MINISTRY OF HEALTH

REPUBLIC OF KENYA

Kenya National School-Based De-worming Programme

Adverse and Serious Adverse Events Protocol

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ABBREVIATIONS

ADR-Adverse Drug Reaction

AE-Adverse Event

CHD- County Health Director

CHEW-Community Health Extension Worker

CHW- Community Health Worker

ID Nr- Identification Number

PHO- Public Health Offcier

WHO-World HealthOrganization

FOREWORD

The vision of the Ministry of Health is a nation free from preventable disease and ill health. One of the strategies to realize this, is the National School-Based Deworming which is a collaborative effort of the two lead ministries of health and education and partners. This intervention is in line with the National School Health Policy and Guidelines.
This protocol is aimed at enhancing the knowledge and skills for prevention and management of serious adverse event during the deworming exercise to both enrolled and non-enrolled school -age children.

This document comprises of;

- Preparation for Adverse and Serious Adverse Events including prevention of Serious Adverse Events on deworming day,
- management of SAE in school, at home and within the Ministry of Health on deworming day,
- management of Serious Adverse Events after deworming day,
- how to investigate and contain a serious Adverse Event Effectively,

The users of this protocol are the the Ministry of Health staff, teachers and parents with details of what to do when an Adverse or Seriouss Adverse Event occurs.

Dr. Patrick O. Amoth

Head, Division of Family Health

Ministry of Health

Background/Policy Environment

This document is generally based on the WHO guidelines for ensuring medicine safety in Mass Drug Administration.

An **adverse event** is any undesirable experience associated with the use of a medical product in a person and a **Serious Adverse Event or Experience (SAE)** is an event that is fatal, life-threatening, disabling or results in hospitalization after medicine intake.

Serious adverse events can be classified as:

- life-threatening or fatal
- cause or prolong hospital admission
- cause persistent incapacity or disability; or
- cause dependence.

There are a number of key types of SAEs:

- allergic reaction to the medicines
- caused by degeneration of worms that have been killed
- caused by medicine choking
- Those which are coincidental but unrelated: e.g. Malaria case around the same time as medicines given

The deworming medicines used in school health programmes are effective, safe and are approved by the World Health Organization, for use in treating school-age children. De-worming medicines cause only rare, mild and transient side effects or adverse drug reactions (Loukas & Hotez, 2006). Most of the side-effects observed in school programmes occur during the first rounds of implementation of the intervention when the intensity of worms is high. Mild abdominal pain, nausea, vomiting, diarrhea and fatigue are the most frequently reported adverse effects. They are not serious and do not normally require medical treatment.

Adverse and Serious Adverse Events Protocol

Preparation

1. County, Sub-county and Divisional health and education personnel should be effectively briefed on dealing with a serious adverse event.

2. County Health Coordinators will contact Sub-county Medical Officers of Health in advance of deworming day with the following information. The Sub-county Medical Officers of Health will subsequently disseminate the same information to health facility staff before deworming day:

    a. The date of deworming day

    b. Information on the medicines being distributed, source and safety and serious adverse events and the need to communicate correct information to the community.

    c. Instructions to **immediately** report to Sub-County Public Health Officer, or Medical Officer of Health, children/parents who arrive with any symptoms attributed to deworming medicines. The two will complete and elevate WHO incident report form on the same.

    d. Instructions to ensure that any child with any complain or symptoms are provided with appropriate tests to determine the cause of illness.

    e. The WHO incident report form (annex A)

3. The County Health Coordinators being the programme spokesperson should receive the Media Engagement Guide, SAE Protocol and attached reports.

4. All health personnels should report all SAE to the County Health Coordinators.

5. The information flow about SAE (see **Information Cascade** below) should be circulated and each level made aware of their responsibilities.

6. Clear and simple messaging should be transmitted to community members and parents ahead of deworming day. Community Sensitization should be conducted at all levels, particularly through CHEWs and CHWs. The message should include;

    a. Information about mild side effects.

    b. If a child has serious and sustained stress, refer to a health facility.

    c. Any suspected case to be referred to the CHEWs or the head teacher.

7. School teachers and head teachers should continue paying attention to absenteeism to **reduce** the treatment of any children who are sick on and around deworming day. The child can be treated at the health facility, when they are well.

8. Schools should provide an area for children experiencing side effects to rest until recovery.

9. Authorized institution is responsible for providing authorized medicines through the proper channels and carefully tracking batch numbers and expiry dates.

10. Medicines should not be split from one container to another unless unavoidable and if so then only under the supervision of qualified MoH personnel.

