

Acute pediatric poisonings: International epidemiological and management differences. A PERN (Pediatric Emergency Research Networks) prospective multicenter study



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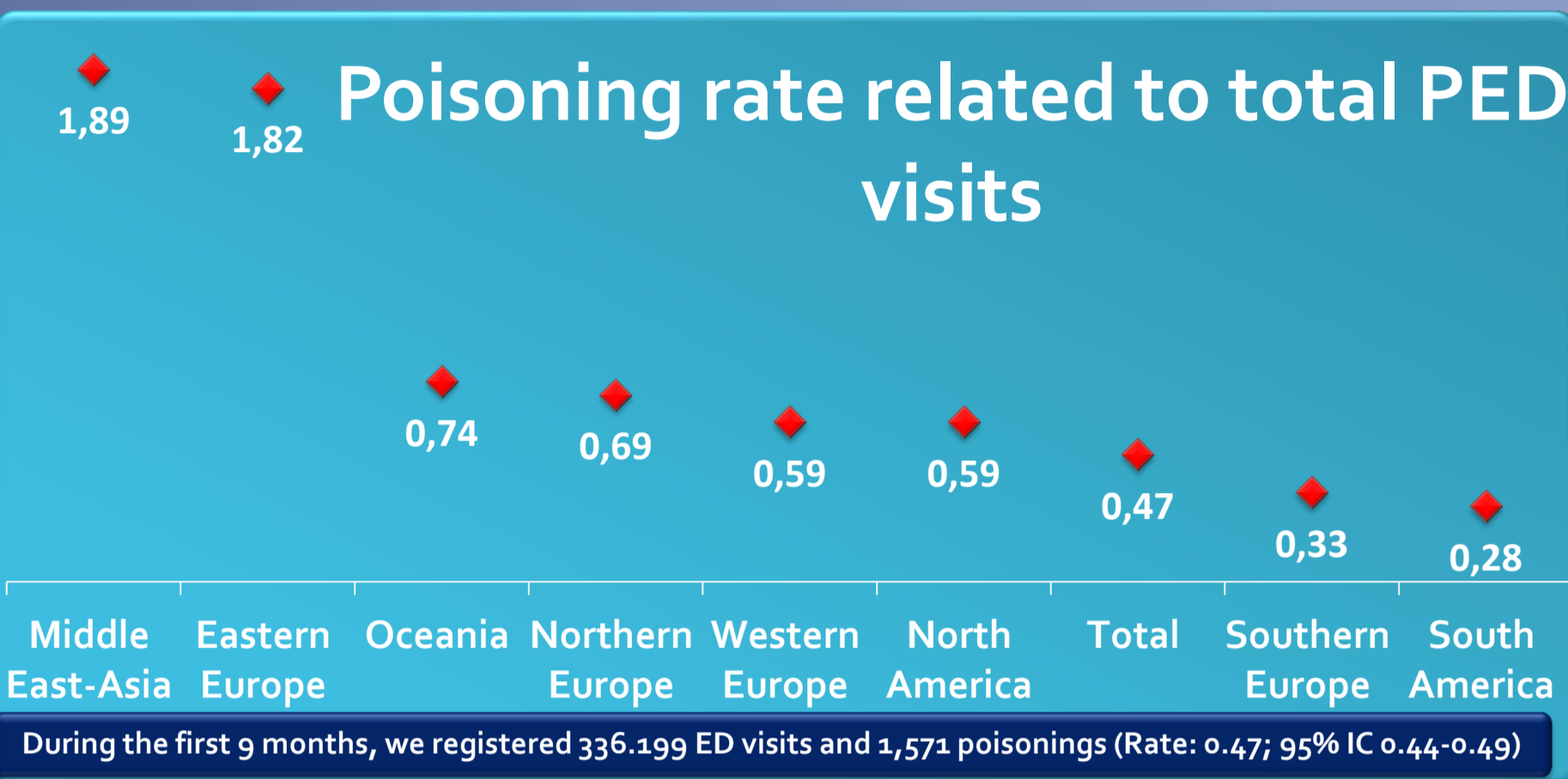
Objective

To determine the epidemiology and management differences of acute poisonings in children evaluated in emergency departments (EDs) from 8 different regions of the world.

