



MINISTRY OF PUBLIC HEALTH AND SANITATION

# ORAL REHYDRATION THERAPY CORNER OPERATIONAL GUIDELINES

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## Abbreviations and Acronyms

<b>ACSM</b>	Advocacy, Communication and Social Mobilization
<b>AFP</b>	Acute Flaccid Paralysis
<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>AOP</b>	Annual Operational Plan
<b>CDF</b>	Constituency Development Fund
<b>CHW</b>	Community Health Worker
<b>CHEW</b>	Community Health Extension Worker
<b>CME</b>	Continuing Medical Education
<b>DCAH</b>	Division of Child and Adolescent Health
<b>DHMT</b>	District Health Management Team
<b>EDDM</b>	Enhanced Diarrhoeal Disease Management
<b>FIF</b>	Facility Improvement Fund
<b>HCW</b>	Health Care Worker
<b>HIIs</b>	High Impact Interventions
<b>HIV</b>	Human Immunodeficiency Virus
<b>HMIS</b>	Health Management Information System
<b>HMT</b>	Health Management Team
<b>HSSF</b>	Health Sector Services Fund
<b>IMCI</b>	Integrated Management of Childhood Illnesses
<b>iCCM</b>	Integrated Community Case Management of Childhood illnesses
<b>IV</b>	Intravenous
<b>KCO</b>	Kenya Country Office
<b>KDHS</b>	Kenya Demographic Health Survey

<b>KEPH</b>	Kenya Essential Package for Health
<b>KEPI</b>	Kenya Expanded Programme on Immunization
<b>KSPA</b>	Kenya Service Providers Assessments
<b>MCH</b>	Maternal and Child Health Clinic
<b>MDG</b>	Millennium Development Goal
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MOMS</b>	Ministry of Medical Services
<b>MOPHS</b>	Ministry of Public Health & Sanitation
<b>MUAC</b>	Mid Upper Arm Circumference
<b>NGT</b>	Nasogastric Tube
<b>OJT</b>	On the Job Training
<b>ORS</b>	Oral Rehydration Salts
<b>ORT</b>	Oral Rehydration Therapy
<b>PSI</b>	Population Services International
<b>RHF</b>	Recommended Home fluids.
<b>TOT</b>	Training of Trainers
<b>UNICEF</b>	United Nations Children’s Fund
<b>USAID</b>	United States Agency for International Development
<b>MCHIP</b>	Maternal and Child Health Integrated Program
<b>WASH</b>	Water, Sanitation and Hygiene
<b>WHO</b>	World Health Organization
<b>Wgt (Kg)</b>	Weight in Kilograms

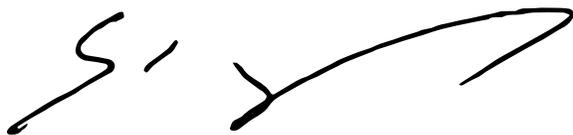
## Foreword

The Ministries of Health, in collaboration with other sectors and with support from development partners, is committed to achieving Millennium Development Goal (MDG) 4. The main causes of under-five deaths in Kenya are neonatal causes, pneumonia, diarrhoea, malaria and malnutrition. Most of these deaths can be prevented by low tech, high impact interventions. For diarrhoea, high impact interventions include but are not limited to exclusive breastfeeding for the first six months and complementary feeding, hand washing, use of oral rehydration therapy and use of zinc.

The Ministry launched the *“Policy Guidelines on Control and Management of Diarrhoea in Children below Five Years”* in March 2010, which advocates for prompt and effective case management in the household and at health facilities, diarrhoea prevention, increasing commodities for management of diarrhoea and increased advocacy.

The Division of Child and Adolescent Health (DCAH) has been working with several partners to revitalize oral rehydration therapy (ORT) corners in Kenya. These guidelines are necessary in order to address gaps in health service provider’s knowledge and practice in diarrhoea management at ORT corners. It is a package that operationalizes important aspects of the above *Policy Guidelines*.

This guideline encompasses a few of the Kenya Essential Package for Health (KEPH) interventions for life cohorts 2 and 3, as highlighted in the National Health Sector Strategic Plan II (NHSSPII 2005-2010). It is envisioned that it will result in a self propelling scale up of ORT corners at all levels of health care, with specific strengthening of diarrhoea case management at health facilities. In addition, it will standardize the operations at oral rehydration therapy corners in case management of a sick child with diarrhoea as well as enable health managers and service providers to easily establish ORT corners while ensuring the availability of equipment, supervision of the functional components and the institutionalization of future planning for ORT services within Annual Operational Plans.



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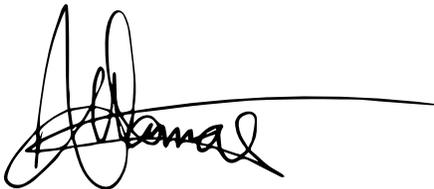
## Acknowledgments

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**Vision:**

The vision of the division as espoused in this document is to have a nation whose children are free from preventable diarrhoeal diseases and ill health.

**Goal:**

To enhance child survival, growth and development through control of diarrhoeal disease.

**Mission:**

To promote and participate in the provision of an integrated and high quality promotive, preventive, curative, and rehabilitative health care to all children less than five years in Kenya.

**Guiding Principles:**

These borrow heavily from all those that have guided technical document development by the Division of Child and Adolescent Health, especially the Child Survival and Development Strategy 2008-2015. The following principles informed the development of this document:

- Evidence Based High Impact Interventions: It emphasizes the use of Oral Rehydration Salts (ORS) and zinc, which are high impact interventions (HIIs) aimed at reducing child mortality, as per the WHO & United Nations Children's Fund (UNICEF) Joint statement (2004) and Lancet 2003 series on child survival.
- Health Systems Approach: Whereas it does not strengthen all aspects of the health system, it advocates for some aspects strengthening. This includes prescriptions for financial support through the annual operational planning (AOP) cycle to sustain the ORT corner, and innovative ways to increase health care worker (HCW) knowledge and competence.
- Partnerships: This document is a product of collaborations and partnerships with other relevant ministries/departments, and development organizations and partners.
- Complementarity: It builds on existing programs, while borrowing on their strengths to ensure a holistic management of the sick child with diarrhoea.
- Respect to Children's Rights: The document follows all the United Nations (UN) Conventions on the Rights of the Child (Article 6 on survival and development and Article 24 on health and health services). In addition, Section 9 (Right to Healthcare), in the Children Act, 2001, Kenya.
- Service Provider Centered: As an operational guideline/document which implements the diarrhoea policy guidelines 2010, it focuses on ensuring that the HCW and district managers are able to establish and scale up ORT corners in a simple and sustainable manner.

## Background

Diarrhoea is the 2<sup>nd</sup> leading cause of death among children under five years of age globally. Nearly one in five child deaths (1.5 million/year) is due to diarrhoea (WHO, 2009). It kills more young children than AIDS, malaria and measles combined and yet is a preventable and easily treatable disease (WHO, 2009).

The Kenya Demographic and Health Survey (KDHS) 2008/9 shows stagnation in national diarrhoeal prevalence with the figure standing at 17% compared to 16% as per 2003 KDHS. According to the KDHS 2008/9 there are only slight variations in prevalence of diarrhoea by various characteristics. Diarrhoea prevalence by residence shows diarrhoea in urban areas 16% with rural areas at 15%. However when other elements such as source of drinking water and sanitation are taken into consideration, rural areas have a higher burden, with the absolute population figures showing that rural areas carry a higher burden of diarrhoea than urban areas. Overall care seeking behavior for diarrhoea improved from 30% (KDHS, 2003) to 48% (KDHS, 2008) however quality of care from the health worker is still less than ideal.

There are many challenges in diarrhoea case management at all levels of care (KDHS & ICF Macro 2010; Kenya Service Provision Assessment, 2010; IMCI Health Facility Survey, 2010). In Kenya, health care delivery faces workforce bottlenecks e.g. staff shortage; a high natural attrition and high staff turnover, which negatively affect effective service delivery in all cohorts. Furthermore, the number of health care workers trained in key packages that address child survival including diarrhoeal disease management is still sub-optimal.

The management of a child with diarrhoea follows WHO IMCI management guidelines, as outlined in various manuals used by service providers in Kenya.

Kenya's *Policy Guidelines on Control and Management of Diarrhoea in Children below Five Years* is modeled on the WHO and UNICEF (2004) seven point plan for a comprehensive management of diarrhoea (Table 1).

These interventions emphasize that diarrhoea disease control can be implemented through a comprehensive package. This package should be implemented together to save children's lives.

Using high impact interventions, these operational guidelines serve to fulfill the implementation of the management of diarrhea at ORT corners. These guidelines will also assist HCWs to scale up ORT corners spontaneously while ensuring quality integrated services. Finally, these guidelines allow HCWs to perform self-evaluations of their data, thus maximizing the benefit to the sick child with diarrhoea.