11. Relevant phone numbers should be exchanged before deworming day. Teachers should have contact information of CHEWs. Health personnel should also have key contact information of other health personnel

13. Head teachers should avail their phone numbers to children and/or parents for easy reporting SAE, or perceived SAE.

Prevention on deworming day

1. Any children who are not well on deworming day (or immediately before) should not be treated. This is not because of any risk associated with the medicines, but to prevent co-incidental illness being associated with the medicines.

2. Medicines should be carefully handled at all times in accordance with programme instructions, spoiled tablets should be disposed of carefully, thoroughly and immediately.

3. CHEWs and other MoH personnel should be circulating and able to respond quickly with enough phone credit and funds for emergency transport etc.

Mild Adverse Events

1. Side effects such as nausea, mild abdominal pain, vomiting, diarrhea and fatigue are expected in 1-5% of children treated.

2. Teachers and parents should be prepared for these events and take immediate action in the event that they occur.

3. These children should be taken to a quiet shady place and allowed to lie down and rest. They should also be provided with some safe drinking water and paracetamol, if required.
4. Children should not leave school unaccompanied within 2 hours of treatment.
5. These side effects are transient and usually do not require hospitalization.

Management of SAE on deworming day

1. In the case that a child is experiencing more serious problems, related or not to the deworming tablets, additional health support will be available through CHEWs, the Divisional and Sub-County PHO, and all health facilities that are usually locally available.

2. Serious adverse events are very unlikely to be due to the deworming medication. Teachers and government officers should ensure this message is conveyed to community members immediately and consistently.

3. The teacher should separate a child experiencing side effects from other children and the deworming day event.
4. Immediate provision should be made for transport of the child to medical facilities.

5. The Community Health Extension Worker (CHEW) in the area should be informed. The CHEW should direct the affected individuals to the nearest medical facility ensuring that they receive prioritized treatment and appropriate testing.

6. The CHEW should inform the Sub-County or Divisional PHO who should complete an incident report form (Annex A) and submit to the Sub-County MOH immediately.
7. The Sub-County MOH should notify the CHC as soon as possible.

8. The Sub-County MOH should sign/confirm the incident report submitted by the DivPHO.

9. The CHC should notify the national Programme team

10. The CHC should sign/confirm the report(s), determine if further investigation is needed and should submit the report to the Programme immediately. If any additional investigation is required, it should be requested at this time.

11. The CHC should act as the spokesperson to the media, and refer to the "Media Engagement Guide" provided by the Programme
12. Child's parents should be informed.

13. If the teacher is unable to manage deworming day after a serious adverse event they should do the following.

    a. Head teacher should suspend deworming temporarily until the Sub-County PHO is able to reach the school and make a decision about how to proceed
    b. Immediately elevate the situation via the information cascade

    c. Maintain calm messaging that the adverse event is very likely not due to the deworming medicine

Management of Serious Adverse Events After Deworming Day

1. It is possible that an adverse event may occur after deworming day and may still be

attributed to the deworming drugs. Teachers, Parents, health facilities and CHEWS must be vigilant for such occasions and elevate immediately through the information cascade (see below)

2. Parents should be informed that though side effects are expected and serious events are likely to be unrelated to the drugs they are encouraged to report early to CHEW or head teacher if they are very worried about the health of their child.
3. Teachers should investigate absenteeism more carefully after deworming day and encourage any sick children to seek treatment or inform a CHEW if they are worried.

4. CHEWs should be prepared to accompany sick children to health facilities and ensure they are getting appropriate tests.

5. By becoming involved early in any potential serious event, the head teachers, and CHEWs will reduce the chances that serious adverse events are incorrectly attributed to deworming medicines and will be able to undertake good and accurate community sensitization ahead of any media coverage.

Information Cascade

If there is any SAE at home or school, the following Information Cascade should be followed

At school: **Head Teacher -> CHEW -> Sub-County PHO or Sub-County MOH -> CHC -> National Deworming Programme**

- CHEWs should communicate 'details' to the parents including what happened, and what action was taken. Parents should be reassured about the safety of the deworming medicines.

At home: **Parent -> Head Teacher or CHEW -> Sub-County PHO -> Sub-County MOH -> CHC -> National Deworming Programme**

- If a parent suspects SAE, a teacher or CHEW should be informed and activate the Information cascade. Head teachers should share their phone numbers with children and parents in case of any actual or perceived SAEs that occur after deworming.

