Objectives: This study describes the epidemiology and risk factors of measles in displaced populations.
Methods: We conducted a systematic review of literature from PubMed and the the US Centers for Disease Control and Prevention database using combinations of several keywords. After the screening, measles outbreaks with quantitative data were reviewed.
Results: Internal conflicts (91%) had resulted in higher displacement of populations mostly in Africa (64%). A total of 6,940 measles cases (average = 628 cases per outbreak) were recorded in the 11 outbreaks with an age ranging from 1 to 39 years In 62.5% of the outbreaks, children between 5 and 15 years old were the most infected. 90.9 % of the outbreaks had occurred in the context of poor vaccination status (vaccination coverage: 17–57%). More than 1,717 cases may have remained unvaccinated due to the restricted target population age in respective immunization campaigns. Active case findings, together with passive surveillance, were described among tsunami victims (India) and the Burundian refugees in Tanzania, where no fatalities were observed.
Conclusions: This study indicates the need to extend the vaccination target age group to 15 years. A surveillance approach that focuses on the assessment of potential risk factors for measles, morbidity, and mortality may be beneficial in future interventions.
Keywords: disaster; epidemiology; internally displaced populations; measles; outbreak; refugees; surveillance
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Recognition and Knowledge of Tetramethylammonium Hydroxide of the First Responders and Emergency Department Staff

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Introduction: Tetramethylammonium hydroxide (TAMH, $(CH_3)4NOH$, CAS No. 75-59-2) is widely used in the micro-electro-mechanical industries, especially in the manufacture of semiconductors and liquid crystal displays. It was considered to be a relatively low level of toxicity when little toxicological information was available. In the past few years, there were three workers who quickly succumbed after significant TMAH contamination.
Methods: We arranged a training course focusing on the toxicology and emergency management of TMAH for first responders and emergency staff. Before and after the course, we tested the students about TMAH and tried to determine the differences in recognition between first responders and emergency staff.
Results: There were 210 students; 98 were emergency responders and 112 medical staff members. The training course was helpful to both groups of students. However, the first responders were less expected to perform well during emergency management even after the course. These groups also differs in their use of reference media while confronting hazardous conditions. The first responders favored to check the chemical file of material safety data sheet, while emergency staff consulted a poison center or the Internet.
Conclusions: Advanced teaching courses might benefit all emergency responders. It is better have separate courses for each profession.
Keywords: contamination; emergency department; first responder; training
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