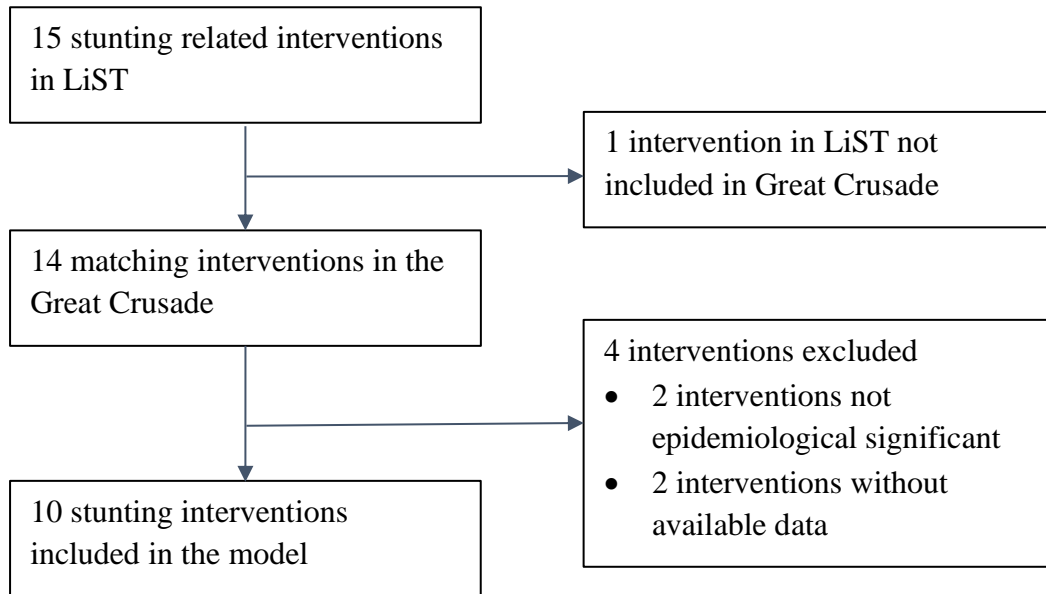


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## INTERVENTIONS INCLUDED IN THE MODEL



## MODEL INPUTS

### Demographics

*First year population single age*

Age	Male	Female		Age	Male	Female
0	193,140	184,360		41	87,311	97,985
1	193,084	184,827		42	83,725	95,009
2	193,486	185,541		43	80,193	92,056
3	192,847	184,749		44	76,729	89,056
4	191,977	183,962		45	73,357	85,974
5	191,156	183,246		46	70,112	82,802
6	190,401	182,608		47	66,987	79,328
7	188,802	181,171		48	63,960	75,996
8	186,540	179,120		49	61,013	72,636
9	185,852	178,580		50	58,159	69,338
10	183,284	176,249		51	55,397	66,175
11	182,564	175,701		52	52,767	63,202
12	181,812	175,138		53	50,260	60,413
13	181,017	174,554		54	47,895	57,801
14	180,174	173,973		55	45,699	55,357
15	179,270	173,387		56	43,737	53,440
16	178,264	172,757		57	41,949	51,298
17	177,084	172,004		58	40,261	49,220
18	182,554	177,758		59	38,640	47,185
19	185,290	180,995		60	37,047	45,184
20	183,174	179,629		61	35,475	43,235
21	175,274	172,717		62	33,937	41,329
22	170,249	168,605		63	32,441	39,478
23	165,229	164,481		64	30,997	37,685
24	162,470	162,513		65	29,603	35,944
25	159,398	160,214		66	28,280	34,255
26	155,974	157,453		67	27,022	32,624
27	152,121	154,213		68	25,821	31,032
28	147,939	150,618		69	24,654	29,469
29	143,401	146,664		70	23,426	27,881
30	138,517	142,395		71	22,346	26,413
31	133,356	137,920		72	21,259	24,963
32	128,035	133,330		73	20,142	23,507
33	122,667	128,704		74	18,985	22,028
34	117,383	124,132		75	17,793	20,531
35	112,281	119,709		76	16,569	19,046
36	107,450	115,479		77	15,346	17,601
37	102,928	111,485		78	14,133	16,212
38	98,734	107,772		79	12,943	14,884
39	94,718	104,258		80+	90,535	108,890

<b>40</b>	90,962	101,046		<b>Total</b>	8,297,763	8,560,479
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Source: Estimaciones y *Proyecciones Nacionales de Población Metodología y Principales Resultados*. Guatemala City; 2019. (2019 Guatemalan Census)

Supplement to: Tschida S, Cordon A, Asturias G, et al. Projecting the impact of nutrition policy to improve child stunting: a case study in Guatemala using the Lives Saved Tool. *Glob Health Sci Pract.* 2021;9(4).