Investigating and Containing a Serious Adverse Event Effectively

See Appendix 3: Investigation Outline

The following is the process for investigating and containing a SAE. Investigation occurs if either:

1. The CHC receives an incident report and determines it needs further investigation. a. Events which require investigation are any which:
    i. May have been caused by operational error (e.g. choking);
    ii. Are on the national list of events that must be reported;
    iii. Are a serious event of unexplained cause;
    iv. Are causing or are likely to lead to significant community concern.

2. The CHC or national programme staff receive information indicating an SAE which hasn't been reported on an incident report

Steps in managing an SAE Investigation

1. Maintain consistent, accurate and open communication with the community using pre-prescribed messaging
2. No one should be speaking to the press except the spokesperson
3. The CHC forwards the incident report and the request for investigation to the Programme.
4. If investigation is required it should be undertaken (under CHC co-ordination) and should include:
    a. Detailed medical follow up
    b. School and community information gathering visits,
    c. Clear tracking of the medicines through the supply chain.
    d. Comparison to available data to determine if the event would have been expected even without the deworming medicines.
5. The following should be submitted to the national programme within 1 week.
    a. Annex A, the incident report
    b. Annex B, the comprehensive report
    c. Annex C, a case report of the child
    d. An investigation report
    e. Annex D, a conclusion stating the cause of the SAE and the level of certainty about this cause.
6. If conclusive, the result is released at every level, careful communication with the community continues and any programmatic issues are amended.
7. In undertaking these investigations a PHO should be present at the 'affected' school or community within 24 hours of the incident being reported to gather information, conduct appropriate interviews and investigate the site of deworming. Use attached Annexes as a guide.

Attachments

Appendix 1: SAE 1 pager
Appendix 2: Annex A-D
Appendix 3: Investigation Outline

Management of Serious Adverse Events (SAEs)

What is a Serious Adverse Event (SAE)? An adverse event is any undesirable experience associated with the use of a medical product, but when it is life-threatening, disabling, or results in hospitalization, it is considered a *Serious Adverse Event (SAE)*. SAEs can be caused by **treatment** (e.g. an allergic reaction to drugs), **parasites** (e.g. intestinal blockage due to bolus of worms), or can be **coincidental, but unrelated to treatment** (e.g. child dies of malaria after taking deworming medicines).

Key Messages on SAEs

- The deworming drugs used in the National School-Based Deworming Programme are **safe and effective** which is why they are approved for use in schools. **Side effects are rare and mild** and they will go away after some time. If a child experiences nausea, stomach pain, vomiting, or fatigue, they should be pulled aside and made to rest.

- If a child's condition is very severe, **it is probably unrelated to the treatment** and you should take him/her to the nearest health facility for treatment.

- **Children that are sick should not be treated under any circumstance!** This is not because of the deworming drug, but because of the risk of mistaken association of the sickness with the drug.

- Teachers should be aware of any absenteeism **before and after** deworming day to reduce the chance of treating any child who is sick on deworming day, and to follow up on any absentee student after deworming day.

- The Sub-County MOH should notify local health facilities that deworming is happening in their district so they are able to handle any children admitted with symptoms of perceived SAEs attributed to deworming.

- CHEWs should be available to quickly respond to any SAEs and communicate to health facilities to prioritize testing and treatment of any admitted child.

- If there is any SAE at home or school, the following Information Cascade should be followed:
  At school: **Head Teacher -> CHEW -> Sub-County PHO or Sub-County MOH -> CHC -> National Deworming Programme**
  - CHEWs should communicate to the parents

  At home: **Parent -> Head Teacher or CHEW -> Sub-County PHO or Sub-County MOH -> CHC -> National Deworming Programme**

  - If a parent suspects SAE, a teacher or CHEW should be informed and activate the Information cascade. Head teachers should share their phone numbers with children and parents in case of any actual or perceived SAEs that occur after deworming.

- Any media inquiries **MUST** be elevated to the **CHC, who is the Programme's official spokesperson.**

What to Do in Case of a SAE

In School: Teachers	At Home: Parents	Ministry of Health
Separate any child experiencing discomfort from other children and the deworming day event.	Notify Head Teacher or CHEW if child becomes sick at home after deworming	CHEW should immediately elevate the situation via the information cascade
If the child is severely ill, immediately elevate the situation via the Information Cascade	Take child to nearest health facility.	When child is admitted to the health facility, CHEW should help supervise to prioritize testing and treatment.
Maintain calm messaging that the adverse event is very likely **NOT** due to the deworming medicine.	CHEW should ensure that child is prioritized and appropriate testing, treatment and referrals are done.	Sub-County /Division PHO should fill out incident form and submit to Sub-County MOH who then forwards to CHC. Sub-County MOH to monitor the child's progress.
If more than one child is severely ill, suspend deworming temporarily until the Sub-County PHO is able to reach the school and make a Decision	CHEW should notify Sub-County PHO who should complete an SAE Report, and move information via the Information Cascade	CHC should review and approve incident report and also indicate if further investigation is necessary. The report should then be submitted to the National Deworming Programme.
Carefully monitor any absenteeism after deworming day and inform a CHEW if worried.	CHC is the only spokesperson for the National deworming Programme.	The Programme will provide guidance for any additional investigation required.

