USAID FROM THE AMERICAN PEOPLE

EQUIP1 Educational Quality Improvement Program Classrooms • Schools • Communities

CHANGES2

Republic of Zambia

MINISTRY OF EDUCATION
Community Health and Nutrition, Gender and Education Support2 Program

Health Promoting Schools

Helminthes

Malnutrition

Treatment

Malaria

HIV/AIDS

Community Participation

School Health and Nutrition
TEACHER'S GUIDE

'A healthy child in a healthy school environment
Is a higher achiever'

Republic of Zambia

MINISTRY OF EDUCATION

Community Health and Nutrition, Gender and Education Support-2 (CHANGES2) Program

School Health and Nutrition TEACHER'S GUIDE

'A healthy child in a healthy school environment is a higher achiever'

November 2006

Published by Community Health and Nutrition, Gender and Education Support2 (CHANGES2) Program
Ministry of Education
Plot 6969 Kabanga Road
Longacres, Lusaka, Zambia.

Editing by Catherine Nkonde Phiri
Design and typesetting by Tej Rae and Gershom Musonda

This publication has been made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the publishers and do not necessarily reflect the views of USAID or the United States Government.

Table of Contents

Helminthes

Health Promoting Schools

Malnutrition

Treatment

Malaria

HIV/AIDS

Community Participation

Acknowledgments

This training manual was revised by the CHANGES2 team in collaboration with many individuals and organizations that contributed significantly to its development and production. Though it is risky to mention names due to the tendency of unwittingly omitting names of people who deserve recognition, it is important and worthy to mention organizations that participated in the development of the manual.

Sincere gratitude and thanks is offered to colleagues in the three line ministries i.e. Ministry of Education, Ministry of Health and Ministry of Community Development and Social Services with whom CHANGES2 collaborated and worked closely in revising the manual and putting it in the format that is appropriate to Ministry of Education needs. Together we forged ahead and made sure that the document stood the test of time.

Credit is also offered to the officers from the initial CHANGES and CHANGES2 who worked tirelessly on the manual and provided continued technical advice and support for the content of the manual. They played an instrumental role in ensuring that the manual is produced and used for providing training to teachers.

We would also like to express gratitude and thanks to USAID for their continued financial and technical support in the production of the manual and implementation of the school health and nutrition activities.

Foreword

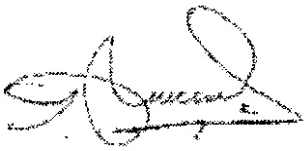
The guide for training teachers and health workers on the School Health and Nutrition (SHN) Programme and the administration of the SHN drugs is such an integral part of a holistic provision of good education. The importance of a sound health and nutrition status of the school - going children can not be over emphasized as forming a core requirement of a successful education system. At Zambia's independence in 1964, the responsibility of handling healthy services was a sole responsibility of the Ministry of Health.

Over the years the Ministry of Education (MoE) had been implementing SHN activities through programmes like the child-to-child and the teaching of health and nutrition related subjects. The health and nutrition activities in schools had declined over the years and this resulted in a compromised health and nutrition status of the school-going children eventually undermining their academic performance and ability.

With the revitalization of this programme in the Ministry of Education, this guide provides a tool that would assist in addressing the adverse effects that are brought about by the inadequate provision of health and nutrition services to our children in schools.

The successful implementation of the SHN Programme will largely depend on the proper utilization of the guidelines outlined in this manual using a multi-sectoral approach.

Once more I urge you to fully get acquainted with the guidelines in this manual and utilize them.



Moses Musonda
Permanent Secretary
Ministry of Education

July 2004

Acronyms

AIDS	Acquired Immunodeficiency Syndrome
BESSIP	Basic Education Sub Sector Investment Programme
BCG	Bacillus Calmette Guanine
CBO	Community-Based Organization
CBOH	Central Board of Health
CDA	Community Development Agent
CHANGES	Community supporting Health, HIV/AIDS, Nutrition, Gender Equity and Education in Schools
CHANGES2	Community Health and Nutrition, Gender and Education Support2
CHW	Community Health Worker
DAD	Drug Administration Day
DEBS	District Education Board Secretary
DEO	District Education Officer
DHMT	District Health Management Team
DHS	Demographic and Health Survey
EMIS	Education Management Information system
FRESH	Focusing Resources on Effective School Health
GRZ	Government of the Republic of Zambia
HC	Health Centre
HIV	Human Immunodeficiency Virus
HPS	Health Promoting Schools
IDA	Iron Deficiency Anemia
IDD	Iodine Deficiency Disorders
ICE	Information education and Communication
JSC	Joint Steering Committee
LOU	Letter of Understanding
KISS	Keep Information (Interesting) Simple and Short
MCDSS	Ministry of Community Development and Social Services
MOE	Ministry of Education
MOH	Ministry of Health
NGO	Non-Governmental Organization
NHC	Neighbourhood Health Committee
PCD	Partnership for Child Development
PEM	Protein Energy Malnutrition
PEO	Provincial Education Officer
PTA	Parents and Teachers' Association
RHC	Rural Health Centre
SAFE	Students' Alliance for Female Education
SCP	School Community Partnership
SHN	School Health and Nutrition
SHT	School Health Teams
SMART	Specific Measurable Accurate Realistic Time bound
STEMP	Space Time Event Methods Product
STI	Sexually Transmitted Infection
TB	Tuberculosis
TBA	Traditional Birth Attendant
TDRC	Tropical Diseases Research Centre
TH	Traditional Healer
TOT	Training of Trainers
UNZA	University of Zambia
UTH	University Teaching Hospital
USAID	United States Agency for International Development
VDC	Village Development Committee
VIP	Ventilated Improved Pit Latrine
VDA	Village Development Communities
VAD	Vitamin A Deficiency
WASHE	Water, Sanitation and Hygiene Education
WHO	World Health Organization

Letter to Our Readers

Dear Parents, Teachers, and Concerned Members of the Community:

It is essential that parents understand the relationship between the health of their children and learning. Moreover, they need to accept the new active role of teachers in their efforts to improve the health of pupils. A successful SHN Programme will require the development and fostering of partnerships among community, parents, pupils, teachers and health workers who need to work together with the common goal of improving the health of school-going children. Each community is unique, and it is up to the SHN team to develop ways of sensitizing and involving communities effectively.

We expect that after you leave this training, you will pass on what you have learned to your fellow teachers and health workers. We expect you to sensitize communities in your catchment areas through Parent Teacher Associations (PTAs), Neighborhood Health Committees(NHCs), Village Development Committees (VDCs) or other local organizations. You will find it helpful to work with other partners including Non-Governmental Organizations (NGOs) in your area, Community Based Organizations (CBOs), chiefs and headmen, extension officers, community health workers and community development assistants.

Pupils are both beneficiaries and partners in this effort, and need to be informed of the goals of the SHN Programme, and its benefits to them. Pupils can help make their school a healthy environment and participate in other aspects of SHN including drug compliance, water and sanitation, hygiene, cleaning of surroundings and even serving on committees and acting as SHN prefects.

You may also hear about an idea called Health Promoting Schools (HPS), an initiation promoted by the World Health Organisation (WHO) in collaboration with the MOH/CBoH and MOE, to reinforce other SHN activities including the Focusing Resources on Effective School Health (FRESH) framework. A "Local Action Manual" has been adapted for Zambia, printed and distributed to some schools. An outline of the key points for starting Health Promoting Schools is provided later in this manual to help you.

A Case Study: Chiluvya's Success

When Chiluvya passed her grade five examinations and was promoted to grade six, her family and friends were happy, especially after the difficulties she experienced in her first term. A pain in her abdomen had increased until she felt ill much of the time and missed many days of school. When she did attend she had a hard time paying attention. She didn't ask questions and seldom answered when called upon. She did not participate in extra-curricular activities, and did poorly in games and sports. She wondered if she would make it to Grade Seven.

That was until Chiluvya was treated at school with medicines for intestinal worms and bilharzia. After receiving the medicines (albendazole and praziquantel), Chiluvya didn't suffer gut-pains or pain on urination. Since then, she hasn't missed a single day of school, and her teacher says that her improved performance has put her at the head of her class. Now she is often first to raise her hand to ask and answer questions, she can run faster than before and is active in Chongololo Club as well as the Anti-AIDS Club. Everyone in the community saw how well she was doing and commented on the benefits of teachers and health center staff working together!

The improvement in Chiluvya's school performance that teachers and the community witnessed was the result of in the new School Health and Nutrition (SHN) Programme, designed to deliver simple health interventions at school. When this programme is in place in all primary schools in Zambia, many children will notice health improvements.

While the classroom intervention Chiluvya received was simple - one dosage of deworming medicine - the behind-the-scenes work of coordinating training for health workers and teachers, and delivering medicine to all children, is complex and challenging. It requires a high level of cooperation between workers in both ministries – Health and Education – as well as the support of parents, teachers, and the community. This training guide provides you with basic information on the SHN Programme and gives you the practical skills and technical knowledge needed to administer drugs and micronutrients.

Introduction

SHN Activities enhance learning and education outcomes of school children. Experience in community involvement and mobilization has shown that to create a feeling of ownership, acceptance and involvement of parents and communities in school-based health programs, members of the community should participate in creating the program.

Schools can provide simple, safe and effective health services, which can lead to:

- Increased enrollment
- Reduced absenteeism
- Improved attendance of vulnerable and disadvantaged children
- Reduced grade repetition
- Cost-effective strategy

Parents are willing to accept and support school-based interventions if they are aware of them and understand their need and anticipated outcome.

A teacher administers Albendazole to pupils on a Drug Administration Day

With minimal training, teachers can feel positive about providing health care to children, as long as the task does not take up too much of their time. In addition, teachers can be taught simple illness recognition skills. The ability to recognize simple physical signs of diseases will help identify children with specific problems who can be referred to the local health centre for specialist treatment.

In Zambia, a student's ability to learn is sometimes compromised by parasitic infections including intestinal worms, bilharzia and nutritional deficiencies. Parasites consume nutrients from the child, aggravating malnutrition and retarding physical development, which can lead to stunted growth, underweight, and anemia. Vitamin A and Iron deficiencies are endemic among children in Zambia.

A survey conducted in 1998 found that 66% of the 1,427 children surveyed were Vitamin A deficient; 22% were aneamic; 14.5% had severe aneamia; 22.2% had malaria parasitaemia. Iodine Deficiency Disorders (IDD) affects 50% to 80% of the general population.

Parasitic infestations due to unsafe drinking water and poor sanitation have contributed to worsening malnutrition in learners. Intestinal worms and bilharzia were found to be a serious problem in a baseline survey carried out in October 2001 by the Partnership for Child Development (PCD) for the CHANGES2 Programme in the Eastern Province of Zambia. Intestinal parasitic infections, bilharzia and malnutrition seriously affect the school children's ability to learn. This has been recognized by the MoE and has been clearly delineated in the formulation of the National School Health and Nutrition policy and strategy.

The SHN Programme is intended to improve the school child's ability to learn by reducing these burdens and to create a "Healthy Child in a Healthy School Environment." This cannot be accomplished by the MoE alone. There are more teachers than health workers and more schools than clinics. Teachers can act as partners with the MoH to administer drugs at the school. Teachers act only as administers of drugs and by training them to do so they are not trying to displace health workers but to assist them in their work.

Students enjoy lunch provided by a school feeding program

Objectives of this Guide

This guide for promoting SHN is intended to…

- Provide information on the SHN Programme and how to establish a Health Promoting School.
- Provide basic information and procedures on the drugs for treatment of intestinal worms, bilharzia and micronutrient supplements like Vitamin A and Iron.
- Provide the knowledge and skills in the use of the bilharzia questionnaire, tablet pole, SHN card, monitoring tool, treatment forms, drug request and retirement forms.
- Provide basic information on school community partnership and how to develop action plans to promote SHN.
- Assist teachers in treating at least 75% of school children in the high risk school communities where schistosomiasis (bilharzias) is a serious threat to public health.
- Foster demand for treatment and encourage the development of a sustainable SHN Programme.

Hello! I'm Billy Harzhia, your friendly guide for School Health and Nutrition. My friends call me Schisto. You can too.

Chapter 1: Health Promoting Schools

Helminthes

Health Promoting Schools

Malnutrition

Treatment

Malaria

HIV/AIDS

Community Participation

What is a Health Promoting School?

A Health Promoting School views health and education as being inseparable. Health Promoting Schools define health in terms of a person's physical, social and emotional well being. Health Promoting Schools strive to build health into all aspects of school and community life. This means finding opportunities to develop policies, practices, and structures that include health promotion in everything done by the school, collaborating towards common goals.

Award System

Health Promoting Schools can be started with minimal Resources.

A criteria has been developed for crediting the schools for there achievements. Schools can work towards creating conducive learning environments through a system of awarding efforts made. Grading of schools will be done in collaboration with MoE at district and zonal levels. The achievements will be explained in terms of colours as follows:

Red level

This level is a danger zone. Any school that scores a mark in the range of 0 to 12 points will be classified as being at the Red Level. At this level the school has not yet grasped the FRESH concept, and the implementation of the activities has not been carried out in a coordinated manner. This school needs more support and monitoring in order to move to the next level.

Yellow level

The school is slowly moving out of the danger zone. A school that scores a mark from 13 to 24 is at a level where they have just started to implement the FRESH concept. This school has a SHN coordinator and may have put a committee in place, but may not be actively implementing the activities.

Green level

A school qualifies to be at Green Level if their score ranges from 25 to 36. The SHN Coordinator and the committee are active and understand the FRESH concept. The school has health policies in place that are being implemented. Some of the activities related to Skills and positive behaviour change are still a challenge. The school has not come up with many innovative ways of addressing these issues.

Steps in Starting a Health Promoting School

Orange level
The school is doing a commendable job implementing SHN. Their score ranges from 37 to 49. The SHN coordinator and committee is active. Community participation at this level is high. The teachers, learners and community are implementing most of the FRESH activities in a coordinated manner. What is lacking is support of neigbouring schools in terms of information sharing and best practices.

Blue level
A school that reaches the Blue Level qualifies to be a model school. Their score is 50 and above. There is innovativeness in the implementation of interventions and such a school has also helped neighboring schools to move from one level to the next. The FRESH concept is well understood and the teachers and learners, together with the communities employ more interventions with their local resources.

A teacher carries out a health check before pupils go into the classroom

Step 1:
Build local support
Local support is paramount in creating a HPS. Start with the following actions. Assemble a small group of people who share an interest in SHN. Include a cross section of members from the society i.e. teachers, health workers businessmen, local government leaders, in and out of school youths, traditional leaders, and others.

Seek the support of local leadership. Invite the general public to the information meeting. Use other media available in your area such as posters, drama and School Open Days. Establish School Health Teams (SHT) and support already existing Community-Based Organizations (CBOs).

Step 2:
Build Capacity
Schools should include school staff, health centre staff, members of School Health and Nutrition Team and CBO supporting SHN activities, Neighborhood Health Committee (NHC), Parent Teachers Association (PTA) members and surrounding communities. Arrange training according to expected roles and functions of specific groups.

Teachers and Health centre staff can be trained on the concept of Health Promoting Schools, storage and administration of drugs, physical examinations, inspection, record keeping, use of SHN tools. They should also be oriented in their roles and functions.

The School Health and Nutrition Team can be trained to formulate action plans, steps needed to meet objectives, how to evaluate progress, and how to establish more Health Promoting Schools.

The School Health and Nutrition Team is made up of...

- Head teacher
- School Health and Nutrition Focal Person.
- Teachers who are patrons of other health related school-based activities like Anti-AIDS, Student Alliance for female Education (SAFE), Red Cross, Anti-drug clubs, guidance and counseling
- Pupils (preferably a prefect - head boy / girl in charge of health)
- In-charge of a local Health Centre or representative
- Community development staff
- Agriculture extension staff
- A representative from the Water Sanitation and Health Education (WASHE)
- Local Chief or Headman or representative
- Parents Teachers' Association (PTA) chairperson or representative
- Neighborhood Health Committee (NHC) chairperson or representative
- A Community Health Worker (CHW)
- Local NGOs representative
- A representative from the church or other religious groups.
- Local businessperson
- Programme.

Functions of the school health team might include...

- Creating and promoting a child-friendly school with a conducive learning environment for male and female pupils
- Planning health-related activities in schools and surrounding communities i.e. World Health events such as TB, AIDS, Malaria, and Water days
- Upholding acceptable health standards in schools and communities
- Formulating school health policy
- Conducting periodic school health inspections
- Developing an action plan each year
- Compiling and submitting reports on the activities of the team
- Keeping records of activities of the team and other health-related clubs at school and the surrounding communities

Step 3: Establish school health policies that promote positive behaviour

- The school based health policies must be clear on the following:
- Use of tobacco, alcohol and other drugs in the school premises
- Selling of food stuffs to pupils
- Disposal of domestic waste
- Use of child labor
- Use of corporal punishment
- Use and maintenance of latrines
- Inspection of pupils and surroundings before school starts
- Pupils involvement in HPS i.e. appointing School Health prefects

Step 4: Provide access to health services

- First Aid treatment to pupils and teachers
- Refer pupils for further treatment at health centers or hospital
- Counsel and support pupils and teachers
- Record keeping on the health status of pupils and their academic performance

Step 5: Establish a health and nutrition resource corner

Set up a place with health information for pupils, teachers and surrounding communities through provision of literature i.e. workshop materials, newspaper cuttings, brochures, pamphlets, video shows, games etc.

Step 6: Plant School gardens

At least quarter lima or/an orchard with at least more than twenty fruit trees or suckers.

Vegetable garden for school feeding program

Step 7: Set up safe water and sanitary facilities.

- Students need a safe source of drinking water protected from animals, dust, and spillovers. These should receive periodic chlorination *in case of wells and water analysis.*
- Periodically, inspect sanitary facilities.
- Female and male students need hygienic toilets, along with school staff.
- Provide hand washing facilities and facilities for refuse disposal.
- School surroundings should have rubish pits and be kept clean, free from animal droppings, etc.

Step 8: Form a community-based organization to support health and nutrition activities

This CBO might consist of 12 to 15 people, depending on response. 50% of members must be women. Membership should stem from a cross section of society, including self-regulatory groups or organizations, with leadership provided by the community themselves, preferably PTA sub-committee. Functions of a Community Based Organization.

