CHALLENGE:

Change of paradigms:
From clinical treatment approach to prevention

TO REDUCE MALNUTRITION
“You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.”
Buckminster Fuller
PARADIGMS

A set of comprehensive ideas, theories, beliefs, feelings, values and affirmations that give sense to our experience.

Determine what we think

Determine available alternatives to take decisions

Determine what we perceive

Determine how we process information

I will see it when I believe it; I will believe it when I see it.

Determine what we take

Determine what to expect / believe

PARADIGM
HOW DO WE CHANGE CURRENT PARADIGMS FOR REDUCING MALNUTRITION?

How the malnourishment process happens and when is the right time to act!
Diarrea
ARI
Anorexia
Lack of love
Stopping breast feeding
Inappropriate introduction of food
Upper curve
Lower curve
Damage span time
Grafica de crecimiento y desarrollo del niño y niño
Changing old paradigms: Develop a new set of paradigms according to the new approach

**OLD PARADIGM:**
Malnourishment is a status, a state of being.

A child is malnourished when his weight or height/age point is under the third percentile.

So, malnutrition has been defined as a state, a static situation, a point in the growth chart.

**NEW PARADIGM:**
Malnourishment is a process, a tendency.

A child is starting to be malnourished when he/she is not gaining the expected weight.

This applied no matter where on the growth chart the point is. Growth monitoring of an individual child is based on his/her own pattern.
OLD PARADIGM:
Childhood malnutrition is always (or very often) a problem of lack of food in the home.

When a child is malnourished it is assume that his/her family is poor and does not have the money to buy food, nor the capacity to produce it.

So, the solution is give and/or produce food to solve the problem.

NEW PARADIGM:
Lack of food in the home is not the (main) cause of childhood malnourishment.

To be poor means lack of knowledge.

UNICEF has estimated more than 50% malnourishment children is not a problem of food in the home.

So, a child not growing well, the problem is not lack of food until the opposite is demonstrated.
Talla/edad

Edad (meses)

Porcentaje

Talla/edad
Changing old paradigms: Develop a new set of paradigms according to the new approach

**OLD PARADIGM:**
Detection of malnourished children, especially severely affected (III Grade)
Treat them through conventional clinical disease approach
Donate food/Promote family food production

**NEW PARADIGM:**
Childhood malnourishment is not only a problem of food in the home
Detect children with adequate growth or early growth faltering
Educate the mother how to produce healthy growth and correct the incipient malnutrition using available resources
Changing old paradigms: Develop a new set of paradigms according to the new approach

**OLD PARADIGM:**
Priority are children less that 5 years old

Older children severely malnourished are the priority

**NEW PARADIGM:**
Priority are children less that 2 years old, especially since the first six month

Malnourishment is an 18 month process occurring from the 6th to the 24th month of age

Correction of growth faltering is easier at the start
PARADIGM CHANGE
FROM FOOD TO KNOWLEDGE

Knowledge

Food/resources

Appropriate

Not Appropriate

Enough

Not enough

Solutions:

1. Donate/give food
2. Clinical malnourishment treatment

Solutions:

1. Education/behavior change
2. Prevention
And the mother neither recognizes the problem nor knows how to manage it.

During many years we have talked how to alleviate world hunger!!

However the problem is that the malnourished child is not hungry, on the contrary: SHE/E IS ANOREXIC.
Every body is talking about how to increase food production to prevent malnutrition!!

We have found that family with children less than 2 years old and not consuming enough food (calories and proteins per day) can, with some specific advice, augment their children intake by about 300 calories per day with the already food available in the home and reach 100% of their calories and proteins needed.
I t has been found that the probability of a malnourished child dying of the same diseases we are trying to avoid, is many fold higher even in mild states of nutrition damage.

We have worked in preventing children’s death through child survival activities!!

INTERESTING PARADOXES
AIN-C. BASIC OPERATIVE MODEL

Community selection

- Monitoring: % Assistance. % under 3rd percentile
- Complementary activities. Home visits. Other.
- Volunteers training.
- Initial meeting. Volunteers selection
- Household map with pregnant women and under two.
- Baseline study (ELB). % of children under 3rd percentile.
- Follow up study (ES.). % of children under 3rd percentile.

