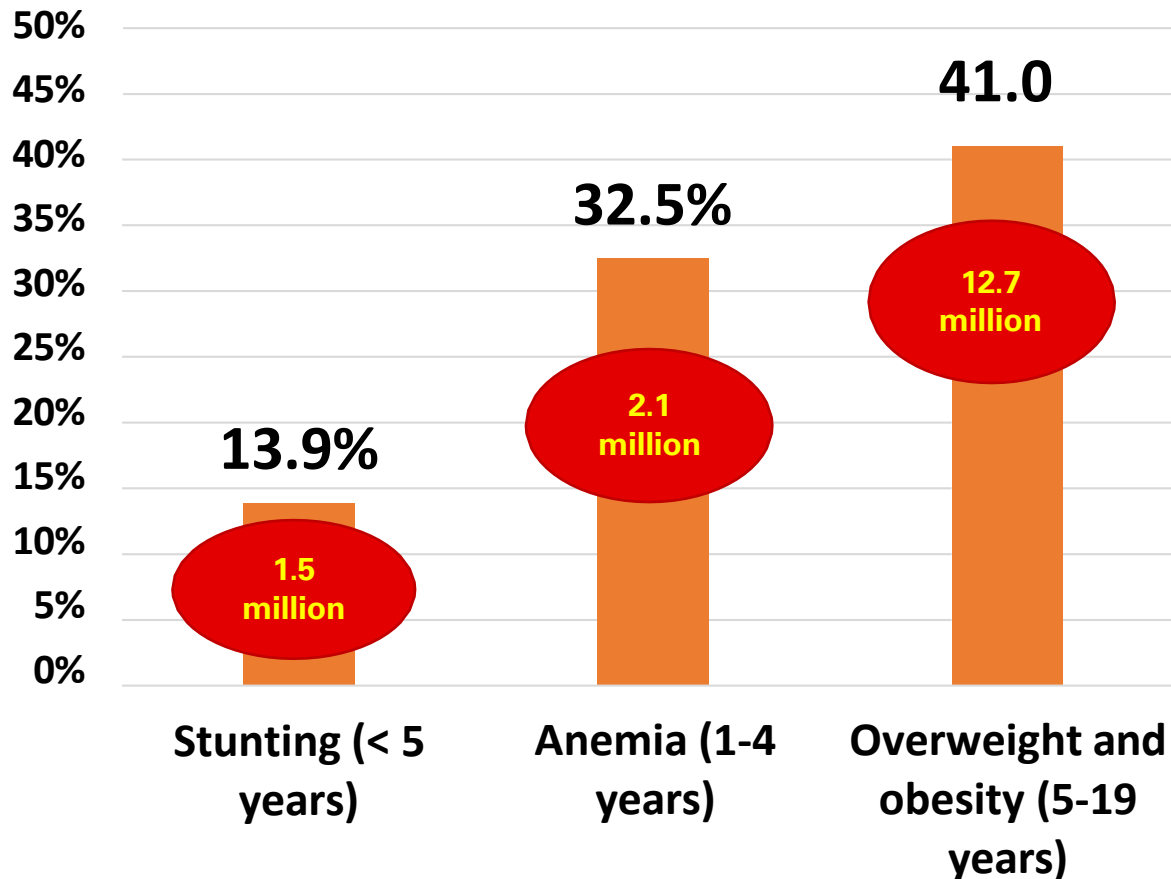


Childhood and Adolescent Overweight and Obesity Prevention and Reduction in Mexico – Investment Case

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UNICEF Mexico

Situation of childhood malnutrition in Mexico

Prevalence of different forms of malnutrition in Mexico
(ENSANUT 2020)