- Developing a health promoting school with leaders, staff and members of their own organization and agencies
- Assessing health problems
- Mobilizing resources
- Sensitizing the community and pupils
- Promoting low cost, nutritious foods and cooking demonstrations.
- Participating in SHN activities.
- Keeping records of its activities
- Upholding acceptable health standards.

Chapter 2:

Parasitic worm infections (Intestinal and Bilharzia worms)

Helminthes

Health Promoting Schools

Malnutrition

Treatment

Malaria

HIV/AIDS

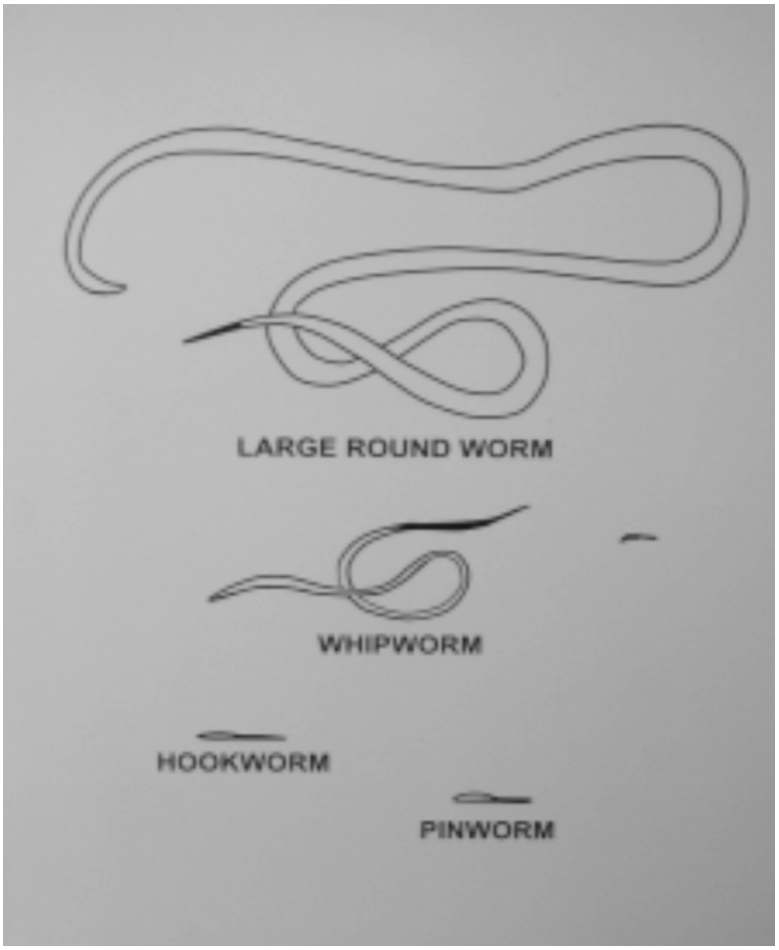
Community Participation

Intestinal Parasitic Worms

Infection by intestinal parasitic worms (geohelminths) is widespread throughout the world, affecting millions of people. Children are particularly susceptible and typically have the largest number of worms, which cause a number of health problems. These worms live in the intestines and their numbers build up through repeated infection. Children may often be infected with more than one kind of worm, which affects their physical and mental development resulting in poor attendance and performance at school.

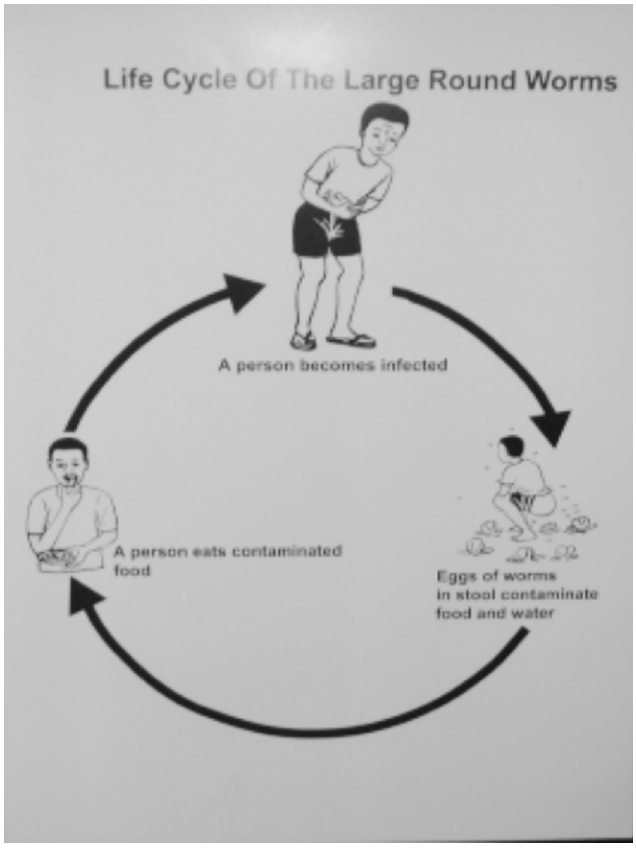
Types of Worms

In Zambia, these types of worms are common: Round worm, Whip worms, and Hook worm.



Round worms (*Ascaris lumbricoides*)

Infection occurs when an individual eats worm eggs accidentally in contaminated food, like fruits or vegetables that have been washed with water containing contaminated soil. Worm eggs can contaminate food when food preparation is done by a person with dirty hands, or when dust or flies land on food; or by eating contaminated soil directly. The eggs are too small to be seen and are released by an infected person in the stool.



Whipworms (*Trichuris trichiura*)

Infection by whip worms occurs in a similar way that infection occurs with round worms.

Hook worms (*Ancylostoma duodenale* and *Necator americanus*)

People are infected with hook worms when they walk barefoot on contaminated ground or when they unintentionally ingest eggs in contaminated food or water. The ground is contaminated if people have defecated onto the soil instead of using a latrine.

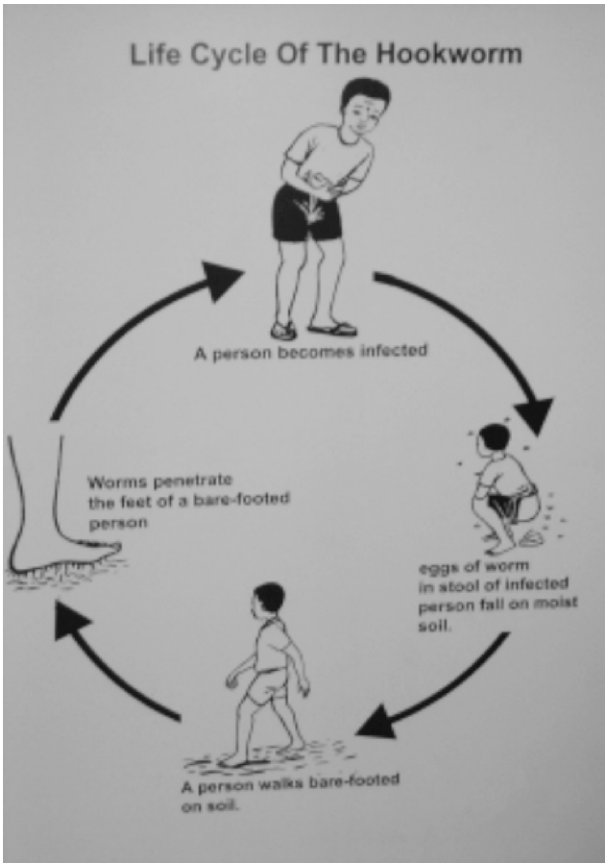


Diagram of a Hookworm

Problems Caused by Worms

As worms build up over time, health problems caused by these worms can be chronic. The worms rob the body of food through loss of appetite so the children eat less, or through stopping the food being absorbed properly once it has been eaten. Children with chronic worm infections and large numbers of worms may be malnourished, stunted and underweight. Heavy infections with roundworm can cause bowel obstruction. Intestinal worms contribute to anaemia, especially hookworm, which causes bleeding in the intestines and loss of blood. The greater the number of worms, the more likely they are to make the child ill, which can lead to missing school, and a weaker performance when they are at school. Chronic infections can lead to long-term retardation of mental and physical development.

Signs and Symptoms of Intestinal Worm Infection

A child with only a few worms will probably not exhibit symptoms. However, with heavier infections, common symptoms in children with one or more kind or worm may include:

- Loss of appetite
- Distended abdomen
- Painful abdomen
- Coughing
- Fever
- Vomiting
- Diarrhea
- Restlessness and generally feeling unwell

Signs and symptoms of intestinal worm infection

How to Treat Intestinal Worms

Treatment for intestinal worms is simple, cheap and effective, with a single dose of Albendazole (400mg pills), which kills the adult worms. Roundworms may be noticed when they are passed with stool. Treatment can be received from a doctor or health worker, or by teachers who treat children at school. As reinfection is likely to occur, treatment should take place once a year, or every six months.

Albendazole for intestinal geohelminth infections can also be given safely with praziquantel for schistosomiasis.

Avoid Giving Treatment to:

Children who are already unwell for some other reason, e.g. with a fever. Treatment should be delayed until they are feeling better.

Children with chronic illness such as sickle cell anaemia (a type of anaemia of sickle shaped red blood cells which does not contain enough Hemoglobin for the cell to function properly).

Pregnant girls. Treatment should not be given in the first three months.

Possible side effects

Albendazole is very safe and most people do not experience side effects, but a small minority report mild and short-lived symptoms. These may include headache, fever, stomachache, diarrhoea and vomiting. Side effects are most likely to occur in people with heavy infections of worms. If side effects are serious or persist, children should be taken to a clinic.

Preventing Infection

- Wash all fruits and vegetables in clean water before eating (to prevent roundworm and whip worm infection).
- Wear shoes or slippers (to prevent hookworm infection).
- Water from septic tanks or other potentially contaminated sources should not be used for watering vegetables.
- Defecate in a latrine, rather than in the bush or around the home or school.

- Communities and schools should provide themselves with latrines and clean sources of drinking water.
- Young children should be taught to use chamber pots, which can then be emptied into a latrine.
- Teach children to wash hands after using the latrine, after playing in dirty soil, after farming or gardening and before preparing or eating food.

What is Bilharzia?

Bilharzia is a parasitic disease caused by worms called schistosomes, small parasitic worms (flukes) that live in veins around the bladder (urinary type) or intestine (intestinal type). The female worms lay eggs that are released in the stool and hatch in water. Schistosomiasis causes a number of problems, making children feel unwell and affecting their physical and mental development, as well as affecting school attendance and performance.

Signs and Symptoms of Bilharzia

People with light infections of schistosomes may not notice any symptoms. With heavier infection, the most common symptoms of urinary schistosomiasis:

- Pain on urinating
- Lower abdominal pain
- Blood in urine (especially in the last few drops)
- General weakness

The most common symptoms of schistosomiasis:

- Fever
- Abdominal pain
- Diarrhoea with blood and mucus in stool
- Loss of appetite
- General weakness
- Enlargement of the liver and spleen

Problems Caused

The problems caused by infection with Schistosomes come not from the adult worms themselves but from the eggs. Only about half the eggs produced by the adult worms leave the body in the faeces (intestinal type) or urine (urinary type). The remaining eggs stay in the body where they may lodge in blood vessels causing inflammation, obstruction and damage. With chronic, repeated infection this can lead to damage of the liver, intestines, lungs, kidneys, bladder and other organs. Schistosomiasis can contribute to anaemia and in some areas urinary schistosomiasis is also associated with a high rate of cancer of the bladder. In children, chronic infection can also lead to growth retardation, absence from school and decreased school performance.

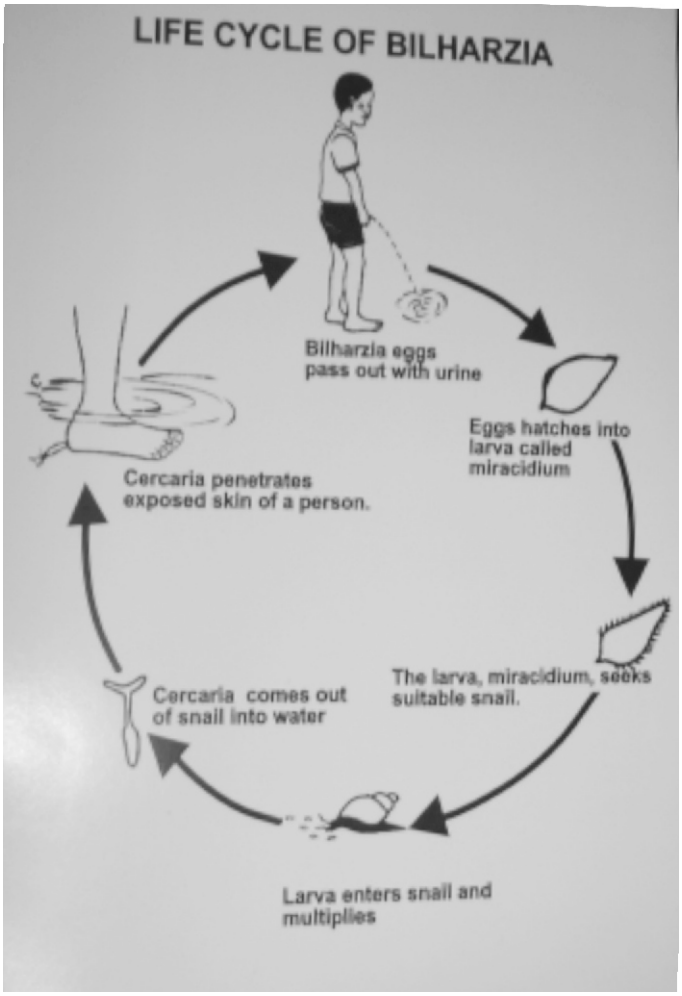
How do you become infected with Schismatosis?

People become infected with schistosomiasis when they come into contact with water - wading, bathing or swimming in ponds, rivers or lakes - that has been contaminated with urine or faeces from a person infected with schistosomiasis. The water contains the fresh water snails that act as intermediate hosts for the schistosome parasites.

Benefits of treatment

- Generally feeling better
- An improved appetite and loss of symptoms of worm infection
- Improved nutrition
- Better school attendance and concentration
- The local community, since children not only carry the greatest burdens of worms, but can also be a major source of infection.

Human urinary and intestinal schistosomes have similar life cycles. The adult worms live in blood vessels around the bladder (urinary type) or intestine (intestinal type). Some of the eggs penetrate the walls of the bladder (which may lead to blood in the urine) or intestine and are passed with the urine or faeces. If the urine or faeces end up in water, the eggs hatch into small active larvae (miricidia) which infect suitable fresh water snails where they multiply inside the snails. A second type of larvae is then released from the snails (cercariae) which can penetrate the skin of a person if they are in the water, traveling through the body to the liver, where they go through further growth and development, and then on to the veins around the intestine or bladder.



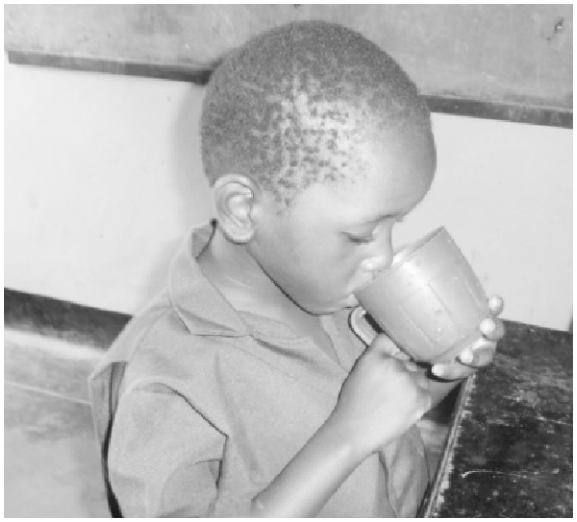
Schistosoma haematobium has a complex life cycle, which takes place in humans, and in an intermediate host of a freshwater snail.

1. Eggs are passed out with the urine. If this is into water (e.g. a pond or lake) the eggs will hatch into miricidia.
2. The miricidia enter a fresh water snail (*Bulinis sp.*).
3. In the snail the larvae go through further stages of development and multiplication.
4. The next stage of the schistosome development is cercariae, which are released from the snail.
5. If these come into contact with humans, e.g. when they are swimming, bathing or wading in the water, the cercariae can enter unbroken skin – often of the feet or ankles (shedding their tail as they do so).
6. Once inside a person, the larvae migrate through the blood system to the liver, where they undergo further development, and mature into adults.
7. The adults leave the blood system of the liver to migrate again, finally ending up in blood vessels around the urinary bladder. Eggs are released against the bladder wall, then penetrate into the inside of the bladder, where they are passed out with the urine – to begin the cycle again.

Treatment of Bilharzia

Schistosomiasis can be safely and effectively be treated with praziquantel. This is given to children in a dose that depends on their size of the body (50mg of praziquantel per kg of body weight). Children can be weighed to work out the correct dose, or their height can be measured. Height and weight are related, so height can be used instead of weight to calculate how many pills of praziquantel should be given. This is most simply done using a 'Tablet Pole'.

Praziquantel for schistosomiasis can be given safely together with albendazole for intestinal geohelminth infections such as roundworm, whipworm and hookworm. Treatment should be repeated after a year if children become infected again. Treatment can be through a doctor or health worker, or by teachers at school.



Avoid giving treatment to...

- Children under one year old.
- Children who are already unwell for some other reason, e.g. with a fever. Treatment should be delayed until they are feeling better.

- Children with chronic illness such as sickle cell anaemia (a type of anaemia of sickle shaped red blood cells which does not contain enough Hemoglobin for the cell to function properly).
- Pregnant girls. Treatment should not be given in the first three months.

Are there any side effects?

Praziquantel is very safe and most people do not experience any side effects. However a small and minority report mild and short-lived symptoms which may include headache, fever, stomachache, diarrhea and vomiting.

Side effects are most likely to occur in people with heavy infections. If side effects are serious or persist, children should be taken to a clinic. Children should be given a small portion of staple food before treatment, to help allay the development of any side effects.

