CHILEAN EXPERIENCE IN CHILD UNDERNUTRITION AND STUNTING

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ANTECEDENTS

Optimal nutrition the first 1000 days of life

- Associated with less Infant Mortality
- Well nourish Children learn better at school
- Well nourish adults and healthy are more productive
- A better nutrition is the entry point to end poverty have a better quality of life and sustainable development of a country

Chronic Malnourishment in Children

Probably one of the best indicators to capture the most important dimension of social problems of the country, including poverty, social exclusion and low coverage of social and health services.
CAUSES OF MALNOURISHMENT IN CHILDREN

BASIC CAUSES
- POVERTY
- INEQUITUES
- LACK OF EDUCATION OF THE MOTHER

UNDERLYING CAUSES
- LACK OF ACCESS TO FOODS
- LACK OF HEALTH CARE
- LACK OF WATER AND SANITATION

IMEDIATE CAUSES
- INSUFICIENT FOOD
- INADEQUATE CARE
- DISEASES

INFANT MALNOURISHMENT
HISTORY OF CHRONIC MALNOURISHMENT IN CHILE

First half of XX century

Food insecurity and high malnourishment of mother and children
Infant Mortality was over 200 per 1000 newborn.

Economic situation of the country not very encouraging with a gross internal product of US$1.800 year 1950, very similar to the average of LAC

The state initiates strategies, plans and programs in Health, nutrition and other activities to increase the level of education, social protection and economic development of the country.
NUTRITIONAL STATUS OF CHILE 2016

INFANT MALNOURISHMENT IN CHILE TODAY

• La prevalencia de desnutrición en los niños controlados en el sistema público de salud se mantiene estable desde el año 2005 al año 2016, con valores bajo el 1%.

Informe de vigilancia del estado nutricional de la población bajo control y lactancia materna en el sistema público de salud de Chile, MINSAL, 2016
## UNDERNUTRITION CHILE 1960-2009

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Desnutrición Leve % -2DE a &lt;-1 DE</th>
<th>Desnutrición Moderada % -3 DE a &lt; -2 DE</th>
<th>Desnutrición Grave % &lt; -3DE</th>
<th>Total %</th>
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</thead>
<tbody>
<tr>
<td>1960</td>
<td>31,1</td>
<td>4,1</td>
<td>1,8</td>
<td>37,0</td>
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<tr>
<td>1970</td>
<td>15,8</td>
<td>2,5</td>
<td>1,0</td>
<td>19,3</td>
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<td>1980</td>
<td>10,0</td>
<td>1,4</td>
<td>0,2</td>
<td>11,5</td>
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<td>1990</td>
<td>7,7</td>
<td>0,2</td>
<td>0,1</td>
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<tr>
<td>2000</td>
<td>2,6</td>
<td>0,2</td>
<td>0,1</td>
<td>2,9</td>
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<tr>
<td>2009</td>
<td>2,4</td>
<td>0,4</td>
<td>-</td>
<td>2,8</td>
</tr>
</tbody>
</table>


INFANT AND MATERNAL MORTALITY

Mortalidad Materna Global y por Aborto, Chile 1960-2005
# Drinking Water and Sanitation

## Cobertura nacional de agua y alcantarillado en Chile, 1970-2000

<table>
<thead>
<tr>
<th>Año</th>
<th>Agua Potable %</th>
<th>Alcantarillado</th>
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<tbody>
<tr>
<td>1970</td>
<td>72,3</td>
<td>41,2</td>
</tr>
<tr>
<td>1980</td>
<td>92,5</td>
<td>65,3</td>
</tr>
<tr>
<td>1990</td>
<td>97,3</td>
<td>78,1</td>
</tr>
<tr>
<td>1994</td>
<td>98,9</td>
<td>88,7</td>
</tr>
<tr>
<td>2000</td>
<td>99,2</td>
<td>93,0</td>
</tr>
</tbody>
</table>

MAIN STRATEGIES

SOCAIL POLICIES

- Priority to defeat hunger and malnourishment as a policy of the State
- Continuity of the intervention over different governments from different political parties.
- Strong participation of the Universities and the Scientific societies.
- Social Movement on favor of a quality of nutrition

CONCRETE ACTIONS

- Creation of the National Program of delivering nutritional products linked to health control activities.
- Natality control
- Increase in the educational level of the population
- Increased availability of drinking water and sewerage
- Public-private partnerships in search of technological and productive
POLICIES DEVELOPMENT

Since the middle of XX century public policies were developed focusing in ending malnourishment in Children.

- **Supplementary Feeding Program (PNAC):** Delivery of food to all children served in health.

