

දුරකථන) 2698475
தொலைபேசி) 2698490
Telephone) 2698507

ෆැක්ස්) 2692913
பெக்ஸ்) 2694860
Fax)

විද්‍යුත් තැපෑල)
மின்னஞ்சல் முகவரி) postmaster@health.gov.lk
e-mail)

වෙබ් අඩවිය)
இணையத்தளம்) www.health.gov.lk
website)



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சுவசிரிபாய

SUWASIRIPAYA

செயல் அலுவலகம்

சுகாதார அமைச்சு

Ministry of Health

මගේ අංකය) FHB/EB/General/11/2012
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My No.)

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Your No.)

දිනය)
திகதி) 05.11.2012
Date)

General Circular Letter No. 02-172/2012

All Provincial Directors of Health Services

All Regional Directors of Health Services

All Heads of Institutions

Guidelines on De-worming Children and Pregnant Women in Community Setting:

2013-2016

Infection with Soil Transmitted Helminths, (roundworm, hookworm and whipworm) has been identified as an important cause of morbidity especially among children and pregnant women. This results in impairment of physical growth and cognitive development which can lead to poor school performance and absenteeism in children, maternal morbidity and reduced productivity of the adult work force. In Sri Lanka, despite environmental sanitation and hygienic practices surveys have revealed a high prevalence of infection in many areas.

As a recommendation made by the Maternal and Child Nutrition Sub-committee chaired by the DDG PHS II, the Family Health Bureau has developed guidelines on de-worming to improve health status of mothers and children in Sri Lanka after a series of consultative meetings with relevant experts including representatives of Sri Lanka College of Pediatrics and Sri Lanka College of Obstetricians and Gynecologists.

This guideline gives recommendations for de-worming children and pregnant women in Sri Lanka. The recommendations on de-worming are in two parts;

- I. **High risk areas:** applicable to whole of Uva, Sabaragamuwa and Central Provinces of Sri Lanka.
- II. **Moderate risk areas:** applicable to all other Provinces (Northern, Eastern, Western, North Central, North Western and Southern).

However, if there are schools/communities at risk of high transmission of STH infection within areas categorized above as moderate risk, the Medical Officer of Health can decide in consultation with MOMCH and RDHS and execute strategies mentioned for "high risk areas" for children under five years and school children in these areas.

Please note that this guideline is to be made effective from January 2013 and that the implementation of de-worming programme for STH in Sri Lanka will be from 2013 to 2016. You are kindly requested to bring the contents of this circular guideline attached herewith to the notice of all healthcare personnel and school authorities in order to ensure that correct and uniform messages are received by caregivers of infants and young children.

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Signed

Deputy Director General

Director General of Health Services

Dr. R. R. M. L. R. Siyambalagoda
Deputy Director General
(Public Health Services)
Ministry of Health
Colombo - 10.

Cc: Secretary Health

Additional Secretary /Public Health Services

Deputy Directors General of the Ministry of Health

Heads of Decentralized Units and Specialized Campaigns

Directors of the Ministry of Health

President Sri Lanka College of Paediatricians

President Sri Lanka College of Obstetricians & Gynaecologists

President Perinatal Society of Sri Lanka

President Nutrition Society of Sri Lanka

President Sri Lanka College of Community Physicians

President Sri Lanka Independent Medical Practitioners

President Sri Lanka College of General Practitioners

President Sri Lanka Medical Association

All Deans of Medical Faculties

Guidelines on De-worming Children and Pregnant Women in Community Setting

Back Ground:

Infection with the Soil Transmitted Helminths (STH), (roundworm, hookworm and whipworm) has been identified as an important cause of morbidity and a contributory factor to mortality among children and pregnant women around the world. The main clinical manifestations of STH arise from malabsorption of nutrients, reduction of food intake due to poor appetite, complications due to intestinal and biliary obstruction due to roundworms (ascariasis), dysentery, rectal prolapse due to whipworm (trichuriasis), and iron-deficiency anaemia following hookworm infections. Long term health impacts with heavy STH infections are impairment of physical growth and cognitive development of children and reduced productivity of the work force. It is also a cause of iron-deficiency anaemia that leads to poor school performance and absenteeism in children and reduced work productivity in adults (WHO, 2010).

The strategies that should be adapted to control STH infections by countries should depend on epidemiological information. The indicator recommended by the WHO for policy guidance for de-worming of populations is the prevalence of STH among school age children (WHO 2002).

Prevalence of STH infestations in Sri Lanka:

A nationally representative survey on the prevalence of STH infections was conducted among grade five school children in 2003 (n = 2173). The findings showed an overall STH prevalence of 6.9% (prevalence ranged from 1.6% in Southern Province to 12.3% in Eastern Province). The survey further revealed that nearly 9% have passed worms at some point in their lives. However the investigators noted that these rates must be interpreted with caution because children of some of the schools had received anthelmintic treatment few weeks prior to sample collection (Pathmeswaran et al 2005).

A survey conducted in 2009 among estate sector school children (20 each from 114 schools) in Nuwara Eliya, Rathnapura, Kandy, Badulla and Kegalle districts, showed the overall prevalence of combined STH infestation to be 29% (prevalence ranged from 12.5% in Badulla to 38.2% in Nuwara Eliya). The commonest infection was roundworm. However hookworm infections were not detected in Nuwara Eliya and Badulla districts (Gunawardena et al unpublished).

Recommendations on de-worming children and pregnant women in Sri Lanka:

Taking the above mentioned facts into consideration, the following measures are recommended for the implementation of de-worming programme for STH in Sri Lanka from 2013 to 2016.