**Table 1: Seven point plan for a comprehensive management of diarrhea (WHO/UNICEF,2004)**

<b>TREATMENT PACKAGE</b>	
1.	<b>Fluid replacement to prevent dehydration</b>
2.	<b>ORS and zinc supplementation</b>
<b>PREVENTION PACKAGE</b>	
1.	<b>Promotion of early and exclusive breastfeeding and vitamin A supplementation</b>
2.	<b>Rotavirus and measles vaccination</b>
3.	<b>Promotion of hand washing with soap and water</b>
4.	<b>Improved water supply, quantity, quality including treatment and safe storage of household water.</b>
5.	<b>Community wide sanitation</b>

These interventions emphasize that diarrhoeal disease control can be implemented through a comprehensive package. This package should be implemented together to save children's lives.

Using high impact interventions, these operational guidelines serve to fulfill the implementation of the management of diarrhoea at ORT corners. These guidelines will also assist HCWs to scale up ORT corners spontaneously while ensuring quality integrated services. Finally, these guidelines allow HCWs to perform self-evaluations of their data, thus maximizing the benefit to the sick child with diarrhoea.

#### **OBJECTIVES OF THE ORT CORNER OPERATIONAL GUIDELINES.**

The objectives of these guidelines are a reflection of those prescribed in various Child health policy documents, including the Child Survival and Development Strategy and the Policy Guidelines for Diarrhoeal Disease Management for Children below Five years. These are:

- To reduce the morbidity and mortality in children aged <5 years due to diarrhoeal disease as per the Kenya Diarrhoea control policy guideline recommendations (MOPHS, DCAH, 2010).
- To scale up evidence based quality & standard operating practices for diarrhoeal disease management by health care workers (HCWs) at ORT Corners.

- ❑ To define the minimum package of equipment, commodity and supplies for a functional ORT corner.
- ❑ To strengthen and institutionalize Monitoring & Evaluation of diarrhoeal disease activities and data at health facilities in Kenya.

### **ORAL REHYDRATION THERAPY (ORT).**

The mainstay of therapy to correct dehydration is low osmolarity ORS. Current evidence shows that ORS reduces mortality due to diarrhoea in children by upto 93% (Munos MK, 2010). All children with diarrhoea should be given ORS as well as Zinc tablets as per WHO and UNICEFs recommendations (WHO & UNICEF, 2004; WHO, UNICEF, USAID, JHSPH, 2006). Zinc reduces the incidence and thus re-hospitalizations, duration and severity of diarrhoeal episodes, and in addition, recent meta-analysis estimate that it reduces mortality by upto 23% too (Fischer Walker & Black RE, 2010). The policy recommends the local production and procurement of ORS. Outlets for ORS include: health facilities, private and public pharmacies, retail shops and distribution through community health workers (CHWs). At health facility level, ORS and Zinc tablets should be dispensed at the ORT corner. Home treatment with ORS and Zinc is also recommended.

### **JUSTIFICATION FOR THE GUIDELINE.**

KDHS & ICF Macro 2010 showed that there was a decline in the percentage of children under five who had diarrhoea and were given more liquids than normal during a diarrhoeal episode from 34% in 2003 to 26.1% in 2009. The percentage that was given increased feeding also dropped from 6.6% in 2003 to 5% in 2009. However, caregiver knowledge of ORS packets was quite high with 78.4% of mothers between the ages of 15-49 knowing about ORS for treatment for diarrhoea.

Whereas the trend in ORS treatment awareness was high, the quality of care given by the health worker is less than ideal. The KDHS reports that of children who sought treatment from a health worker for diarrhoea only 38.8% received *any* ORS packets and less than 1% received Zinc supplements. The IMCI HFS 2010 survey also shows that of all the children assessed using the IMCI Algorithm; Only 36% of all observed sick child consults are assessed for all three symptoms of fever, diarrhoea and cough for difficulty in breathing, while only 14% were assessed for *all* danger signs. This shows that there is a gap in the HCW skills that address the major causes of mortality (diarrhoea, pneumonia and, malaria).

According to the KDHS 2008/09, only 43% of children with diarrhoea in Kenya are given continued feeding as well as ORT or increased fluids, or both. Food intake is often more likely to be curtailed during an episode of diarrhoea than fluid intake. Only 26% of children with diarrhoea were given more to drink than usual, while 32% were given the same as usual, 17%

were given somewhat less to drink than usual, and 23% were given much less to drink than usual. This therefore, reflects a gap in knowledge among some mothers regarding the nutritional requirements of children during episodes of diarrhoea.

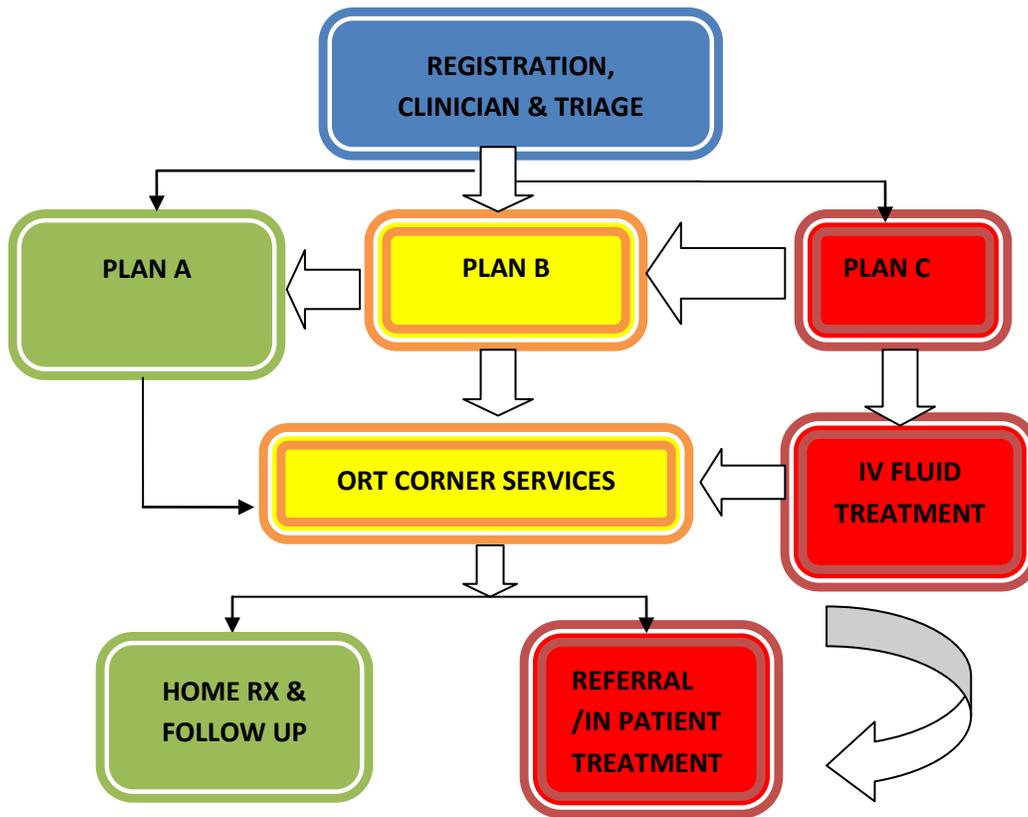
Many partners have now come up to assist in implementing the diarrhoea policy guidelines, and it is worth mentioning that most facilities now have ORT corner equipment 72% (KSPA, 2010). However, many HCWs and managers still do not appreciate the important contribution of ORT corners in diarrhoea management, resulting in equipment still being kept in stores and ORT corners remaining *non-functional*. A rapid assessment done by DCAH and USAID MCHIP found major operational and knowledge gaps in ORT corners in two provinces of Western and Nyanza.

These operational guidelines come at a time when there is need to scale up and implement the specific recommendations of the “Policy guidelines for management of diarrhoea disease among children below five years”. It will also serve as a standard document to ensure a rapid scale up of ORT corners, while enhancing the quality of treatment services during sick child consults for those with diarrhoea in Kenya. The supervision checklist as well as the monitoring and evaluation sections will ensure accountability by health managers & service providers during service delivery at these corners. This will lead to not only better management of the child with dehydration, but also to a reduction in mortality due to severe dehydration.

**SECTION ONE: Pathways to the ORT Corner**

The sick child with diarrhoea accounts for 17% of all cases of childhood mortality in Kenya. In most provinces in Kenya, diarrhoeal disease is among the top five most common causes of morbidity, after neonatal causes and pneumonia. Children with diarrhoea should follow the same patient flow as all other sick children. The chart below forms a logical flow for the sick child with diarrhoea. Section one will define the flow, the functions of an ORT corner, and the standardization of equipment, supplies and commodities for the ORT corner.

**Chart 1: Schema of a Sick Child’s Path to the ORT Corner:**



The flow chart above describes the pathways and their linkages during the management of all sick children with diarrhoea. All children will pass through the ORT corner.

Children classified as Plan C can directly be referred or pass through the ORT corner for ORS while awaiting means of referral. All measures should be taken to establish intravenous (IV) lines for these children so that they can receive IV fluids as they are waiting for referral. Continue to give ORS by mouth or nasogastric tube. This will depend on the set up of the health facility, capability of HCWs to provide Intravenous treatment and the ease of referral.

**Note:** The clinician assesses and classifies dehydration status and starts rehydration therapy for the child. This set up will vary depending on the physical set up of the health facility/service delivery point.

## SECTION TWO: CLASSIFICATION AND TREATMENT OF CHILDREN WITH DIARRHOEA

The treatment of diarrhoea is explicitly addressed using the WHO IMCI treatment protocols, which were adapted by the Ministry of Health in 1997. The guidelines were revised to include Zinc and low osmolarity ORS in treatment in 2007.

