

## **The epidemiology of deliberate self-harm by poisoning in a hospital from Singapore**

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**Objective:** To describe the epidemiology of deliberate self-harm (DSH) by poisoning from a general hospital in Singapore. **Methods:** Poisoning cases that presented to the Accident & Emergency (A&E) department of Changi General Hospital from 2001 to 2003 were collected. The cases were identified by their ICD codes and those classified as non-accidental DSH were included. Data for age, gender, race, type and quantity of poisons, treatment received and disposition of patients were captured and analyzed using the SPSS software. **Results:** The total number of poisoning cases for the 3 years was 5050 (1.4% of the total A&E attendance). DSH made up 26.4% (1331) of the cohort while accidental: industrial, accidental: others, bites and stings, non-accidental: misuse and abuse made up 3.1%, 3.8%, 11.5% and 55.2% respectively. The number of cases from 2001 to 2003 was 376, 477 and 478 respectively. 69.9% of the patients were female with a racial distribution of: Chinese 71.8%, Malay 12.4%, Indians 8.3% and others 7.5%. The median age was 28 years (range 10 to 94). Most of cases involved one drug (62.1%) and oral ingestion constituted 98.5% of cases. 76.3% of cases occurred at home and 24.2% of the patients presented within 2hrs of exposure. The type of agents used included analgesics 30.8% (84.8% of which involve acetaminophen), sedatives 20.6%, alcohol 9.9%, antihistamines 6.6%, antidepressants 6.1%, domestic cleaning products 5.7%, gastrointestinal medications 2.4% and medical cleaning products 2.1%. 1.4% or 19 patients needed definitive airway management. Activated charcoal was given for 34% of patients and gastric lavage was performed for 14% of patients. The main antidotes administered included: N-acetylcysteine 4.9%, flumazenil 1.3% and naloxone 0.5%. 91.8% or 1222 patients were admitted, 11 patients were transferred to the main psychiatric hospital while the remainder of the patients were managed as outpatients or were transferred to other hospitals (4 patients). There were altogether 2 deaths (0.15%) and 51 cases (3.8%) were admitted to the intensive care unit (ICU). 75.4% of the admitted patients stayed for >24hrs. 48 patients were referred to the social services and 129 patients to psychiatry. **Conclusion:** DSH by poisoning occurred mainly in young adults and was a common cause for poisoning. The majority of patients were admitted with a small proportion to the ICU. Effective management of DSH can be achieved by appropriate focus of resources and education on common poisons. Perhaps the development of a standard protocol for the management of acetaminophen poisoning and the use of N-acetylcysteine would be beneficial.