[ID-P#024] Pesticide poisonings at a children's hospital in Cape Town, South Africa – has the electronic reporting system and development of case definitions improved notification compliance?

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Background: Agricultural or stock remedy poisoning is a Category 2 Notifiable Medical Condition (NMC) in South Africa, and all symptomatic cases are to be notified within seven days of clinical or laboratory diagnosis. [1] However, notification rates for pesticide poisonings have been consistently poor.
[2] To revitalise the national surveillance system, web-based and mobile electronic applications were added to the paper-based system from 2018, with associated training of users. In 2020, case definitions for pesticide poisonings were implemented, without training. [3] The Red Cross War Memorial Children's Hospital Poisons Information Centre (RCWMCH PIC) routinely collects data on acute pesticide poisoning admissions, and prior reports showed only a 40% notification rate with the Cape Town District Health Office. [4] This follow-up study aimed to assess the local impact of multiple efforts to improve toxicovigilance.

Methods: Pesticide poisonings from 2019-2023 were extracted from the RCWMCH PIC Database, identified according to a history of pesticide exposure or via clinical diagnosis due to a specific toxidromewith or without laboratory confirmation. These were compared to cases lodged with the Western Cape Province (WCP) NMC Coordinating Authority.

Results: During the 5-year period, 10% of paediatric poisonings (n = 173 / 1 671) were due to pesticides, and 67 (39%) of these were symptomatic cases requiring notification. Cholinergic pesticides (organophosphates and carbamates) accounted for 67 (39%) of all cases, of which 47 (70%) were symptomatic, with 16 severely toxic and one death. Anticoagulant pesticides accounted for 54 (31%) of all cases, of which five (9%) were symptomatic, and unknown pesticides for 29 (17%) cases. Twenty- four RCWMCH cases were found on the electronic system, equating to a 36% notification rate.

Conclusion: Although e-notification simplifies and centralises NMC surveillance, healthcare worker compliance is poor and further training is required, specifically on the regulations for, and case definitions of, pesticide poisonings.