

# Adherence to case management guidelines of IMCI by health care workers in Tshwane

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# Introduction

- Integrated management of childhood illness (IMCI) is an essential strategy known to deliver childhood interventions that reduces the under-5 mortality rate
- South Africa adopted the IMCI strategy in 1996

# A GLOBAL REVIEW OF THE KEY INTERVENTIONS RELATED TO REPRODUCTIVE, MATERNAL, NEWBORN AND CHILD HEALTH (RMNCH)

Infancy and Childhood	
Exclusive breastfeeding for 6 months	 <p><b>ESSENTIAL INTERVENTIONS, COMMODITIES AND GUIDELINES</b> for Reproductive, Maternal, Newborn and Child Health</p>  
Continued breastfeeding and complementary feeding from 6 months	
Prevention and case management of childhood malaria	
Vitamin A supplementation from 6 months of age	
Comprehensive care of children infected with or exposed to HIV	
Routine immunization and <i>H. influenzae</i> , meningococcal, pneumococcal and rotavirus vaccines	
Management of severe acute malnutrition	
Case management of childhood pneumonia	
Case management of diarrhoea	

# The IMCI strategy

- The strategy has 3 components
  - Case management guidelines
  - Health systems strengthening
  - Community health messages
- In IMCI case management guidelines, classification of illness rather than diagnosis is used

## Does the child have diarrhoea?

### IF YES, ASK:

- For how long?
- Is there blood in the stool?
- How much and what fluid is mother giving?

### LOOK OR FEEL:

- Look at the child's general condition. Is the child:
  - Lethargic or unconscious?
  - Restless and irritable?
- Look for sunken eyes.
- Offer the child fluid. Is the child:
  - Not able to drink, or drinking poorly?
  - Drinking eagerly, thirsty?
- Pinch the skin of the abdomen. Does it go back:
  - slowly?
  - or very slowly? (more than 2 seconds).

### Classify DIARRHOEA

for  
**DEHYDRATION**  
in all children  
with diarrhoea

and if diarrhoea  
14 days or more

and if blood in  
stool

- Two of the following signs:
  - Lethargic or unconscious.
  - Sunken eyes.
  - Not able to drink or drinking poorly.
  - Skin pinch goes back very slowly.

### SEVERE DEHYDRATION

- Start treatment for severe dehydration (Plan C, p. 17)
- Refer **URGENTLY**
- Give frequent sips of ORS on the way
- Advise the mother to continue breastfeeding when possible

- Two of the following signs:
  - Restless, irritable.
  - Sunken eyes.
  - Drinks eagerly, thirsty.
  - Skin pinch goes back slowly.

### SOME DEHYDRATION

- Give fluids to treat for some dehydration (Plan B, p. 16)
- Advise mother to continue breastfeeding and feeding
- Give zinc for 2 weeks (p. 12)
- Follow-up in 2 days (p. 25)
- Advise the mother when to return immediately (p. 23)

- Not enough signs to classify as severe or some dehydration.

### NO VISIBLE DEHYDRATION

- Give fluid and food for diarrhoea at home (Plan A, p. 16)
- Advise mother when to return immediately (p. 23)
- Give zinc for 2 weeks (p. 12)
- Follow up in 5 days if not improving (p. 25)

- Dehydration present
- Losing weight

### SEVERE PERSISTENT DIARRHOEA

- Start treatment for dehydration
- Refer **URGENTLY**
- Give frequent sips of ORS on the way
- Give additional dose of Vitamin A (p. 18)

- No visible dehydration.

### PERSISTENT DIARRHOEA

- Counsel the mother about feeding (p. 19 – 22)
- Give additional dose of Vitamin A (p. 18)
- Give zinc for 2 weeks (p. 12)
- Follow-up in 5 days (p. 25)
- Advise the mother when to return immediately (p. 23)

- Dehydration present or
- Age less than 12 months

### SEVERE DYSENTERY

- Refer **URGENTLY**

- Age 12 months or more and
- No dehydration

### DYSENTERY

- Treat for 3 days with ciprofloxacin (p. 9)
- Advise when to return immediately (p. 23)
- Follow-up in 2 days (p. 25)

# Aim of the study

- To evaluate the adherence to the IMCI case management guidelines
  - on referred patients to Kalafong hospital
  - by primary health care workers in the Tshwane area.

# Methods

- **Study design and setting:** The study was conducted at Kalafong Hospital in Pretoria. This was a cross-sectional study, conducted between July and December 2012. Convenience sampling was used .
- **Participants and eligibility criteria:** Children aged 2 to 60 months referred from clinics to Kalafong Hospital with medical conditions were recruited.
- **Statistics:** Data was analysed using the stata 12 descriptive statistics.
- **Ethics:** Ethical approval was granted by the University of Pretoria, Faculty of Health Sciences Research Ethics Committee. Informed consent was obtained from parents who agreed to participate in the study.