Benefits of treatment

Schistosomiasis can be a serious condition and it is important that children are treated to avoid some of the consequences of infection described above. Children will generally feel better after treatment, and will have to spend less time away from school and will be able to concentrate and work better when they are in school.

How to prevent infection from Schismatosis

Use proper latrines/toilets, not open spaces in the bush or near water.

Do not urinate in or near water that could become contaminated.

Avoid walking through water oror swimming and or swimming and bathing in rivers, streams, ponds or canals that may be infected.

Bilharzia Questionnaire

The Bilharzia questionnaire consists of fourteen questions covering various conditions such as coughing, headache, malaria, ear infection, cuts, lice and jiggers. It was developed and tested in Zambia during a training of trainers' course as part of the Eastern Province Pilot programme. It was then used during a baseline survey conducted in October and November 2001 in twenty intervention schools. The results indicated that it was a good sensitive instrument for detecting bilharzias cases. The questions related to bilharzias (ie. blood in urine (Magazi mukodzo) and Bilharzia (Likodzo) did in fact correlate with actual biomedical testing and confirmation of positive cases.

The questionnaire can be used alone without resorting to urine analysis using a dipstick to determine the estimated prevalence of bilharzia of pupils. For example, a random sample of 10 pupils (5 boys and 5 girls) in each class can be interviewed for a total of 70 in the school. If the results are found to be positive (yes for questions on bilharzia and blood in urine) it can be assumed that the students do have bilharzia. If 35 out of the 70 interviewed have bilharzia by self-reported symptoms and if the questionnaire underestimates by 15% then the results indicate a 50% prevalence rate. This then justifies mass treatment or treatment of the whole school with Praziquantel using the tablet pole to determine the correct dosage.

There are sufficient spaces on the four sheets of the questionnaire for 80 pupils. Please make sure you record on the top of the form Total number of Boys and Girls and number of Boys and Girls present when you conduct the interviews so that the correct denominator is used in calculating prevalence rates.

Interviews of pupils should be conducted discretely respecting the privacy of the children who are often reluctant or shy to discuss the issue of blood in their urine openly. This is the reason these questions are embedded in a larger questionnaire.

The information and completed questionnaires should be maintained by the headmasters and kept in their office. The information should be regarded as confidential and available only to health workers, teachers and SHN Programme staff.

BILHARZIA QUESTIONNAIRE

Zambia Bilharzia Questionnaire - School Health and Nutrition Programme
CHANGES2 School Health and Nutrition Programme
Questionnaire for Teachers to interview pupils about their health

Teacher: please complete this form and return it to your Head Teacher

Name of School

Date: (day/month/year) ☐☐ – ☐☐ – ☐☐

School Status ☐

Zone/ District

Total girls enrolled in class ☐☐

Total boys enrolled in class ☐☐

Name of Teacher

Total girls present today ☐☐

Sex of Teacher (M/F) ☐

School Code/ EMIS Number ☐☐☐☐

Total boys present today ☐☐

Please call up each child, one by one, and write the child's name, admission number, age and sex in the column below. Then ask the child: "In the last 2 weeks have you had a headache?" Write down the answer in the same column, below, put (✓) for 'Yes), (O) for "No" and (?) for "Don't know." Continue with the next problem and record the answers below.

Serial Number	e.g	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Name of Child																					
Admission Number	1233																				
Age (years)	12																				
Sex (M or F)	F																				
Grade	2																				
Cough/ Cifuwa	✓																				
Headache/ Mutu	0																				
Scabies/ Rignworm / Mapere/ Cipere	✓																				
Bilharzia/ Likozo	✓																				
Malaria/ Malungo	✓																				
Toothache/ Dzino	?																				
Adominal pain / M'mimba	0																				
Eye infection/ Maso	✓																				
Blood in urine/ Magazimukodzo	0																				
Ear infection/ M'matu	✓																				
Worms passed/ njoka zam'mimba	0																				
Cut or wound/ Cilonda	0																				
Lice/ Nsabwe	✓																				
Jiggers/ Matekenya	o																				

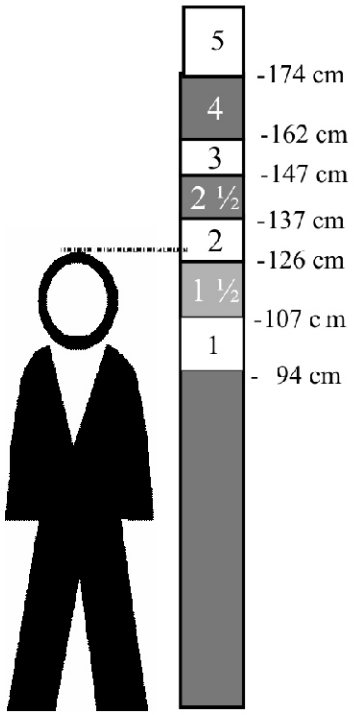
Thank you teacher

The Prazquantel Tablet Pole

Praziquantel is the drug given to school children for treatment of schistosomiasis. The dose of praziquantel for each child depends on their weight- 40mg of praziquantel per kg of body weight. Since weight and height are related, height can be used instead of weight to find out the correct dose of praziquantel for each child.

A Tablet Pole is ci straight pole made of straight lengths of hardwood or paper strip of more than 200cm long and this is used to measure the height of each child in order to determine the dose to be given. The pole i marked to show the correct number of praziquantel tablets.. to the nearest half tablet, that should be given for each child, according to his/her height.

NOTE: A builder's tape measure of more than 200cm long may be used to make a pole, or to mark a door frame or classroom wall. The door frame or wall can then be used as a tablet pole. The pole is divided into sections as follows:



How to Use the Tablet Pole

1. The pole should be held upright on a flat surface. If necessary, flatten the ground and then hold the pole on a large piece of wood. One way to make sure that the pole is held upright is to hold it near to a piece of string that has a weight attached to one end, and the other end tied to a roof beam or tree branch, making a "plumb line". This can be used to judge whether the tablet pole is upright.

2. For children to be treated, ask them to stand so that their spine is against the face of the pole on which the number of tablets is written. Put the child feet together so that they touch the base of the pole. The child should stand upright, looking straight ahead with shoes removed.

3. Place a ruler on the child's head and press down the hair so that the ruler is flat against the skull. Make sure that the ruler is level and makes an angle of 90 degrees with the height pole. Read the number of tablets that the child needs from the pole. If the ruler exactly touches the line between two doses of tablets (e.g. on the line between 1.5 and 2), then give higher dose of tablets. If children are taller than the marking on the pole for the highest dose of tablets, they should be referred to a clinic, for determining the correct dose of praziquantel.

A teacher uses the tablet pole to determine the number of pills to give to a pupil with bilharzia

The Treatment Form

Protocols for Administration of SHN Drugs

Albendazole (for treatment of worms)
The tablet may come in 200mg or 400 mg dosage. It should be administered to all pupils one tablet of 400mg or two tablets of 200mg once per year. Note that for the SHN protocol it is recommended that 400mg dosage be used so that a child takes only one tablet.

Praziquentel (for treatment of bilharzia)
The dosage is determined by use of the Tablet Pole. It is administer in a dose of 600mg tablets as indicated from the tablet pole once per year. After administering the Bilharzia questionnaire to 70 pupils, 5 girls and 5 boys randomly selected from grades one to seven or 90 pupils if the school runs from grade one to nine teachers will know if mass treatment is required or not. If the resulting percentage is below 35% treat only those reporting symptoms or complain of blood in urine. If the percentage is above 35% treat every pupil in the school once per year. The questionnaire should be administered each year.

Vitamin A (200,000 IU capsules)
Administer only one capsule to each child once per year. It is important that this is done only after the worm and bilharzia treatment regimen is carried out. **Do not administer Vitamin A on the same day as Albendazole or Praziquentel. Vitamin A should be given 10 days after administration of Albendazole and Praziquentel.**

Iron tablets (Ferrous Sulphate - 200 mg tablets)
Begin the series of required 10 doses of iron on the same day as Vitamin A or soon after. Ensure that each pupil receives ten doses over the course of ten weeks. In other words give each child one iron pill for ten weeks. If for some reason the pupil is absent or ill, continue ticking the spaces so that all ten doses are received in a year. Do not leave a blank space. It is ok if there are intervals between receiving doses as long as each pupil receives all ten doses of iron in a year. Give first dose along with Vitamin A.

USE OF THE TREATMENT FORM
All SHN drugs given to pupils are recorded to enable the programme to monitor progress and to track drugs used and to calculate future requirements. Proper recording will also aid teachers to keep track of pupils who have missed the required dose and to follow up those who have not completed the regimen (10 weeks of iron). The treatment form also includes a space for recording side effects of the SHN drugs given and teachers need to observe pupils after treatment and record here any side effects such as abdominal pains, dizziness, headache or vomiting.

School Health and Nutrition Programme
TREATMENT FORM

School Health programme: Class recording Form for Treatment of Bilharzia, Intestinal Worms and administration of Vitamin A and Iron tablets. (Please refer to protocol attached when to give SHN drugs)

Name of School	
Province	
District	
Zone	
EMIS No.	

No.	Name (Surname first)	Grade	Age	Sex	Results from the question-naire- positive (+) or Negative (-)	No. of prazqu-antel Tablets given	Date drug given	Albendazole (400mg) given	Date drug given	Date Vit. A (200,000Iu) given	Number of Iron (200mg) tablets given										Remarks/ Side effects
											1	2	3	4	5	6	7	8	9	10	

DRUG AND INFORMATION FLOW

External Drug Supplier

Internal Source

Medical Stores Ltd - Quality Testing and Distribution to DHMTs

MOE Procurement Office

National SHN FP MOE HQ

DHMTs Storage and distribution to Health Centres to selected SHN schools

Provincial SHN FP District level Data Aggregated and sent to MOE HQ

District SHN FP School -level data aggregated and sent to HQ

Health Centres Storage and distribution to Selected schools according to drug allocation lists

School SHN FP calculates drug requirements based on enrolment and sends to DEO

Pupils receive drugs

Training Exercise on SHN Card, Treatment Form

INSTRUCTIONS:
Please read the story of Misozi carefully, and answer the questions that follow.

Misozi Zulu has just been enrolled to grade one at Aroma Basic School (EMIS NO. 1234), in Chipata District. Her admission No is 1959.

According to facts presented before you by her guardian, Misozi was born on 7th February 1996, at Muzamo village Chief Mishoro, Chipata. Misozi's mother died a week after she was born and her father's health has not been good since then.

Just after the death of Misozi's mother, Amai Thandizo Zulu, the young sister to Misozi's father took her on to bring her up. She was now living with her at Mugubudu village, Chief Mishoro. This is about 45 minutes walk to Aroma Basic School. Misozi settled well at school.

On 7th March 2006, Amai Thandizo received a letter from the Headteacher informing her that all pupils at Aroma Basic School will be required to receive SHN drugs on the 15th March 2006. Misozi was therefore required to eat enough food and carry some with her to eat at school.

Just before drug administration, their respective teachers conducted a physical check of personal hygiene on all pupils. Apart from a running nose and a rash around her neck, Misozi had no any other abnormality. However, the teacher couldn't determine whether Misozi had received BCG vaccination or not, as she had several scars on both arms.

The teacher administered the bilharzia questionnaire to selected pupils. The results on aggregate showed that 45% of the sampled pupils passed blood in urine. Misozi was one of them. Later in the day Misozi took her drugs according to School Health and Nutrition drug administration protocol as follows.

- One (1) tablet of Albendazole (400mg), and two (2) tablets of Praziquantel. These were given on the same day on Drug Administration Day (DAD) on 15th March 2006

- After 10 days / 2 weeks, on 27th March 2006 Misozi was given one (1) capsule Vitamin A supplement (200,000 IU), and one (1) iron tablet (200mg)

- Misozi was available to take her iron table every week on the same day for the following 3 weeks on 3rd, 10th 17th April 2006

Unfortunately, on 24th April 2006 Misozi fell ill while at school. She complained of having fever. By use of a school health card, she was taken to the Clinic where she was treated for Malaria. The health worker advised her to rest in bed for 3 days.

However, Misozi did not return to school after three days, as she was still feeling weak. She only returned to school after 12 days when she had fully recovered.
This made her miss her iron tablet which was supposed to have taken on 24th April 2006. She even missed the other dose of iron tablet that she was supposed to receive on the 1st May 2006 as she was requested to stay at home by her aunt, to look after her niece while she was away queuing for fertilizer at a nearby cooperative society deport. Nevertheless, she took all her remaining doses of iron as required by SHN treatment protocol.

Another fate strike Misozi's life. This time she lost her father on 26th June 2006 and that too kept her away from school for ten (10) days.

On 15th July 2006, Health Centre Staff from a near by health centre visited the school for an immunization exercise. "Though Misozi was eligible for BCG vaccination, she was not vaccinated because she was running a temperature; instead, she was given Fansida and Paracetamol tablets. Later on 22nd August 2006 she was vaccinated against BCG when the health workers made a return follow up visit.

Misozi's academic performance was classified as average in all the three terms of the year 2006 and her health was judged as average in the first and second term. Her health in the last term improved and was described as good.

Group Exercise

1. Fill in the events described above in Misozi's SHN Card.

2. Enter all the treatment given to Misozi on the treatment form provided and then transfer this information onto the SHN Card.

3. What could have the teacher done to confirm if one of the scars on Misozi's arms were as a result of BCG vaccination or not.

4. Following the results from the Bilharzia questionnaire, who or how many were eligible to receive bilharzias tablets (Praziquantel)?

5. Why were they eligible?

6. Suppose Aroma Basic School has a total enrolment of 500 pupils, calculate the requirements of the following SHN drugs
   - Praziquantel
   - Albendazole
   - Vitamin A
   - Iron

The SHN Card

EMIS NO:.....
Admission No:.....

SHN FORM 01

Republic of Zambia
MINISTRY OF EDUCATION

School Health Card

Name of School:..... **District:**.....
Name of Child:..... **Sex F M**
Date of Birth:.....
Village / Address:.....
.....

Distance between Home and School - Km or..... Hours / Minutes
Mother alive /dead....If Mother dies at a later date indicate when.....
Father alive / dead.....If Father dies at a later date indicate when.....
Name of Parent / Guardian: .....Relationship.....
Chronic Illness: Epilepsy, Sickle Cell Anemia
No / Yes Specify .....

Screening Exam
Grade 1 **Date of Exam / / Child's Age: Yrs.....Months.....**

Hair: Lice	No / Yes	Nose	Clear / Running
Skin: Rash	No / Yes	Walking ability	Good / Poor
Nails	Clean / Dirty	Speech	Good / Poor
Eyesight	Good / Poor	Hearing	Normal / Poor
Ears: Infection/Pus	No / Yes	BCG scar	No / Yes
Teeth: Decay	No / Yes		

Academic work	**Term One**	**Term Two**	**Term Three**	**Final Grade**
Above average				
Average				
Below average				
General Health status Good, average, poor				

Page One of the SHN Health Card. The card has six pages on which information is recorded during the time the pupil is in school (Grades 1 to 7).
Other information recorded on the card includes:

1. Days when a pupil is absent and reasons for not attending classes.
2. Treatment and immunisation given to the pupil.
3. Referral of a sick pupil to a clinic or hospital.

Helminthes

Health Promoting Schools

Malnutrition

Treatment

Malaria

HIV/AIDS

Community Participation

Chapter 3: Malnutrition

Zambia suffers from high rates of malnutrition manifested as Protein Energy Malnutrition (PEM) and micronutrient deficiencies and the most common being Vitamin A Deficiency (VAD), Iron Deficiency Anemia (IDA) and Iodine Deficiency Disorders (IDDs). These micronutrient deficiencies affect a large percentage of the population and particularly women of child bearing age and young children and contribute to higher rates of mortality and morbidity and result in low productivity and intellectual impairment.

It is possible to reduce or even eliminate these micronutrient deficiencies through interventions such as increasing consumption of micronutrient rich food, through use of micronutrient fortified foods and through micronutrient supplementation in schools.

Vitamin A Deficiency (VAD)

VAD is a pubic health problem in over 75 countries throughout the world – most of them are low-income countries in Africa and Asia. Up to 230 million children are at risk from VAD, and over 1 million children die each year from VAD related causes. The groups at greatest risk from VAD are very young children and pregnant women, and school age children are also at risk.

Why do children need Vitamin A?

Fighting disease: Vitamin A is vital for a healthy immune system, to help combat disease. It is needed for the formation of mucous secreting tissues lining the passage to the lungs, intestinal tract and other tissues. With vitamin A deficiency, the body is no longer able to fight off infections effectively, so children are more likely to be become ill (especially with measles and diarrhea diseases), or remain ill for longer.

Vision: Vitamin A is essential for healthy eyes and eyesight. It is needed for the formation of visual purple in the eye for proper vision in poor light. One of the first signs of severe VAD is loss of vision in low light conditions or "night blindness." Whitish patches may also occur on the eye (Bitot's spots), and in severe cases the eye becomes dry and damaged, leading to blindness. An estimated 250-500,000 children with VAD become blind every year worldwide, half of them dying within 12 months of losing their sight.

Growth: VAD is essential for growth and to help fight infections. Young children suffering from VAD may become stunted.

Skin: Vitamin A is essential for healthy skin

Reproduction: VAD leads to low rates of conception and an increased rate of stillbirths.

Iron: VAD contributes to anemia, as a deficiency can inhibit the body's ability to use iron efficiently.

Who is at risk?

- School-going children
- Children not at school
- Pregnant women
- Lactating women
- Sick children and adults
- Children having a poor diet

What are the symptoms of VAD?

- Night blindness, an inability to see in poor light, is usually the first symptom of VAD. Mothers can be taught to recognize this first signs of deficiency, that her child is clumsy at dusk and bumps objects, so early treatment can be given. A delay in treatment results in serious and possibly permanent damage to the eyes.
- Disturbed colour vision.
- Other manifestations of VAD not affecting
- the eye include: growth retardation, increased morbidity and mortality.
- Dry skin.

Local food stuffs rich in Vitamin A

Vitamin A is found in animal and plant or vegetable foods. In animal foods vitamin A is found in its natural form, while in vegetable foods vitamin A is found as beta carotene and other carotenoids which give fruits and vegetables their green, red, orange and yellow colours. Carotenoids, particularly beta-carotene are converted into vitamin A in the body.