Investigating reported SAEs

Which reports should be investigated?

The first assessment to conduct is to determine whether or not an investigation is needed. Unless national policy decides otherwise, a reported SAE must be investigated if it:

may have been caused by operational error (e.g. choking); is on the national list of events that must be reported;

is a serious event of unexplained cause;

is causing or is likely to lead to significant community concern.

The number of adverse events will naturally increase with increased preventive chemotherapy coverage, so it is essential to calculate the event reporting rate on the basis of actual coverage. In the evaluation it is always the rate and not just the number of reports that needs to be taken into account. Improved reporting can lead to more AE reports without a real increase in event rate. The investigator needs to determine if there is a real increase in the event rate as well as to identify the cause of the increase. For example, a change in manufacturer or batch can lead to a change in event reporting rate. It is for the national programmes to decide which level will decide which reports need to be investigated. The national preventive chemotherapy safety committee should define the type of AE that requires investigation. Regional/national assessors need to ensure that all reports requiring investigation have been adequately investigated.

Who should investigate?

Ideally, there should be an investigator with adequate training and resources for the investigation at each major administrative unit (e.g. region, or district), depending on each country's situation. In general, when embarking on an investigation, peripheral level investigators should ensure that the national level is aware and regularly updated through the investigation. A decision should be made as early as possible about who is taking up the role of spokesperson about the investigation.

When to investigate?

The urgency of the investigation will depend on the situation. National programme managers or national preventive chemotherapy safety committees should establish criteria that make an investigation urgent as well as deadlines for starting an investigation in relation to its urgency (e.g. urgent investigations should commence within two working days of the decision to investigate). Once it is decided that an investigation is needed, it should be initiated as soon as possible.

How to investigate?

Serious AE should be investigated promptly and completely. The investigator will need to look directly at the event as well as gather information (see below) from the affected person (when possible), her/his relatives, health workers and supervisors, as well as community

members. A detailed report of the case (annex B) should have been finalized as early as possible after becoming aware of a case. Otherwise, this should be completed at the beginning of the investigation. A summary of the case and the conclusions of the investigation should be recorded on an AE Investigation Form (Annex C), which could become useful in other investigations and training activities. Investigations should aim to identify programme problems rather than find individuals to blame. While an individual may have been at fault, it is more effective to concentrate on changing the operational procedures to avoid the circumstances that permit such errors than to blame or punish any individuals. Such an approach is essential to ensure that AE reports are encouraged. It is also much more likely to improve system performance. Errors provide opportunity for learning, and creating a system that encourages hiding errors will cause more errors. Operational errors are often causes of serious adverse events. Therefore, the investigator should always suspect operational error as the cause and examine the evidence for any errors in the selection of people to be treated as well
as in storage, handling, or administration of medicines. Attention can then focus on finding out more about the particular error and taking the necessary corrective action. Even known medicine reactions may in fact, upon investigation, turn out to be operational errors (e.g. dosage mistakes). An investigation may lead to uncover operational errors that are not the primary cause of the AE being investigated.

Investigating AE clusters

A cluster of similar adverse events may be the consequence of operational errors or reflect unusual local circumstances. If the event also occurred in untreated people, it may be coincidental. It is therefore important to identify if untreated people also developed similar symptoms around the same time. If all cases happen at a specific site and there are no other cases elsewhere, operational error is likely. If all cases received the same medicine brand/batch and there are no similar cases in the community, a problem with the medicine is likely. If the event is known and expected but occurs at an increased rate, an operational error or a medicine problem are possible causes. Investigation of a cluster requires:

establishing a precise description of the event;

identifying all the people in the area who have an illness that meets that description; obtaining treatment histories (when, where and which medicines were given); identifying any common exposures among all the cases.

Diagram: suggests a possible approach to investigating clusters of AEs.