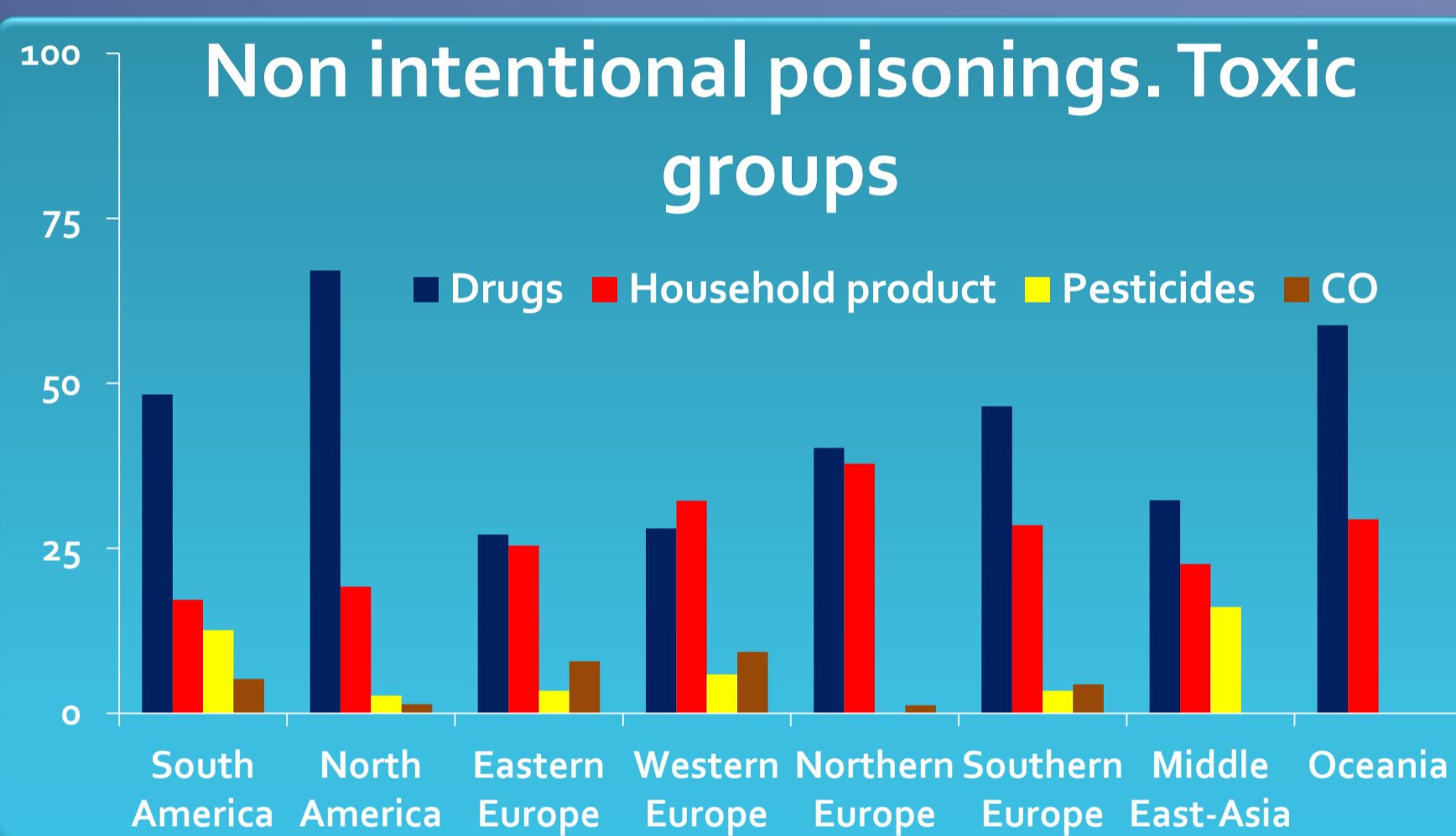
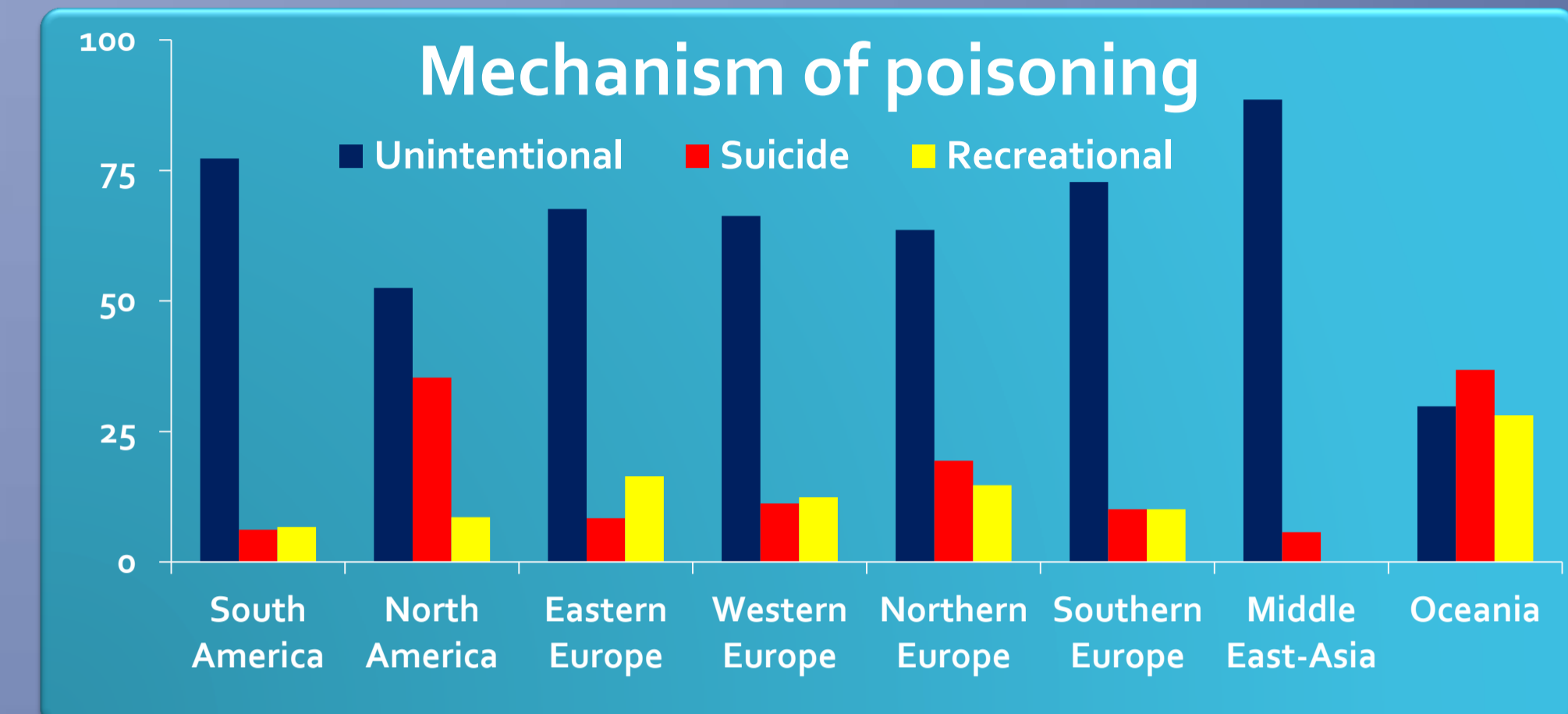