<https://doi.org/10.9745/GHSP-D-20-00585>

*Total fertility rate*

	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
<b>TFR</b>	2.6	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1

Source: 2019 Guatemalan census

Supplement to: Tschida S, Cordon A, Asturias G, et al. Projecting the impact of nutrition policy to improve child stunting: a case study in Guatemala using the Lives Saved Tool. *Glob Health Sci Pract.* 2021;9(4).

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*Age-specific fertility rate*

Age	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>15-19</b>	12.17	12.12	12.08	12.02	11.90	11.90	11.83	11.76	11.68	11.60	11.51
<b>20-24</b>	24.27	24.24	24.21	24.18	24.10	24.10	24.06	24.01	23.96	23.90	23.85
<b>25-29</b>	23.55	23.58	23.61	23.64	23.73	23.73	23.77	23.82	23.87	23.93	23.99
<b>30-34</b>	19.38	19.42	19.46	19.52	19.64	19.64	19.71	19.78	19.87	19.96	20.05
<b>35-39</b>	13.08	13.09	13.10	13.12	13.16	13.16	13.18	13.21	13.23	13.26	13.28
<b>40-44</b>	6.10	6.09	6.08	6.07	6.05	6.05	6.03	6.02	6.00	5.99	5.97
<b>45-49</b>	1.47	1.46	1.45	1.44	1.42	1.42	1.41	1.40	1.38	1.37	1.36
<b>Total</b>	100.0 2	100	99.99	99.99	100	100	99.99	100	99.99	100.01	100.0 1

Source: Default data, World Population Prospects - Population Division - United Nations.

<https://population.un.org/wpp/>

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*Sex ratio at birth*

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Birth ratio</b>	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7	103.7

Source: Calculated by authors using microdata from: International Ministerio de Salud Pública y Asistencia Social (MSPAS), Instituto Nacional de Estadística (INE), ICF International. *Encuesta Nacional de Salud Materno Infantil 2014-2015. Informe Final;* 2017. (ENSMI)



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*Life expectancy*

	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
<b>Male</b>	69.9	70.1	70.3	70.5	70.7	70.8	71	71.2	71.4	71.6	71.8
<b>Female</b>	76.4	76.6	76.8	77	77.1	77.3	77.5	77.7	77.9	78	78.2

Source: 2019 Guatemalan census

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*International migration*

	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
<b>Male</b>	-21,098.20	-19,643.90	-18,346.30	-17,116.30	-16,030.90
<b>Female</b>	-17,876.60	-17,380.20	-16,827.10	-16,296.50	-15,711.40

	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>
<b>Male</b>	-15,153.70	-14,323.70	-13,608.60	-12,928.60	-12283.6
<b>Female</b>	-14,998.10	-14,317.80	-13,602.60	-12,922.40	-12277.2

	<b>2030</b>
<b>Male</b>	-11668.6
<b>Female</b>	-11662.1

Source 2019 Guatemalan census

## Health, Mortality and Economic Status

### Baseline child health status

Meningococcal A vaccine recommended

Yes       No

Nutrition Deficiencies

Input	Value	Source
Percent vitamin A deficient	0.0%	Instituto de Nutrición de Centro América y Panamá (INCAP). Sistema de Vigilancia Epidemiológica de Salud y Nutrición (SIVESNU). Guatemala: INCAP; 2016
Percent zinc deficient	13.3%	SIVESNU 2016

Status at birth (percent of total births)