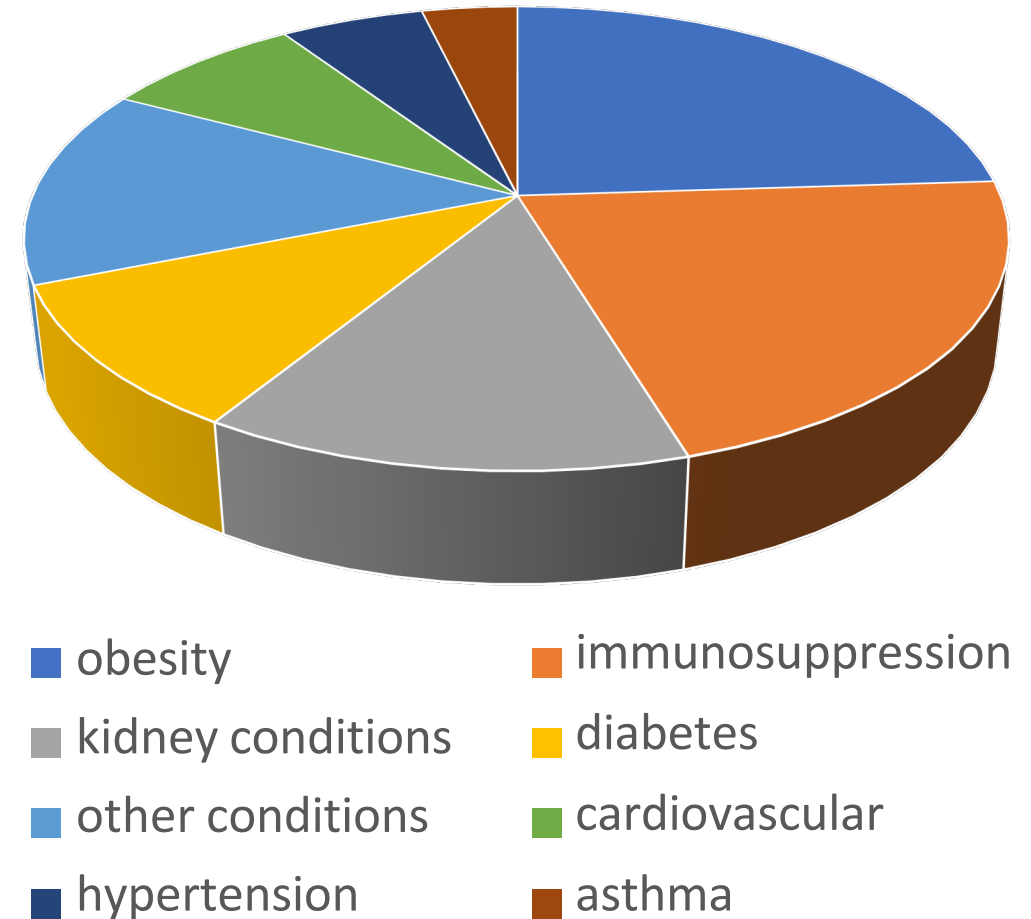


Marta, 11 years, lives in Mexico City

Impact of Covid-19 on Nutrition and Health in Mexico

- 8% mortality among people infected by COVID-19 in Mexico;
- Obesity and other nutrition related conditions (diabetes, hypertension, cardiovascular diseases) are them main co-morbidities among infected and deceased adults;
- Obesity is the main co-morbidity among infected and deceased children, especially in the age range 12-19 years;
- Increase in the levels of all forms of malnutrition during the pandemic;
- Significant increased in the consumption of unhealthy foods and beverages
- Significant increase in screen time, and decline in physical activity

Co-morbidities detected among adolescents (12-19) deceased due to Covid-19 (MOH: Dec 2020 – Jul 2022)



Objectives and Methodology of the Study

Objectives of the investment case

- Measure the **costs of childhood obesity** in terms of **health** (DALY) and **economy** (health care costs, wages and productivity loss, years of life lost)
- Measure the economic and health costs and benefits of **implementing five priority interventions, as well as their cost-effectiveness, and return on investment.**



Methodology

Economic models specific for childhood, used in high income countries:

- *"Assesing Cost-Effectiveness in Obesity"* (ACE-Obesity) examines impacts of childhood obesity on **future mortality**
- *"Early Prevention of Obesity in Childhood"* (EPOCH) measures healthcare costs and wage and productivity losses and assesses the cost-effectiveness of childhood and adolescent overweight and obesity prevention interventions