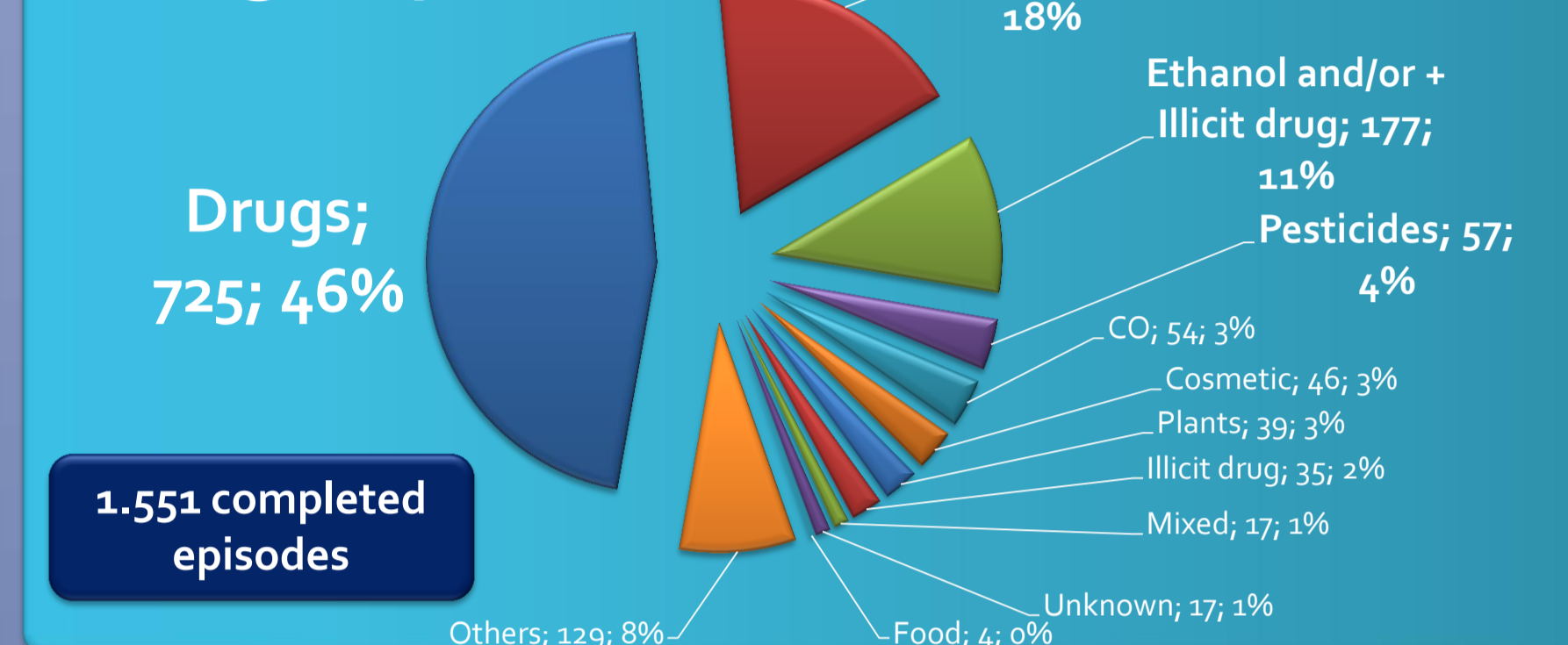
Design/Methods

