ACUTE PESTICIDE POISONING AND THE NEED FOR NATIONAL SURVEILLANCE SYSTEMS
–The Case Example of Tanzania

What is the problem with pesticides in Tanzania?

Pesticides are extensively used in Tanzania for crop protection, livestock production and public health. Despite their benefits in pest control, these chemicals may cause serious health injuries and enormous hidden costs for the farming community in Tanzania. Exposure to pesticides is high, risk reduction strategies are low and without adequate data, policy makers do not address the issues to promote pesticide risk reduction. Pesticides are handled by farmers often unaware of the methods to protect themselves from serious injuries.

Acute pesticide poisoning in Tanzania

Studies conducted in Tanzania confirmed that acute pesticide poisoning is a serious problem in the community and need urgent attention. The studies revealed that a small proportion of poisoning cases are reported to hospitals. These are usually the severe poisonings while the bulk of non severe cases are unreported. As a result, we greatly underestimate the burden of injury caused by pesticides. In 2006, over 200 poisoning cases were identified from only 10 health care facilities. The study also revealed that the few poisoning cases reported in hospitals are associated with missing information due to lack of data recording format. In another study conducted in Dar es Salaam, Tanzania, among 42 poisoning cases recorded, 29.2% were caused by pesticides and 70% were caused by unknown chemical products which most likely also included some unidentified pesticides. Among the circumstances of poisoning reported in the studies conducted in Tanzania, suicide appears to dominate. In another study conducted in coffee growing areas of Tanzania, an average of 62 poisoning cases were recorded in local hospitals per year over the period 1980 – 1990, most of these cases being due to attempted suicide. Previous studies have also revealed that health care providers are not conversant with the diagnosis and management of acute pesticide poisoning cases.

What is a “surveillance system” for acute pesticide poisoning and why is it needed?

A "surveillance system" for acute pesticide poisoning is a system for capturing data on illness and injury arising from pesticide handling and use in working and non-work settings. It is very important to inform our understanding of the burden of disease due to pesticides. Because we lack a strong surveillance system, the burden of injuries caused by pesticides in Tanzania is not known.

Establishment of a surveillance system for acute pesticide poisoning in Tanzania will:

Help to identify risk factor for exposure to pesticides

Understand the patterns of poisoning such as common circumstances and outcomes

Identify which groups in the population are most affected

Enable calculation of poisoning rates

Identify those agents most commonly responsible for poisoning

These data can be utilized for prevention and control actions leading to a reduction of morbidity and mortality. Surveillance data can also inform appropriate research to reduce health risks arising from pesticide poisoning.

Proposal for National surveillance system for acute pesticides poisoning

WAHSA’s Action on Pesticides project is proposing a surveillance system to identify outbreaks of pesticide related illness and injury and to monitor the effectiveness of interventions to reduce hazardous exposures.

The complete data under the proposed system will be compiled and analyzed at the WAHSA centre at TPRI.

The data will be submitted regularly to the surveillance partners including the Ministry of Health, health care facilities, other government ministries such as Labour, Industries and Trade and the Office of the Tanzanian Parliament, other government agencies and community stakeholders for appropriate action. The control and prevention of acute pesticide-related illness will depend on the dissemination of surveillance data to ensure that educational, consultative, and regulatory interventions are effectively targeted.

Data will also be made available to the public through an active website, and by publishing information in relevant journals and newsletters as part of awareness creation. Keeping partners informed can promote visibility and support for the surveillance system.

TPRI will support the Ministry of Health in preparing reports for distribution to other stakeholders depending on the need or requirements of the respective stakeholder.

Detailed data will also be supplied to the Tanzania Bureau of Statistics and this will be accessible to all and in the web.

Summary data will also be forwarded to the community from which the data was collected i.e. health facilities, local services, NGO’s and the community.
What can stakeholders in the region do to support surveillance?

Support training of farmers and retailers that include awareness of the need to report cases of poisoning

Support human resource capacity development for data recorders to identify cases of pesticide poisoning and for health care providers on the management of acute pesticide poisoning

Increase capacity to enforce the Plant Protection Act and the registration of most hazardous products

Increase the number of primary health care facilities in agricultural areas and their capacities in terms of staff and equipment

Support research on pesticides that helps to develop better surveillance, or that uses surveillance data to inform new risks

Facilitate financial support to develop a national pesticide surveillance system in Tanzania

Support collection of acute pesticide poisoning cases

Ensure that data from surveillance is used for preventive action

References:

TPRI. List of pesticides registered in Tanzania. The ministry of agriculture, food security and cooperatives, June, 2008


Kaija J. Health care systems of Tanzania and the flow of health care information at Mbeya region. Kuopio, Finland: University of Kuopio, Faculty of Science Department of Health policy management;1995. MSc thesis.


