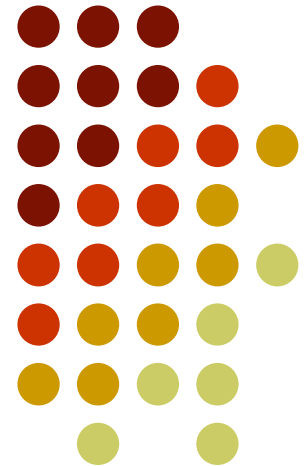


Childhood Malnutrition: Current Solutions and Future Directions

A Focus on Apam Catholic Hospital

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According to the WHO...



- *Poor nutrition contributes to 1 out of 2 deaths (53%) associated with infectious diseases among children under age five in developing countries.*
- *1 out of 2 children in Africa with severe malnutrition dies during hospital treatment due to inappropriate care.*
- *1 out of 4 preschool children suffers from under-nutrition, which can severely affect a child's mental and physical development.*
- *Inappropriate feeding of infants and young children are responsible for one-third of the cases of malnutrition.*



Malnutrition...What is it?

- Defined as “the cellular imbalance between supply of nutrients and energy and the body’s demand for them to ensure growth, maintenance and specific functions”



Malnutrition...Who does it affect?



- **113.4 million** children in under age 5 in the world
- Of these...
 - **112.8 million** are in developing countries
 - **26%** are in Africa
- Ghana
 - ~ **36%** of children under age 5 are stunted for growth
 - **18.8%** of children under age 5 are underweight



Malnutrition...How does it affect children?



- Stunted growth
- Impaired immunity
 - Predisposes to infectious disease
- Changes in brain similar to those encountered with severe mental retardation
- Social and behavioral delay

Methods



- Looked at child weights in Apam and compared to WHO Child Growth Standards
 - Based on measurements from a study using over 12,000 children from Brazil, Ghana, Oman, U.S. and India
 - Children enrolled had to be absent of illness, socioeconomic constraints on growth, breastfeeding infants and nonsmoking mothers

Weight Status of A Sample of Children at Apam Catholic Hospital



	Females	Males	<i>Totals</i>
Underweight at -2 SD	4	5	9
Underweight at -3 SD	2	2	4
Normal	8	16 (1 overweight)	25
<i>Total</i>	14	24	38

Apam Catholic Hospital- Results



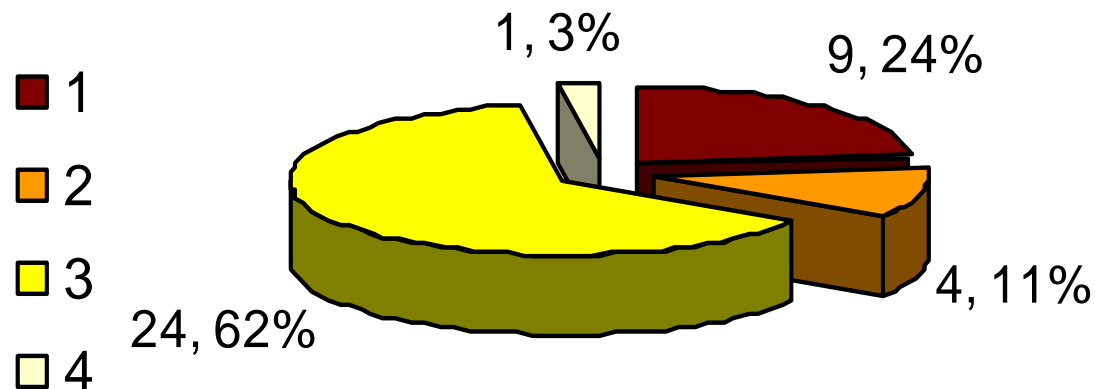
Weight Status of Children- Apam Catholic Hospital

Underweight at -2 SD

Underweight at -3 SD

Normal

Overweight

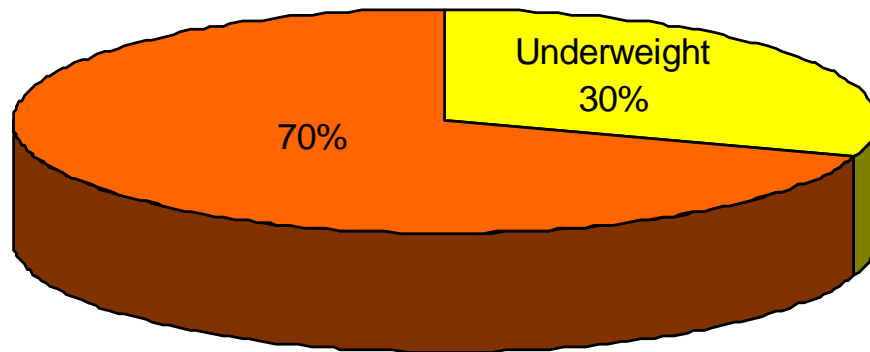




Results...ctd.

- 33/38 of children in sample were under age 5
- 10/33 (30.3%) children under age 5 were underweight

Underweight Children Under Age 5





Discussion

- Small sample size, so no statistical conclusion can be drawn from this data
- Only weight for age data used; no other anthropometric measures used
 - i.e.- height for age, BMI



Discussion

- According to WHO data in 2003...
 - 26.8% of children under age 5 in Ghana were underweight for age
 - 25.8% of children under age 5 in Central region were underweight for age
 - Comparable to 30% derived in this study



Weight Status of Children Under Age 5- WHO Data, 2003 (Adapted from WHO Global Database on Child Growth and Malnutrition)

Region	Sample Size	Weight/Age -3 SD (%)	Weight/Age -2 SD (%)
All	3183	4.7	22.1
Ashanti	613	4.1	20.9
<i>Central</i>	<i>284</i>	<i>3.9</i>	<i>21.9</i>
<i>Greater Accra</i>	<i>337</i>	<i>2.1</i>	<i>11.6</i>
Northern	415	8.7	35.4
Upper East	156	7.7	32.5
Brong Ahafo	356	5.3	20.5
Eastern	333	3.6	17.4
<i>Upper West</i>	<i>95</i>	<i>6.3</i>	<i>26.3</i>
<i>Volta</i>	<i>259</i>	<i>5.0</i>	<i>25.6</i>
Western	333	3.6	17.4

What factors contribute to malnutrition in these areas?



- In Greater Accra, one study showed that ***low birth weight*** and ***lack of maternal education*** are risk factors for being underweight
- Areas for further investigation
 - Difference between regions in diet
 - Difference between regions in interventions for malnutrition

What is being done to address the problem?



- Nutrition Centre in Apam
 - Rehabilitation for severely malnourished children
 - Outpatient treatment- intensive feeding over a period of months
 - Community education about nutrition and feeding
- Child Welfare Clinic at Apam Catholic Hospital
 - Measures child weights
 - Gives immunizations

What more can be done?



- Further anthropometric measures to include height and head circumference for children under age 3
- Height measurement for older children (in order to calculate BMI)
- Prescription of multivitamin at sick visits for all children (to prevent iron deficiency anemia and other vitamin deficiency)
- Parental education programs
- National public health program to supplement infant feeding



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Thank
you!!!
(Medase)