This was a registry-based international multicenter prospective study of children treated for acute intoxication on the 4th, 14th and 24th days of each month in 110 EDs from 20 countries between 01/13 and 01/14 including all the patients admitted with a presumed poisoning using an electronic questionnaire via Internet.

Results



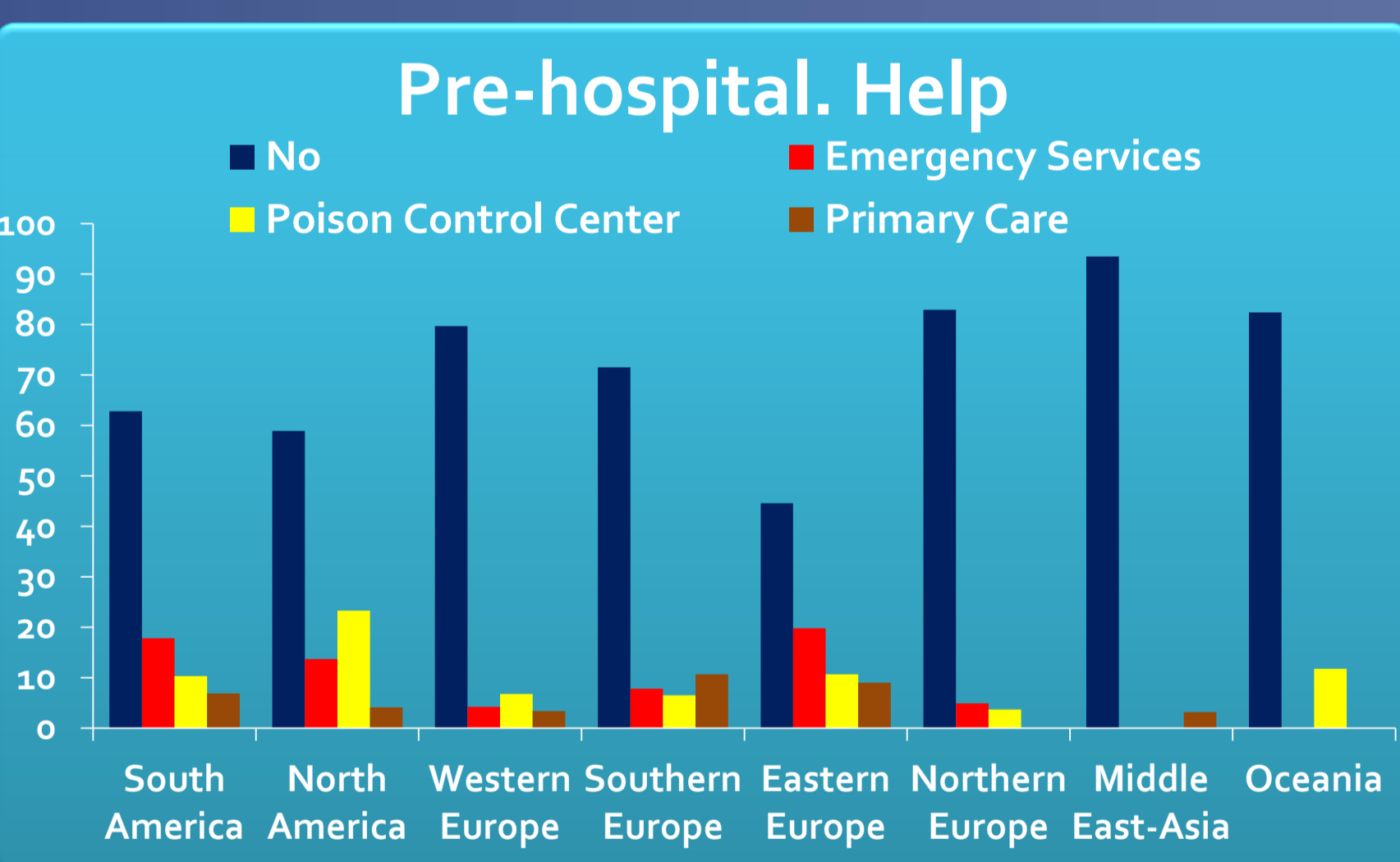
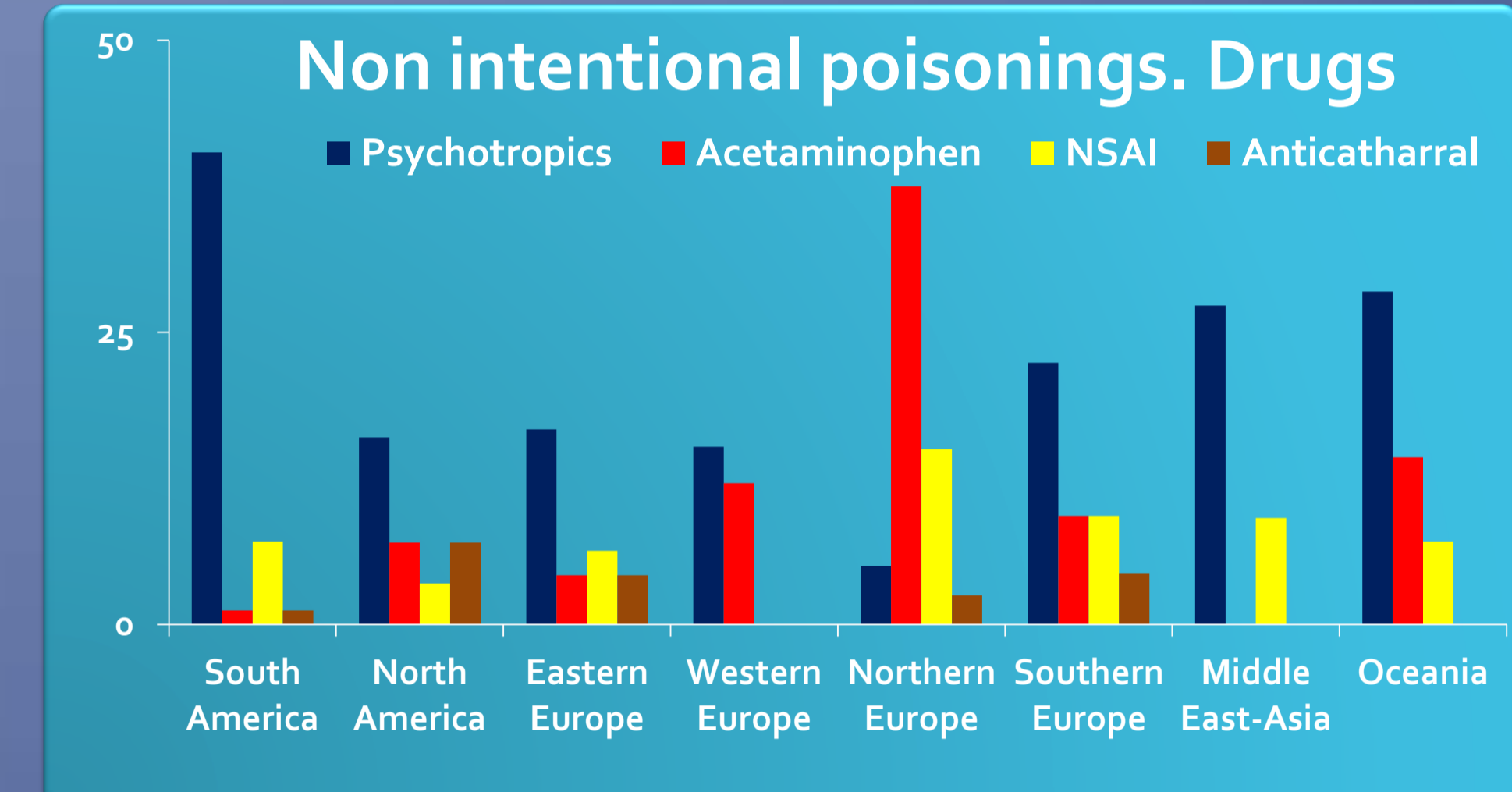
Toxic groups