WHO IMCI treatment protocols as adapted by the Division of Child and Adolescent Health, Ministry of Public Health and Sanitation give the following classifications and treatment plans:

TABLE 2: SIGNS, CLASSIFICATION AND TREATMENT OF DIARRHOEA PER THE DEHYDRATION STATUS

SIGNS OF DIARRHOEA	CLASSIFICATION	TREATMENT PLAN
<b>Two or more of the following Signs:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lethargic or unconscious</li> <li><input type="checkbox"/> Sunken eyes</li> <li><input type="checkbox"/> Not able to drink; or drinking poorly</li> <li><input type="checkbox"/> Skin pinch goes back very slowly</li> </ul>	<b>SEVERE DEHYDRATION</b>	<b>PLAN C</b>
<b>Two or more of the following Signs:</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Restlessness, irritable</li> <li><input type="checkbox"/> Sunken eyes</li> <li><input type="checkbox"/> Drinks eagerly, thirsty</li> <li><input type="checkbox"/> Skin pinch goes back very slowly</li> </ul>	<b>SOME DEHYDRATION</b>	<b>PLAN B</b>
<input type="checkbox"/> No signs to classify as some or severe dehydration	<b>NO DEHYDRATION</b>	<b>PLAN A</b>

Table 2 above gives the signs that allow classification of dehydration in children with diarrhoea, and the treatment plan addressing each classification. A further illustration of the detailed treatment plans is shown in Tale 3, on page 14. This gives a comprehensive guide to treatment, including the age ranges, amounts of fluid requirements, including Oral rehydration Solution, for this age group, Zinc therapy, recommended home fluids (RHF) and the 4 Rules of Home treatment. Annex IV is added to ensure easy understanding of fluid management as per the treatment plans.

**Table 3: Treatment of Diarrhoea disease as per the WHO IMCI Protocols: Plan A and Plan B**

Plan A			Plan B		
<b>Oral Rehydration</b>					
Age of Child	Dosage	Timing	Age of Child	Dosage	Timing
Up to 2 years	50-100 mls	After each loose stool	<i>Use the child's age only when you do not know the weight. The approximate amount of ORS required (in ml) can be calculated by multiplying the child's weight (in kg) by 75.</i>		
			Up to 4 months or less than 6kg	200-400 ml	Give calculated fluid amounts in 4 hours, then reassess and classify child for further treatment.
4 -12 months or 6-10 kg	400-700 ml				
12-24 months or 10-12kg	700-900 ml				
2 years or more or 12-19 kg	900-1400 ml				
2 years or more	100-200 mls	<i>If after reassessment (at 4 hours), the child has not improved – i.e. s/he is vomiting and showing danger signs, then refer or transfer them immediately for I.V. treatment as outlined in Plan C.</i>			
<b>Zinc</b>					
Age of Child	Dosage	Duration	Age of Child	Dosage	Duration
0-6 months	10 mg daily	10-14 days	0-6 months	10 mg daily	10-14 days
More than 6 months	20 mg daily	10-14 days	More than 6 months	20 mg daily	10-14 days
<b>Recommended Home Fluids</b>					
<input type="checkbox"/> Breast Milk <input type="checkbox"/> Clean, safe water		<input type="checkbox"/> Fresh and fermented milk <input type="checkbox"/> Fresh fruit juices		<input type="checkbox"/> Soups prepared from meat, fish and chicken.	
<b>Four (4) Rules of Home Treatment</b>					
1. Give extra fluid and ORS until diarrhoea stops: breastfeeding frequently; teach mother how to mix and give ORS; show the mother how much ORS fluid to give in addition to the usual fluid intake.  <i>Note: The use of salt sugar solutions is not recommended.</i>			2. Give zinc supplements/tablets per health worker's instructions 3. Continue feeding; breastfeed more often (if breastfeeding) 4. Return the child immediately if s/he does not improve or if the <u>danger signs</u> are observed.		
The health care worker <b>must</b> check the caregiver's knowledge and understanding of the significance of zinc in the treatment of diarrhoea in children as well as the recommended duration of treatment using zinc tablets.					

**SERVICE INTEGRATION AND LINKAGE AT ORT CORNERS:**

The ORT corner must serve the sick child with diarrhoea in a holistic way and ensure that there are *no missed opportunities for the related services*. These linked services include:

- Nutrition & malnutrition assessment (MUAC/Weight & height measurements) and Vitamin A supplementation
- Immunization, as per the Kenya Expanded Program on Immunization (KEPI) schedule (measles and rotavirus immunizations are critical to diarrhoea prevention). Refer to Annex VII for the KEPI immunization schedule.
- Human immunodeficiency virus (HIV) status assessments & referral of HIV exposed infants
- Growth monitoring-Weights and Height/Length measurements.
- Disease surveillance-Acute flaccid paralysis/polio etc.

All HCWs must give integrated and comprehensive care to the sick child with diarrhoea. The IMCI treatment guidelines and the MCH flow chart/checklist are important in this respect.

**Plan C: Treatment of Children Classified with Diarrhoea and Severe Dehydration:**

It is recommended that HCWs and caregivers continue to give oral rehydration even during the child's referral to a higher level of care. Please refer to Annex IV for details of Plan C.

**Table 4: Recommended Treatment for a Child with Diarrhoea and Severe Dehydration**

Age	Step one: give 30ml/kg in:	Step two: give 70ml/kg in:
Infants (age < 12months)	1 hour	5 hours
Children (12months-5years)	30 minutes	2 and ½ hours
IV treatment not available; if trained to use Nasogastric tube for rehydration	Start rehydration by tube (or mouth) with ORS solution; give 20ml/kg/hour for 6 hours (Total of 120ml/kg)	

**NB: Intravenous therapy will be used in children with severe dehydration, severe profuse repeated diarrhoea, persistent vomiting, abdominal distension, paralytic ileus and glucose malabsorption.**

**Recommendation for Antibiotics:**

Antibiotics are given only when there is blood in the stool. Recommended antibiotics include:

- Dysentery: Ciprofloxacin;
- Giardiasis/Amoebiasis: Metronidazole
- Cholera/Acute Watery Diarrhoea: Erythromycin; Cloramphenicol (second line)

### SECTION THREE: REQUIREMENTS FOR A STANDARD ORT CORNER

The ORT Corner serves specific functions which address the health of the sick child with diarrhoea. In addition, there are equipment, supplies and commodities that are critical to the functions of ORT corners. This section, as well as subsequent sections will define these and include their operational guidelines.

#### Functions of an ORT Corner:

- Oral rehydration therapy with ORS.
- Assessment & classification of children with diarrhoea.
- Administration of zinc sulphate tablets and Vitamin A.
- Provision of information on other child services, e.g. immunization, HIV counselling and testing, Infant and young child nutrition and growth monitoring and disease surveillance.
- Demonstrations of hand washing, ORS mixing, administration of ORS, administration of Zinc.
- Counseling on continued care (Treatment, Nutrition) of the convalescing child at home.
- Comprehensive communication as described below.

#### Space:

- All facilities should have a designated area or space for the rehydration of children under-five with diarrhoeal disease.

#### Location:

- ORT corners should be accessible to attending staff and caregivers. It should also have a water source and be comfortable with adequate lighting and ventilation. Finally, in an ideal setting, the ORT corner is located at the maternal and child health clinic (MCH) or adjacent to it, and at entry points for the child into care, e.g. OPD and even Wards.

#### Equipment:

- Table 5, on page (18), gives the *minimum standard set of equipment, commodities and supplies* required for a functional ORT corner. The patient case load will dictate the number of equipment and supplies.

**Table 5: ORT Corner Equipment Checklist:**

\* Derived from Malezi Bora M&amp;E Tool, {MOPHS and MOMS}

Standard ORT Equipment			
Item Number	Item	Item Number	Item
<input type="checkbox"/> 1.	Buckets for storing cups and spoons	<input type="checkbox"/> 12.	Buckets (3) with lids for infection prevention
<input type="checkbox"/> 2.	Clear plastic jugs – calibrated	<input type="checkbox"/> 13.	Cups, 50,100ml,200ml and 500 ml – calibrated
<input type="checkbox"/> 3.	Comfortable chairs/seats	<input type="checkbox"/> 14.	Hand washing facility with tap
<input type="checkbox"/> 4.	Height boards – for measuring height/length	<input type="checkbox"/> 15.	Jug (1)
<input type="checkbox"/> 5.	Locally-available measuring materials, e.g. Kimbo tin	<input type="checkbox"/> 16.	Measuring jug – calibrated
<input type="checkbox"/> 6.	MUAC tape for nutrition assessments	<input type="checkbox"/> 17.	Safe water source and storage containers
<input type="checkbox"/> 7.	Spoons – teaspoons and stirring spoons	<input type="checkbox"/> 18.	Storage facility/Area
<input type="checkbox"/> 8.	Sufurias with lid (14 inch)	<input type="checkbox"/> 19.	Table, bench/chairs for mixing ORS
<input type="checkbox"/> 9.	Timing device or wall clock	<input type="checkbox"/> 20.	Wash basin
<input type="checkbox"/> 10.	Waste bucket	<input type="checkbox"/> 21.	Water heating equipment
<input type="checkbox"/> 11.	Weighing scale		
Commodities and Supplies			
Item Number	Item	Item Number	Item
<input type="checkbox"/> 22.	Chlorine for disinfection	<input type="checkbox"/> 26.	Ciprofloxacin, Metronidazole, Erythromycin and Chloramphenicol for dysentery and cholera
<input type="checkbox"/> 23.	ORS in sachets	<input type="checkbox"/> 27.	Safe, clean water
<input type="checkbox"/> 24.	Soap for hand washing	<input type="checkbox"/> 28.	Thermometers
<input type="checkbox"/> 25.	Vitamin A	<input type="checkbox"/> 29.	Zinc tablets
Tools			
Item Number	Item	Item Number	Item
<input type="checkbox"/> 30.	Diarrhoea wall charts	<input type="checkbox"/> 32.	IEC posters
<input type="checkbox"/> 31.	Mother Child Health Booklets	<input type="checkbox"/> 33.	ORT registers

**Communication at the ORT Corner:**

Communication for those seeking care for children presenting with diarrhoeal disease should include:

- Counseling on ORT based on rehydration status;
- Zinc treatment; and
- Feeding during and after the diarrhoea episodes.