The recommendations are in **two** parts:

- I. **High risk areas:** applicable to whole of Uva, Sabaragamuwa and Central Provinces of Sri Lanka (where tea and rubber plantations are predominant and on the assumption that STH prevalence is between 20% and 50%).
- II. **Moderate risk areas:** applicable to all other Provinces (Northern, Eastern, Western, North Central, North Western and Southern) (on the assumption that STH prevalence 10% to <20%).

I. Guidelines for de-worming in high risk areas

Children under five years

Should be de-wormed twice a year

Mebendazole 500mg single dose chewable tablet to all children from age of one and a half years to five years, every six months with the Vitamin A Megadose given at child welfare clinics (to be given to caregiver to be swallowed by the child at home. For 18 months to three year old children, caregivers should be instructed to give the **tablet crushed between two spoons**). At the age of 5 years Mebendazole 500mg can be given either with Vitamin A Megadose at the child welfare clinic or at the School Medical Inspection in grade one.

School children

Should be de-wormed twice a year

All children in grades 1-10 of the school to be given Mebendazole 500 mg single dose at the commencement of anaemia prevention programme (iron folate, vitamin C weekly supplementation regime for 24 weeks) and to repeat the dose after 6 months.

Pregnant Women

Mebendazole 500 mg single dose to be given to all pregnant women with the commencement of iron, vitamin C and calcium supplementation in the second trimester of pregnancy.

II. Guideline for de-worming in moderate risk areas

Children under five years

Should be de-wormed once a year

Mebendazole 500mg single dose chewable tablet to all children at ages of one and a half, 2, 3, 4 years with Vitamin A Megadose given at CWC (to be given to caregiver to be swallowed by the child at home. For 18 months to 3 year old children, caregivers should be instructed to give the **tablet crushed between two spoons**). At the age of 5 years, Mebendazole 500mg can be given either with Vitamin A Megadose at CWC or at the School Medical Inspection in grade one.

School Children

Should be de-wormed once a year

All children in grades 1-10 of the school to be given Mebendazole 500 mg single dose at the commencement of anaemia prevention programme (iron folate, vitamin C weekly supplementation regime for 24 weeks).

Pregnant Women

Mebendazole 500 mg single dose to be given to all pregnant women with the commencement of iron, vitamin C and calcium supplementation in the second trimester of pregnancy.

However, if there are schools/communities at risk of high transmission of STH infection within areas categorized above as moderate risk, the Medical Officer of Health can decide in consultation with MOMCH and RDHS and execute above mentioned strategies for “high risk areas” for children under five years and school children in these areas.

Contraindications to treatment:

Children who are suffering from an acute illness or in case of any doubts of an illness on treatment day should not receive the Mebendazole tablet but it could be given later, on recovery. This is not because of any danger of adverse effects, but to prevent the potential misperception that de-worming caused the illness (WHO, 2002).

Expected side effects:

Mild abdominal pain, nausea, vomiting, diarrhoea or fatigue are the most frequently reported adverse events, and normally do not require medical treatment. However, it is important to address adverse events by communicating clearly with the community since rumors about the lack of safety of the drug may result in a large number of children complaining of non-specific symptoms and in a high number of referrals to the health units (WHO, 2011). Rarely, worm migration may occur after treatment of children with heavy roundworm infections. Teachers and parents should be warned to take the child to the nearest medical facility in such an event.

Additional measures to control STH transmission:

In conjunction with the above drug treatment, it is imperative that the following activities are ensured in the community (in all areas irrespective of the degree of prevalence);

- The disposal of all human faeces (including that of young children) in water-sealed latrines in order to minimize environmental contamination – Provincial authorities to take action to initiate the latrine construction programme especially in high risk areas
- Use of foot wear to prevent hookworm infections
- Food and water sanitation
- Personal hygiene and hand washing
- Environmental sanitation
- Health education, especially to school children and mothers in high transmission areas
- Symptomatic individuals to seek immediate medical advice
- Family members of treated children to be advised on the importance of taking de-worming treatment for helminthiasis. All household members of the index case to be advised to take de-worming treatment.

This guideline was prepared with the available epidemiological data and is to be followed for a period of 4 years from 2013 till 2016. As it was observed that the data available is inadequate to ascertain district specific prevalence rates, it is recommended that the epidemiological situation to be re-assessed by the Medical Research Institute / special surveys at sentinel sites prior to implementation of this guideline in 2013 and an impact assessment survey to be conducted after implementation of the programme.

Calculation of annual requirement

Eg: Calculation of total requirement for the MCH programme in Sri Lanka

Pregnant women :- annual births with 10% added

i.e. for whole of Sri Lanka = 4 00 000 tablets

(annual births reported by Registrar General's Department for 2010 = 3 64 565

with 10% added = 4 00 000 tablets)

Children 18 months to five years :- in high risk areas, annual births x 8 * and in moderate areas annual births x 5*

= (1 03 501 x 8 *) + (2 61 064 x 5*) = 8 28 008 + 13 05 320 = 21 33 328

School children :- in high risk areas, grade 1*-10 school population x 2

and

in moderate areas grade 1*-10 school population x 1

= (8 42 726 x 2) + (20 14 834 x 1) = 37 00 290

Total requirement :- 4 00 000 + 21 33 328 + 37 00 290 = **62 33 618 tablets (500mg tablet)**

*** children aged five years (grade one children) have been included in the "18 months - five years" category and NOT included in the estimates for school children.**

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