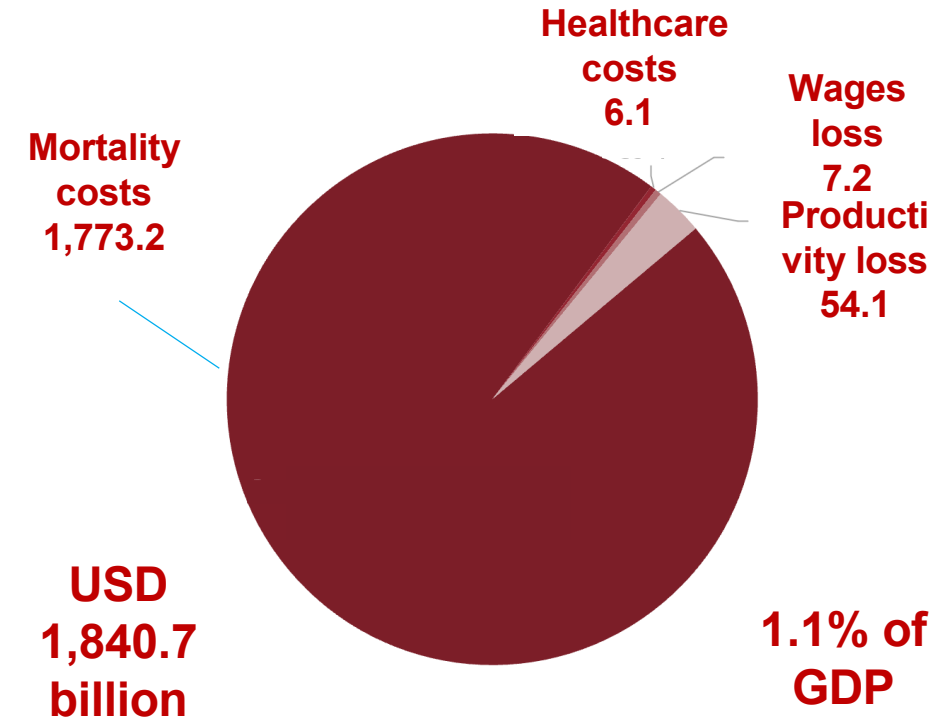
Interventions' implementation period: **2025 to 2090** (longer than previous studies, allows assessing impact of interventions directed to children)

Results: Costs of childhood obesity in Mexico

Status quo

If no further implementation if implemented, the cost of childhood and adolescent obesity was estimated at **143 million disability-adjusted life years** DALYs)

Type of costs	Total cost USD (billion)	Average lifetime cost per child with obesity (USD)
Direct healthcare costs		
During childhood	1.3	158.7
During adulthood	4.9	611.7
Total direct healthcare costs	6.1	770.4
Indirect costs		
Loss in lifetime wages	7.2	911.2
Productivity loss	54.1	5,948.4
Mortality costs	1,773.2	194,815.2
Total indirect costs	1,834.6	201,674.8
Total	1,840.7	202,445.2



Additionally, there will be **12.4 million children 6-17 years with psychosocial challenges** in school and about **25.5 million cases of school absence**

5 selected interventions

Intervention	Target
Breastfeeding promotion	<ul style="list-style-type: none"> Scale up the baby-friendly hospital initiative (BFHI) from 20% to 80% Increase coverage of breastfeeding promotion at community level from 10% to 80%
Fiscal interventions	<ul style="list-style-type: none"> Increase the existing 10% tax level to 20% Start a 20% subsidy on healthy foods
Strengthening the restrictions on marketing unhealthy foods to children	<p>Strengthen existing regulation by:</p> <ol style="list-style-type: none"> 1) Harmonize with the new front of pack nutrition warning label 2) Cover all programs and times on TV; cover other channels such as internet, points of sale, indirect marketing (<i>product placement</i>, gifts, etc.) 3) Implement systematized mechanisms of enforcement and sanctions
Social marketing in schools	Implement a campaign in all schools in the country to promote healthy diets and physical activities
Strengthening school-based interventions	<p>Strengthen the 2014 national guidelines to improve school food environments by:</p> <ol style="list-style-type: none"> 1) Harmonize with the new front of pack nutrition warning label 2) Implement systematized training, enforcement and sanction

