

INCIDENCE OF CARBON MONOXIDE INTOXICATION IN BELGIUM

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Description of the number of incidents, victims and deaths caused by carbon monoxide (CO) in Belgium in a twenty year registration period from 1995 to 2014.

In registration period 1995-2014:

- 13.544 incidents
- 27.284 victims
- 735 deaths (2,7 %)

Possible explanations for the decline in carbon monoxide intoxications

. Legislation passed in 1989 and 1995 imposing intrinsic safety devices for gas powered water heaters.

. Warning for risk of CO intoxication during the weather forecast when temperature inversion is expected (started in 1994).

. Public awareness campaigns carried out each year at the beginning of the heating season.

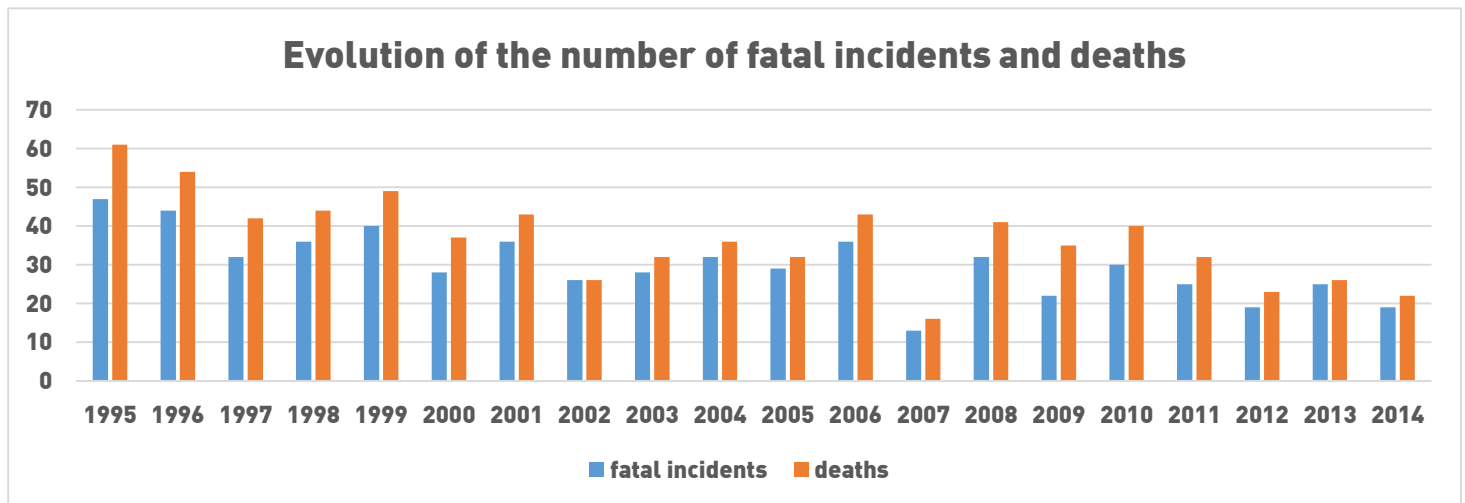
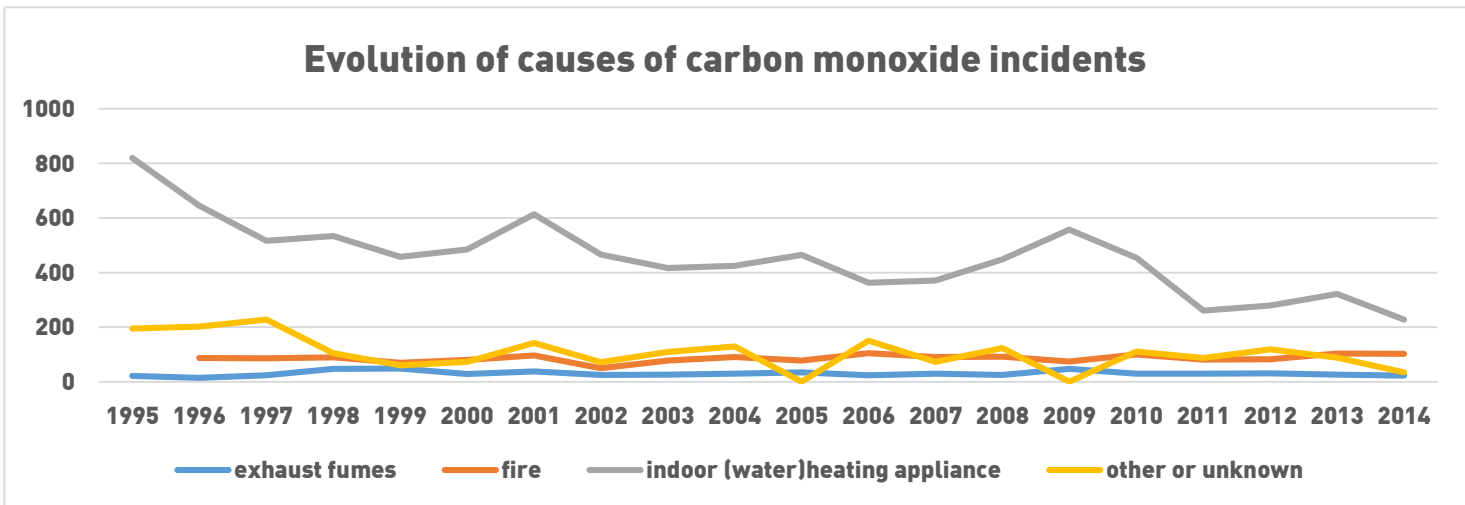
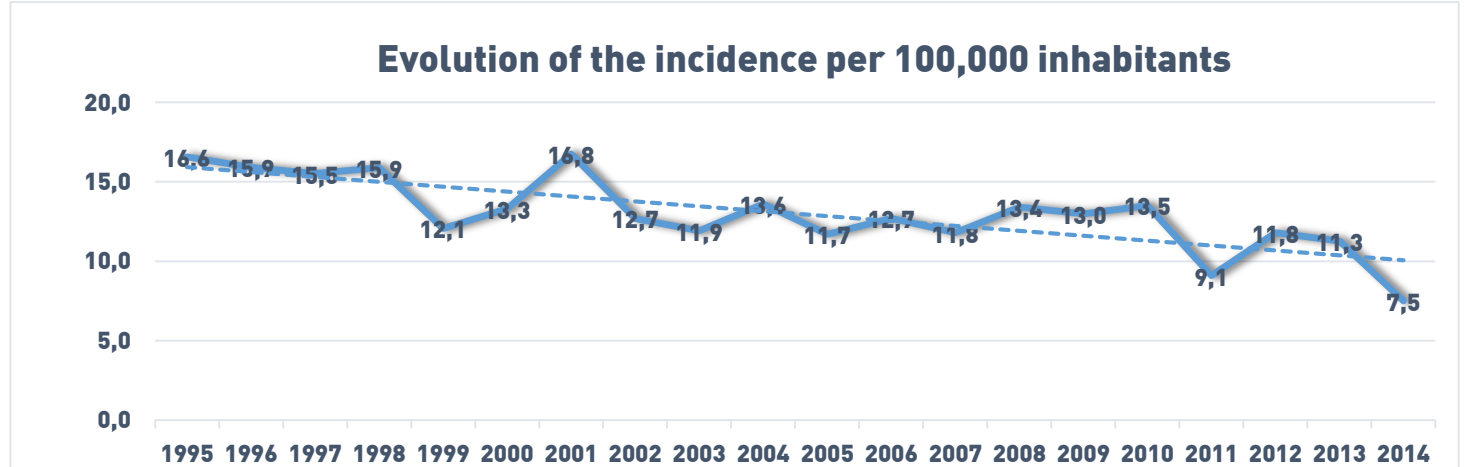
Over the whole registration period the majority of incidents was caused by domestic water heaters or heating appliances (68%). Appliances concerned are:

- . Boilers for central heating.
- . Stoves on coal, wood, gas or gasoil.
- . Mobile heaters on butane or petrol.
- . Gas powered water heaters.