**Behaviour change communication (BCC) for those seeking care for patients at waiting bays.**

ORT corner staff will provide behaviour change communication for patients at waiting bays including *weekly demonstrations* and *scheduled health education talks* on the following:

- Point of use water treatment, including product information;
- Hand washing with soap including tippy taps;
- Faecal disposal;
- Water Protection; and
- Feeding of the child, vaccinations, and growth monitoring.

**BCC Materials and Job Aids**

The following are the recommended IEC materials for BCC at ORT Corners:

- Job Aids for health care workers;
- Posters for BCC: All BCC posters on diarrhoeal disease treatment, key preventive messages, and integrated WASH messages must be displayed *strategically* at the ORT corners and at waiting bays; and
- Demonstration materials, including: tippy tap, hand washing pictures & points plus soap.

**Operational Instructions:**

- The health facility must maintain proper stock control and have an updated inventory for ORT equipment, supplies & commodities;
- All ORT corner commodities (ORS, zinc, and Vitamin A) should be made available at the ORT corner (*One Stop Shop*).
- Pre-packaging of Zinc & ORS is recommended to avoid double queuing by caregivers at remote drug dispensing sites. This will ensure that no caregiver leaves without receiving the complete package of drugs.
- All drugs and commodities must be stored properly in a cool dry place.
- The ORT corner location should follow a set of criteria so all corners are standardized. The set of criteria should also guide health care workers as outlined within the Functions of an ORT Corner section.

## **SECTION FOUR: HUMAN RESOURCE REQUIREMENTS FOR ORT CORNER OPERATIONS**

The Government of Kenya recognizes that human resource development is important to improve health service delivery and health sector transformation. A well-performing health workforce is one that works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances. There must be sufficient staff, fairly distributed, competent, responsive and productive to achieve targets in any program, diarrhoea management inclusive. Thus, investment in this area is of paramount importance.

It is prudent to make the following recommendations which address staff trainings and staffing needs at ORT corners. This will help in ensuring that services at ORT corners proceed uninterrupted and remain high quality.

### **ORT Corner Staffing:**

ORT corners should be staffed by clinicians (nurses, clinical officers, nutritionists, Community Health Extension Workers [CHEWs]) oriented in diarrhoea case management and working in MCH. They should supervise the corner's services and be responsible for keeping records and data generated at the corners.

Three (3) steps are critical in the human resource component:

1. Identification of staffing needs, then
2. Identification of training needs and staff training, and
3. Redeployment, Support supervision and follow up of trained/sensitized staff.

### **Training:**

Health care workers should be trained so they are equipped with the appropriate knowledge and skills for effective sick child case management, including: assessment, classification, treatment, referral, service linkages and counseling.

The current MOPHS-DCAH standard training packages are:

1. The standard WHO adapted IMCI training package, and
2. Short training packages, such as the enhanced diarrhoeal disease management, which can be provided as short 1-3 day updates.

Other innovative approaches of healthcare trainings are: On the Job training (OJT), mentorship by district or provincial training of trainers (TOTs), continuing medical education (CMEs), policy and guideline sensitizations/orientations and performance Improvement approaches, among others.

It is recommended that high volume facilities with more staff have in-house trainings while lower volume facilities, e.g. level 2 and 3 healthcares, have their staff join others at a separate location or at ORT demonstration centres/centres of excellence.

**Summary:**

Operational guidelines for human resource strengthening in case management of diarrhoea disease at ORT corners include:

1. Training of staff at ORT corners should follow the WHO adapted IMCI protocols or a defined national OJT/mentorship package.
2. Innovative training approaches such as mentorship, refresher courses and OJT is encouraged and should be delivered by TOTs.
3. The health facility management teams (HMTs) should ensure frequent information sharing via CME.
4. CME schedules should be available at the ORT corner and at the MCHs.
5. District health management teams (DHMTs)/County health authorities should ensure that all staff are updated/oriented on new diarrhoea treatment policy guidelines.
6. DHMTs/County health authorities and HMTs should institutionalize enhanced diarrhoea disease management trainings and self evaluations of the facility services.
7. All staff must be proficient in the summary and presentation of diarrhoeal disease data during facility data reviews - a performance improvement skill.
8. Training preference must be given to those staff working at ORT corners. These staff should be posted to work or supervise the corners.

## SECTION FIVE: Advocacy, Communication and Social Mobilization for ORT corners

Advocacy, communication and social mobilization are crucial to community actions to prevent and control major problems of public health importance. Communication is a key strategy towards reduction of morbidity and mortality due to diarrhoea and other diseases. This section will look at the functions of communication for and in support of services at ORT corners, target groups for communication as well as operational guidelines and themes of key messages to be given at ORT corners. The section also covers the community linkages that are important in strengthening services and diarrhoea management.

### Objectives of Communications at ORT Corners:

- To emphasize the importance of ORT corners in the management of the sick child with diarrhoeal disease;
- To promote the use of ORS and zinc at the health facility and at household levels;
- To discourage negative practices associated with ORT; and
- To prevent diarrhoea through the promotion of healthy lifestyles including the use of safe water, sanitation and hygiene practices (WASH).

### Target Audiences:

- Health workers
- CHEWs & CHWs
- Parents/Caretakers
- Community leaders

**Table 6: Key Issues and Themes for Health Workers, Caregivers and Community Leaders**

Target Audience	Key Issues & Message themes
<b>Health Worker/CHEW/CHW</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Procedure for preparation, storage and administration of ORS and Zinc</li> <li><input type="checkbox"/> Importance and organization of the ORT corner</li> <li><input type="checkbox"/> Assessment, classification and management of diarrhoea, pneumonia, malaria and other illnesses</li> <li><input type="checkbox"/> Infection prevention at the ORT corner</li> </ul>
<b>Caregivers/Parents</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Effects of diarrhoeal disease in children</li> <li><input type="checkbox"/> Preventive measures for diarrhoea</li> <li><input type="checkbox"/> Prevention of dehydration with more fluids</li> <li><input type="checkbox"/> Preparation, storage and administration of ORS and Zinc</li> <li><input type="checkbox"/> When to seek medical attention immediately</li> <li><input type="checkbox"/> Dispel rumors, myths, misconceptions and practices associated with diarrhoea</li> </ul>

<b>Community Leaders</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Understand the burden of diarrhoeal disease in their locality</li> <li><input type="checkbox"/> Importance of ORT in saving children's lives</li> <li><input type="checkbox"/> Availability of ORT</li> <li><input type="checkbox"/> Facilitate referral &amp; compliance with referral in diarrhoea disease referral</li> <li><input type="checkbox"/> Roles of community leaders in diarrhoea prevention</li> </ul>
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### Key Messages for Specific Target Audiences:

#### A. General Public:

*Mobilization Message: Prevent Diarrhoea, Save Children's Lives (Zuia Kuhara, Okoa Maisha)*

#### Hygiene Messages:

- Wash hands with running water and soap at these four (4) critical times:
  1. After using the toilet
  2. Before preparing food for the baby
  3. Before feeding the baby
  4. After changing the baby and disposing of its faeces
- Drink safe water (boiled or treated)
- Observe proper environmental and personal hygiene
- Treat water used for drinking, cooking and washing
- Store water safely

#### Sanitation Messages:

- Always ensure safe disposal of children's and all faeces
- Always use a toilet properly

#### Nutrition Messages:

- Exclusively breastfeed your child for the first six months with continued breastfeeding and nutritious, hygienically-prepared complementary foods during and after the diarrhoeal illness period.

#### Diarrhoea disease treatment Messages:

- Give plenty of fluids and frequent feedings to children with diarrhoea.
- Continue extra feeding for non-breastfeeding infants and more frequent breastfeeding for children who still breast feed.

- Feeding should continue during an episode of diarrhoea, and feeding should increase after the episode to counteract weight loss and prevent malnutrition.
- Use ORS and Zinc tablets for the management of diarrhoea.
- Complete all the 10-14 day Zinc tablets given to a child with diarrhoea.
- Complete all immunizations for children (including measles immunization at 9 months).