Information

Adjustment
### MONITORING: RESULTS

#### MONITOR: HEALTH AREAS

**MONITORIA**

1. % OF ASISTANCE
2. % UNDER 3TH PERCENTIL (WEIGHT/AGE.)

**INDICATORS: PROVIDERS/SUPERVISOR**

**PROCESS AND SURVEILLANCE**

- % OF ASISTANCE (2/1)100.
- % UNDER 3TH PERCENTIL (WEIGHT/AGE.) (5/2)100.

**EPIDEMIOLOGY SURVEILLANCE**

4. % WITH INAPPROPRIATE GROWTH ((3+4)/2)100.
5. % WITH PERSISTANCE INAPPROPRIATE GROWTH (4/2)100.

#### INFORMATION: LOCAL PROVIDER/VOLUNTEER

1. NO. CHILDREN ANNOTATED IN THE REGISTRATION LIST
2. NO. WHO ASISTED THIS MONTH.
3. NO. CHILDREN WITH INAPPROPRIATE GROWTH.
4. NO. CHILDREN INAPPROPRIATE GROWTH THIS MONTH AND FORMER.
5. NO. CHILDREN UNDER 3TH PERCENTIL
EVALUATION: IMPACT

FOLLOW UP STUDY(ES)

1. % UNDER 3TH PERCENTIL (WEIGHT/AGE.)
2. % UNDER 3TH PERCENTIL (HEIGHT/AGE.)

RECTOR: BUYER/EVALUATOR

IMPACT

PROVIDER: SUPERVISOR/MONITOR

1. % UNDER 3TH PERCENTIL (WEIGHT/AGE.)
2. % UNDER 3TH PERCENTIL (HEIGHT/AGE.)

ESTUDIO DE LÍNEA BASE (ELB)
<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>NAME</th>
<th>DESCRIPTION</th>
<th>NORMAL VALUE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IMPACT (EVALUATION)</strong></td>
<td>Heigth/edad</td>
<td>% under 3th Percentil.</td>
<td>3 %</td>
<td>Every three months and one or two years</td>
</tr>
<tr>
<td></td>
<td>Studies comparison</td>
<td>Studies comparison</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RESULT (MONITORIA)</strong></td>
<td>Peso/edad</td>
<td>% under 3th Percentil.</td>
<td>3 %</td>
<td>Every month and one or two years</td>
</tr>
<tr>
<td></td>
<td>Studies comparison</td>
<td>Studies comparison</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>And regular data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EPIDEMILOGY SUVEILLANCE</strong></td>
<td>Inappropriate growth</td>
<td>No. Inappropriate growth</td>
<td>0 %</td>
<td>Every month</td>
</tr>
<tr>
<td></td>
<td>/No. weigthed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inappropriate</td>
<td>Inappropriate persistent growth</td>
<td>0 %</td>
<td>Every month</td>
</tr>
<tr>
<td></td>
<td>persistent growth</td>
<td>/No. weigthed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inappropriate growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PROCESS</strong></td>
<td>Assistance</td>
<td>No. weigthed/ No. anotated</td>
<td>100 %</td>
<td>Every month</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oportunity</td>
<td>No. Anotated first three month/No. Anotated</td>
<td>100 %</td>
<td>Every month</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MANAGEMENT</strong></td>
<td>Performance quality</td>
<td>Base on quality standars</td>
<td>Specific ranges</td>
<td>Variable</td>
</tr>
<tr>
<td></td>
<td>AIN-C implementation</td>
<td>% of implementation/ No. programmed</td>
<td>100 %</td>
<td>Every six months or a year</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What does “participation intensity” mean?

- Intensity of attendance at weighing/counseling sessions
- Percentage of weighings out of possible 12 per year (or total months of life)
- Non-participants have 0% participation intensity

Additional Z-score increment with increasing AIN-C participation intensity

<table>
<thead>
<tr>
<th>Index</th>
<th>Each additional month of participation</th>
<th>100% participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight-for-height</td>
<td>0.03</td>
<td>0.4</td>
</tr>
<tr>
<td>Height-for-age</td>
<td>0.03</td>
<td>0.3</td>
</tr>
<tr>
<td>Weight-for-age</td>
<td>0.04</td>
<td>0.5</td>
</tr>
</tbody>
</table>