Some helpful dietary practices for the prevention of VAD...

Adding some fat or oil to a child's diet every day to help the baby absorb vitamin A from foods.
Adding vitamin A –rich foods to a child's diet everyday.
Giving Vitamin A supplements to children and lactating women.
Encourage children to eat locally available Vitamin A rich foods.
Giving Vitamin A supplements to children.

Animal and Vegetable Sources for Vitamin A

- Animal Source
- Oily fish
- Fish eaten whole
- Kapenta
- Egg
- Dry fortified milk and milk products, such as cheese

Vegetable (Plant) Source

- Food rich in beta-carotene such as dark green leaves eg rape, spinach, pumpkin, cassava leaves
- Traditional vegetables (eg Amaranthus)
- Red and yellow vegetables and fruits
- Yellow maize
- Red Palm oil
- Wild fruits

How can you treat Vitamin A deficiency?

Vitamin A supplementation is a safe, low cost and effective way of preventing and treating VAD. It can be given as capsules, the recommended dose for school age children of 200,000 International Units once per year. It can also be given every 4-6 months in areas that have a high prevalence of VAD. Vitamin A supplements should not be given to pregnant women. Some have expressed concern about the dangers of toxicity from extremely high doses of vitamin A, but at the doses recommended, any side effects (such as headaches and nausea) are extremely rare. The small risk of side effects is minor compared to the devastating effects of vitamin A deficiency.

What are the benefits of improving the Vitamin A status of children?

- Increases chance of survival
- Death from measles can be reduced
- Death from diarrhea can be reduced
- Overall mortality can be reduced
- Reduces the severity of children illness
- Prevents night blindness, eye problems and blindness
- Improves resistance to infection
- Helps reduce anemia
- Contributes to children's well-being, school attendance

Iodine Deficiency Disorders (IDDs)

Why is iodine needed?

- For proper growth and development of the body especially mental development
- For normal development thyroxin
- For control of body systems

Who is at risk?

- Young children, the fetus and pregnant women
- Women of reproductive age are at risk because of the possibility of delivering children with severe mental retardation.
- School-going children

What are the signs and symptoms of iodine deficiency?

In children it causes:

- Mental and growth retardation including cretinism
- Increased childhood mortality

In adult and children it causes:

- Goiter and swelling of the thyroid gland in the neck which not only looks unsightly but signifies iodine deficiency and may be accompanied by more serious manifestations of the following:
- Listlessness
- Sleepiness
- Dry skin
- Cold intolerance
- Constipation

In pregnant women it causes:

- Still births
- Miscarriages

Good dietary practices for the prevention of IDDs

Foods naturally rich in iodine are sea foods, therefore Zambians have no naturally occurring sources of iodine. It is not possible to prevent IDDs in Zambia by dietary practices alone, since the foods do not contain sufficient iodine to sustain good health. The only two options for Zambians is use of fortified salt and iodized oil capsules. It is important to note that iodine can be damaged by too much light, heat or moisture. Salt should be stored carefully.

Iron Deficiency Anemia (IDA)

IDA is probably the most common nutritional disorder in the world, affecting over 2 billion people – the vast majority of whom live in low-income countries. Pregnant women and young children are among the worst affected, but the world Health Organization estimates that nearly 50% of school age children in developing countries also suffer from IDA. Iron deficiency anemia can be caused by a variety of things, but is often due to insufficient iron intake in the diet and/or poor absorption of iron. In many developing countries, IDA is aggravated by worm infections (such as hookworm), and schistosomiasis. In areas where malaria is prevalent, this is also a major contributing factor to IDA. Other micronutrient deficiencies such as vitamin A deficiency can also contribute to IDA.

Who is at risk?

- School-going children
- Out of school children
- Women
- Babies

What are the signs and symptoms of anemia?

In school children:

- Decreased work capacity
- Decreased mental performance
- Impaired resistance to infection
- Impaired physical performance and fatigue
- Listlessness and weakness
- Decreased learning capacity
- Breathlessness
- Heart palpitations

In adults anemia causes:

- Decreased work capacity
- Decreased mental performance
- Tiredness/breathlessness

Good practices for the prevention of IDA

- Increasing the consumption of vitamin C rich foods in the diet especially with the main meal
- A supplement of Iron given to women during pregnancy will prevent anemia in mother and child.
- Children should also be given Iron supplements.
- Avoiding loss of Iron from the body by controlling malaria attacks or worm infestation.

Treating Iron Deficiency Anemia

IDA can be treated and iron levels stabilized with supplementation. For school age children this can be in the form of Ferrous Sulphate tablets (200mg tablets), one dose per week for 10 weeks. It is important that no pills are missed, or the course of treatment will lose its effectiveness.

Common side effects of iron supplementation treatment include: nausea, diarrhea or constipation and gastrointestinal discomfort. For the iron to be absorbed most effectively, the tablets should be given before meals. If, however, the effects are serious, they can be taken with food to reduce the unpleasant effects. Some people taking iron supplements also report black colour of stools, but this is not serious and should not lead to stopping the cause of treatment.

Supporting strategies

Along with iron supplementation, other strategies to combat IDA include food fortification (increasing the available iron content of foods) and dietary diversity. Food that are rich in vitamin C (such as citrus fruits) help increase absorption of iron, and some traditional food practice such as fermentation and germination, also help to improve absorption of iron from cereals and legumes.

Good sources of haem iron include meat, and meat products, offals, such as liver and kidney, chicken and fish.

Sources of non-haem iron include, unrefined cereals, pulses and nuts, dark green leafy vegetables and egg yolks

Parasitic infections and problems with other micronutrient deficiencies can contribute to IDA, so treatment is most effective if it is carried out as part of an integrated programme that also includes deworming, malaria prevention, and supplements of other essential dietary elements such as vitamin A.

Chapter 4: Treatment

Helminthes

Health Promoting Schools

Malnutrition

Treatment

Malaria

HIV/AIDS

Community Participation

This session will look at the issues of drug treatment, storage, compliance, flow of drugs, transportation, how to calculate your drug requirements, and the 10 golden rules of SHN drug administration.

Drug Storage

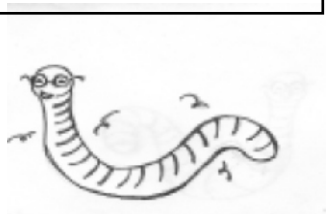
Drugs deteriorate over time and this process is worsened if they are not stored properly. When drugs deteriorate they may become useless or even harmful. All drugs used in the SHN Programme must be stored below 25 degrees celsius (room temperature). They must also be protected from heat, light, moisture and dirt. All drugs carry expiry dates and they should not be used after that date. However, the expiry date depends on storage conditions. Exposure to heat, light, moisture and dirt will affect the potency of the drugs.

Deterioration occurs if the drugs show any of the following:

Stakeholder participation on a drug administration day: parents watch as a teacher enters information in a SHN Card

- Bad smell
- Bad taste
- Change in colour
- Brown spots
- Melting, sticking or cracking of tablets
- Liquid has separated out from cream in liquid medicine
- Development of turbidity
- Development of bubbles in liquid medicine

Some drugs may not show deterioration signs after expiry date or when affected by adverse storage conditions. All drugs used in SHN must be stored at room temperature 25°C and protected from heat, light, moisture and dirt. No expired drugs should be used in School Health and Nutrition Programme.



Drug Compliance

Compliance is a measure of extent to which a pupil follows instructions on the use of drugs. Others may take medicine for a while and later stop when they suffer from side effects or when they start feeling better.

Teachers should aim at high pupil drug compliance. If pupils do not follow the instruction properly, it is unlikely that the medicine will work. Therefore, there is need to spend time to explain the instructions to pupils, their parents or guardians and communities carefully and accurately.

Some reasons for poor drug compliance are:
If there are too many drugs taken in a day at many intervals, the clients are less likely to take any of them (drugs) properly.

Number of medication times. Difference in frequency of medication with each one being taken at different time a day are bound to be taken wrongly
Taking medicine for a long time- as in chronic conditions is most prone to non-compliance.

Cultural, traditional and religious beliefs may have a negative impact on compliance. Some religions do not encourage their followers to take any form of medicines as remedy to ill health but prayer.
Myths and misconceptions may also affect compliance. Teachers must counteract elements that may affect compliance. It may be useful to seek the help of community opinion leaders who can help explain the correct information to pupils and surrounding communities.

Teachers should strive to attain high pupil compliance for SHN drugs in order to achieve effectiveness of programme efforts.

DRUG	STORAGE TEMPERATURE	PROTECT FROM	COMMON SIGNS OF DETERIORATION
Vit A	Below 25 ° C	Heat, Light, Moisture and dirt	Melting, sticking and bad smell
Iron (Ferrous sulphate)	Below 25 ° C	Heat, Light, Moisture and dirt	Melting, sticking and bad smell
Albendazole	Below 25 ° C	Heat, Light, Moisture and dirt	Bad smell brown spot
Praziquantel	Below 25 ° C	Heat, Light, Moisture and dirt	Cracking, melting brown spots change of colour and bad smell

Transport and Flow of Drugs

Drugs need to be protected from rainwater, heat and dirt during transportation. Wrapping drug containers in a plastic sheet and putting them in a bag may help. Consider all transportation days and whether there is rain, dust or excessive heat. Do not take chances. During transportation of drugs all storage conditions must be applied.

A diagram is presented to show the various steps in the flow of SHN drugs and information needed to initiate the placing of the order including procurement and distribution to all levels of the system from source to pupil. Teams from the office of the District Education Board Secretarys (DEBS) and District Health Management Team need ensure that information from all selected school head teachers is sent to the DEBS SHN Focal Points, aggregated and sent on to the MOE SHN Headquarters who will send the total requirement needed to the MOE procurement office. This needs to take place in a timely manner so that there is sufficient time from anticipated order, arrival, clearing, and quality testing by Medical Stores Ltd to health centre. Keep in mind that the shelf life for the SHN drugs is two years, so orders from external suppliers should be sufficient for two years. The amount ordered should also include buffers to allow for wastage and increased enrollment.

The PEOs, DHMTs, and DEBS Focal Points need to be trained on drug calculation and the steps in the drug procurement process so that drugs arrive in a timely manner and all parties are aware of what should be done at each step.

The Ten Golden Rules of Drug Administration

1. Store and transport drugs under approved conditions.
2. Explain the benefits of the SHN drug administration program to pupils, guardians and the surrounding communities.
3. Invite Health Centre staff to participate as co-partners in drug administration program.
4. Encourage pupils to eat food before administering drugs on DAD.
5. Assess children's health, exclude those who are ill or on medication and those suffering from sickle cell anemia (a condition caused by sickle shaped red blood cells and reduces the haemoglobin required for proper body functioning).
6. Maintain high standards of hygiene during the DAD.
7. Give the right drugs to right pupils at the right time.
8. Record drugs given on drug treatment form.
9. Observe for side effects and refer as appropriate to nearest health centre.
10. Consult health personnel when unsure.

How to Calculate Your Drug Requirements

In order to avoid wastage or running short of drug supplies during Drug Administration Days (DAD), it is important to calculate your drug requirements before hand. Drug requirement calculations must be based on school enrolments and drug administration protocols.

For the School Health and Nutrition (SHN) program, the drug administration protocol has already been

Each year, pupils are expected to take the following:

Vitamin A - one capsule (200,000 IU)

Albendazole - one tablet (400 mg)

Iron (Ferrous Sulphate) - tablets (200mg) once per week for 10 weeks

Praziquantel- 1,800mg to 2,400 mg of is to be given according to dosage indicated by using a tablet pole

Step 1: Calculate drug requirements for your school

Enrollment

X multiply by

Dosage Required

X multiply by

Frequency

÷ divide by

Strength

= equals

Drugs Required

Step 2: Add contingency

\+ Plus

Contingency

Step 3: Order this amount

= equals

Vitamin A

Step 1: Calculate drug requirements for your school

school enrollment (250 pupils)

X

dosage 200,000 IU

X

frequency 1 per year

÷

strength 200,000 IU

=

drugs required 250 tablets

Step 2: Add contingency

+

contigency 10% of 250

Step 3: Order this amount

=

275 capsules
amount to be ordered

Albendazole

Step 1: Calculate drug requirements for your school

school enrollment (250 pupils)

X

dosage 400mg

X

frequency 1 per year

÷

strength 400 mg

=

drugs required 250 tablets

If the strength of Albendazole is 200 mg, the requirement will be as follows 250 pupils x 400 mg x 1 dose per year 200mg = 500Tablets.

Step 2: Add contingency

+

contigency 10% of 250

Step 3: Order this amount

=

275 tablets
amount to be ordered

When the strength is 200 mg the calculation will be 500 tablets plus 50 tablets (10% of 500) = 550

Ferrous Sulphate

Step 1: Calculate drug requirements for your school

school enrollment (250 pupils)

X

dosage 200mg

X

frequency 1 per week for 10 weeks

÷

strength 200 mg

=

drugs required 2,500 iron tablets

tep 2: Add contingency

+

contigency 10% of 2,500

Step 3: Order this amount

=

2,750 tablets
amount to be ordered

Praziquantel

Step 1: Calculate drug requirements for your school

school enrollment (250 pupils)

X

dosage 1,200mg

X

frequency 1 per year

÷

strength 600 mg

=

drugs required 500 tablets

Step 2: Add contingency

+

contigency 10% of 500

Step 3: Order this amount

=

550 tablets
amount to be ordered

1,200 mg of Praziquantel tablets an average requirement per pupil for calculating drug requirements only. It should be administered according to the tablet pole.

Therefore, the school drug requirements will be:

Vitamin A	=	**275 Capsules**
Albendazole	=	**550 Tablets**
Ferrous Sulphate	=	**2,750 Tablets**
Praziquantel	=	**550 Tablets**

Procurement in good time, proper storage and transportation, dispensation of the right drugs and dose to right pupils, at the right time, are key elements in SHN drug management.

Treating Pupils in My School

Teachers' responsibilities

Teachers request for SHN drugs from their nearby Health Centres and keep them safely.
The amount of drugs requested will be calculated based on school enrollment and in some cases based on the distance of the Health Centre to the school, .e.g. the school may wish to order ten doses of Iron tablets at once rather than travel back to the health for Iron tablets each week.
To access SHN drugs, teachers complete drug request forms in four (4) copies. One copy of the request form will be kept at the health centre, one at the school and the other copies must be sent to the DEBS and the PEO to enable the SHN Programme to track supplies and know when to place orders for more drugs through Headquarters.

Teachers administer drugs to pupils and keep records of the same.

Health Centre Staff responsibilities

It is the Health Centre staff's responsibility to receive the drugs from the District Health Management Teams (DHMTs) and store them at the Health Centre in an allocated space until they are requested for by the schools.
The DHMTs will inform the respective Health Centres what schools will be accessing drugs and ensure that drugs are received and stored properly.
The Health Centre staff will provide technical advice to respective schools particularly on Drug Administration Days.
The Health Centre staff will treat side effects that may arise as a result of administering SHN drugs

The ultimate success of the SHN Programme is dependent on how well drug distribution and administration procedures are followed and systematized

Teachers take the lead, and the success of the SHN Programme is dependent on how well drug distribution and administration procedures are followed and Systematized.

Drug Request Form

School Health and Nutrition Programme

DRUG REQUEST FORM

Name of School_____ **Enrolment (Grades 1-9)** _____

Province_____ **District**_____ **Health Centre**_____

Ordered by_____ **Date**_____

Drug	Quantity	Comments by Health Worker
Prazquantel	_____	_____
Albendazole	_____	_____
Vitamin A	_____	_____
Iron tablets	_____	_____

Supplied by: **Collected by:**

Name_____ **Name**_____

Position_____ **Position**_____

S
Ignature_____ **Signature**_____

To be completed in four copies and distributed as follows:
One copy to: ***School***
Health Centre
District Education Board Secretary
Provincial Education Office

SCHISTOSOMIASIS (BILHARZIA) CONTROL PROGRAMME

DRUG RETIREMENT FORM

TO BE COMPLETED BY THE HEAD TEACHER DURING EACH DRUG ADMINISTRATION DAY

To be submitted to the District Education Board Secretary's Office

SCHOOL	DATE
LOCATION ZONE	DISTRICT

ENROLLE D CHILDREN	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	TOTAL
Number of children from register										
Number of children treated										
Quantity of drug used	Albendazole Praziquantel Ferrous Sulphate Vitamin A									

NON ENROLLED CHILDREN		AGE GROUP			TOTAL
		1 TO 4 yrs	5 TO 10 yrs	Over 10 yrs	
Number of children treated					
Quantity of drug used	Albendazole Praziquantel Ferrous Sulphate Vitamin A				

DRUG BALANCE	Albendazole	Praziquantel	Ferrous Sulphate	Vitamin A
Total quantity of drug used				
Number of spoilt tablets				
Number of tablets received				
Number of tablets returning				
Source of drugs e.g MoH, SCI				

Chapter 5: Malaria

Helminthes

Health Promoting Schools

Malnutrition

Treatment

Malaria

HIV/AIDS

Community Participation

Malaria is still endemic in Zambia and many parts of the world, the leading cause of illness and death in both children and adults. Malaria is also a leading cause of absenteeism among pupils and teachers in schools.

Malaria is transmitted by mosquitoes. There are many types of mosquitoes but only a few carry the parasites, called plasmodium, that cause malaria. These mosquitoes belong to the group called "Anopheles", and these types of mosquitoes only bite at night.

The four species of plasmodium that cause the disease:

- Plasmodium malaria
- Plasmodium falciparum
- Plasmodium vivax
- Plasmodium ovale

Plasmodium falciparum is the mostly common seen in Zambia. All four types are transmitted from person to person by female Anopheles mosquitoes.

Mosquito breeding places

Anopheles mosquitoes tend to breed in fresh water bodies such as holes, ditches, ponds or agricultural fields. Other areas include water collection sites like boreholes and stand pipes. The mosquito does not breed any where else but in water, but they do not breed in very dirty water such as water polluted by sewage or oil.

The female Anopheles mosquito lays its eggs in water, where they hatch into larvae after several days. These in turn form pupae, which develop into adult mosquitoes. The process takes two weeks or more.