## B. Parents/Caregiver: The 4 Rules of Home Treatment

- Treat diarrhoea at home with ORS and recommended home fluids. Give plenty of fluids and more frequent food.
- Continue extra feeding, and if breastfeeding, breast feed more often.
- Give ORS with Zinc tablets as per the health care worker instructions and demonstrations.
- Take the child to a health facility if the child does not improve or becomes sicker.

*Key Messages on danger Signs: Caregivers should be informed to return a child immediately if they observe the following danger signs:*

- |                          |  |
|--------------------------|--|
| 1. Lethargic child       | 4. Blood in stool/diarrhoea                  |
| 2. Becomes unconscious   | 5. Child is drinking poorly                  |
| 3. Develops a convulsion | 6. Vomits everything and is not able to feed |

## C. Health Care Worker

- Ensure that they possess the appropriate information on how to set up a standard and functional ORT corner.
- Use of IMCI/Enhanced Diarrhoeal Disease Management (EDDM) plan:
  1. Classify and manage diarrhoea, and also other symptoms
  2. Ensure infection prevention at ORT corner
  3. Case management and follow up
  4. Inclusion of diarrhoea prevention and treatment messages during health education talks
  5. Educate caregiver on preparation, use and storage of ORS and zinc
  6. Counsel the caregiver on importance of ORS and zinc
  7. Dispel rumors and misconceptions
  8. Promote child immunization and growth monitoring
  9. Counsel on infant and young child nutrition
- Inform caregivers on identification of danger signs and when to refer.

- ❑ All diarrhoea disease communication materials for caregivers at ORT corners must be placed strategically at the ORT corner, in locations where mothers can view them clearly. Mothers should read and relate the activities at ORT corners with their sick child.
- ❑ Demonstrations of hand washing with soap and water should be done at the ORT corners, or at a strategic place in the facility, using innovative hand washing approaches e.g. tippy taps.

### **Community Linkages to Strengthen ORT Corner Operations:**

The following shall form the operational guidelines to ensure linkages with the community. This will also serve to operationalize the ideals as envisaged in the community strategy document.

- ❑ The CHEWs at the facility will link the ORT services at the health facility with the community.
- ❑ Sharing of facility data and the development of community action plans will be encouraged to support case treatment, referrals and counter referrals.
- ❑ There should be proper documentation of community to facility treatment and referrals, and counter referrals, using the standard MOH CHW referral forms to ensure that cases of diarrhoea are properly managed and followed up.
- ❑ CHWs and CHEWs will be given simple instructions on the right diarrhoea disease prevention, control and treatment messages which they will pass to care seekers at waiting bays during health talks and in the community.
- ❑ Treatment of Diarrhoea disease in Children under five years by CHWs will be done by those who are trained in proper case assessment, classification and treatment of the sick child as per guidelines for Integrated community case management.
- ❑ Trained and supervised CHW's will use ORS and Zinc for treatment as per Government policy.

## SECTION SIX: MONITORING AND EVALUATION

Monitoring and evaluation (M&E) are key functions that must be carried out after the ORT corner is established and as its services continue to be implemented. Reporting, monitoring and evaluation, as outlined in the diarrhoea policy guideline, includes strengthening supportive supervision and health information systems.

Measures should be put in place to generate and analyze data according to the set indicators included in the health management information system (HMIS). This is important to ensure that outcomes and achievements at varying health facility levels of implementation are captured.

Valid information generated from M&E tools will enhance the use of data for planning and decision making at all levels. Supportive supervision, appropriate indicators, in conjunction with methods, tools and clear accountability for their timely collection, compilation and analysis should be used to meet clear objectives for monitoring and evaluation.

### Function of M&E in Diarrhoea Case Management at ORT Corners:

- Collection, Recording and Analysis of diarrhoeal disease data.
- Reporting: total cases periodically, cases by classification, age, sex, location, treatment plans, admissions, referrals, commodity utilization and number of caregivers counseled.
- Surveillance for acute diarrhoeal disease outbreaks and notification of diseases in the IDSR surveillance list, e.g. Measles, Polio/AFP.
- Supervision using an ORT and supervision checklist,
- Sensitizing health workers on use of data to enhance service performance.
- Periodically conducting quality of care assessments; giving feedback, designing and implementing improvement interventions.
- Support supervision and external assessment from National, County and Sub County levels.
- Sharing data and experiences during monthly and quarterly meetings, both at the facility and in other external forums, e.g. *at monthly in-charges meetings*.

The following will form the basic minimum tools that health care providers will use to ensure that preventive and treatment services at the ORT corner are monitored and evaluated for quality.

- ORT corner supply and equipment checklist
- ORT register (Annex I) & the data Summary sheet (Annex II).
- Supervision checklist for diarrhoea case management at ORT corners (Annex III A & B).

- Simple charts showing graphical display of total diarrhoea cases, classification and cases treated as per the plans against time (months) – (Annex VIII)
- CHW referral and counter referral form
- Sick child recording form utilizing the IMCI format
- ORT Operational Guidelines & accompanying M&E document.
- IMCI Chart Booklet (WHO adapted IMCI chart booklet)

The HMTs at the facility and the sub county supervision units will form the best placed administrative units to ensure that there is internal fidelity to these guidelines.

**M&E Operational Guidelines:** To improve services at ORT corners, the minimum package of operational directives for M&E include:

- Monthly review of facility diarrhoeal data, including diarrhoeal disease morbidity, referrals and ORT drug stocks at monthly facility HMT/County/District meetings.
- Graphical display/presentations of diarrhoea morbidity data, with cases against time (in months). This should be on affordable Manila paper, flip charts, etc., and placed in the ORT corner at strategic locations for ease of reference by all. Please refer to Annex VIII for a sample of a graphical display.
- Monthly/Weekly CMEs, OJT should be tailored to assist HCWs & facilities to self monitor their progress by displaying and looking at their data and making *simple analysis*.
- Action planning to institute strategies to address the Health Facility challenges, & the morbidity and mortality patterns are encouraged (see Annex IIIB as a guide).
- Sub county HMTs and facility HMTs should ensure that the ORT register (Annex I) is filled \*completely and \*correctly, with a summary of the data (cases, plans) at the end of each month (see Annex II).
- Use the inventory checklists to ensure that all commodities are in place, at intervals.
- All children should be managed as per IMCI guidelines at ORT corners.
- The HMT should conduct monthly data reviews to gauge their performance, based on the given \*indicators.
- There should an integrated quality assurance team if possible for the level of the facility/focal person for the health facility.
- The HMT or person responsible periodically conducts quality of care assessments and provides feedback, to help the HMT to take corrective measures.

***\*Details of the definition of Indicators is found in the detailed M&E matrix (Annex IX) attached and in the M&E document.***

## SECTION SEVEN: SUSTAINABILITY OF FUNCTIONS AND SERVICES AT ORT CORNERS

Critical to the functions of an ORT corner is the sustainability of the functions at ORT corners and integration of key services that address the sick child comprehensively. The integration of nutrition, routine immunization services and HIV status assessments are all key to comprehensive management of a child with diarrhoea. This section covers ways that health service providers and DHMTs/County health authorities can adapt to ensure sustainability in terms of equipment and supplies as well as the integration of services at ORT corners.

### Financial Support for Sustained ORT Corner Operations:

The government of Kenya has provided an enabling policy environment with regard to financing health services at all levels of the health sector.

Partners have frequently supported ORT corner establishment in health facilities. The Government of Kenya (GoK) funding mechanisms that can be used to purchase supplies and equipment for the ORT corners include:

- Facility Health Sector Services Fund (HSSF)
- The Facility Improvement Fund (FIF)
- The sub county HMT HSSF allocations
- The Constituency Development Fund (CDF)
- Grants from Non GoK organizations and individuals

All HMTs, DHMTs and county health authorities are required to cost the ORT equipment and make provisions for this cost in their Annual Operational Plans and Quarterly Implementation Plans (Facility & District/County health Units). This will ensure that diarrhoea control, prevention and treatment activities, in addition to IMCI activities, OJT, support supervision and monthly HMTs are meaningful and sustainable, for the accelerated scale up of high impact child survival activities. Please see Annex VI for an Excel costing template for the ORT corner.



**ANNEX II: MOH ORT REGISTER DATA SUMMARY SHEET.**

<b>SICK CHILD DIARRHOEAL DISEASE INDICATOR AS PRESENTED IN THE MOH REGISTERS</b> <b>REFERENCE-MOH 204A, ORT CORNER REGISTER. Data is collected and summarized monthly in the ORT register.</b>	<b>ORT REGISTER DATA SUMMARY SHEET (refers to consolidated information from source MOH documents, (705A, 204A, 511 and the ORT register).</b>	<b>Facility Name:</b>	
		<b>Facility Code:</b>	
		<b>Sub County:</b>	
		<b>Month:</b>	

		*Num	*Den	No.	Proportion (%)
1	Total number of sick children seen at the facility during the month				
2	Total number of sick children presenting with diarrhoea disease at the facility.				
3	Number & Proportion diarrhoea classified as with no dehydration				
4	No & proportion classified as diarrhoea with some dehydration				
5	No & proportion classified as diarrhoea with severe dehydration				
6	Number & proportion of children with diarrhoea managed as per Plan B in the last month.				
7	Number & proportion of children with diarrhoea managed as per Plan A in the last month.				
8	Number & proportion of children with diarrhoea managed as per Plan C in the last month.				
9	Number & Proportion of children with blood in stool				
10	Number & Proportion of children with diarrhoea prescribed both ORS and Zinc				
11	Number & Proportion of children with diarrhoea prescribed ORS,Zinc and Vitamin A				
12	Number & Proportion of cases of diarrhoea prescribed ORS alone				
13	No & Proportion of care givers provided with counseling				
14	Total number of children with diarrhoea & severe dehydration admitted				
15	Number & proportion of children with severe diarrhoea discharged				
16	Number & proportion of children with severe dehydration referred				
17	Number & Proportion of female children with diarrhoea seen				
18	Number & Proportion of male children with diarrhoea seen				
	*As per the detailed Monitoring and Evaluation matrix attached in Annex (IX) of the ORT Guideline.				