Input	Value	Source
Preterm: Small for gestational age (PEG)	1.61%	Default data  <a href="#">Lee AC, Katz J, Blencowe H, et al. National and regional estimates of term and preterm babies born small for gestational age in 138 low-income and middle-income countries in 2010. <i>Lancet Global Health</i> 2013; 1(1): e26-36. <a href="http://www.ncbi.nlm.nih.gov/pubmed/25103583">http://www.ncbi.nlm.nih.gov/pubmed/25103583</a>.</a>
Preterm: Appropriate for gestational age (AEG)	6.10%	
Term: Small for gestational age (PEG)	11.96%	
Term: Appropriate for gestational age (AEG)	80.33%	
Total	100%	

Incidence (Number of cases per child per year)

	< 1 month	1-5 months	6-11 months	12-23 months	24-59 months	Source
Incidence of diarrhea	3.4	3.2	3.2	3.2	3.2	Default data  <a href="#">Fischer Walker CL, Rudan I, Liu L, et al. Global burden of childhood pneumonia and diarrhoea. <i>The Lancet</i> 2013; 381(9875): 1405-16. <a href="http://www.ncbi.nlm.nih.gov/pubmed/23582727">http://www.ncbi.nlm.nih.gov/pubmed/23582727</a>.</a>
Incidence of severe diarrhea	0.062	0.062	0.062	0.062	0.062	
Incidence of severe pneumonia	0.027	0.027	0.027	0.027	0.027	Default data  <a href="#">Rudan I, O'Brien KL, Nair H, et al. <i>Epidemiology and etiology of childhood</i></a>

						<p><a href="#">pneumonia in 2010: Estimates of incidence, severe morbidity, mortality, underlying risk factors and causative pathogens for 192 countries. Journal of Global Health 2013; 3(1).</a>  <a href="http://www.ncbi.nlm.nih.gov/pubmed/23826505">http://www.ncbi.nlm.nih.gov/pubmed/23826505</a>. (Online supplementary material.)</p>
<b>Incidence of meningitis</b>	0.001	0.001	0.001	0.001	0.001	<p>Default data</p> <p>Calculated from the following sources:</p> <p>Davis S, Feikin D, Johnson HL. The effect of Haemophilus influenzae type B and pneumococcal conjugate vaccines on childhood meningitis mortality: A systematic review. BMC Public Health 2013; 13(Suppl 3): S21.  <a href="http://www.ncbi.nlm.nih.gov/pubmed/24564188">http://www.ncbi.nlm.nih.gov/pubmed/24564188</a>.</p> <p>See also the WHO online companion table referenced in the following articles: Watt JP, Wolfson LJ, O'Brien KL, et al. Burden of disease caused by Haemophilus influenzae type b in children younger than 5 years: Global estimates. Lancet 2009; 374(9693): 903-911.  <a href="http://www.ncbi.nlm.nih.gov/pubmed/19748399">http://www.ncbi.nlm.nih.gov/pubmed/19748399</a>.</p> <p>O'Brien KL, Wolfson LJ, Watt JP, et al. Burden of disease caused by Streptococcus pneumoniae in children younger than 5 years: Global estimates. Lancet 2009; 374(9693): 893-902.  <a href="http://www.ncbi.nlm.nih.gov/pubmed/19748398">http://www.ncbi.nlm.nih.gov/pubmed/19748398</a>.</p>

*Nutrition status distributions*

Stunting

	<b>Percent</b>	<b>Source</b>
<b>Stunting</b>	46.47%	Automatically calculated from stunting distribution.

<b>Stunting distribution</b>	<b>&lt;1 month</b>	<b>1-5 months</b>	<b>6-11 months</b>	<b>12-23 months</b>	<b>24-59 months</b>	<b>Source</b>
<b>Greater than 1 SD less than the median norm</b>	36.03%	36.03%	31.34%	19.07%	19.84%	Calculated by authors using microdata from ENSMI 2014-2015.
<b>Between 1 and 2 SDs less than the median norm</b>	34.01%	34.01%	34.24%	30.16%	30.37%	
<b>Between 2 and 3 SDs less than the median norm</b>	22.49%	22.49%	23.94%	29.07%	31.94%	
<b>More than 3 standard deviations less than the median norm</b>	7.466%	7.466%	10.49%	21.7%	17.85%	
<b>Total</b>	100.00%	100.00%	100.01%	100.00%	100.00%	