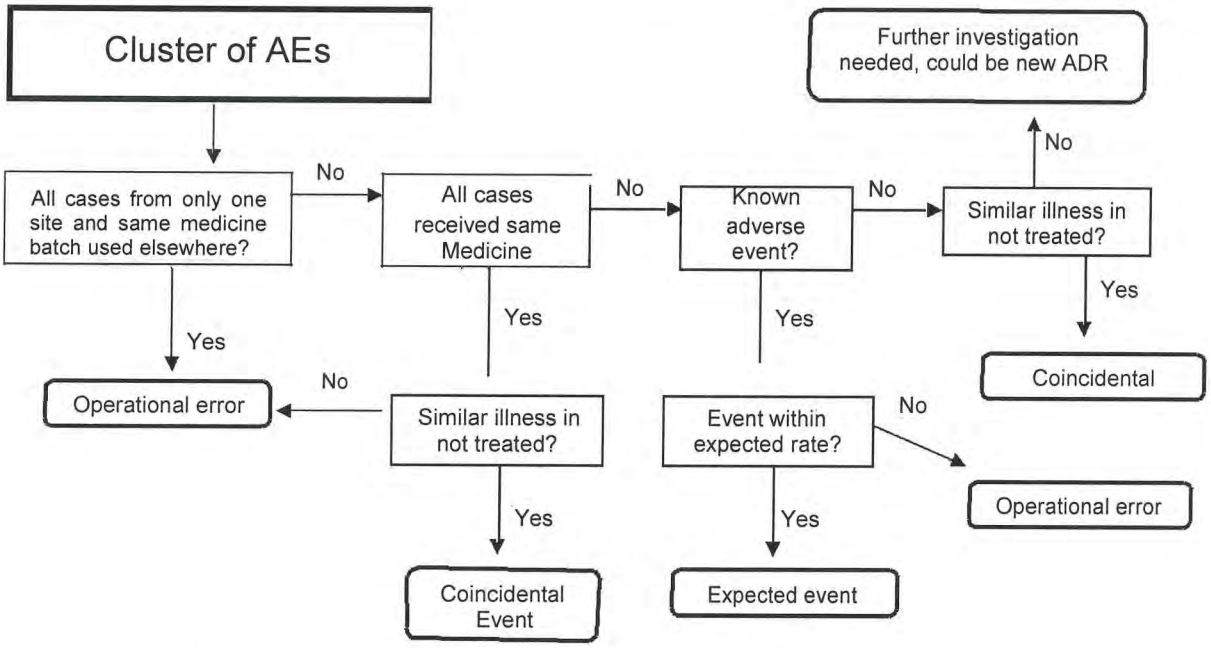

Diagram - A possible approach to investigating clusters of AEs

Outline of an investigation

An AE investigation follows standard epidemiological investigation principles. In addition, it requires investigation of the specific medicinal product(s) as well as intervention and administration techniques and procedures. The following steps outline a typical investigation:

a) Confirm the information provided in the report and add missing information (if any).

b) Check if more than one case should be included in the same investigation and gather and verify basic information on each case:

Age, sex, place of residence.

Family history.

Recent clinical features (e.g. symptoms and signs, when they appeared, duration, results of laboratory and other diagnostic tests, treatment, etc.).

Type of event (a clear description of the clinical features is extremely useful and should have been included in the national guidelines on reporting or defined during a specific investigation), date of appearance, duration, and treatment of the clinical event.

History of the patient (past medical conditions, previous reactions to vaccines or medicines, allergies, pre-existing neurological disorders, medicines recently or currently taken, etc.). Preventive chemotherapy history: type of medicine(s) taken, date of the last and previous (if any) doses, type of previous reaction (if any).

In the event of death, full autopsy report (or reason why not available), toxicological screening, and pathological finding

c) Make a direct examination of preventive treatment site:

Storage facilities – whether dedicated storage facilities exist and how medicines are stored, what else is stored (note if similar containers are stored next to medicines containers which could be confused); which other medicines are stored in the same place;

whether any container is not the original or carries no readable label;

ask to be shown treatment procedures, medicine administration technique, how dose is calculated, how water used in administering the medicines is obtained and checked; any (open) container look particularly dirty? physical environment compatible with administration of medicines?

presence and completeness of records of medicines that are received and used in treatment operations;

presence of up-to-date guidelines on medicines handling and treatment procedures; details of staff training (when trained, for doing what, any verification of skills?); number of persons to treat greater than usual?

d) Gather information on the suspected medicine and obtain a sample (preferably from and with the container of the suspected medicine):

Brand, batch number, expiry date;

Describe any unusual appearance (broken tablets, unusual tablet colour/shape, etc.); Conditions under which the medicine was shipped, its present storage condition, storage of medicine before it arrived at treatment site, where it has come from (who imported, who sent to treatment site & how).