Sources include- Out Patient under five register ( MOH 204A Under 5 reporting tools/ registers, CWC register, Supervision reports, Rapid assessments and the ORT Register. Indicator numerators & denominators are defined in Annex IX M&E framework / Matrix.

KEY: \*Num – Numerator  
 \*Den - Denominator  
 \*No. - Number

**ANNEX IIIA: SUPERVISION CHECKLIST FOR SERVICE PROVIDERS**

<b>Questionnaire Code:</b>	
County Name:	Health Facility Level:
Sub County Name:	Supervisor's Name:
Health Facility Name:	Supervisor's Designation:
Health Facility Code:	Date Of Supervision:
Quarter date:	

	<b>SECTION I: INFRASTRUCTURE</b>	Indicate: Yes, No or N/A.	Numbers	Remarks
<b>1</b>	Does this facility have an ORT Corner? If No, go to <u>Section VI</u> and ask HMT to plan on establishing one. If Yes, Proceed to Qn2.			
<b>2</b>	If Yes, is there a minimum equipment package at the ORT Corner? (Refer to equipment checklist)-if No, make remarks & assist facility to action plan			

	<b>SECTION II: HUMAN RESOURCE</b>	Indicate: Yes, No or N/A	Numbers	Remarks
<b>1</b>	Does the facility have a staff assigned to work at the ORT Corner? If Yes go to Qn 2, If No, go to Section VI assist them to plan for one.			
<b>2</b>	Are the staff trained or sensitized on:			
	Integrated Management of childhood illness (IMCI), if Yes, How many?			
	Enhanced Diarrhoeal disease management (EDDM), If Yes, How many?			
	Diarrhoea disease Policy & Guideline Sensitizations, If Yes, How many staff members?			

<b>SECTION III: COMMODITIES AND SUPPLIES</b>		<b>RESPONSE-Indicate: YES, No or N/A</b>						
<b>1</b>	Has the facility experienced Stock outs for ORT Corner commodities in the last 3 months? If Yes, go to Qn 2,							
<b>2</b>	Has the facility experienced stock out for the following commodities in the last 3 months? If Yes, go to Qn3.	<b>ZINC</b>	<b>ORS</b>	<b>VIT A</b>	<b>*ANTIBIOTICS</b>			
					<b>ER</b>	<b>CH</b>	<b>ME</b>	<b>CP</b>
<b>3</b>	Does the facility have bin cards for stock control of the following ORT Corner commodities, If Yes, go to Qn4							
<b>4</b>	Is the Bin card upto date for the following commodities?							

<b>SECTION IV: DOCUMENTATION AND REPORTING</b>		Indicate - Yes, No or N/A	Remarks
<b>1</b>	Does the Facility have an ORT Corner Register? If Yes, go to Qn2, If No-go to Section VII and Action Plan.		
<b>2</b>	Is the ORT Corner Register *completely filled?		
<b>3</b>	Is the ORT Corner Register *correctly filled?		
<b>4</b>	Has facility monthly diarrhoeal disease data been summarized and displayed graphically or using charts?		

*\*Refer to the detailed Monitoring and Evaluation matrix attached in Annex (IX).*

	<b>SECTION V: COMMUNICATION /MESSAGING AT ORT CORNER</b>	Indicate: Yes, No or N/A	Remarks
1	Are the following materials available at the ORT Corner? If No, plan for their provision.		
	Diarrhoea disease treatment algorithm/Wall Chart		
	ORT Corner operational Guidelines		
	ORT Corner Guideline Orientation Pack		
	IMCI Chart Booklet		
	ORT Corner Job Aid		
	Policy Guidelines on Control & Management of Diarrhoea in children <5years		
2	Does facility display IEC materials with WASH messages at ORT Corners?		
3	Does facility display IEC materials with WASH messages at waiting Bays?		
4	Does the Facility conduct Health education talks to care givers at Waiting bays? If Yes, go to Qn 5, if No, assist HMT to action plan		
5	Does it have scheduled health education talks? If Yes, go to Qn6.		
6	Do the scheduled Health Education talks contain Topics/Themes on diarrhoeal disease? <i>Verify if schedule has diarrhoea related topics.</i>		

	<b>SECTION VI: DIARRHOEAL DISEASE MANAGEMENT-observe at least 1 session in Progress. Observe at least one child per the health care worker in the facility supervised.</b>	Indicate: Yes, No or N/A	REMARKS
1	Has the Health care worker classified the sick child correctly as per IMCI classification? Note: use the entry point into service to get this information.		
2	Are children being given the correct diarrhoea treatment?		

**ANNEX IIIB: Supervision Checklist- Action planning on facility challenges & gaps.**

Supervisor's documentation–Diarrhoea case management gaps and challenges at facility.

	<b>SUPERVISORS COMMENTS/REMARKS:- HEALTH FACILITY CHALLENGES, GAPS AND ACTION PLAN.</b>
Qn1	What Challenges does the facility face in case management of sick children with diarrhoea at the ORT Corner (GAPS) and what are the priority solutions to these? <i>(Fill this information in the following spaces/table. A supervisor can add more space depending on the challenges, but prioritization of at most three is important).</i>

	<b>HEALTH FACILITY CHALLENGES:</b> <i>(Prioritization is based on the root causes, and the actions that will have the highest impact on Diarrhoeal disease management at the facility).</i>	Suggested Action or Solution	Time Frame- dd/mm/year	Responsible person
1				
2				
3				
4				
5				

**ANNEX IV: Summary of Classifications & treatment Plans for diarrhoea in children below five years**

PLAN A: DIARRHOEA BUT NO SIGNS OF DEHYDRATION					
TREATMENT	PLAN				
Home fluids (as described above)	Age	Fluid Requirements			
	Up to 2 years	50-100mls per each stool.			
	2 years or more	100-200ml per each loose stool.			
PLAN B: DIARRHOEA WITH SOME SIGNS OF DEHYDRATION					
TREATMENT	PLAN				
ORS	Age	Weight	Fluid Requirements (ml)	Comments	
	Up to 4 months	<6kg	200-400	Give the calculated fluid amounts in 4 hours, then reassess and re-classify. If after reassessment at 4 hours, the child has not improved i.e. there is vomiting and shows danger signs, then refer immediately for IV treatment as per Plan C.	
	4 months – 12 months	6<10kg	400-700		
	12 months – 2 years	10<12kg	700-900		
	2 years to 5 years	12-19kg	900-1400		
	<i>*Use the child's age only when you do not know the weight. The approximate amount of ORS required (in ml) can also be calculated by multiplying the child's weight (in kg) by 75.</i>				
	<i>*If the child wants more ORS than shown, give more.</i>				
Zinc	Age	Zinc tablets; dose	Duration	Comments	
	<6 months	10mgs zinc tablets given	10 days	The dose must be completed.	
	>6 months	20mgs zinc tablets given	10 days		
PLAN C: DIARRHOEA WITH SEVERE DEHYDRATION					
TREATMENT	PLAN				
IV Fluids	Age	First give 30ml/kg in:	Then give 70ml/kg in:	Comments	
	Infants (<12mths)	1 hour	5 hours	Intravenous therapy will be used in children with severe dehydration, severe profuse repeated diarrhoea, persistent vomiting, abdominal distension, paralytic ileus and glucose malabsorption.	
	Children 12 months-5 years	30min	2 hours 30 minutes		

**ANNEX V: New Recommendations for ORS (WHO/UNICEF ORS 1978/2004)**

	<b>CURRENT (2004)</b>	
<b>Constituents</b>	<b>g/dl</b>	<b>mEq/L</b>
<b>Sodium Chloride</b>	<b>2.5</b>	<b>75</b>
<b>Trisodium/Citrate(NaHCO<sub>3</sub>)</b>	<b>2.9</b>	<b>10</b>
<b>Potassium (K<sup>+</sup>)</b>	<b>1.5</b>	<b>20</b>
<b>Chloride (Cl<sup>-</sup>)</b>		<b>65</b>
<b>Glucose Anhydrous</b>	<b>13.5</b>	<b>75mmol/L</b>
<b>Osmolar</b>	<b>20.5</b>	<b>245mOsmols/L</b>