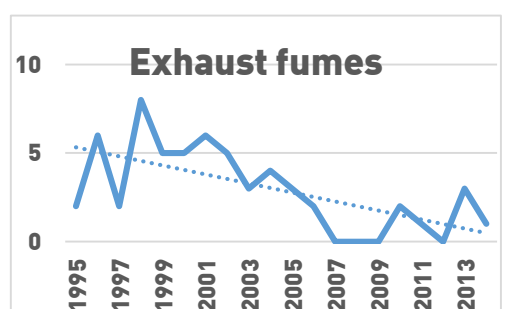
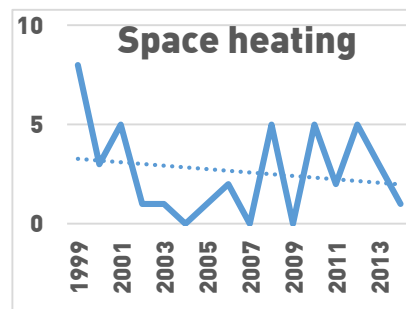
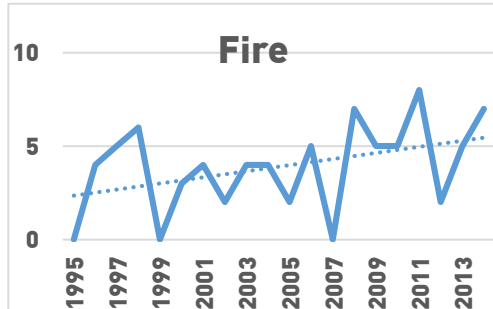
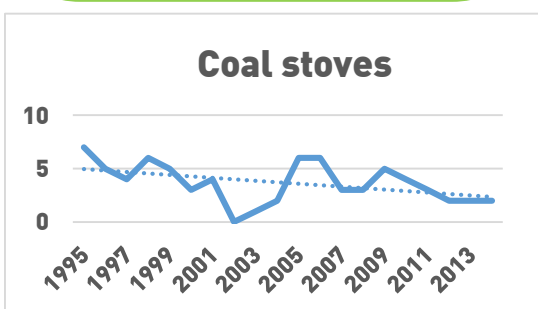
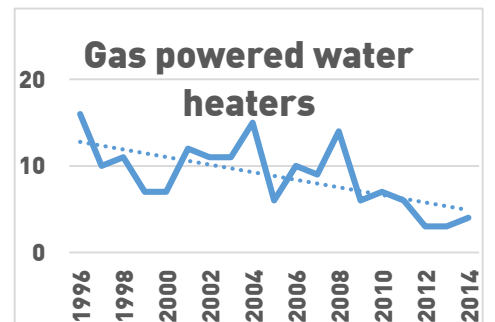
Whereas the number of incidents caused by heating appliances decreased, the number of incidents caused by fire and exhaust fumes remained almost the same over the whole period.

Over the 20 year registration period the number of deaths dropped from 61 to 22 per year. The crude mortality rate dropped from 0.60 to 0.20/100,000. The global mortality rate during the registration period was 0,35/100,000.

Cause of fatal incident	Number	%
Water heater	182	31,4
Coal stove	71	12,2
Space heater other than coal stove	49	8,4
Mobile	14	2,4
Central heating	14	2,4
Indoor BBQ or open charcoal fire	3	0,5
Fire	71	12,2
Exhaust fumes	57	9,8
Others	18	3,1
Unknown	101	17,4
Total	580	100



Evolution of the causes of fatal incidents



Conclusion

During this 20 year period of registration we noted an important decline in the number of incidents, victims and deaths by carbon monoxide intoxication. Legislation passed in 1989 and 1995 imposing intrinsic safety devices for gas powered water heaters probably contributed to this decline, as well as public awareness campaigns carried out each year at the beginning of the heating season. As incidents due to preventable causes continue to happen, efforts must be maintained to inform the public of the dangers of CO intoxication.