Prepare a list of sites that have received and used the same batch.

e) Gather information on clinical features of suspected ADR at same treatment site, at other sites and in non-treated persons:

Who else received the same medicine (same batch) and developed illness? Who else received the same medicine (different batch) and developed illness?

Did anyone untreated with the same medicine have similar illness (see detailed clinical features)?; if so, did they take any other medicine(s) before and to treat the illness? Population treated with the same batch of medicine in the same period (number at same and at different sites);

Non-treated population (number at same and at different sites).

f) Formulate a working hypothesis on the likely/possible cause(s) of the event.

g) Test the working hypothesis by checking that it matches on all cases and their distribution and is corroborated by laboratory testing (if applicable).

h) Conclude the investigation:

Reach a conclusion on the cause of the AE
Complete AE Investigation Form (Annex C).

Take corrective action, and recommend further action.

In general, it is necessary to compare information on cases with information on the prevalence of the same clinical manifestations and exposure to treatment among controls (same population, untreated - same population, before treatment). Without such comparison it will be impossible to identify the cause of the AE, unless it is a case of operational error. Clear descriptions of the clinical features should have been included in the national guidelines on reporting or, in their absence, defined during a specific investigation. This will permit the identification of all cases in the community and find out the outcomes for all those who received the suspect medicine. A comparison of the risk of disease should be made considering those who received the medicine versus those who did not. The working hypothesis may change during the course of the investigation. The focus of the investigation should be to seek to confirm the working hypothesis.

No action should be taken on the basis of the hypothesis until this is confirmed with reasonable certainty. An AE investigation form (Annex C) should be completed only at the end of the investigation.

Causality assessment

The investigation needs to include an assessment on the cause of the AE. Adverse reactions are rarely specific for a given medicine, diagnostic tests are usually absent and a re-challenge (i.e. giving the same medicine again to the patient who has experienced an adverse event) is rarely ethically justified, but it may sometimes happen by chance. In practice the cause of only few adverse events is 'certain' or 'unlikely'; in most cases the cause can be classified as 'possible' or 'probable'. No perfect system to assess causality can produce a precise and reliable quantitative estimation of relationship likelihood. Nevertheless, causality assessment must be dealt with.

WHO's Medicine Monitoring Programme proposes the following approach[14]:

Causality term	Assessment criteria*
Certain	Event or laboratory test abnormality, with plausible time relationship to drug intake Cannot be explained by disease or other drugs Response to withdrawal plausible (pharmacologically, pathologically) Event definitive pharmacologically or phenomenologically (i.e. an objective and specific medical disorder or a recognized pharmacological phenomenon) Satisfactory re-challenge procedure, if necessary
Probable / Likely	Event or laboratory test abnormality, with reasonable time relationship to drug intake Unlikely to be attributed to disease or other drugs Response to withdrawal clinically reasonable Re-challenge not required
Possible	Event or laboratory test abnormality, with reasonable time relationship to drug intake Could also be explained by disease or other drugs Information on drug withdrawal may be lacking or unclear
Unlikely	Event or laboratory test abnormality, with a time to drug intake that makes a relationship improbable (but not impossible) Disease or other drugs provide plausible explanations
Conditional / Unclassified	Event or laboratory test abnormality More data for proper assessment needed, or Additional data under examination
Unassessable/ Unclassifiable	Report suggesting an adverse reaction Cannot be judged because information is insufficient or contradictory Data cannot be supplemented or verified

* All points should be reasonably complied with

For AE, the first three categories (certain, probable, possible) are used for a known medicine reaction, when a previously unknown reaction seems likely (perhaps due to drug interaction) or when an operational error is suspected. Category 4 (unlikely) is when coincidental events are more likely and 5 (conditional) would be used for a situation where an investigation is not yet completed , and category 6 (unassessable) for AEs where insufficient evidence is provided to make an assessment.

Clinical judgement is crucial in deciding whether or not a medicine is responsible for a particular adverse reaction, but causality assessment must take a number of factors into account. These factors include: nature of the event, temporal relationship, dose relationship, de-challenge and re-challenge (i.e. recovery after medicine withdrawal and, although deliberate re-challenge is often not ethical, recurrence on re-challenge is strongly suggestive that the medicine was responsible), exclusion of confounding factors, and clinical plausibility.

The following list of questions may help in the assessment of causality:

What is the frequency of occurrence for this event (common/rare/not previously reported)? Are similar events known to occur with other disease?

Is the event known to be related to this medicine(s)?

Is the event explainable by the pharmacological properties of the medicine(s)?

Is the interval between treatment and onset of the adverse event suggestive of causality? Has the patient had similar symptoms in the past?