Highest rates: Hungary (3.24%), Belgium (2.73%), Pakistan (2.23%)
Lowest rate: Brazil (0.03%)

Non-intentional exposure was more common in South America and the Middle East-Asia, suicide attempts in Oceania and North America and recreational exposure in Oceania and Europe.

Among the **non-intentional poisonings**, therapeutic drugs (mainly psychotropics, except in Northern Europe) were the more commonly involved substances (highest rate in North America), followed by household products (highest rate in United Kingdom) and pesticides (leading cause in the Middle East-Asia and South America).

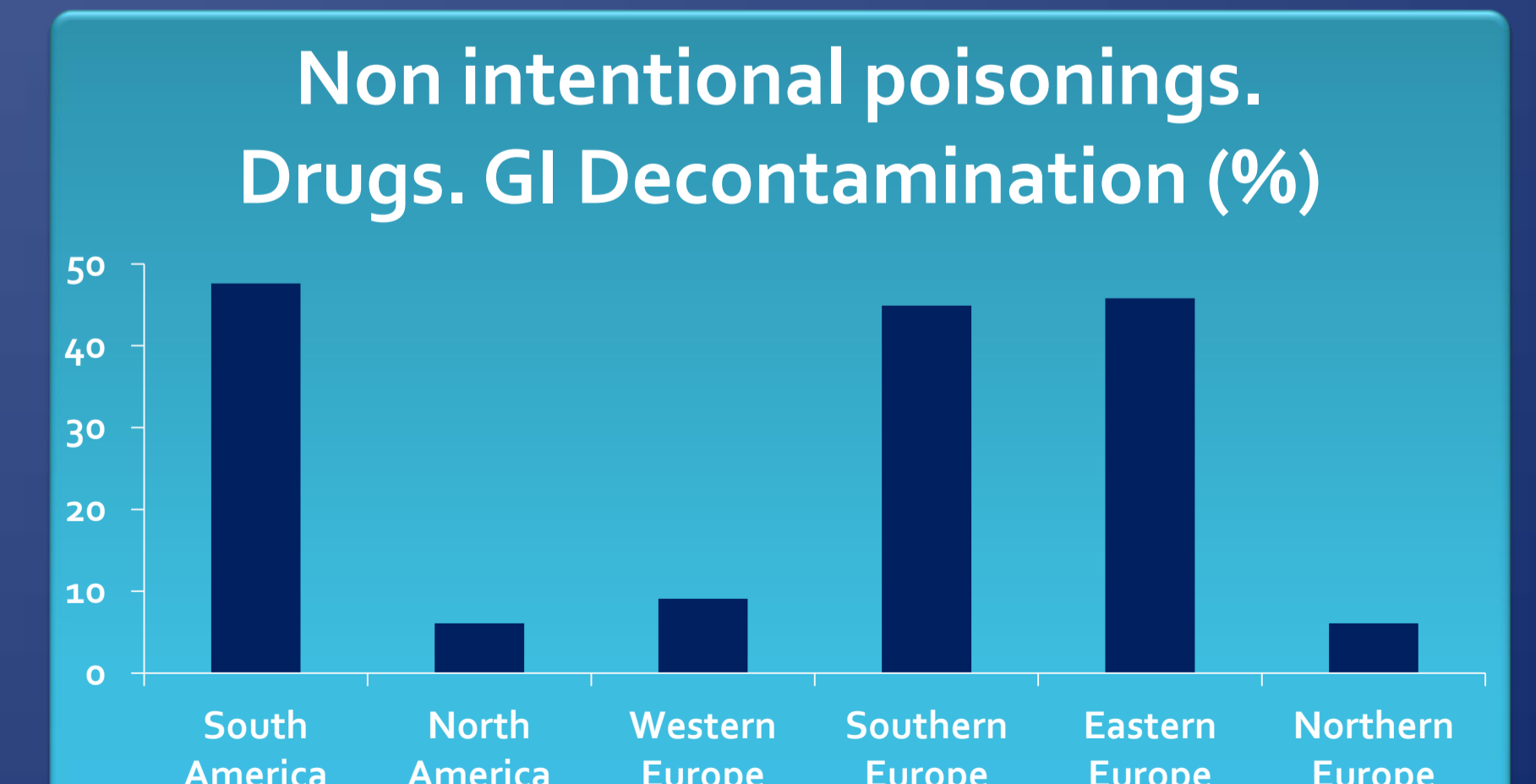
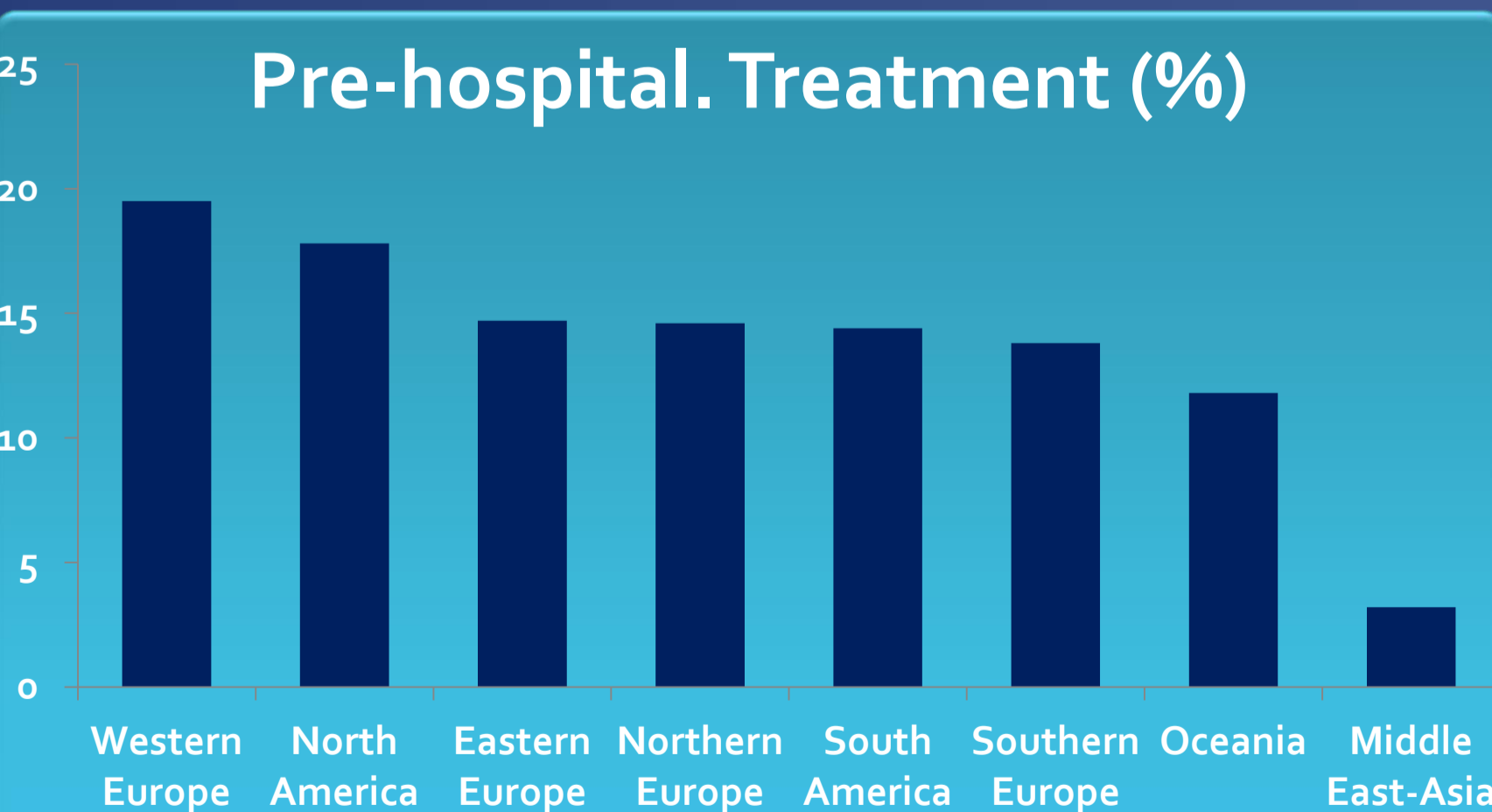
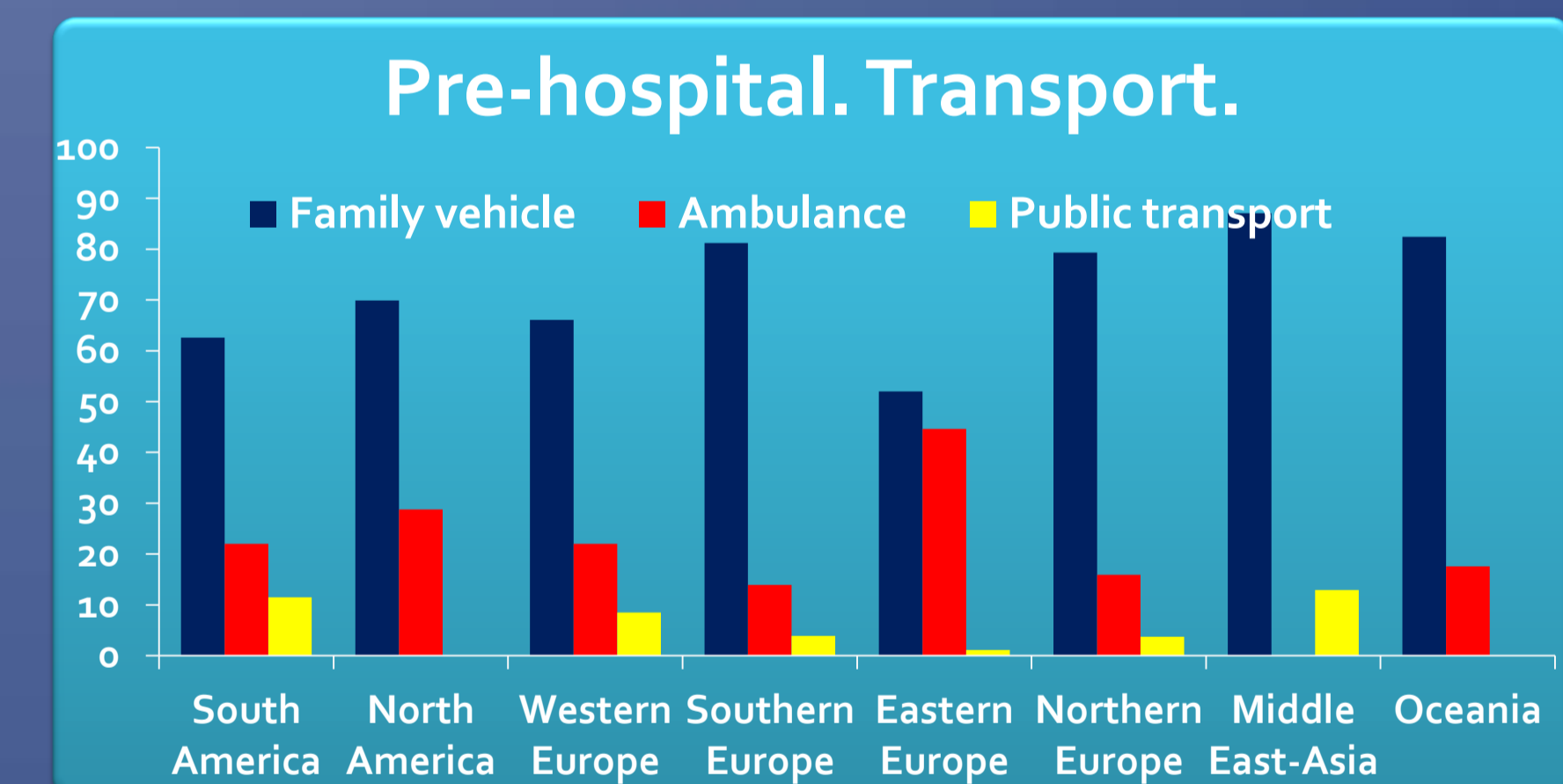


Pre-hospital contact was more common in Eastern Europe and North America and pre-hospital treatment was administered more commonly in North America and Western Europe. Poison Control Centres were mainly contacted in North America.

Over 40% of the patients in North America, Oceania and Eastern Europe were brought the ED by **ambulance**.

Overall, 723 (46.6%) received some **treatment in the ED**, more commonly in the Middle East-Asia and South America.

Gastrointestinal decontamination procedure was exceptionally performed in North America, Oceania and Western and Northern Europe. Sixty-three patients were admitted to **ICU** (4.1%, highest rates in North America). **No patient died**.



Conclusions

There are substantial epidemiological and treatment differences related to acute poisonings in children in different countries and regions of the globe. These differences appeared in both the pre-hospital and ED settings. International best practices need to be identified for prevention and management of acute pediatric poisonings.