

# Circumstances of accidental poisonings in Estonias elderly - a 12 year retrospective analysis.



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## Objective

Elderly people can be more affected by accidental poisonings than younger adults due to worsening health. This study aims to better understand causative factors in accidental poisonings in Estonia's older population in order to find best strategies to minimize the hazards of such poisonings and understand who should be the main target of prevention work.

## Method

Calls about people 65 and more years old to Estonian Poisonings Information Centre (EPIC) from January 2009 till December 2020 were analysed in age groups 65-69; 70-74, 75-79, 80-84, 85-89 and 90 and more years old. About every call it was registered, who called to the poisoning information, how long after the incident did they call, did the person live alone or with someone; main reason behind the accident; where did the accident happen and what kind of agent caused it; toxscore of the patient; advice given about further action.

## Results

1038 calls were found. Excluded were suicide attempts (116) and general questions, where there was no actual poisoning case (172) leaving 669 calls. Most calls in all age groups were made by the patient themselves (76%) (Fig.1), mostly only 5-24 h after the incident (84%) (Fig.2). Symptoms were mild (toxscore 0-1 96%, only 5 cases toxscore 3)(Fig.3). 25% of patients were referred to hospital, others were advised observation at home. Most common reason of the accident (Fig. 4) was mistaking similar objects 54%, forgetting medication already taken 39%; wrongly stored things were less important. Mental confusion became more important after age 75, in younger groups confusion was mostly caused by drunk condition. Incidents mostly happened at home: 100% up from age 80. Main agents causing poisonings (Fig.4) were medications (no difference between prescription – or over the counter medications) Second most common were caustic/corrosive chemicals followed by alcohols, cosmetic products, food supplements. Poisonings by plants, mushrooms were very rare.

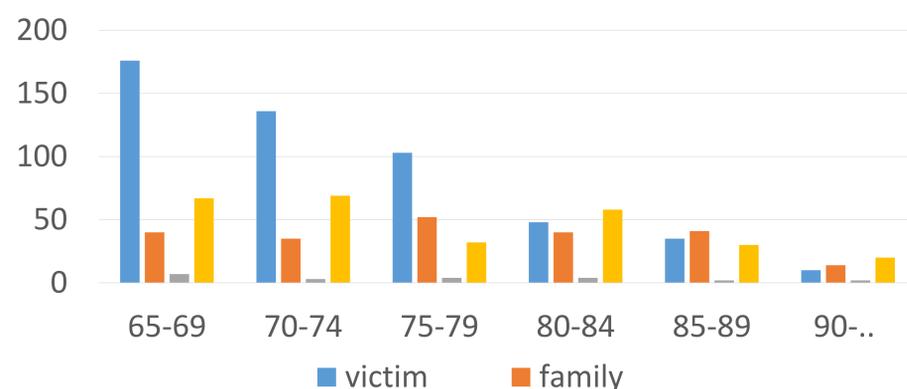


Fig 1. Caller distribution to PIC for the elderly

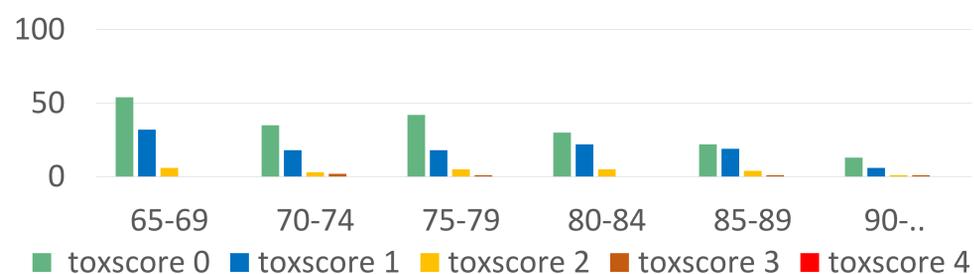


Fig 3. Poisoning Severity Score Scala (TOXSCORE) value of accidental poisonings among elderly people