A student prepares to sleep under a net

Life Cycle of a Mosquito

When the mosquito bites an infected person in whom the gametocytes have developed, it sucks blood-containing gametocytes. These gametocytes in the stomach of the mosquito will mature and conjugate. The fertilized female parasite will develop into zygote, when the Zygote become mobile it is referred to as ookynate. The ookynate will develop into oocyst on the outer wall of the mosquito's stomach within which repeated subdivision of the parasites occurs (sporozoites) until the oocyst is filled with numerous sporozoites.

When the cyst raptures, the sporozoites disperses through the body of the mosquito. Most of those lodging in the salivary glands will be injected with the saliva when the mosquito next bites a human being for the blood meal.

Clinical Features

Individual cases may present a wide variety of symptoms. The Incubation period of the disease varies from 10 – 14 days. Many present with acute febrile illness.

Any acute falciparum infection is a medical emergency. It requires immediate medical attention. If untreated, severe complications follow in the course of the illness.

Malaria is a great imitator of other diseases therefore it is important to refer all suspected malaria cases to the health centre or hospital immediately.

Signs and Symptoms of Malaria

One or a combination of the following symptoms is characteristic of clinical malaria.

- A person feels cold and begins to shiver
- One may have a headache and feels pains in his/her muscles
- A person becomes weak and gets tired easily
- Rapidly rising and falling temperatures. When the body feels hot the temperature rises to 300C to 390C or more. The temperature may continue going up and down for several days.
- Profuse sweat
- Loss of appetite
- Nausea
- Vomiting
- Convulsions, frequent in young children
- Anaemia
- Coma or convulsion (usually present in cerebral malaria)

A mosquito lands

What to do if a child has malaria

- Cool his/her body down by wiping it with a cloth soaked in slightly warm water or a fan
- Make him/her drink plenty of cold water and wear light clothing
- Take him/her to health centre or hospital for treatment and follow the instructions of a health worker or doctor
- Make sure that a person with malaria takes all the medicine that has been given
- Do not let the patient stop taking the medicine even if he/she starts feeling better (if he/she does not take all the medicine, the malaria germs in his/her blood which the medicine has not killed will become active again later. This will make him/her sick again).

Prevention

Malaria is preventable. It can be prevented by taking the following measures:

Keeping mosquitoes away can be done by use of mosquito nets, use of mosquito repellents (burning of mosquito coils can keep mosquitoes away, but their effectiveness is limited and fumes emitted are irritating to some people), clothing that covers the body, especially arms and legs, should be worn to prevent the biting of the mosquitoes, particularly at dusk and in the evening when the insects are active.

- Provide information to both pupils and staff on prevention of malaria.
- Early identification and referral of acute febrile cases to health centres.
- Encourage pupils, teachers and surrounding community members to use bed nets.
- Keep surroundings clean, bury all gullies, keep water collecting site-borehole and stand pipes free from water bodies.
- Involve local health centre staff in preventive activities., as they retain overall responsibility for malaria control.
- Organize mass spraying campaigns.
- Teach skill based health education to pupils i.e. recognizing risky environment, how to proper disposal of wastes, keeping surrounding clean, burying of gullies, treating ITNs etc. while they understand the purpose of such actions.
- Develop a plan of action to prevent malaria in schools.
- Monitor implementation of the work plan.

Destruction of mosquitoes

Spray walls and ceilings of buildings with insecticides, mosquito breeding places should be destroyed, e.g. draining stagnant water or spraying oil to coat it, covering rain water collections and making sure that gutters function well. Tins or vessels that can collect rainwater should not be left lying around as they may provide breeding places for Anopheles mosquitoes. Open pits or gullies must be buried to prevent them from holding water.

The role of teachers in prevention of malaria in schools.

- Provide information to both pupils and staff on prevention of malaria.
- Early identification and referral of acute febrile cases to health centres.
- Encourage pupils, teachers and surrounding community members to use bed nets.
- Promote clean school environment (keep surroundings clean, bury all gullies, keep water collecting site-borehole and stand pipes free from water bodies).
- Involve local health centre staff in preventive activities. As the health sector retains overall responsibility for malaria control and for the technical content of school activities.
- Organize mass spraying campaigns.
- Teach skill based health education related to malaria control to pupils i.e. recognizing risky environment, how to proper disposal of wastes, encouraging pupils to physically participate in keeping surrounding clean, burying of gullies, treating ITNs etc. while they understand the purpose of such actions.
- Develop a plan of action to prevent malaria in schools.

Why Malaria prevention initiatives in schools?

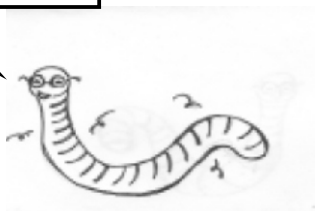
Malaria is the leading cause of illness and deaths among children and adults. It affects both teachers and school children. Absenteeism due to ill health by both teachers and pupils affects learning.

Children can be important agents for change. Health Education through schools can help promote a community – wide understanding of malaria and the need for control.

Skills - Based Health Education can promote prevention of disease by encouraging the use of Insecticide Treated Nets (ITNs) and the recognition of environmental risks.

Adoption by children of life long healthy behaviours can benefit not only the individual, but also the next generation of children.

Malaria is the leading cause of illness in Zambia. It must be prevented.



Chapter 6: HIV and AIDS

Helminthes

Health Promoting Schools

Malnutrition

Treatment

Malaria

HIV/AIDS

Community Participation

The scale of AIDS epidemic is enormous and is one of the leading causes of death in both children and adults. HIV/AIDS is also a leading cause of absenteeism among pupils and teachers in schools. HIV/AIDS has left many children orphaned and many of them have been left to head households or they are kept by their old grand parents. HIV/AIDS affects the learning process.

The epidemic's grip on Africa has been by far the deadliest but no part of the world is immune. According to UNAIDS (2005), about 40 million adults and children are living with HIV/AIDS. 64% of these are in Sub-Saharan Africa, although the region only accounts for 10% of the world's population. In 2006, 4.3 million people became newly infected with the HIV virus.

Narrowing the picture to Zambia, the National HIV/AIDS / STI / TB Council (2004) statistical report revealed the HIV prevalence estimates are as follows.

Wearing a t-shirt like this one can help to raise awareness and reduce stigma around HIV/AIDS

Province	Percent
Central	14.4
Copperbelt	18.5
Eastern	13.2
Luapula	10.6
Lusaka	20.7
Northern	8.0
North Western	8.6
Southern	16.2
Western	12.6

This means that in Lusaka, for example, two out of every ten adults is infected with HIV.

What's the difference between HIV and AIDS?

HIV means the "Human Immunodeficiency Virus". This is a virus that causes the disease AIDS. A person can have a virus in his/her blood, but may feel and look healthy.

AIDS stands for "Acquired Immune deficiency Syndrome". This is the final phase of HIV infection and is a condition characterized by a combination of signs and symptoms caused by HIV which attacks and weakens the body's immune system making the affected person susceptible to other life threatening diseases.

Ways in which HIV is transmitted

1. **Sexual intercourse**
   This is the most common way in which people get HIV. The virus is present in semen and viginal secretion. When people have unprotected penetrative sex (without use of condom) through virginal, oral and rectal, the HIV virus can pass from one person to another.

2. **Mother to Child**
   When the mother is infected, she can infect the baby before or during delivery. A simple course of drugs can reduce the risk of Mother-to-Child transmission. The child can also be infected through breast feeding.

   NOTE: Not all children born of infected mothers are infected and not all children breast - fed by infected mothers are infected. About 40% of the HIV positive mothers pass on the virus if they do not receive preventive treatment

3. **Blood transfusion**
   This can be done through transfusion of unscreened blood. In Zambia, all hospitals screen blood from donors for HIV before transfusion. Therefore it is safe.

4. **Contact with contaminated sharp instruments**
   Sharing piercing instruments, such as needles and razor blades, that have HIV infected blood on it, is another way in which HIV may be transmitted. HIV is rarely transmitted in this way

Ways in which HIV is not transmitted

It is important that pupils, teachers and communities understand that HIV/AIDS is not transmitted by:

- Wearing used clothes
- Sharing clothes with a person who has AIDS
- Sharing a toilet with a person who has AIDS
- Living with a person who has HIV / AIDS
- Being in the same room with a person who has AIDS
- Touching a person with or who has AIDS
- Shaking hands with a person who has AIDS
- Using the same bathroom as a person who has AIDS
- Sharing plates with an infected person

Progression of HIV

When the HIV enters the body, it starts to multiply very fast. As the virus multiplies in the body, it uses the body's essential nutrients and the immune system in the body is depleted.

Immediately the virus enters the body, the person is able to infect others. But his / her blood can still test negative because of measurable antibodies have not yet been produced. This period is called **"window period".** The window period ranges from 1-3 months.

The period from the time one is infected to the time when signs and symptoms appear is called **"incubation period".**

Signs and symptoms of AIDS

- Weight loss of about 10% or more occurring within one month without an explanation
- Having diarrhoea daily or intermittent lasting for more than one month
- Having continuous fever intermittently for more than one month
- Repeated abscesses
- Karposis Sarcoma
- Coughing lasting for more than one month
- Itching of the skin
- Herpes Zoster
- Night sweats
- Loss of memory
- Severe drug reaction
- Loss of hair texture
- Unexplained nerve palsies
- Recurrent oral thrash
- Failure to thrive (in children below five years)

Factors contributing to HIV transmission

Cultural and traditional practices
Certain cultural practices in Zambia may contribute to the spread of HIV e.g sexual cleansing, inheritance of the dead person's spouse, sharing unsterilized piercing instruments.

Gender
Girls aged 15-24 are 6 times more likely to be infected with HIV than boys of the same age.
Girls and women often do not have the power to refuse sex or insist on condom use.

High prevalence of other sexually transmitted diseases
There is a high chance of transmitting HIV during unprotected sex if one or both partners are infected with other STIs such as syphilis or gonorrhoea;

Poverty and low social economic status
Wide spread poverty, high rates of unemployment and the general low return from informal sector income generating activities have been associated with high risk sexual behaviour and the spread of HIV.

High risk behaviour
Knowledge levels about HIV / AIDS are high among Zambian adults. Most understand that HIV / AIDS is fatal and that there is no cure available at the moment. Yet sexual behaviour has changed very little and most Zambians still engage in risky sexual behaviour such as having multiple sexual partners. Drug abuse and alcohol contribute to HIV infection

The Impact of HIV/AIDS

HIV/AIDS is the leading cause of high pupil and teacher absenteeism and low productivity. As the country is struggling to develop and overcome poverty, the epidemic is destroying the most productive members of the society. The negative impact of the epidemic can be felt at all levels of education service delivery.

Families and Community

- If it is the breadwinner who is infected, his or her illness leads to lack of income, as she/ he can no longer work. The family may not be able to pay for school fees and other school requirements
- Parents may die before the children reach adulthood. Some will never receive any education
- Other family members, especially women and children may take a lot of their time looking after the sick relative, this may result in less labour for the farm leading to less food for the family
- In some cases, children may be removed from school to help increase household labour. The demand for education is thus affected.
- In the event of death, funeral costs can consume a lot of household resources

School

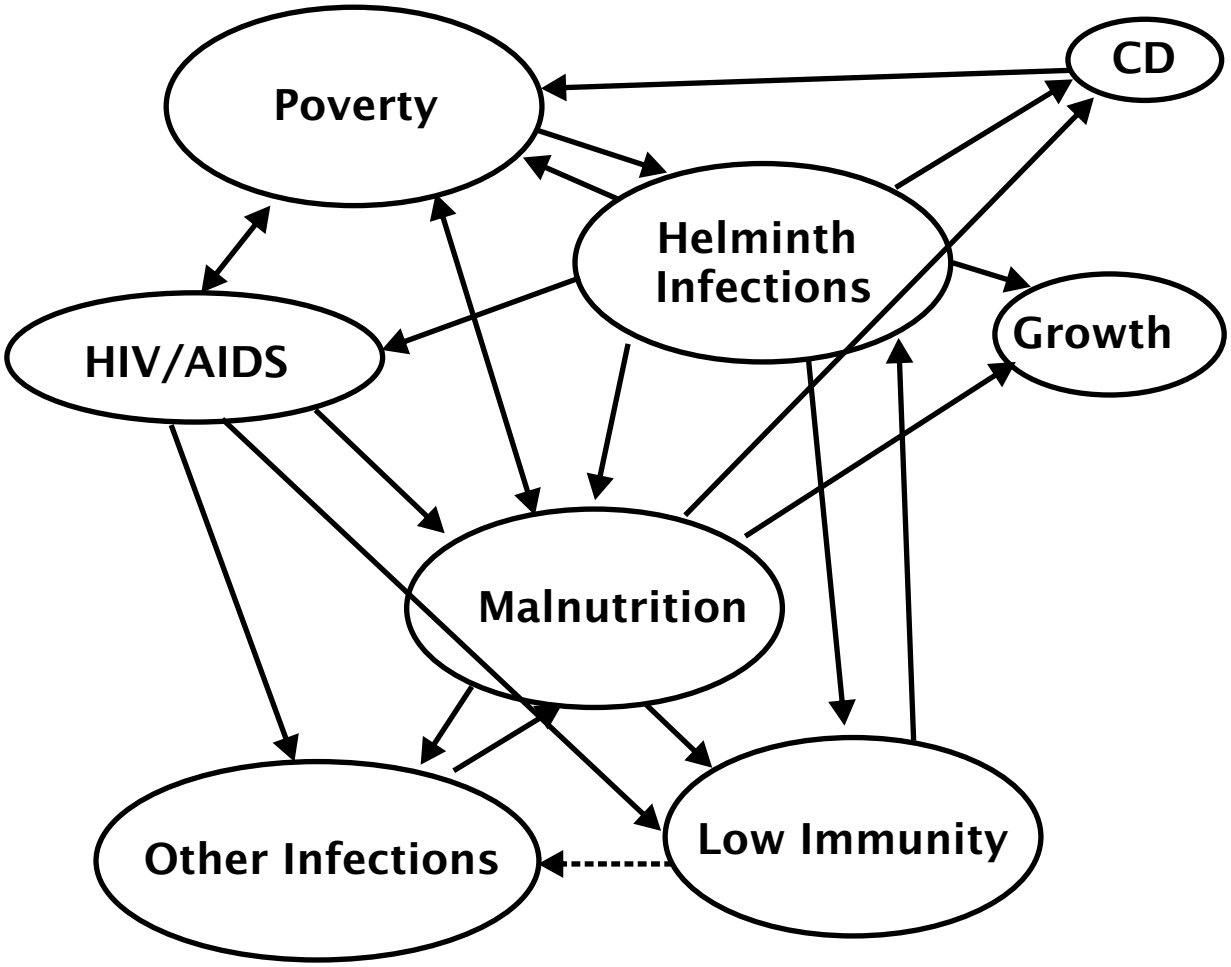
- Pupils and teachers absenteeism due to illness or attending to HIV/AIDS related funerals and illnesses
- Learners who are ill lag behind with their studies
- Healthy teachers will have to take up extra load when sick teachers are absent. This affects the quality of teaching in the process
- Loss of qualified and skilled manpower due to AIDS
- Low retention rate as orphaned children may withdraw from school due to lack of support
- Teacher's deaths and absenteeism affects the supply of quality education.

District, Provincial and National

- Loss of skilled and qualified planners and mangers due to AIDS related deaths
- Too few teachers to cater for current establishment
- Burden placed on the small allocation of resources due to increased demand on funeral benefits
- Time spent on training replacements
- Increased burden on the few available resources due to increased demand for manpower, money for coffins and other benefits
- Difficult to meet objectives as planned
- Health budget is high at the expense of other social services like education

How HIV/AIDS Relates to Deworming and Nutrition

Poverty is a common denominator for these problems. Parasitic infections (bilharzia and soil transmitted worms) mostly affect school age children who bear the brunt of the combined effects of parasitic infections and malnutrition. A combination of all these result in impairment of physical growth, mental development and wellbeing, therefore school attendance and performance is also affected. Interaction between infection and malnutrition is mainly synergistic because infection makes malnutrition worse and malnutrition aggravates infection.



Chapter 7: School Community Partnership

Helminthes

Health Promoting Schools

Malnutrition

Treatment

Malaria

HIV/AIDS

Community Participation

A community is a group of people that have something in common, such as, the place they live in, the tribe or clan they belong to, the work they do.

Mobilization is to bring people together for a common purpose. Community participation refers to a situation where members of a community contribute to achieve an objective. For example, a group may team up to improve the water situation a village by digging and protecting a well for clean and safe water..

For the School Health and Nutrition (SHN) Programme to succeed, the community and other stakeholders should be mobilized to effectively participate in planning and decision making processes in SHN activities.

Most importantly, community participation enables the people to find local solutions to their own problems.

There are so many ways in which communities can be mobilized to support SHN and other activities that would improve learning. One of the most effective ways is to establish School-Community Partnerships (SCP).

SCP is a mutually beneficial union between schools and communities where the vision, roles and responsibilities are shared.

The main aim of the SCP is to create linkages between schools and communities. In this way, there would be effective management of local resources with minimum outside assistance. The process of entry into the community is very critical as any mistake made at any stage may determine the success or failure of the relationship.

The following hints are necessary when entering the community.

Know your community

Know your community's culture, beliefs, values, weaknesses and strengths to have to better strategies your activities.

Shared vision

Share your vision or idea with the community and all stakeholders about the advantages of SHN and link this to the general MoE aspiration of improved access, retention, progression and achievement of school children through improved learning.

Protocol stage

Involve the influential leaders in the communities as failure to work with them may result in the program not succeeding. The leaders may include local chiefs, headmen, residents development committees, and others in similar leadership positions. These leaders have a following, influence and authority to convince other members of the community to support and participate in the program.

Engage the wider community

Call for a community meeting where communities are engaged in participatory planning process and find local solutions to their problems. Participatory Planning for Action (PLA) model is process is preferred because it is more interactive. Encourage women and other marginalized groups participate

Community Motivation.

After communities have been mobilized, teachers must ensure that communities a continue taking part in school activities. People can be motivated to continue participating if the leadership is supported by the community and the SHN goals are made clear.