Was the patient on any concomitant or preceding drug therapy? Did the patient have any concomitant or preceding condition? Were there any other contributing factors?

The national preventive chemotherapy safety committee, if established and operational, has the role of confirming the causality assessments of selected investigations and, where required, assisting investigators to determine causality.

ANNEXES

ANNEX A - SIMPLE AE REPORT FORM[15]

Name	Birth date	ID Nr[16]:
Address:	Male Female	
	Reporter's name & contact:	
Treatment site:		

Medicine given (generic name)	Dose	Band & Manufacturer	Batch number

Date/time preventive treatment given	Date/time AE started	Date/time patient seen first time after AE	Date of report

Action taken to treat AE

Check box and describe as needed[17]:	Past medical history and any other relevant information :
Encephalopathy/Encephalitis Mazzotti reaction Severe allergic reaction Other serious[18] AE (describe):	
Currently recovered Y/N/? Hospitalized Y/N/? Died Y/N/?	

Investigator's office should complete:

Date report received:	Checked by:
Investigation needed: Y/N/?	If yes, date investigation started:
Investigator:	Investigation ID Nr:
Cause:	Degree of certainty:

[15] a more detailed form should be used in conjunction with an investigation, see annex B.

[16] ID Nr: unique identifier number, invented by and specific to each treatment site.

[17] the list should be based on locally meaningful a table of named AE with their clinical features.

[18] Serious AE = death, hospitalization, or other severe and unusual events that are thought by health workers or the public to be related to the medicines used in the preventive chemotherapy intervention and cause concern in the community.

ANNEX B - COMPREHENSIVE AE REPORT FORM

(From: *Preventive chemotherapy in human helminthiasis : coordinated use of anthelminthic drugs in control interventions : a manual for health professionals and programme managers, WHO 2006)*

Country:	**Date of report:** / /

1. Patient information

Name (first/middle/last)		*Age*	*Sex* (M/F)
Location	*District*	*Province/State*	

2. Pre-existing conditions

Health status before treatment with preventive chemotherapy drugs:

☐ Good ☐ Poor ☐ Unknown If "Poor", give details:

Parasitic infections	Confirmed	Suspected	Negative	Unknown	Details
1. STH	☐	☐	☐	☐	
2. Lymphatic filariasis	☐	☐	☐	☐	
3. Onchocerciasis	☐	☐	☐	☐	
4. Schistosomiasis	☐	☐	☐	☐	

Other parasitic infections, known or suspected:

Malaria ☐ Yes ☐ No

Loiasis ☐ Yes ☐ No If "Yes", mf/ml (blood): mf/ml (CSF):

Other medications being taken (concurrently or recently):

Is patient pregnant? ☐ Yes ☐ No ☐ Unknown

3. Drugs administered

Which of the following drugs were administered to the patient?	Dose	Brand and Manufacturer Name	Batch number	*Date of treatment:* (day/month/year)
☐ albendazole				
☐ diethylcarbamazine (DEC)				
☐ ivermectin				
☐ mebendazole				
☐ praziquantel				

Source of treatment:	Patient's height (cm)	Patient's weight (kg)
☐ Mass treatment programme ☐ Clinic or physician treatment ☐ Other method		

Was this a first treatment with any of the drugs selected above?

☐ Yes ☐ No ☐ Unknown

If "Yes", which of the following drugs were first treatments?

☐ albendazole ☐ diethylcarbamazine (DEC) ☐ ivermectin ☐ mebendazole ☐ praziquantel

If "No", explain when, and circumstances of past treatment(s) of each drug:

4. Description of the serious adverse experience (SAE)

Date of onset (day/month/year):	*How long after drugs were taken?* hours OR days

Clinical signs and symptoms (please describe)

Do you think this adverse event is/was life-threatening? ☐ Yes ☐ No

Laboratory results (please provide name of test) *Dates of tests* (day/month/year)

a) ***Hospitalization*** ☐ Yes ☐ No

If "Yes", indicate:

1. Date of admission (day/month/year)
2. Reason(s) for admission:
3. Date of discharge (day/month/year)

b) ***Drug treatments administered to tread adverse event:***

c) ***Clinical course:***

(Attach any relevant reports)

5. *Condition/outcome at time of last observation*

Full recovery: ☐ Yes ☐ No ☐ Unknown

Ongoing illness: ☐ Yes ☐ No ☐ Unknown
If "Yes", describe current condition:

Persistent/significant disability/incapacity: ☐ Yes ☐ No ☐ Unknown
If "Yes", describe:

Death: ☐ Yes ☐ No
If "Yes", indicate:
1. Date of death (day/month/year):
2. Cause of death:
3. Circumstances at the time of death, in detail:

Report any autopsy findings, including tissues taken for histopathology and any additional studies done or requested (use additional pages if necessary to complete your answers):

6. *Conclusions (to be completed by the health-care provider)*

Presumptive diagnosis:

Do you think the combined treatment with the drugs selected in Box 3 was a possible causative factor in this serious adverse event?

