Province Punjab, Pakistan. It operates through a toll free number, 1122. This study analyses the burden of Non-Emergency Calls (NECs) received on 1122.

Methods Retrospective analysis of all received calls on 1122 during 2004-September 2015 was conducted. Data were collected from 37 major cities of Punjab.

Results Rescue 1122 received over 79 million calls during study period; with only over three million (4%) emergency calls and 76 million (96%) NECs. There were 66 million (87%) Prank, 8 million (10.5%) Information Seeking and 1.8 million (2.5%) Wrong calls. Additionally, about 0.17 million (0.2%) Fake calls were also received, on which 3,964 false dispatches were made. Maximum NECs (around 14 million) were attended by Lahore Rescue 1122; while similar patterns of NECs were also experienced across Punjab. Rescue 1122 adopted various NECs counter-strategies that include: usage of questionnaire-based minimalist communication between anonymous caller and 1122 staff; software-based blacklisting and auto-blocking for habitual callers and calling back for deterrence.

Conclusions Data analysis shows that NECs pose a massive burden on Rescue 1122. Excessive misuse of an emergency number suggests public's lack of awareness and apathetic attitude that could result in death or serious outcome of an emergency. False dispatches made could have resulted in deprivation of emergency care to real emergencies and economic losses as well. Though, Rescue 1122 has adopted some counter-strategies, however that cannot lessen the burden of NECs. Therefore, a mass awareness campaign is needed to sensitise the public regarding the sensitivity of the issue.



## PREVENTION OF ACCIDENTS BY ENHANCING REPORTING CULTURE IN THE FINNISH DEFENCE FORCES

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10.1136/injuryprev-2016-042156.606

Background One of the most common obstacles in preventing accidents is the unwillingness of personnel to report near miss incidents. The enhancement of a common reporting culture is essential for a safety process to work.

Methods The number of employees in the Finnish Defence Forces (FDF) is around 12,000 and FDF trains around 25 000 conscripts every year. However the number of official safety near miss reports was 223 in the year 2014. The aim of this process is to lower the threshold of incident reporting by making it simple and worthwhile with a software.

Results A safety management software (SMS) incorporates a common methodology for incident and risk management. Incident management includes reporting and managing near misses and injuries as well as performing safety investigations. FDF personnel and conscripts can report incidents via internet or intranet and on the simplest level they have to fill a form with only a few fields. Three obligatory fields (material, activity and location) link the incidents to the risk management tool and can be used as an easy database when performing risk assessments. The reporter can follow the management of incident report and corrective and preventive actions and will always get a feedback. One of the reasons for high threshold of reporting incidents is the fear of penalty. This matter is of great importance especially in military environment and the safety investigations and the investigations to allocate legal liability must be strictly separated. The safety investigation tool and a related norm are one of the methods to tackle this problem.

Conclusions The safety management software with anonymous and mobile reporting possibility is striving towards a proactive safety reporting. But the software itself is not a shortcut to success. To play its part, it needs communication, procedures, training and above all systematic safety work at all levels and good safety culture starting from the top of the organisation.

## **Environmental Safety**

Post Mon 1.20

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EXTERNAL COSTS OF TRAFFIC CONGESTION IN IRAN URBAN FREEWAYS

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10.1136/injuryprev-2016-042156.607

With the rapid growth of urbanisation in recent decades, urban transportation has become one of the major issues, and urban traffic congestion is the concern of mismatch cars with the development facilities of urban transportation. Density is created due to the competition between users of the limited capacity of the transportation system. This social phenomenon is accompanied with problems such as wasting time, wasting opportunities to live, and air pollution, and noise, waste of national resources such as fuel, mental health problems, and neurological disorders. Therefore, the identification and estimation of external costs caused by traffic congestion is important to attract the attention of researchers and policy-makers.

In this paper, overviews of studies on all the parameters that affect the congestion cost have been conducted. These parameters include the cost of traffic congestion, including vehicle operating costs, pollution, travel time and accidents. The different methods used to calculate any of these costs have been introduced and the method of calculating each parameter vector is presented. The principal developed relations for such calculation in this research are as following:

$$C_{Con}^{E} = \infty_{S} \left( C_{Acc}^{E} + C_{Delay}^{E} \right) + C_{AP}^{E} + VOC_{Total}$$

 $C_{Con}^{E}$ : External cost of congestion

 $\alpha_S$ : Factor related to increasing costs due to neurological disorders