The leader should promote good interpersonal relationship and he/she should identify conflicts and resolve them immediately. Where there are doubts about something, they must be clarified. Communities must be involved in decision making and they must be recognized and appreciated for their work. The leaders should be open and frank, and no false hopes should be created.

Myths, rumors and misconceptions about the project may de-motivate community members to effectively participate. Thus, counter measures should be taken. Leaders within the community can be called upon to explain the true position of the program to the wider community. Good leadership style is critical in motivating community members. Good leaders should be collaborative and not directive.

STYLE	YOUR APPROACH
A - DIRECTIVE	Acts as expert Provides answers Directs Sets goals Gives answers Does much of the work Evaluates Presents plans
B - COLLABORATIVE	Works with group to find solution Collaborates Provides technical e expertise Takes on part of the work Encourages Helps set goals Questions Interacts Evaluates jointly Helps identify resources

Monitoring the community mobilization and participation campaign.

It is important to develop a work plan and indicators to assist your measure the success of community mobilization and participation.

If one of the you objectives is to increase the number of parents providing their children with food for school lunch break , from 10% to 50% in 6 months.

Then six months of community mobilization,—Find out if the number has increased.

If not find out why and decide on how you van improve.

Critical issues to consider in community mobilization and participation?

Community mobilization for the purpose of community participation requires adequate planning. A number of questions need to be answered;

Who has been mobilized and participating?

What is the objective of our community mobilization? Are the marginalized groups of community participating? How can we make them involved?

If it is to improve water supply and sanitation, primary health care, agriculture, integrated rural development, etc then for what purpose?

How are we going to know that mobilization has been successful?

MFUNI's Story

Mfuni was a young focal point person from the inspectorate department of the Ministry of Education. As part of a big national effort to improve the well being of rural communities, the government was providing drilled wells and other services. Mfuni was assigned to work with several of the recipient communities within the school catchments areas on long-term School Health and Hygiene Education activities.

His most active community was Garuwao; Where the Community Health Committee had already worked very hard to prepare for the arrival of the wells and pumps. Mfuni had given several health talks about the benefits of clean water to the committee and they were enthusiastic about teaching their fellow villagers about the best way to use the new pumps and water.

Mfuni's ministry stressed the necessity of involving the community and working through local organizations. Mfuni was ready to do the first steps of his program with Garuwao: collect and analyze information about hygienic practices in the community. He would use this information to prepare his community health talks. Mfuni felt that the inhabitants of Garuwao had a lot to learn about nutrition and hygiene. The children were always dirty and playing in the mud by the river. Many of the small ones had coughs and looked thin. The local health centre personnel recorded very high figures for worm infestation and passing blood in urine. Mfuni knew there were no latrines in the community and wondered if the parents knew much about proper childcare and personal hygiene.

Mfuni called a committee meeting to organize the first steps of the hygiene education campaign. The whole group came and the chairman began by telling them about holding community wide meetings about the use of the popular theatre approach. Mfuni told the group that now that the community had clean water, it must change some of it's more unseemly and unhygienic practices. He decided it was a good time for a little health talk, so he stood up and talked to them for five minutes on the perils of fecal contamination of water.

He explained that to start this education campaign, they would first carry out a survey of current hygiene practices. The committee chairman told Mfuni that the committee members knew the information already, but Mfuni told them they would have to do what he said. He set the date for the survey for the following Thursday, and assigned different roles to different members: two would accompany him for translating and notation, two would inspect the households for water storage and general cleanliness practices, and two would spend time at the pumps and river taking note how water was being fetched and how the new pumps were being used. Since there wasn't much response from the committee, he assumed everything was understood and said farewell until Thursday.

When Thursday came, Mfuni arrived at Garuwao bright and early, carrying papers and pencils. He was surprised to find no one at the usual meeting place, so he went to the members' houses. Everyone was out either in the fields or off on errands in the next village. Mfuni was very puzzled. Hadn't he clearly said that they were to

QUESTIONS about Mfuni's Story

1 List at least one collaborative and one directive behavior of an extension agent working with members of a community and

2 List some strategies for collaborating with a community organization on a health education program.

3 How would you describe Mfuni's working style with the community: directive or collaborative? *(Answer: Directive)*

4 What are some specific examples of his type of behavior? (Answer: *He told the committee what to do without asking their opinion, he stood in front of them, and talked down to them during his "health talk", he decided what was best for the community, he didn't listen to others and made all decisions on his own, he assigned task without asking volunteers).*

5 What are some of the reactions and consequences of his type of behavior? Give Specific examples *(Answer: The committee grew more passive and silent the more Mfuni tried to control, the committee also "stonewalled" him- did not appear at the appointed time to do the survey. They stopped collaborating).*

6 What could Mfuni have done that would be more collaborative with the committee? (Be specific) *(Answer: Mfuni could have pursued the committee's initiative before his own agenda, he could have asked questions and listened to their opinions, he could have gotten agreement from the committee on the information gathering or ask them to propose a different approach. He could have asked members to choose their own roles in the information gathering exercise)*

7 What guidelines or "rules" can we establish for working collaboratively as educators

Effective Workshop Organization

IDENTIFY THE RESOURCE PERSONS

You will need two types of resource persons to assist you in the delivery of some of the topics namely:

1. Resource persons to assist in the delivery of drug administration topics (your co-trainer). The topics in this area must be delivered only by those trainers who have been trained by the SHN provincial office or representative. Allocate the topics according to the ability of each such trainer invited to assist you.

2. Resource persons to assist in the delivery of non – drug administration topics or specialized topics of particular interest to the workshop participants e.g. project proposal writing, sub grant regulations, HIV/AIDS, psycho-social counseling, Health reforms, children's rights, public health, community development, etc.

The trainees may continue to interact with the organizations/agencies from whom you invite the resource persons long after the TOT has ended. In this way the TOT will "open the eyes of the SHN trainees" to the world of School Health and Nutrition. The main advantage is that the trainees will get relevant, detailed and first hand information.

WORK PLAN FORMAT

	Activity	Objective	Target	Time frame	Respon Officer	Strategy	Means of Verification	Venue	Cost	Expected Outcome
1										
2										
3										
4										
5										

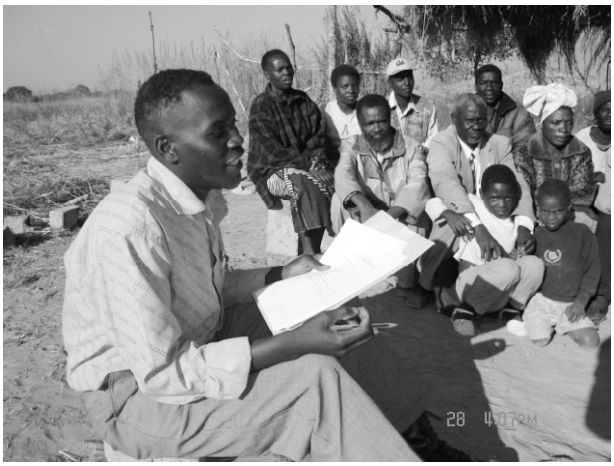
FINALIZE THE TIME TABLE

Finalize the workshop timetable on the basis of the decisions made about the various components of the session, namely:

- Maximum number of days to be allocated for the workshop;
- Whether full days, half days or only certain hours per day;
- Time allocated for the introductory and ice –breaker sessions;
- Number of topics to be covered;
- Time allocated for each break;
- Workshop evaluation at the end of workshop
- Time allocated for the participants preparation of action plans;
- Time allocated for the opening and closing ceremonies.

INFORMTHEWORKSHOP PARTICIPANTS

It is important that the workshop participants selected for a TOT need to be informed in advance (1-2 weeks) so that they can make suitable arrangements for their teaching jobs and not to abandon the school health and nutrition activities



Community Organiser addresses a local meeting

Organize PracticalTraining Sites

Visit the school site at least one day in advance to alert the staff of the intended visit with participants

The purpose of the practical exercise is to give the participants skills in using the tablet pole, doing height and weight measurements, completing the bilharzia questionnaire and observing side effects.

TIPS ON EFFECTIVE TRAINING

- Use icebreakers appropriately; songs, stories, exercises, jokes (avoid personalizing) real life situations or experiences.
- Do not dominate the sessions.
- Observe good time management.
- Paraphrase the participants' responses to ensure accuracy of information.
- Use listening skills.
- Allow the participants to complete their contributions without interruptions.
- Be flexible in your approach to ensure that you are catching the participants' attention always.
- Do not let one participant dominate the session.
- Refer to participants by name (use labels to assist you)
- Don't put off participants after they have given a wrong response.
- Avoid unnecessary arguments during the sessions.

ICE BREAKER

- Learn when to come in when there is an argument between participants
- Avoid taking sides in any argument between participants.
- Dress appropriately.
- Avoid showing your emotions when you are disappointed by the participants
- Do not use abusive or intimidating language.
- Allow the participants to choose their leaders to take care of their social needs.
- Allow the participants to come up with their own code of conduct during the training period
- Be properly prepared with your material before coming to the session. As a trainer you have to choose which method to use. (STEMP approach and one of the 12 teaching skills) to make the training product meaningful to the situation.
- Sitting arrangement should be conducive. (Semi-circles. Staggered tables so that participants should be able to see each other)

You are an extension worker from the Community Development Department but you are attached to the MOE School Health Nutrition programme. One of the communities where you work is Garuwao; where the village Health Committee has worked very hard to prepare for the arrival of the wells, pumps and school health nutrition program. You want to begin a hygiene education program in Garuwao to make sure that people in the community will keep the water from these new wells as safe as possible and make the best use of it.

You feel that it is very important to carry out a survey of current knowledge, altitude and practices in the community in order to plan appropriate health activities. The committee Chairman who is a retired health worker thinks he knows that information already; but you feel this person is not in touch with many parts of the community; therefore, you do not trust the information he claims to have. You feel the survey should be conducted in a very organized manner and you have specific ideas about what should be done and who should help you do it.

You want to do this survey next week; starting on Tuesday. It will take five days. On each of these days you will need two people to accompany you to translate and take notes; two to inspect households for water storage and general cleanliness practices; and two to spend time taking note of how water is being fetched and carried. You have to conduct a survey on these days because you are committed to work in another community the following week

You are about to meet with the committee Chairman to gain his support for the survey.

COMMITTEE CHAIRMAN ROLE PLAY SHEET

You are the Chairman of the village Health Committee in Garuwao.

You and others on the committee including the schoolteachers have worked very hard to prepare for the arrival of the new wells and pumps in your community. You are one of the elders in the community; and your role as chairman has made you very popular with other people in the community.

You have been working with a young extension worker from the Ministry of education to prepare for these wells. He is well intentioned; but his suggestions always seem unnecessarily complicated. For example; before receiving approval for the new wells; he insisted on meeting not only with committee but also with several other individuals in the community. He asked these people a lot of questions, which you felt were not important.

In any case; you could have given him all of the information he needed and saved everyone a lot of time and trouble.

Now this extension worker wants to start some kind of an educational program.

You do not see the need to educate people about wells; since they obviously know how to use water-they have been doing it all of their lives. But you are willing to let him organize a few sessions; just to keep him happy. After all it is important to maintain good relations with the Ministry of education. However he insists on talking to several people once again; even before he starts the educational program.

You are annoyed with his insistence and you plan to talk him out of bothering more people in the community with a bunch of questions. You would be willing to give him all the information he needs yourself; since after all; you represent the community; and they trust you.

THE GIFT

STEP 1: Group work
Divide into 3 groups to read and discuss the attached questions. "There once was a man living in a remote village known as Mangulu whose son was working in Lusaka.

His son come to visit and brought him a gift: a new shirt and trousers. The Father was happy and thanked him profusely.

Six months later the son received a parcel containing the same shirt and trouser he had earlier bought for his father.

The accompanying note read: please, the shirt and trousers need to be washed and mended. I am waiting for your quick action, since I have nothing to wear?"

STEP 2: Group work and plenary discussion

Group A what do you (villagers) think of this story, does it happen?
Group B what would you do if you received something?
Group C Can you relate this to any activities happening in your community?

Appendix A

LETTER OF UNDERSTANDING BETWEEN THE MINISTRY OF EDUCATION AND THE MINISTRY OF HEALTH ON SCHOOL HEALTH AND NUTRITION

1.0 PREAMBLE: The Ministry of Education and Health are committed to reviving School Health and Nutrition services for the benefit of school going children aged 0 – 18 years old.

Whereas: The Government of Zambia (GRZ) is committed to improving the social status of its nationals through economic and public sector reforms. The Ministry of Education (MOE) is implementing Basic Education Sub-Sector Investment Programme (BESSIP) as a national education programme. The main objectives of BESSIP are increasing enrolment and improving learning achievements. Under BESSIP there are seven components contributing to the achievement of these two objectives. These are:

- Infrastructure
- Teacher Development, Deployment and Compensation
- Education Materials
- Equity and Gender
- School Health and Nutrition
- Curriculum Development
- Capacity Building and Decentralization

In its 1996 Education Policy Document, "Educating Our Future: National Policy on Education", the goal for education provision is to provide quality education to all Zambian children.

Whereas: At independence in 1964, the Ministry of Health (MOH) provided comprehensive School Health and Nutrition (SHN) services including physical examination, referral and treatment of ailments when necessary, inspection of immunization scars (e.g.Bacillus Calmette Guanine-BCG) and micronutrient supplementation through food supplements, mainly milk and buns. In 1978 the MoH deployed public health nurses in many districts to strengthen maternal and child health as well as school health services.

Whereas: In 1985, the MoE adopted the Child-to-Child Programme as a tool that gives health information directly to school going children and through them, indirectly to the community. The MoE also re-introduced production units in schools to enable children to learn about food production as well as benefit from the products of their work. The impact of these programmes has been mixed. Some schools seemed to be doing well while rural schools benefited little from the two programmes. Teachers previously provided support of good sanitation and hygienic practices of children through regular checks, but currently, this is a infrequent.

Whereas: In the last two decades, SHN services have declined in terms of access, availability and quality. Rarely are school children physically examined, referred and treated. Food supplementation ceased in the early 1970s due partly to an insufficient understanding and appreciation of the role that health and nutrition contributes to learning achievement. This decline has been exacerbated by a misconception that SHN is the prerogative of the MoH alone rather than being regarded as a multi-sectoral development issue.

Generally, the health and nutrition status of school children has continued to deteriorate.

2.0 PROBLEM STATEMENT:

Whereas: The problems that school children face as they go to school are many and varied. The integrated school curriculum together with the teaching and learning materials do not adequately address the quality and relevance of health and nutrition issues for behavior formation and change of individuals. Pupils are often placed in a poor physical environment as infrastructure in a significant number of schools has deteriorated through heavy use and lack of maintenance. Furniture is often in a bad state of repair or is absent. In addition, lack of a school health and nutrition policy, harmful traditional practices, and poor sources of water and sanitation compound this problem.

Whereas: As a result of food insecurity and high levels of poverty in the country malnutrition has increased among school children as manifested by Protein Energy Malnutrition (PEM) and micronutrient deficiencies. The most common micronutrient deficiencies are Vitamin A, Iron and Iodine. According to the Demographic Health Survey (DHS) (1997) malnutrition contributes to over 50% of all infant and child deaths in Zambia. A recent study (Luo, et. al. 1999) found that out of 1427 children screened, 14.5% were severely anemic and 22.2% had malarial parasitaemia. It was also stated that iodine deficiency ranges between 50% and 80% of the general population and Vitamin A deficiency is endemic in most children.

Whereas: Malnutrition levels are worsened in school children by the increase in parasitic infestations due to unsafe drinking water and poor sanitation. Parasitic infections in children can result in diarrhea, anorexia and general malaise. When children are heavily burdened with worms they eat even less when food is available and their absorption and retention of certain nutrients is impaired. Consequently, this diminishes children's learning capacity and their ability to pay attention and to concentrate. Growth and cognitive development also diminish.

Whereas: Environmentally related diseases such as malaria, cholera and dysentery are also widespread in school communities. These pose a challenge for environmental health and hygiene in relation to clean, safe drinking water and good sanitation practices.

Whereas: The current HIV/AIDS situation adds to the complexity of health issues in education. Although the rate of HIV/AIDS among school children is low compared to those of adults, girl children suffer disproportionately as victims. Increasingly, induced abortions, alcohol and drug abuse have become common.

Whereas: The impact of HIV/AIDS is devastating to children and touches all aspects of their life. Specifically children will experience psychosocial distress, increased malnutrition, loss of health care including immunization, fewer opportunities for schooling and education, exposure to HIV infection, homelessness, starvation and crime. A further dimension of the HIV/AIDS problem is the fact that teachers fall within the age groups that are most vulnerable to infection.

Whereas: Children suffer from health, communicable and nutritional problems due to micro-nutritional deficiencies, unsafe water supply and poor sanitary conditions. This has been accentuated by the lack of a SHN policy, strategies and regulations not only to ensure good nutrition in school children but also to reinforce the need for good sanitary environments.

Whereas: A health and nutrition programme supported by policy and strategies is critical in improving not only the health and nutrition of school children but also to enhance academic achievement and acquisition of life skills.

The parties now therefore agree as follows:

Clause One. OBJECTIVES

The Parties agree that the objectives of this LOU are to:

I. Improved collaboration between the two ministries
II. Revamp SHN activities
III. Guide the implementation of the programme
IV. Clarify the roles of the MoE and MoH/CboH in the implementation of SHN strategies.

IMPLEMENTATION:

- The parties agree that the Management Implementation Team (MIT) in the MoE shall work under the supervision of a programme coordinating committee. The committee shall work under the guidance of the Joint Steering Committee (JSC), which is composed of representatives from MoE and cooperating partners.

- The provision of integrated health and nutrition interventions shall be implemented jointly by MoE/School Health and Nutrition Component of BESSIP and MoH/CBoH.

- The administration of the interventions will commence in January 2001 in 80 (40 intervention and 40 control) pilot schools. Gradually the interventions will be expanded to other schools throughout the country.

- This LOU will be effective from the date of signing but subject to the continual search for improved partnerships, information flows and mutual trust.