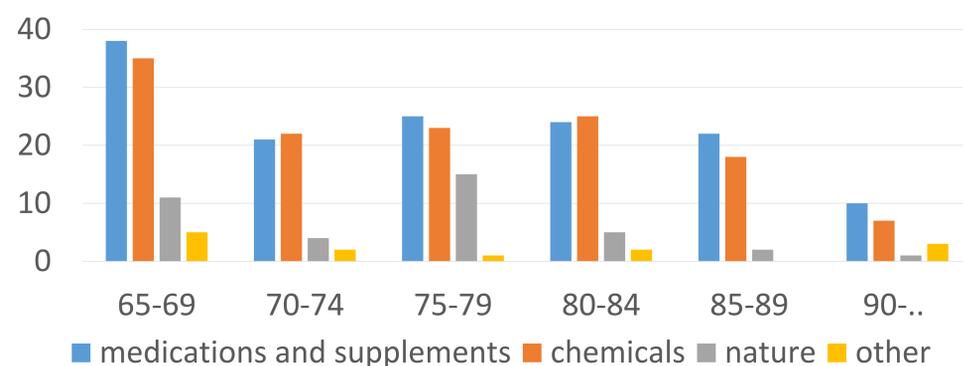


Fig 4. Substances involved in poisoning accidents among elderly

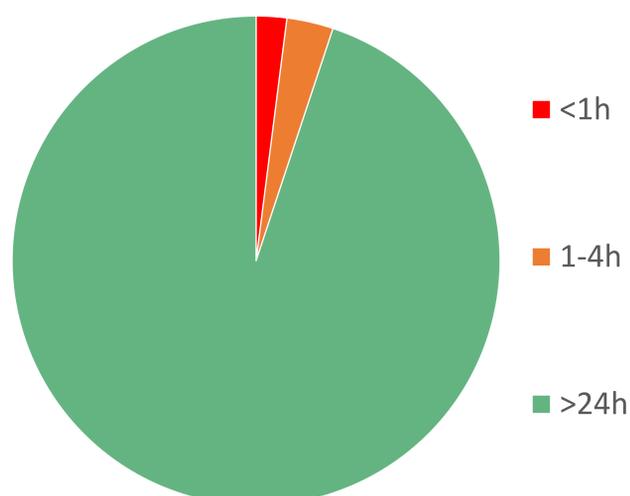


Fig 2. Time from poisoning to calling to PIC among elderly

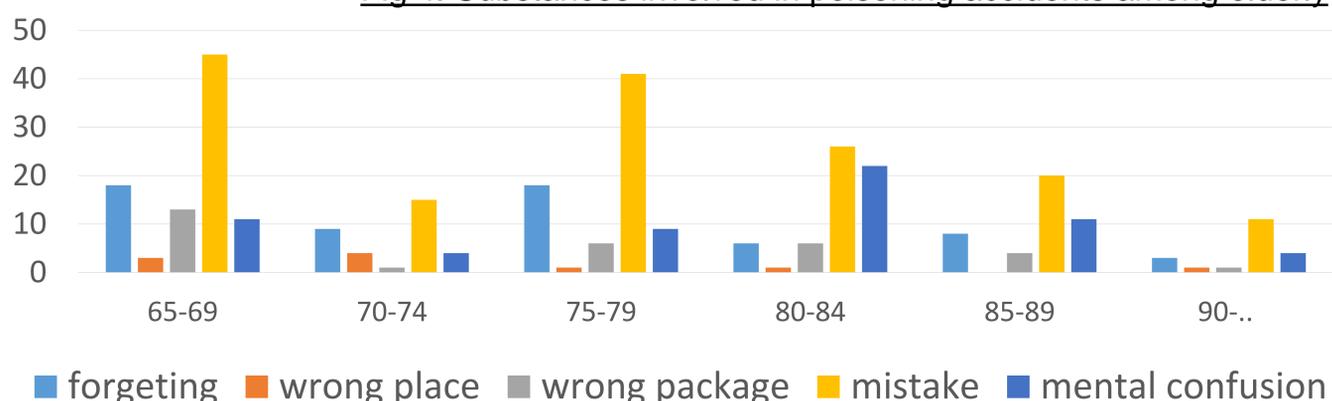


Fig 5. Reasons of poisoning accidents among elderly

## Conclusion

Most poisoning accidents happen to elderly people living alone, taking care of themselves. Most common reasons of accidents are forgetting about taken medication, careless handling of different substances and not checking what is in the bottle or package before using it, plus mental confusion cases. Also, it often takes dangerously long time to call for specialist help. Knowing this EPIC can better target our prevention work to the elderly themselves about medication, chemical safety and introduce more what kind of help is available on EPIC call-line and encourage them to call sooner. Also relatives attention should be pointed to possible hazards. These conclusions were used in Estonian Poison Prevention Week 2022 to construct messages for media campaign addressed both to elderly and their carers and for educational lectures and materials for social workers.