☐ Yes ☐ No ☐ Not sure
If "Yes", explain:

If "No" or "Not sure", what do you believe was the cause of the experience?

7. *Source - Report prepared by:*

Name of person making the report	
Organization & Title	
Address	
Phone, mobile phone and fax numbers *(including country code and area code)*	
Signature and date	

ANNEX C - AE INVESTIGATION FORM

This form should be filled at the end of an investigation into the cause of an AE.

Investigation ID Nr:	Report ID Nr:	date investigation started:
Describe AE that triggered investigation:		
Diagnosis/clinical features:		
Data on frequency of same/similar illness in same community: available/not available Higher frequency in treated versus not treated? Y/N/? Other comments:		
Treatment site investigated?: Y/N/? If yes, key findings:		
Other relevant investigation findings:		

Conclusion about cause of AE	Describe
Adverse reaction to the medicine Operational error Coincidental event Unknown	
Conclusion is: Certain Probable Possible	
Reasons/justification for conclusion:	

Corrective action taken (specify action or reasons for no action):
Further action recommended:

Investigator signature:..... Date:.....

Investigator name and contact details:.....

ANNEX D - COMMUNICATING WITH THE MEDIA

The effectiveness of our communication depends on audience's perception of our credibility. Trust and credibility are difficult to achieve; if lost, they are extremely difficult to regain. When establishing relations with the media we should take into account the key factors that can establish and strengthen our credibility:

empathy and caring;
competence and
expertise; honesty and
openness; dedication
and commitment.

Before any media contact it is vital
to**prepare**: key messages;

answers for the likely and awkward questions;

identifying which issues not to respond to (e.g. blaming an individual or speculating on the cause before the investigation is complete).

The **key messages** should be kept to a minimum and are likely to include some of these facts:

benefits of preventive chemotherapy are well proven:

it is very risky not to carry out preventive treatment (risk of disease and complications); preventable neglected diseases caused millions of death and/or disability before the introduction of preventive chemotherapy, and that situation would return without continued use of preventive treatment with effective medicines;

medicines do cause reactions, but these are rarely serious and hardly ever cause long-term problems (if feasible, provide a list of known adverse reactions);

preventive chemotherapy safety is of paramount importance, and any suspicion of a problem is investigated through a well established safety surveillance system;

the AE is currently being investigated, but the medicines' quality is guaranteed (provided this is true...) and the treatment intervention must continue to keep the population safe from disease; action is being taken (describe what is being done).

It is essential to present information to the media in a credible way. This entails being:

honest: never lie; if you do not know, say so, but promise to find out (e.g. "We don't know at this time, but we have taken steps to answer that question"); note that a lie or cover-up can become a bigger news story than the initial event;

caring: create a strong, compassionate, competent image for yourself and the preventive chemotherapy programme;

clear: avoid jargon; use simple phrases and give examples to clarify meaning; serious – jokes can be disastrous and the subject is rarely amusing anyway; aware of body language: it is of critical importance in perceptions;

responsible: don't be defensive, but accept responsibility appropriate to your position and avoid blaming someone else (e.g. "We will see if there is any truth in the report".); responsive: hold a daily press conference if that is what is needed to meet the needs of the pubic and media; regular contact helps build a trusting relationship with the media;

positive: reframe the situation in positive terms; use terms such as vaccine safety (which has a positive connotation) rather than adverse event

When facing a hostile interviewer, prepare these techniques:

block: respond to a negative question with a positive answer (e.g. when asked, "How many children have died from preventive treatment?", answer: " Preventive chemotherapy saves lives. Since our programme began X children have been treated, and of them Y% might have died from one of these diseases. That is the context in which we must consider the tragic, but thankfully rare adverse events which follow preventive chemotherapy."

bridge: having answered a difficult question, move quickly to something linked but positive; correct what is wrong: immediately correct information from the interviewer that is wrong. Be assertive, not aggressive and state the facts simply, factually and in a friendly way;

stay cool: no matter how bad it gets, don't get angry or defensive; stay friendly, polite and **warm;**

be assertive: means stating what you want to say in a clear way without getting aggressive; take time to think about the response and don't be rushed or forced.