ClauseThree. The parties agree that:

a) **The Ministry of Education** shall strengthen its links with MoH by addressing health and nutrition problems to improve the education, health and nutrition outcomes of school children. Collaboration shall be linked through structures existing at each level as follows:

(i) **Central Level:**
MoE/SHN Focal Point will provide policy direction of the programme in liaison with CBoH/Health Promotions Specialist (Public Health and Research).

(ii) **Provincial Level:**
The SHN team at provincial level will be responsible for policy translation and implementation. The MoE SHN Provincial Focal Point shall be liaising with the CboB Provincial Director of Health.

(iii) **District Level:**
MoE/SHN Focal Point in liaison with the District Director of Health will be responsible for programme implementation.

(iv) **School Level:**

- The classroom teachers and SHN Focal Point at School level will be responsible for programme implementation in liaison with health workers from health centers in the catchment area.
- Class teachers shall always inspect personal hygiene of children before starting any lessons.
- Class teachers shall be administering deworming drugs, micronutrient supplements and the cognitive assessment instrument.
- Class teachers shall maintain health record cards.

b) **The Ministry of Health** shall strengthen links with the Ministry of Education to achieve School Health and Nutrition outcomes through the Central Board of Health and its structures throughout the national health System as follows:

(i) **Central Level:**
The School Health and Nutrition Programme shall be a core-shared responsibility between the Ministry of Education and Health. The Health Promotion Specialist under the guidance of the Director Public Health and Research in the Central Board of Health will provide policy direction of the programme on behalf of the MoH/CBoH in liaison with relevant Specialists in the programme area such as pharmacy, Child Health and Adolescent health Specialists.

(ii) **Provincial level:**
The School Health Promotion Team at provincial level will work closely with the MoE Provincial SHN Focal Point to plan, implement and co-ordinate school health promotion and education programmes in the province. The Provincial Director of Health or delegated officer shall be liaising with the MoE Provincial SHN Focal Point on all SHN activities.

(iii) District Level: The School Health Promotion Team at district level through the District Director of Health or a delegated officer will collaborate with the MoE district SHN Team to plan and implement district-wide school health services and Nutrition services.

(iv) Community Level

Health Centre staff shall work together and be responsible for programme implementation in liaison with SHN focal points at school level. Local health staff will visit schools in the catchment area to conduct physical examination, supervise the de-worming and micro-nutrient administration days, provide basic treatment and for referral of sick pupils, conduct immunisation and support school health education.

Ministry of Health and Central Board of Health will be involved in training and monitoring teachers on administration of drugs and other health related activities.

Clause Four. Drug administration

- The drug to be used for Helminthes infections (Parasitic Worm Infections) shall be **Albendazole / Mebendazole and Praziquentel.** Albendazole / Mebendazole shall be administered to all the children in the intervention pilot schools twice in a year. **Praziquentel** shall be administered only to the children who are infected with bilharzia worms.
- All the children in intervention schools shall be administered Vitamin A capsules twice in a year and Iron tablets as appropriate.
- An assessment and screening of all children will be conducted by classroom teachers before administration of drugs.
- SHN drugs will be handled as all other drugs (i.e delivered to Medical Stores LTD for proper storage and performance of quality control procedures before distribution). The drugs will then be distributed to various District Stores from where they will be repackaged and issued to respective schools. The District Health officers will supervise the administration of the drugs to pupils.
- Payment of local clearing and management fees to be incurred at medical Stores LTD will be covered by MOE.
- Guidelines on repackaging and handling of SHN drugs by the District Health Office will be developed by CBoH in Collaboration with MOE.

Clause Five. Responsibilities of MoE and MoH

Parties agree that the MoE shall:

- In collaboration with MoH shall supervise planning, implementation, monitoring and evaluation of all SHN activities and ensure that all activities support SHN Programme goals and are approved by the Inter-sectoral Steering Committee.
- Provide funding of SHN activities as described in the SHN component action plan.
- Prepare progamme implementation plans and annual work plans.
- Establish SHN/MIS at national, provincial, district and school levels.

- Coordinate, monitor and evaluate activities using agreed MoE and CBoH indicators.
- Disseminate guidelines for various interventions under SHN.
- MoE shall provide policy direction and coordination of SHN activities in BESSIP.

The MoH shall:

- Funding activities contributing to health outcomes such as immunizations.
- Provide Technical support on the implementation of core health and nutrition activities including procurement of drugs, physical examination (screening), immunization, referral and treatment of ailments.
- Ensure that the Public Health Act and other relevant health regulations are enforced.
- MoH shall provide policy direction and coordination of activities in CBoH, DHMT and Health centres.
- In collaboration with MoE participate in planning, implementation, monitoring and evaluation of all SHN activities.

Clause Six. Reporting system and format

Parties agree that the reporting system and format shall be as follows:

- Each class teacher shall maintain a health card for each individual child in his or her class. This will also include records of referral cases to health centres and counseling of any social, psychological or economic problems.
- Health workers from health centres shall keep records of all referrals and treatment.
- MoH at central level in collaboration with MoE shall procure, distribute and store all the drugs until such time they are needed at the schools.
- The DEOs shall keep all Health and Nutrition records in their districts for their own use and for use by other stakeholders.
- The DEOs shall submit regular reports to the MoE Management Implementation Team.
- Head teachers and class teachers shall monitor attendance, health and nutrition status and general educational performance.
- Other stakeholders from central, provincial and district levels from both MoE and MoH shall be involved in the monitoring of the programme.
- An independent team shall be constituted to evaluate the impact of the programme.

Clause Seven. Amendments

Parties agree that any amendments of this LOU shall be by mutual agreement at a roundtable. These shall immediately become effective upon signing the amended LOU.

SIGNED BY:

Dr Sichalwe M. Kasanda
Permanent Secretary
MINISTRY OF EDUCATION

DATE: 21/11/2000

SIGNED BY:

Dr Kashiwa M. Bulaya
Permanent Secretary
MINISTRY OF HEALTH

DATE: 08/01/01

WITNESSED BY:

Mr Christopher E. Zulu
Chief Inspector of Schools
MINISTRY OF EDUCATION

DATE: 21/11/2000

WITNESSED BY:

Dr Gavin B. Silwamba
Director General
CENTRAL BOARD OF HEALTH

DATE: 20.12.00

Appendix B

Frequently asked Questions

1. Is the use of the tablet pole to measure Praziquantel dosage really accurate?

Answer: The use of the Tablet Pole to measure Praziquantel dosage is accurate. There is a relationship between body weight and height especially with growing children. The tablet pole was carefully designed using a computerized program to relate number of tablets required gauged to the height of a client. The pole was tested in Zambia (Chongwe and Chipata districts) and proved to be accurate, easy and safe to use.

2. What is SHN doing for prevention – are we dealing with the symptoms?

Answer: The treatment of pupils using delivering drugs and the provision of micronutrients does not address the causes of bilharzia, worms, malnutrition, and anaemia. Pupils may show an improvement after treatment become more alert and show increased learning performance but they may soon become re-infected, still suffer from malaria and malnutrition. It is true that we are treating the symptoms and it is vital that we also address the causes and deal with preventive issues. To some extent this can be done through health education, improved hygiene and food security. Currently the SHN Programme has distributed flipcharts on Bilharzia, worms and prevention messages. These are being used by teachers and health workers to teach pupils about causes and prevention of worms and bilharzia. An effective preventive campaign will require the concerted effort of different departments, organisations, ministries, teachers, pupils and community to have an impact.

3. How sustainable are the efforts of the SHN Programme?

Answer: The SHN Programme and CHANGES2 is making every effort to ensure the sustainability of activities initiated during the pilot programmes. These include developing capacity of district/provincial staff, developing monitoring tools and checklists, strengthening EMIS and IEC components, ensuring that SHN is included in provincial and district education and health work-plans and that a line item is included for SHN activities in budgets. Alternatively, community demand and teachers will help ensure sustainability by demanding SHN activities and by their active involvement in SHN Programme. Finally, it is important that the SHN focal points promote SHN goals, and monitor SHN as a regular part of their jobs.

4. How is the community involved?

Answer: In order for the SHN Programme to be successful it is essential that the community, parents and pupils understand the relationship between health and learning. Moreover, they need to understand the new role teachers are taking in administering drugs to pupils and their respective responsibilities to assist the school/teachers in developing Health Promoting Schools. The SHN Programme has used popular theatre to sensitize parents/communities on SHN and HIV/AIDS issues. Trained teachers should also assist in sensitizing parents because a health promoting school must be carried over and reinforced in the community as well. Teachers need to serve on Neighbourhood Health Committees (NHC) and community members should be included in SHN committees. Decisions affecting the school need to be discussed with community members. This interaction must be encouraged because it is essential to the sustainability of the SHN Programme.

5. What about community schools will they be included in treatment for worms and bilharzia?

Answer: SHN Programme targets Grades1-7 pupils. Community Schools will be included at the discretion of the Ministry of Education. Pupils in Community Schools may even be more vulnerable and will obviously benefit from SHN initiatives.

6. How fast will the programme scale up national wide?

Answer: The SHN Programme will expand to other districts nationally but will do so in a manner that will not jeopardise system development. Moreover, we must ensure that training is done effectively and that SHN drugs are in place. The scale of expansion will also depend on the availability of resources.

7. How are the other line ministries e.g Health and Community Development and Social services and other government departments involved in the programme?

Answer: The SHN Programme was designed to be inter-ministerial A Letter of Understanding has was written and signed between the Permanent Secretaries of Education and Health. The LOU spells out the roles and responsibilities of each Ministry. In addition, the Community Development and Social Services Ministry of Education has agreed to collaborate with the Ministry after receiving the initial SHN concept paper developed during the design phase. The SHN Programme therefore works at district, provincial and national levels with these respective ministries in various activities related to SHN. Representatives also serve on District and Provincial SHN Coordinating Committees.

8. What supporting committees need to be established at district and provincial level?

Answer: The SHN Programme works with the support of various committees including District/Provincial Steering Committees. At the school level SHN Committees are in place and teachers are encouraged to serve on existing Neighbourhood Health Committees (NHC). These committees need to be functional and maintain minutes and develop action plans.

9. How will SHN data requirements and management needs be integrated with the routine EMIS? Who is responsible for collecting and compiling information from the SHN forms at various levels?

Answer: The capture and tracking of data on pupils' health by the proposed SHN – MIS can play an important complementary role in the current provision of information on Basic Education and health in Zambia. It is also important that the SHN Programme is able to monitor the number of pupils receiving drugs so that information is available to the Provincial SHN Focal Point who will in turn advise the Ministry of Education on drug requirements. In addition, management data needed for SHN includes production units, water sanitation, and number of pupils treated at clinics, and absenteeism due to illness. By combining the school health information gathered through the SHN- EMIS with data on education indicators by EMIS, there is a great potential for provision of a comprehensive information base for integrated education and health promoting for primary schools at the district level.

10. How can SHN collaborate with and involve other NGOs and stakeholders?

Answer: Because SHN is a complex, multifaceted programme it is desirable and cost-effective to involve all relevant stakeholders and NGOs who have an interest in or are currently working or supporting schools. This requires regular meetings and sharing of ideas to learn from others what activities are taking place and to avoid duplication of effort.

11. What is the role of health centre staff?

Answer: The Health Centre staff are an essential link in the SHN Programme. They form one leg of the tripartite focus that includes the school, community and health centre. We include Health Centre staff in the drug administration training because it is essential that they know and participate in the process (when teachers administer drugs, refer pupils or have questions on a pupil's health after screening. Health Centre staff's role is to provide technical support and this is defined in the LOU.

12. What is the role of Community Development Agents and Community Health Workers?

Answer: CDAs and CHWs are essential members of the community. These are already accepted by their respective Communities as agents of change. They link the School to the wider community and other stakeholders. They should be members of the Health Promoting Team and must participate actively in the SHN implementing process. They should assist in sensitizing the communities in the course of their duties.

13. How have the activities conducted in Eastern Province related to developing SHN in other provinces and a national programme?

Answer: The pilot activities in Eastern Province were intended to help the SHN Programme develop a model for the implementation of SHN and to demonstrate through research the value of providing drugs and its effect on the learning ability of pupils. The research component was carefully designed and implemented by Partnership for Child Development (PCD) in collaboration with University of Zambia (UNZA), University Teaching Hospital (UTH) - Department of Parasitology, Tropical Diseases Research Centre in Ndola (TDRC) and Successful Intelligence (Yale University, SI). The pilot has already yielded many valuable lessons that will help strengthen the progressive implementation of SHN in other districts and provinces.

14. What are the key elements of a SHN Programme?

Answer: The major components of an SHN Programme have been outlined in a process model. These include 10 elements all of which are important to an effective SHN Programme. Emphasis however, needs to be placed on developing sustainable systems such as training, EMIS and drug delivery. Other supporting components like IEC, health-promoting schools concepts, and community involvement can be developed and refined as programmes progress.

15. What are the major constraints of SHN?

The implementation process of SHN is challenging and a number of constraints have been observed.

- Movements and transfers of trained teachers even before they establish or brief other teachers, threaten the stability of the programme.
- MoE staff attached to the programme is overwhelmed by a lot of other assignments making it difficult for them to focus attention on SHN activities.
- Some Health Centre Staff have not fully accepted that teachers should take the role of administering drugs to pupils.

- Some DHMT staff are too busy with their own programmes and have little time to effectively participate in the SHN Programme.
- Some teachers have taken SHN as an extra responsibility and expect extra duty allowance.

16. Who is responsible for monitoring drug administration and other SHN activities? How will it be carried out?

Answer: SHN Programme is not independent of other school activities. It is part of the main activities to be carried out in school to improve learning. Therefore the monitoring of drug administration and SHN activities must be extended to teachers, health workers and communities. The health promoting teams and PTAs can also assist in monitoring SHN activities. However, the Focal Point Person is responsible to ensure that there are no deviations from established standards. The effective use of monitoring checklists and guidelines in establishing a health promoting school and treatment forms developed would greatly assist in monitoring SHN activities.

17. How will the media support SHN: - what IEC activities can will/be done at school level?

Answer: The effective use of IEC materials and use of media (radio and television) is essential to promoting the SHN messages. This applies to every level, schools need to use learning materials including flip charts, readers, life skills manuals, and participatory teaching methodologies. Schools can also initiate quizzes, art competitions, and use drama groups to disseminate SHN messages. All of these will help the programme initiate new programme and consolidate on going activities. Use of house radio, and newspapers can also have a far-reaching impact and will help stimulate interest in SHN.

18. How is HIV/AIDS related to SHN activities?

Answer: HIV/AIDS must be regarded as an integral part of SHN and not as a parallel or peripheral activity. The decline in teaching staff, the alarming spread of HIV/AIDS in younger populations and its overall impact on the education sector is of vital concern to the SHN Programme. CHANGES 2 is working to mitigate the impact by supporting HIV/AIDS activities, though workshops, materials development, counselling research, inclusion of HIV/AIDS components in small grants, community sensitisation through drama, and support and strengthening of anti-AIDS clubs, and establishment of HIV/AIDS resource centres in schools.

19. How will drugs be ordered and regular supply lines ensured after the pilot ends in Eastern Province?

Answer: All schools will be required to submit their school enrolment to District Education Office. Based on District enrolment data. The DEBs or SHN Focal Point Person (PFPP) will calculate the district requirement and forward them to provincial

office. The PEO or Provincial Focal Point Person will forward aggregated drug requirements to the MoE Focal Point Person and procurement officer. They will then liaise with Medical Stores.
The protocol of ordering drugs must start a year before the drugs are needed to allow enough time for processing and delivery. This approach will ensure regular supply

20. Now will schools / teachers determine their prevalence rates for bilharzia?

Answer: A simple and effective tool has been developed, the bilharzia questionnaire that will enable teachers to determine prevalence whether their schools by intervening 70 pupils (10 in each grade (5 girls – 5 boys). Grades 1 – 7, and by calculating the percentage responding positively to the two key questions on the questionnaire. The questionnaire in fact is very sensitive and underestimates actual prevalence by 15%. Therefore, if 35% are found to be positive teachers may provide mass treatment (treat all pupils in the school). The Nyanja questionnaire developed for Eastern Province will be translated and tested in other provinces as the programme expands.

21. How can we sensitise communities effectively after supported pilot activities and use of popular theatre ends?

Answer: Teachers and Health Workers have been trained on Concept of SHN.
CBOs and other Community Based Volunteers, local drama groups in surround school and surrounding communities will be trained.
They will therefore be empowered to sensitise other Community members effectively.
All stakeholders are being encouraged to include SHN component in their already existing programmes.

22. What is the role of PTA, Communities NHCs and CBOs in developing Health promoting schools and SHN in general?

Answer: PTAs, community NHCs and CBOs are representatives of the wider community. They link the school to the community. They should be members of School Health promoting Teams and must be part of the decision-making process in regard to issues affecting health in schools. They must also be involved in sensitising the communities

23. Why do we do Mass Treatment?

Answer: In areas where the prevalence of infection with intestinal worms and bilharzia is very high mass treatment with anthelmintics is widely used. The reason is that the emphasis of such programmes is on alleviating disease and lessening sources of transmission rather than on eradicating the worms. Although re-treatment may be necessary every year there are significant benefits to health at low cost. School children are good targets for mass treatment for a number of reasons because they typically have the heaviest infection and contain a large proportion of all worms in a community.

24. What is being done about Prevention in SHN?

In most SHN Program dissemination meetings, concerns have been raised regarding sustainability of the programme and its perceived biasness towards drug administration at the expense of prevention of common diseases affecting school children. The SHN Programme is aware of the need to deal with issues related to preventing malnutrition, worm infections, bilharzia, anaemia and HIV/AIDS. It is for this reason that the design of the program has focused on health promotion with special emphasis on life skills.

The programme has addressed these on a wide range of fronts that include the following: -

(a) Development of education materials.

The SHN Programme has developed simple and user friendly flip charts on the prevention of bilharzia and intestinal worms. These charts have been distributed to target schools and corresponding Health Centres (Hcs)

Teachers and health workers have been trained on how to use the Flip chart.

Community Health workers and other community Based Volunteers are encouraged to use the Flip chart during sensitisation meetings in their respective communities.

The flip chart on intestinal worms and bilharzia has messages on prevention of infection from worms and Schistosomes.