**Note:** Sodium chloride was reduced from 90mEq/L to 75mEq/l and glucose was reduced from 111mmol/L to 75mmol/L.

**ANNEX VI: Excel Costing of an ORT Corner** (Ref: MOPHS-MOMs Malezi Bora M&E document, 2009).

No	Item	Quantity	Unit cost (Ksh)	Total Cost (Ksh)	Cost (\$)
		A	B	C=A*B	C/Unit Dollar Rate
1	Tea spoons	12	30	360	4.0
2	Table Spoons	12	30	360	4.0
3	Big Stirring spoon	1	200	200	2.2
4	Buckets for Infection Prevention	3	500	1,500	16.7
5	Buckets for storing cups, spoons	2	500	1,000	11.1
6	Small Cups (all cups)	12	50	600	6.7
a	Small cup, 50-100			0	0.0
b	Small cup, 100-200			0	0.0
c	Small cup, 200-300			0	0.0
7	Calibrated Measuring Jar, 1 Litre	2	200	400	4.4
8	Table Tray	2	300	600	6.7
9	Wash Basin	2	300	600	6.7
10	Water Heating Equipment	1	5000	5,000	55.6
11	Sufuria with Lid (14inch)	1	1,500	1500	16.7
12	Waste Bin/Bucket/basket	1	200	200	2.2
13	Timing Device	1	500	500	5.6
14	Table for Mixing ORS	1	5,000	5,000	55.6
15	Bench (s)	1	1,000	1,000	11.1
16	Chair(s)	6	500	3,000	33.3
17	Water Storage container- 20Litres Jerricans	2	300	600	6.7
18	Hand Washing Point/Facility	2	1,000	2,000	22.2
	<b>Total</b>			<b>24,420</b>	<b>271.3</b>

## ANNEX VII: KEPI Immunization Schedule

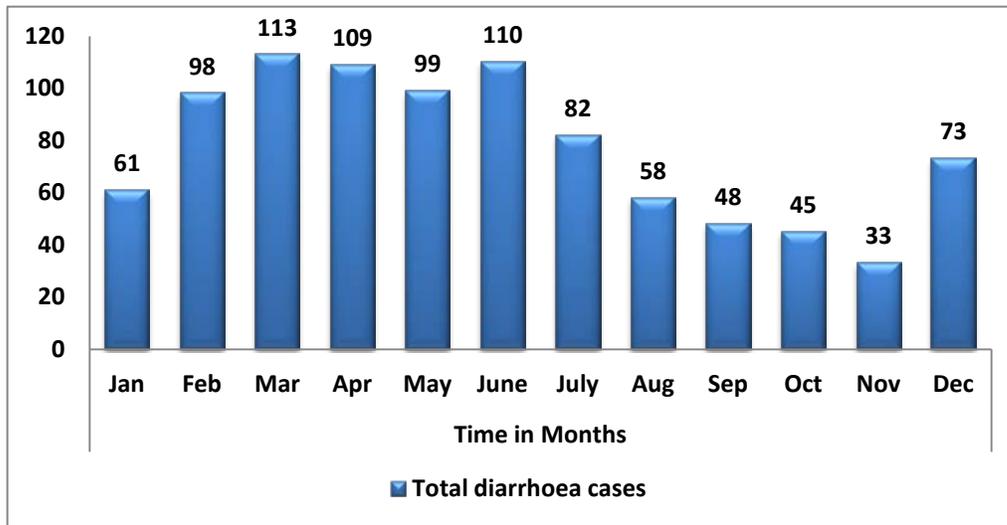


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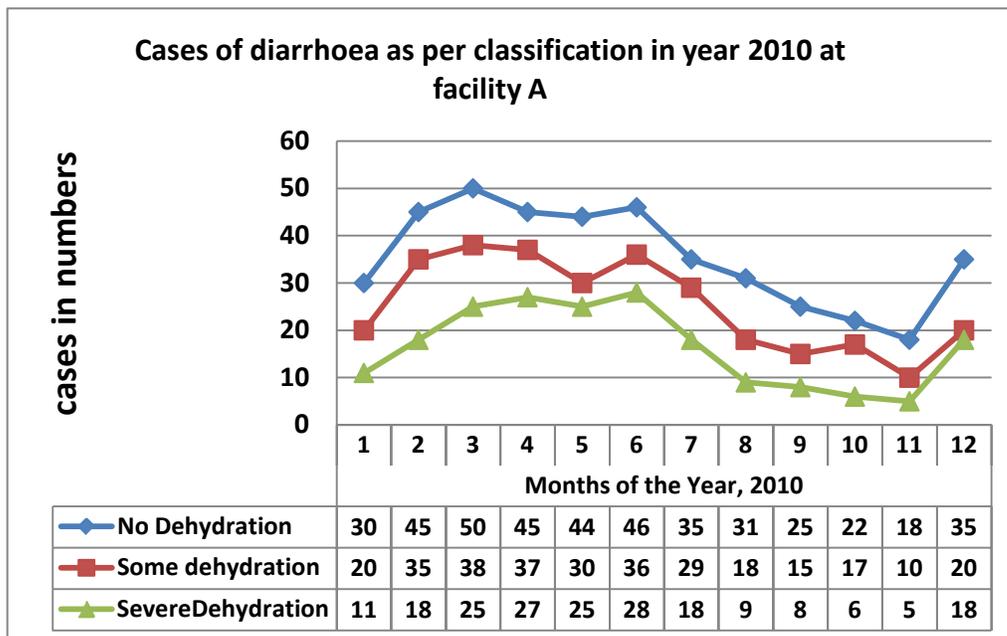
ROUTINE CHILDHOOD IMMUNIZATIONS IN KENYA.			
WHEN TO IMMUNIZE	DISEASE PROTECTED AGAINST	VACCINE GIVEN	IMMUNIZATION SITE.
At Birth or immediately after	Tuberculosis	BCG	Left Forearm
	Poliomyelitis	OPV 0 dose	Given orally in the mouth as two drops
At 6 weeks-1 month and a half.	Poliomyelitis	OPV 1 <sup>st</sup> Dose	Given orally in the mouth as two drops
	Diphtheria, Pertussis, Tetanus Haemophilus Influenza, Hepatitis B	DPT/Hib/HepB Pentavalent 1.	Left Outer thigh
	Meningitis, Pneumonia, Bacteraemia	PCV 10	Right Outer Thigh
At 10 weeks-2 months and a half.	Poliomyelitis	OPV 2 <sup>nd</sup> dose	Given orally in the mouth as two drops
	Diphtheria, Pertussis, Tetanus Haemophilus Influenza, Hepatitis B	DPT Hib/HepB Pentavalent 2.	Left Outer thigh
	Meningitis, Pneumonia, Bacteraemia	PCV 10	Right Outer thigh
At 14 weeks- 3 months	poliomyelitis	OPV 3 <sup>rd</sup> Dose	Given orally in the mouth as two drops
	Diphtheria, Pertussis, Tetanus Haemophilus Influenza, Hepatitis B	DPT/Hib/HepB Pentavalent 3.	Left Outer thigh
	Meningitis, Pneumonia, Bacteraemia	PCV 10	Right Outer thigh
At 9 months	Measles Yellow fever	Measles- Yellow fever-	Right Upper Arm Left Upper Deltoid
At 18 months	Measles	Measles 2 <sup>nd</sup> Dose	Right Upper Arm
At 6 months, then every 6 months until 5 years.	Measles complications	Vitamin A supplementation	Given orally by mouth.

**Annex VIII: Graphical Display of Total Monthly Cases of Diarrhoea and Classification**

**Chart A:** Bar graph showing a simple graphical presentation of diarrhoea cases treated using ORS and zinc at the ORT corner at Dispensary A 2010.



**Graph 1:** Line graph showing cases of children with diarrhoea as per classification of dehydration status for Dispensary A 2010.



## ANNEX IX: MONITORING AND EVALUATION FRAMEWORK/MATRIX FOR DIARRHOEA MANAGEMENT.

### SECTION A: INSTRUCTIONS AND CODE BOOK.

ITEM	OPERATIONAL DEFINITION
<b>Community Level:</b>	Level 1-Community
<b>Health Facility Level</b>	Level 2-Dispensary
	Level 3-Health Centre
	Level 4-Sub District & District Hospital
	Level 5-Provincial Hospital
<b>Supervisors designation:</b>	Refers to the professional title, e.g. Provincial Clinical officer, district Public Health Nurse, District nutrition officer.
<b>Quarter: 1-2- 3 and 4.</b>	Quarters are defined according to the GOK financial Year.
<b>Valid diarrhoea disease trainings/ sensitizations are listed as:</b>	
	<b>1</b> IMCI Trainings
	<b>2</b> Enhanced diarrhoeal disease management
	<b>3</b> Current Diarrhoeal Policy and associated Guidelines
	<b>4</b> Diarrhoeal disease treatment Algorithms
<b>ORT CORNER COMMODITIES</b>	
	<b>1</b> Chlorine for water treatment
	<b>2</b> Oral rehydration solution sachets
	<b>3</b> Zinc Tablets
	<b>4</b> Vitamin A
	<b>5</b> Antibiotics: ER-Erythromycin; CP-Ciprofloxacin; CH-Chloramphenicol; ME-Metronidazole
<b>ORT Corner Minimum Package of Equipment</b>	List found in the ORT corner operational guideline document.
<b>ORT Corner Register</b>	The official MOH register for recording ORT data/information
<b>Correctly filled</b>	Correctly filled means that the fields in the tool are filled with valid expected information as per the instructions specific for that field. Choose 10% of all randomly selected register entries out of the previous month's recordings.
<b>Completely filled</b>	Completely filled means that ALL the fields have documented information. Choose 10% of all randomly selected register entries/ out of the previous month's recordings.
<b>Diarrhoeal disease Job Aids:</b>	Job Aids include: ORT Corner Orientation Package, MCH Flow Chart
	Diarrhoea Treatment Algorithm/Wall Charts, IMCI Chart Booklet
	ORT Corner Job Aid and Mother Child Health Booklet