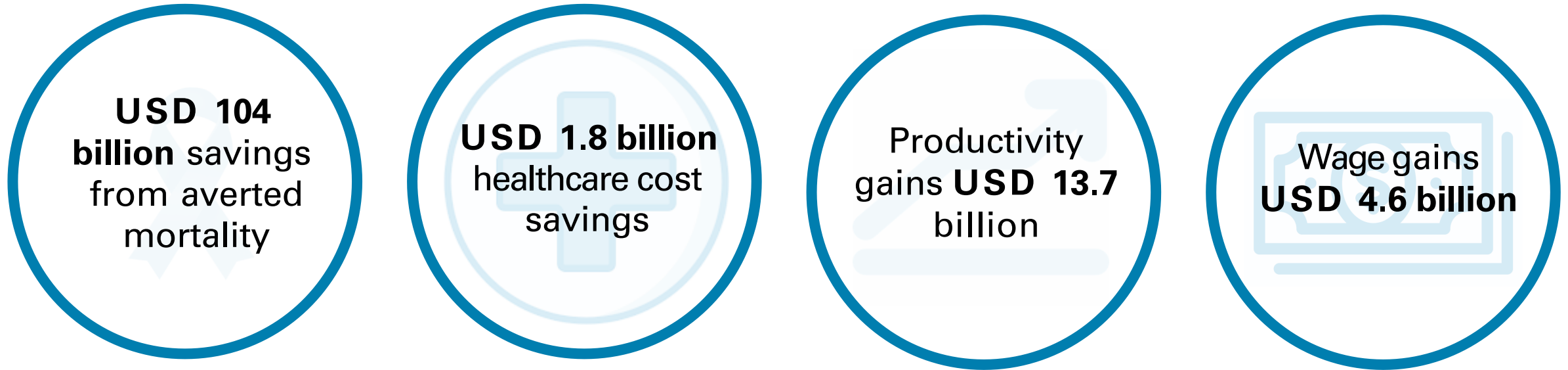
WHO (Report of the Commission on Ending Childhood Obesity, 2016)

https://apps.who.int/iris/bitstream/handle/10665/204176/9789241510066_eng.pdf?sequence=1&isAllowed=y

Results: Savings and Gains

5 interventions

8.6 million DALYs saved. The economic benefits would amount to a total of **USD 124 billion** in the time covered by the cohort, that is, a benefit of **USD 2.1 billion** each year:



Additionally, **6.2 million** cases of children with psychosocial challenges in School would be prevented, as well as **12.8 million** cases of school absence

Results: cost-effectiveness and return on investment

5 interventions

All interventions were found cost-effective in reducing overweight and obesity

Intervention	Reduction in DALY (million)	Cost-effectiveness (USD to avoid 1 DALY)*			Return on investment (USD)		
	At 65 years	At 30 years	At 50 years	At 65 years	At 30 years	At 50 years	At 65 years
Breastfeeding promotion	0.3	2,605	598	48	23	136	324
Fiscal interventions	3.8	31	35	3	728	2,558	4,876
Strengthening marketing regulation	2.2	91	92	8	269	987	1,929
Social marketing in schools	0.9	1,760	2,150	181	13	42	80
School-based interventions	1.3	258	215	20	101	377	725
5 interventions	8.6	320	331	28	72	264	515

** If the cost to avert one DALY is less than three times GDP per capita, the intervention is considered cost-effective*

Mexico GDP per capita: USD 9,950.2 (2019)

72 (59-75) 264 (222-271) 515 (438-523)



Conclusions and Recommendations

- The study indicates that the **health and economic impacts of childhood overweight and obesity are substantial.**
- The combined implementation of the five interventions analyzed would be **highly cost-effective in all time horizons.**
- Although several measures have already been implemented, it is necessary to **strengthen** their **design and scale-up** to increase their impact.
- This investment would constitute a **solid and coherent public policy response to the national challenge** posed by the increase in the rates of child and adolescent overweight in Mexico.



Moving forward

In México, the Government with Support from UN, the Academia and Civil Society has recently made **important progress**:

- **Marketing regulations:** publication of a strengthen version of the General Health Law's Marketing regulation
- **School-based interventions:** ongoing reform of the general education law and national guidelines on school food environments
- **Social marketing in schools:** Implementation of Vida Saludable
- **Promotion of Breastfeeding:** first 1000 days national strategy



*The life of Marta and her friends
is changing...*

A photograph of three young children, likely of Mexican descent, smiling and looking towards the camera. They are in an outdoor setting that appears to be a slum or informal settlement, with cluttered buildings and laundry visible in the background. The child on the right is a girl with long dark hair wearing a pink shirt. The child in the middle is a younger child with dark hair wearing a yellow shirt. The child on the left is a girl with dark hair wearing a white shirt.

¡GRACIAS!

<https://www.unicef.org/mexico/temas/nutrición>