(b) Training. During Training of teachers in SHN issues and the administration of drugs, prevention is a key component, involving sensitisation of community, cause and prevention of worms/bilharzia and provision of on going health education using, a flip chart already described above.

Teachers are also trained on how to examine pupils for hygiene.

(c) Establishment of Health Promoting School (HPSs).

The SHN component of the CHANGES 2 program has encouraged target schools to be Health Promoting Schools. The "Health Promoting School" approach emphasises prevention. This approach ensures that a child and a teacher are in a healthy environment. The SHN Programme has developed guidelines for establishing a health promoting school based on eight (8) characteristics. All these characteristics hinge on prevention and promotion of health.

The following are the examples of the characteristics of a health promoting school.

i. Health promoting Team-Multicultural team links between the community and the school and between the school & communities. The team should act as advocates for promotion of prevention of diseases and other SHN activities.

ii. School health policy-Each school is encouraged to develop a health policy that evolves around prevention of diseases or improved life skills. Examples of health policies developed by schools include; all pupils shall be inspected for personal hygiene before lessons begin, the school surroundings shall be left clean before knocking off.
These kinds of policies are to be integrated with information on why children must behave according to the policies developed.

iii. Promotion of good sanitation- schools are encouraged to provide Hand Washing facilities through the use of running water after use of the toilet

iv. Active health promoting clubs- Pupils are encouraged to participate in Health promotion through clubs. Nutrition clubs anti-Aids Clubs, Anti drug abuse club etc.

v. Establishment of resource corners or centres. Health resource corners have been encouraged in every SHN School. It is important to note that schools have been encouraged to establish resource corners or centres where pupils, teachers and surrounding communities can access information on health including HIV/AIDS. This approach enhances knowledge levels in both school and community and has an influence on the prevention of diseases.

vi The School Health and Nutrition Promotion competition.
The program has developed an assessment tool based on prevention of diseases and health promotion.

The deserving schools will receive award (trophies, cash, and certificates). This is a strategy to encourage schools prevent illnesses and create a disease free environment using resources available.

vii. Small Grant Component.
The CHANGES2 program is supporting innovative proposals through grants. CHANGES2 has insisted that initiatives must be sustainable and have a component of HIV/AIDS prevention as part of every proposal submitted. Many schools and communities in the Copperbelt, Lusaka, Central and Southern provinces have already benefitted from the grants.

viii. Drug administration. Studies have shown that school pupils carry the majority of the worm burden in a community. Therefore by treating all pupils one can reduce overall worm loads substantially and thereby reduce transmission as well. This implies that mass treatment among the most affected sector of the population, in these case pupils, is a preventive measure too!

It is impractical, expensive and unrealistic to use chemical means to kill snails in the numerous dams, streams, and irrigation channels in order to prevent bilharzia. In conclusion, SHN component of CHANGES2 Health education coupled with mass treatment in conventional schools and eventually reaching community schools is the only sustainable, cost effective method available. Communities must be sensitised on the issue on how to prevent re-infection by not bathing, swimming and washing clothes in infected water. We have already seen that re-infection rates in our SHN are low indicating that progress has been made in prevention. HIV/AIDS prevention is an important component of SHN. This includes, training, sensitisation of teachers, communities using media, popular theatre, peer educations, SHN organised meetings of Anti-AIDS clubs and life skills. Clearly, much more needs to be done on prevention and the SHN programme will continue to focus attention on ways to deal with this issue.

- Because treatments are a good investment in growth and nutrition at a time of rapid physical and mental development;

- Because children are easy to reach through schools and can be treated by teachers; and

- because giving anthelmintics can be a simple and practicable activity to strengthen or establish school health programmes

Infection rates for those pupils tested in the 40 pilot SHN schools have been high with roughly 50% of the schools with rates over 40%.

Appendix C

THE 6-F DIAGRAM

The prevention of intestinal worms and bilharzia can be illustrated through the use of the 6-F diagram. It begins with the unsanitary disposal of human excreta (faeces) due to the absence of latrines / toilets or the lack of use of these facilities where they may be available.

Routes of contamination

1. **Flies** sit on **Faeces** which are not properly disposed of.
   They then go to sit on uncovered **Food** onto which they deposit the germs got from the faeces.
   When the contaminated food is taken into the mouth and eaten, the individual may suffer from:
   - Diarrhoea and even Cholera
   - Intestinal worms such as round worms and pin worms and pin worms

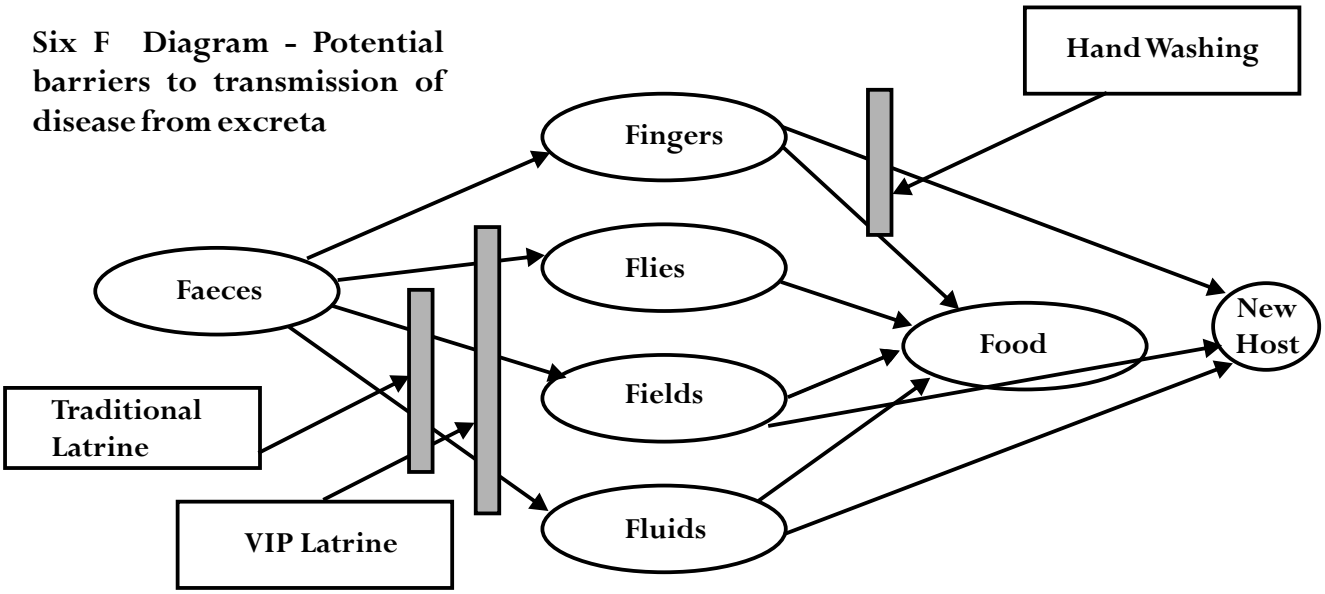
2. After using the toilet or latrine, the **Fingers** may get contaminated during the process of cleaning oneself. If the unwashed hands touch Food or drinking water, the germs will definitely enter the body.

3. When Faeces are deposited in the bush or **Fields,** they are washed into bodies of water by the rain (Fluids) resulting in whoever drinks that water getting sick. Such water can also cause illness if it is used to wash fruits and vegetables.

Barriers that can be applied

- Always use the toilet for the disposal or faeces
- Wash hands every time after using the toilet
- Chlorinate or boil drinking water to make it safe
- Wash fruits and vegetables before eating or cooking
- Use safe water for washing fruits and vegetables
- Give health education to the pupils (and members of the community) as often as it is practicable

Six F Diagram - Potential barriers to transmission of disease from excreta



Appendix D

Ministry of Education
School Health and Nutrition (SHN) Programme

Criteria for assessing Health Promoting Schools (HPS)
Minimum benchmarks for basic schools grades 1 to 9

COMPONENT A: SCHOOL BASED HEALTH POLICIES			
SN.	**ITEM**	**CHECKPOINTS**	**SCORE** **YES = 1** **NO = 0**
1]	Policy on school feeding and sustainable school snacks/lunches.	• Policy displayed • Presence of school garden or orchard (at least 25 fruit trees), poultry or animal husbandry • Records of learners fed on nutritious foods • Food bought from vendors properly and hygienically packaged.	**POSSIBLE SCORE: 4** **ACTUAL SCORE...**
2]	Policy on substance abuse (smoking, bringing alcoholic drinks in school premises during school hours, drunkenness on duty by teachers or learners) etc	• Policy displayed • None smoking zone created • Alcohol consumption in school premises • Evidence of teachers being drunk during school working hours	**POSSIBLE SCORE: 4** **ACTUAL SCORE...**
3]	Policy on a school becoming a centre of treatment seeking behaviours for learners and accessing health services: prevention, treatment, and referral	• Short and simple guidelines on how to prevent • TB, Malaria, HIV/AIDS and other diseases • Routine check on general personal hygiene and health status of pupils by teachers • Presence of teachers and learners trained in first aid • Presence of first aid kit with essential drugs for first line treatment (e.g. pain killers, bandages, cotton wool) • Pupils access health services from health workers /centres for immunizations and for referral cases • SHN card completed for treating and providing referrals to school children • Procedures on deworming done correctly (verify from treatment forms)	**POSSIBLE SCORE: 7** **ACTUAL SCORE...**
4]	Policy on equitable provision of education and health services	• Existence of reports on psychosocial counseling • Records on re-entry policy Records of learners on early marriages • School upholds principles that ensure girls and boys having equitable access to school and health services • School upholds principles that do not discriminate the CSEN in education activities • Short and simple guidelines on how children can report cases of abuse and discrimination	**POSSIBLE SCORE: 6** **ACTUAL SCORE...**

4]	Policy on equitable provision of education and health services	• Existence of reports on psychosocial counseling • Records on re-entry policy • Records of learners on early marriages • School upholds principles that ensure girls and boys having equitable access to school and health services • School upholds principles that do not discriminate the CSEN in education activities • Short and simple guidelines on how children can report cases of abuse and discrimination	**POSSIBLE SCORE: 6** **ACTUAL SCORE...**
5]	Established active School Health and Nutrition Promoting Team (SHNPT)	• SHNPT must have at least membership from teachers, learners, local health centre, agricultural department, PTA, NHC, Community • Development, and local CBOs / NGOs, private sector, etc. and must meet at least once in two months; • Meetings must be evidenced with availability of minutes. • Evidence of implementation of resolutions made in the past two months	**POSSIBLE SCORE: 3** **ACTUAL SCORE...**
REMARKS			
COMPONENT B: WATER AND SANITATION / PHYSICAL ENVIRONMENT			
1]	Clean and safe drinking water for learners and teachers	• Confirm that teachers and learners are drawing water from protected water source, e.g. borehole, protected traditional well, piped water from Water and Sewerage Company • Water source or well should be at least 500 meters away from the latrine. • The water source i.e traditional well / bore hole area is fenced and kept clean and that a traditional well is kept covered • Evidence of a health report on water analysis (quality control) at least once a term • Evidence to show that their drinking water is treated by adding chlorine	**POSSIBLE SCORE: 5** **ACTUAL SCORE...**
2]	Availability of adequate number of pit latrines (preferably VIP) / water closets for learners and teachers.	• Confirm availability of pit latrines or water closet toilets. [one (1) latrine or closet for every twenty five (25) pupils for both girls and boys per session] • Availability of a minimum of at least two toilets for staff (one for females and one for males) • Check maintenance of latrines or toilets in terms	**POSSIBLE SCORE: 5** **ACTUAL SCORE...**

3]	Availability of hand washing facilities	• Check the location of the hand washing facility if it is placed near the latrine / toilet. • Check if the hand washing facility has clean running water and kept clean • Interview a few learners to get evidence on use of the facility and if they washing hands correctly with soap or any improvised soap.	**POSSIBLE SCORE: 3** **ACTUAL SCORE...**
4]	Safe and clean physical school environment	• Confirm the presence and correct use of the waste paper baskets in classrooms and offices • Confirm the presence and use of rubbish pits/ dust bins in strategic points around the school premises • School surroundings and classrooms must be kept clean, and free from litter and animal droppings. • Availability of working fire extinguishers such as sand buckets, hose reels. • Evidence of a working Preventive Maintenance System and Committee	**POSSIBLE SCORE: 5** **ACTUAL SCORE...**
5]	Internal and external school supervision on general environmental health status of the school to prevent outbreak of diseases such as cholera	• Evidence of reports on school inspections on public health by teachers and heads of schools • Evidence of inspection reports on general school public health from health workers and local government • Evidence of collaboration with health centres and local government	**POSSIBLE SCORE: 3** **ACTUAL SCORE...**
REMARKS			
COMPONENT C: **SKILLS BASED HEALTH AND NUTRITION EDUCATION (SCHOOL SOCIAL ENVIRONMENT)**			
1]	Information on the prevention, care and support of HIV/AIDS, TB and Malaria cases. Information on causes and prevention of intestinal worms, bilharzia, micronutrient	• Evidence of learning and teaching resources used by teachers in classroom. • Evidence of teachers integrating topics on HIV/AIDS, TB, malaria in their lesson plans and teaching them • Evidence of learners and teachers sharing and disseminating information on health and nutrition issues using print media such as	**POSSIBLE SCORE: 4** **ACTUAL SCORE...**

1]	Information on the prevention, care and support of HIV/AIDS, TB and Malaria cases. Information on causes and prevention of intestinal worms, bilharzia, micronutrient deficiencies (Vitamin A and Iron Deficiencies).	• Evidence of learning and teaching resources used by teachers in classroom. • Evidence of teachers integrating topics on HIV/AIDS, TB, malaria in their lesson plans and teaching them • Evidence of learners and teachers sharing and disseminating information on health and nutrition issues using print media such as brochures, pamphlets, flyers • Records to show teachers are discussing SHN issues in their teacher group meetings using the SPRINT Teachers G uide	**POSSIBLE SCORE: 4** **ACTUAL SCORE...**
2]	Existence and support of three health promoting clubs and the members such as Anti AIDS, Red Cross, Nutrition.	• Confirm existence and support of three health promoting clubs such as Anti AIDS, Red Cross, Nutrition • Confirm the support of the members or patrons of health promoting clubs e.g. from Red Cross, two teachers or two learners have been trained in the use of the First Aid Box and the contents. • Confirm participation of members through records of meetings and action taken	**POSSIBLE SCORE: 3** **ACTUAL SCORE...**
REMARKS			
COMPONENT D: SCHOOL BASED HEALTH AND NUTRITION SERVICES			
1]	Administration of SHN drugs according to the SHN protocol and schedule Proper utilization of health cards by teachers	• Inspect treatment forms, determine if SHN protocol and schedule are followed • Check the SHN cards to determine that they are correctly completed by class teachers • Sample teachers and interview them on the use of data from the SHN cards to verify use of data in supporting learners	**POSSIBLE SCORE: 3** **ACTUAL SCORE...**

2]	The school is proactive in linking with its local community	• The school informs the local community on its health initiatives • Evidence of local resource mobilization • Confirm presence of community based organizations supporting SHN programme • Evidence of community participation in school based activities	**POSSIBLE SCORE : 4** **ACTUAL SCORE...**
3]	Availability and implementation of SHN action plan for the year	• Presence of an action plan • Evidence of teachers, pupils and other community members being aware of the action plan and implementing activities as planned	**POSSIBLE SCORE : 2** **ACTUAL SCORE...**
REMARKS			
GENERAL REMARKS			
POSSIBLE SCORE:60			
ACTUAL SCORE:			
GRADE (COLOUR LEVEL):			

GRADING SYSTEM

The grading of the schools will be done in collaboration with MOE at district and zonal levels. The achievements will be explained in terms of colours as follows:

RED LEVEL

This level is a danger zone. Any school that scores a mark in the range of 0 to 12 points will be classified as being in the Red Level. The characteristics of this school are that at this level the school has not yet grasped the FRESH concept. The implementation of the activities is not done in coordinated manner. This school needs more support in order to move to the next level. More monitoring visits are need to this school to help them in planning the activities.

YELLOW LEVEL

At this level the school is slowly moving from the danger zone. A school that scores a mark from 13 to 24 is at a level where they have just started understanding the FRESH concept. This school has a SHN coordinator and may have put a committee in place. However, at this level the coordinator and the committee may not be active to implement the activities.

GREEN LEVEL

A school qualifies to be in at Green Level if there score ranges from 25 to 36. This school is moving to a comfortale zone but have not quitereached the level to be called health promoting school. At this level the SHN Coordinator and the committee are active and they do understand the FRESH concept. The school has also school based policies in place and they being implemented. However, at this level some of the activities related to skills and positive behaviour change are still a challenge. The school has not come up with many innovative ways of addressing these issues.

ORANGE LEVEL

At Orange Level the school is doing a commendable job in as far as the implementation of the SHN interventions is concerned.Their score ranges from 37 to 49. The SHN coordinator is active including the committee. Community participation at this level is quite high. The teachers, learners and the community has a good understanding of the FRESH concept and they implementing most of the FRSH activities in a coordinated manner. At this level what is lacking is innovativeness to support other neigbouring schools in terms of information sharing and best practices.

BLUE LEVEL

A school that reaches the Blue Level qualifies to be a model school. Their score is 50 and above. There is innovativeness in the implementation of the interventions and such a school has also helped other neighboring schools to move from one level to the next. The FRSH concept is well understood and the teachers, learners together with the communities are able to employ even more interventions with their local resources with innovativeness.

AWARDS

1. Schools that reach Green and Orange Levels shall be awarded certificates of attainment to that particular level.
2. Out of all the schools that have reached the Orange Level, the school with the highest points within that range shall be awarded a shield in addition to the certificate of attainment.
3. Schools that reach Blue Level shall be awarded a certificate of excellence of attainment to that particular level.
4. Out of all the schools that have reached the Blue Level, the school with the highest points within that range shall be awarded a trophy and funds as a grant.
5. The schools that have reached the Blue Level from various zones will compete for a provincial award for outstanding performance. The winning school shall be awarded a certificate for outstanding performance and a trophy with a grant.

Support.

Enable.

Empower.

AMERICAN INSTITUTES FOR RESEARCH®