<b>Health Facility Challenges:</b>	The priority challenges need to be identified based on a root causes, and with the noble intention of narrowing down to the ones which will have the highest impact on diarrhoeal disease management at the facility level.
<b>Time frame for action.</b>	Actual start and end date should be specified.
<b>Age in weeks</b>	Age in weeks of an infant s age expressed over 52 weeks in a year (weeks/52)
<b>Age in Months</b>	Age in months of a baby since birth expressed over 12 months of a year.
<b>Serial Number</b>	Number given to the child as they are seen at the ORT Corner
<b>Out Patient Number</b>	Number given to the child as they are seen at the main facility entry point
<b>Residence</b>	Refers to the place of physical stay or the nearest locator details
<b>Duration of diarrhoea</b>	Indicate whether the number of days(either less than or greater than 14days) the child has passed diarrhoea
<b>Dehydration status</b>	Recorded as per the IMCI classification of none, some & severe dehydration
<b>Recommended Home fluids (RHF)</b>	Refers to Uji (porridge), yogurt, vegetable, meat& fish soups,
<b>Vitamin A (200,000/100000IU)</b>	Indicate if Yes given, write 1=if 100,000IU,2=if 200,000IU and 3=if No, and 4=If not applicable.
<b>Antibiotics</b>	Indicate Name of antibiotic, if Yes. Fill all fields.
<b>Admitted</b>	Refers to children with diarrhoea admitted into this same facility
<b>Referred</b>	Indicate the child with diarrhoea referred to another facility at the next level
<b>Discharged</b>	Refers to children with diarrhoea who are successfully treated for diarrhoea at the ORT Corner and allowed home
<b>Died of Diarrhoea with dehydration</b>	Children who have succumbed to dehydration due to diarrhoeal disease

**SECTION B: MONITORING AND EVALUATION FRAMEWORK/MATRIX PROPER**

NO	RESULT AREAS	ACTIVITIES	OUTPUTS	INDICATORS	INDICATOR DEFINITION	SOURCES	FREQUENCY
1	Infrastructure strengthening	Provision of ORT corner space	Designated space for an ORT Corner provided.	Number of facilities with ORT corners	Actual Numbers	Supervisory reports	Quarterly
		Provision of equipment and apparatus for ORT corners	ORT corners equipped*- check list found in ORT guideline.	Number of ORT corners equipped based on the minimum package	Actual Numbers	Sensitization Reports	Quarterly
2	Human Resource	Assignment of staff to ORT Corners	ORT corner staffed	Number of facilities with at least a staff running the ORT corners	At least 2 people trained/sensitized on ORT per facility	Supervision Reports.	Quarterly
		Capacity building of ORT corner staff	ORT corner staff sensitized on Diarrhoea management	Percent of ORT corner staff sensitized on Diarrhoea management	<b>Num:</b> No. of ORT staff sensitized <b>Den:</b> Total staff assigned to ORT corner	Supervision Reports.	Quarterly
3	Commodities and supplies	Continuous supply of ORT commodities and supplies	Commodities and supply stock maintained	Percent of facilities reporting no stock outs for ORS in last 3 months.	<b>Num:</b> Number of facilities reporting no ORS stock outs for ORS in last 3 months; <b>Den:</b> Total number of facilities with ORT Corners.	Facility Stock out report.	Quarterly
				Percent of facilities reporting no stock outs for Zinc in the last 3 months.	<b>Num:</b> Number of Facilities reporting no Zinc stock outs for ORS in last 3 months; <b>Den:</b> Total number of facilities with ORT Corners.	Facility Stock out report.	Quarterly

4	Documentation and reporting	Distribution of ORT registers to facilities with ORT corners	ORT registers availed	Percent of facilities with ORT registers	<b>Num:</b> Number of facilities with ORT registers; <b>Den:</b> Total number of facilities with ORT Corners.	Supervision Reports.	Quarterly
		Analysis of monthly diarrhoeal data	Monthly Diarrhoea summary data analyzed	Percent of facilities with ORT corners displaying diarrhoea data graphically	<b>Num:</b> Number of facilities displaying diarrhoea data graphically; <b>Den:</b> Total number of facilities with ORT Corners.	Supervision Reports.	Monthly
		Distribution of IEC materials with WASH messages at ORT corners and waiting bays	IEC materials with WASH messages availed	Percent of Facilities with IEC materials with WASH messages displayed	<b>Num:</b> Number of facilities with WASH messages displayed in ORT corners and waiting bays; <b>Den:</b> Total number of Facilities.	Supervision Reports.	Quarterly
5	Communication /Messaging	Provision of health information on diarrhoea to caregivers in health facilities	Health talks on diarrhoea conducted	Percent of Facilities conducting health education talks with diarrhoea themes.	<b>Num:</b> Number of facilities with ORT corners reporting conducting health talks <b>Den:</b> Total number of Facilities.	Facility health education schedules	Monthly
		Provision of Job aides on diarrhoea management	Diarrhoea management Job aides availed	Percent of facilities with diarrhoea management job aides	<b>Num:</b> Number of facilities with diarrhoea management job aides; <b>Den:</b> Total number of facilities.	Supervision Reports.	Quarterly

6		Assessment of dehydration status of the sick child with diarrhoea	Children with diarrhoea assessed according to IMCI guidelines	Percent of sick children with diarrhoea classified for dehydration according to IMCI Proportion should be for a specific classification	<b>Num:</b> Number of sick children with diarrhoea assessed and classified; <b>Den:</b> Total number of children with diarrhoea seen.	ORT register	Monthly
	<b>Diarrhoeal Disease management</b>	Treatment of the sick child presenting with diarrhoea	ORS prescribed to sick children presenting with diarrhoea	Percent of children sick with diarrhoea prescribed ORS	<b>Num:</b> Number of children sick with diarrhoea prescribed ORS; <b>Den:</b> Total number of children sick with diarrhoea seen.	ORT register	Monthly
			Zinc prescribed to sick children presenting with diarrhoea	Percent of children sick with diarrhoea prescribed Zinc	<b>Num:</b> Number of children sick with diarrhoea prescribed Zinc; <b>Den:</b> Total number of children sick with diarrhoea seen.	ORT register	Monthly
	<b>Diarrhoeal Disease management</b>	Treatment of the sick child presenting with diarrhoea	ORS and Zinc prescribed to sick children presenting with diarrhoea	Percent of children sick with diarrhoea prescribed ORS and Zinc	<b>Num:</b> Number of children sick with diarrhoea prescribed ORS and Zinc; <b>Den:</b> Total number of children sick with diarrhoea seen.	ORT register	Monthly

6	Diarrhoeal Disease management	Treatment of the sick child presenting with diarrhoea	Vitamin A prescribed to sick children with diarrhoea	Percent of children sick with diarrhoea prescribed Vitamin A	<b>Num:</b> Number of children sick with diarrhoea prescribed Vitamin A <b>Den:</b> Total number of children sick with diarrhoea seen.	ORT register	Monthly
		Recording of treatment outcomes in Sick children with diarrhoea	Diarrhoeal diseases managed	Proportion of children admitted with diarrhoea discharged	<b>Num:</b> Number of admitted children treated for diarrhoea discharged; <b>Den:</b> Total number of children with diarrhoea admitted into the ward.	ORT register	Monthly
				Proportion of children with diarrhoea admitted	<b>Num:</b> Number of children with diarrhoea admitted; <b>Den:</b> Total number of children seen.	ORT register	Monthly
				Proportion of children with diarrhoea referred	<b>Num:</b> Number of children with diarrhoea referred; <b>Den:</b> Total number of sick children with diarrhoea seen.	ORT register	Monthly

The diarrhoea disease monitoring and evaluation framework works within indicators that are available in MOH registers. These indicators are consolidated in the ORT registers, and hence the basis for a framework.

An important area which should be considered during M&E is that touching on information from the care giver. This area is by consensus thought to serve as an area of operational research.

The critical information to be collected includes: 1. Counseling provided on giving more fluids, 2. Care giver knowledge on how to prepare ORS, 3. Care giver knowledge on how to give ORS (in correct amounts, timing and duration), 4. Care giver knowledge on how to give correct dosages of Zinc, 5. Whether child has been given first dose of antibiotic by healthcare worker, 6. Care giver knowledge on when to seek treatment immediately and 6. Caregiver practices and attitudes in managing diarrhoea disease

These are areas that can be delved into more objectively through operational research studies.

This framework will be updated from time to time depending on the changing circumstances of child survival. It is also important to note that an ORT register shall form a critical aspect of monitoring of Diarrhoea disease management at ORT Corners, in all health facilities, and at all health care levels. Service linkage s with the community services through the community strategy are envisaged to form a critical component that it is hoped will inform evolution of this M&E section of the document.

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