- **More frequent health controls and reinforced food deliver to children at risk of malnourishment or mild malnutrition** (secondary prevention).

- **Hospitalization in rehabilitation centers of The Corporation of Child Nutrition (CONIN) for those infants with moderate to severe malnutrition** (tertiary prevention).
HISTORY OF CHILEAN POLICIES

- INFANT PATRONAGE
  - 1901: Development of Milk Drop Initiative

- LAW of mandatory workers insurance /”National program of milk deliver”
  - 1906

- Legislation of health control of mother and children less than 2 years and food deliver
  - 1934

- Supplementary Feeding Program (PNAC): (PNAC)
  - 1937

- National Health System
  - 1952

- LAW of mandatory workers insurance /”National program of milk deliver”
  - 1954

- Half a liter of milk campaign
  - 1971-1973

- National Strategy against diarrhea
  - 1976

- Corporation for Child Nutrition (CONIN)
  - 1976
OTHER IMPORTANT MILESTONES

1. Family Planning programs and increase in the educational level of the mother allowed significant reduction in fertility rates a trend that was attenuated in the 90s
2. There was also a significant impact in maternal mortality
3. From the 602 school population feeding programs were developed,
4. Vaccination programs.
5. Nursery networks developed
6. Breast feeding
7. Food fortification: iron, flour,
8. Food programs.
The training of human resources (pre and postgraduate) related to food and nutrition has been prioritized, achieving an adequate level of knowledge and experience in professionals and technicians working in primary care (nurses, nutritionists, midwives, doctors, paramedics).

University Research focus on nutrition  INTA
The efficient nutritional surveillance system has allowed since 1975 a continuous record of the nutritional status of 1.2 million children and pregnant women controlled in the public health system. In addition, a system of information on the prevalence of low birth weight was established in maternity hospitals, which together with the information on infant mortality recorded in Chile since 1904, allowed for very strict monitoring of malnutrition in Chile.
NATIONAL SUPPLEMENTARY FEEDING PROGRAM (PNAC):

It is created in 1954
It presents an uninterrupted history of more than half a century
Its purpose is "to contribute to maintain and improve the nutritional status of the population" It points to the control of malnutrition problems, with an initial emphasis on deficit malnutrition, then incorporating problems of excess malnutrition It is universal in nature and considers a set of preventive and recovery nutritional support activities, through which food is distributed to children under 6, pregnant women and nurses
NATIONAL SUPPLEMENTARY FEEDING PROGRAM (PNAC):

Food delivery is made through the establishments of the Primary Health Care network. Currently, the PNAC distributes a year close to 16 million kilos of various foods throughout the country, where dairy products represent 98% of the total volume.
NATIONAL SUPPLEMENTARY FEEDING PROGRAM (PNAC):

Consultas de salud por enfermeras y cantidad de alimentos entregados,

1957-2002
PROGRAMA NACIONAL DE ALIMENTACIÓN COMPLEMENTARIA (PNAC)

Consultas infantiles por Médico y cantidad de alimentos distribuidos a través del PNAC 1957-2003
LESSONS LEARNED

- PUBLIC POLICIES OF THE STATE.
- SUSTAINABILITY OF INTERVENTIONS.
- STRENGTHENING OF PRIMARY HEALTH CARE AND HUMAN RESOURCES DEVELOPMENT.
- COMMUNITY PARTICIPATION INVOLVING KEY STAKEHOLDERS AND CIVIL SOCIETY.
- PUBLIC PRIVATE PARTNERSHIPS IN THE SEARCH FOR TECHNOLOGICAL AND PRODUCTIVE SOLUTIONS.
- HEALTH: UNIVERSAL HEALTH CHECKS AND FAMILY PLANNING.
- INCREASE THE EDUCATIONAL LEVEL OF THE POPULATION.
- INCREASED AVAILABILITY OF DRINKING WATER AND SEWERAGE.
- MONITORING SYSTEMS TO ASSESS COMPLIANCE WITH THE PROPOSED GOALS.
- SUPPLEMENTARY FOOD PROGRAMS.
¿IS IT POSSIBLE TO ERRADICATE CHILD MALNUTRITION?

- Yes, but together, among several institutions, and with different actions sustained over time.
- The greatest impact is achieved in interventions aimed at pregnant women, lactation period and children under 3 years = damage reversibility stage (1000 days).
- Promotion, primary and secondary prevention.
- Actions to cure.
- Virtuous circle of good nutrition.
The Chilean experience allows us to suggest that it is possible to eradicate child malnutrition before reaching good levels of economic development in the country, with state commitment, alignment of public policies, strengthening of the health system, political will and concrete actions to improve maternal and child health.