# Measurement and tools used

- Information on IMCI clinical symptoms and signs, classification and pre-referral treatment documented on patient's referral letter was collected.
- Information on counselling received by caregivers regarding the child's condition at the clinic before referral was collected through an interview with the caregiver at the hospital.
- A questionnaire adapted from the WHO health facility survey tool to evaluate the quality of care delivered to sick children attending the outpatient facility was used.

# Results

- 110 children recruited of ages 2- 60months
- 80 children were included referred with
  - Four main IMCI symptoms cough and difficulty in breathing, diarrhoea, fever, ear problem (55)
  - Malnutrition, HIV, TB, Measles (12)
  - Others(13)
- 52 male, 28 Female
- Half of the children were under one year old.
- Children were referred from 12 surrounding clinics, in the Tshwane sub-districts 3 and 4.

# Four main IMCI symptoms frequency

- Cough and difficulty in breathing (34)
- Diarrhoea (15)
- Fever (22)
- Ear problem (5)

# Cough and difficulty in breathing

Presenting symptoms (n)	IMCI signs (n)	Total IMCI classification (n)	Percentage of IMCI classification correctly assigned per clinical signs	Treatment given at clinic before referral according to classification
<b>Cough and difficulty in breathing (34)</b>	Chest in-drawing(11)	Severe pneumonia (4)	2/11 (18.2%) (other 2 did not have clinical sign- chest indrawing)	3 received ceftriaxone 1 received cotrimoxazole 3 received oxygen No glucose done
	Fast breathing (14)	Pneumonia (6)	4 +1 +2/14 (50%)	3 received Amoxicillin 1 received cotrimoxazole 3 received inhalation
		Wheeze first episode (2)		
		Recurrent wheeze (2)		
	No fast breathing (4)	Cough and cold (4)	3/4 (75%)	

# Diarrhoea

<b>Presenting symptoms (n)</b>	<b>IMCI signs (n)</b>	<b>Total IMCI classification (n)</b>	<b>Percentage of total IMCI classification done per symptoms</b>	<b>Treatment given at clinic before referral according to classification</b>
<b>Diarrhoea (15)</b>	Lethargy (2)	Severe dehydration (3)	(3 +7+1)/15 73.3%	All received IVI fluid
	Sunken eyes (7)	Some dehydration (7)		No documentation of ORS
	Absent (3) Drinking well, no sunken eyes, no lethargy	No visible dehydration (1)		

# Fever and ear problem

Presenting symptoms (n)	IMCI signs (n)	Total IMCI classification (n)	Percentage of total IMCI classification done per symptoms	Treatment given at clinic before referral according to classification
<b>Fever(22)</b>	Stiff neck or bulging fontanel (2)	Suspected meningitis (1)	2/6 (33.3%)	I received ceftriaxone
	Absent stiff neck or bulging fontanel (1)	Suspected severe malaria (1)		10/22(45.4%) received paracetamol
<b>Ear problem (5)</b>	Ear pain (1) pus draining for less than 14 days (1) No swelling behind the ear (1)	Acute ear infection (1)	1/5 (20%)	

# Nutrition

- Nutritional assessment was only recorded in 24 (30%) of all children,
  - Severe malnutrition 6
  - Not growing well 8
  - Growing well 10
- Of the six children with severe malnutrition only one had received vitamin A, three had received antibiotics and glucose had not been checked in any of them.

# Counselling

- 73% of caregivers received counselling on the condition of the children before transfer to the hospital

# Classifications

- IMCI classification was done in just over half (52.9%) of 34 children with cough, 73% of 15 children with diarrhoea.
- Only 18% of children with chest indrawing were classified correctly as severe pneumonia/very severe disease and half with fast breathing classified correctly.
- A total of five cases were classified as tuberculosis (TB) exposure, 11 probable Tuberculosis (TB), two symptomatic HIV, ten HIV exposed and one measles .

# Limitation of the study

- it's not known if the primary HCWs who saw the children were IMCI trained;
- Its possible that certain clinical symptoms and signs were elicited and pre-referral treatment administered at the clinic, but not documented on the referral letters .

# Summary

- IMCI guidelines were not always adhered to and IMCI classifications for children referred from clinics to the hospital were often incorrect and incomplete.
- Children chest indrawing and fast breathing were classified incorrectly, resulting in an inappropriate treatment received before referral to the hospital.
- Nutritional status was documented in only a quarter of children referred.
- None of the children with severe pneumonia and severe malnutrition had glucose checked before referral.
- Misclassification resulted in no or wrong pre-referral treatment

# Recommendation

- HCWs in the primary health care clinics should be trained and supported to use the IMCI guidelines.
- Messages to HCWs chest indrawing sign should have the same importance as the IMCI general danger signs.
- The findings of clinicians not following guidelines and misclassification has been documented by others.
- Support, supervision and resource allocation in particular to IMCI to deliver IMCI strategy is important.

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