

Trend of Unintentional Non Fire Related Co Fatalities in Iran

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Objective : In 2004, poisoning was third only to motor-vehicle crashes and burning as a cause of death from unintentional injury in Iran (1). During 21 March 2007 to 20 March 2008, 1024 non fire carbon monoxide (NFCO) fatalities (1.44 per 100,000, M/F=2.25/1) were registered according to official reports of Legal Medicine Organization. Although oil and charcoal heating systems were restricted due to availability of gas supplies in recent decade, but it seems the CO exposures are not decreasing may be due to worse installation, misuse, tampering, or lack of maintenance of heating appliances. The current research aims to determine the annual number, incidence rate and trend of NFCO fatalities during a 4 years survey in Iran and compare it with the latest data. **Method :** Twenty provinces which cover more than 38,500,000 residents (58% of whole country population) were included and 5 different age groups were defined. Data were obtained through national death registration system database for 2001- 2004 for each province.

Results : During this period, an average of 382 persons died annually and the national average annual death rate was 0.98 per 10⁵ persons. Rates were highest in both sexes in aged 15-49 years. [Table1] **Conclusion :** In comparison to recent data, these findings indicate that in spite of using natural gas in household heating systems combustion, the CO exposure and related fatalities are increasing. Improved population-based prevention measures, including educating the public about the dangers of CO exposure, are needed at the national level.

Table 1 Four year trend of non fire carbon monoxide fatalities in 20 provinces of Iran

Year	Sex	<5 years	5-14 years	15-49 years	>50 years	Total sex (per 10 ⁵)	Total (per 10 ⁵)
2001*	M	22	9	137	43	211(1.09)	310(0.81)
	F	22	19	48	19	99(0.50)	
2002*	M	22	18	225	51	316(1.60)	474(1.22)
	F	18	21	73	46	158(0.83)	
2003*	M	23	16	208	47	294(1.46)	406(1.03)
	F	14	6	69	23	112(0.59)	
2004*	M	11	14	174	46	245(1.21)	338(0.85)
	F	7	10	61	14	93(0.48)	
Average (per 10 ⁵)	M	20	14	186	47	267 (1.34)	382 (0.98)
	F	15	14	51	26	115 (0.6)	

*Base on Persian calendar which start 21 March

Reference : 1. The ministry of Health, Treatment and Medical Education. National Burden of Diseases and Injury in IR. Iran. 2007.