### *Pathogens*

#### Diarrhea – distribution among all cases

	<b>1-5 months</b>	<b>6-11 months</b>	<b>12-23 months</b>	<b>24-59 months</b>
<b>Rotavirus</b>	5.5%	5.5%	5.5%	5.5%
<b>Pathogen B</b>	0%	0%	0%	0%
<b>Pathogen C</b>	0%	0%	0%	0%
<b>All other pathogens</b>	94.5%	94.5%	94.5%	94.5%
<b>Total</b>	100%	100%	100%	100%

#### Diarrhea – distribution among severe cases

	<b>1-5 months</b>	<b>6-11 months</b>	<b>12-23 months</b>	<b>24-59 months</b>
<b>Rotavirus</b>	0%	0%	0%	0%
<b>Pathogen B</b>	23.4%	23.4%	23.4%	23.4%
<b>Pathogen C</b>	0%	0%	0%	0%
<b>All other pathogens</b>	76.6%	76.6%	76.6%	76.6%
<b>Total</b>	100%	100%	100%	100%

#### Diarrhea – distribution among fatal cases

	<b>1-5 months</b>	<b>6-11 months</b>	<b>12-23 months</b>	<b>24-59 months</b>
<b>Rotavirus</b>	23.4%	23.4%	23.4%	23.4%
<b>Pathogen B</b>	0%	0%	0%	0%
<b>Pathogen C</b>	0%	0%	0%	0%
<b>All other pathogens</b>	76.6%	76.6%	76.6%	76.6%
<b>Total</b>	100%	100%	100%	100%

Source: Default data, [Fischer Walker CL, Rudan I, Liu L, et al. Global burden of childhood pneumonia and diarrhoea. \*The Lancet\* 2013; 381\(9875\): 1405-16. <http://www.ncbi.nlm.nih.gov/pubmed/23582727>](#)

#### Pneumonia – distribution among severe cases

	<b>1-5 months</b>	<b>6-11 months</b>	<b>12-23 months</b>	<b>24-59 months</b>
<b>H. influenzae type b</b>	4%	4%	4%	4%
<b>S. pneumoniae</b>	7%	7%	7%	7%
<b>Influenza virus</b>	10.7%	10.7%	10.7%	10.7%
<b>All other pathogens</b>	78.3%	78.3%	78.3%	78.3%
<b>Total</b>	100%	100%	100%	100%

#### Pneumonia – distribution among fatal cases

	<b>1-5 months</b>	<b>6-11 months</b>	<b>12-23 months</b>	<b>24-59 months</b>
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<b>H. influenzae type b</b>	21.3%	21.3%	21.3%	21.3%
<b>S. pneumoniae</b>	32.8%	32.8%	32.8%	32.8%
<b>Influenza virus</b>	10.7%	10.7%	10.7%	10.7%
<b>All other pathogens</b>	35.2%	35.2%	35.2%	35.2%
<b>Total</b>	100%	100%	100%	100%

Source: Default data, [Rudan I, O'Brien KL, Nair H, et al. Epidemiology and etiology of childhood pneumonia in 2010: Estimates of incidence, severe morbidity, mortality, underlying risk factors and causative pathogens for 192 countries. Journal of Global Health 2013; 3\(1\). http://www.ncbi.nlm.nih.gov/pubmed/23826505](http://www.ncbi.nlm.nih.gov/pubmed/23826505). Please refer to the online supplementary document

#### Meningitis – distribution among severe cases

	<b>1-5 months</b>	<b>6-11 months</b>	<b>12-23 months</b>	<b>24-59 months</b>
<b>H. influenzae type b</b>	46%	46%	46%	46%
<b>S. pneumoniae</b>	52%	52%	52%	52%
<b>N. meningitis type A</b>	2%	2%	2%	2%
<b>All other pathogens</b>	0%	0%	0%	0%
<b>Total</b>	100%	100%	100%	100%

#### Meningitis – distribution among fatal cases

	<b>1-5 months</b>	<b>6-11 months</b>	<b>12-23 months</b>	<b>24-59 months</b>
<b>H. influenzae type b</b>	46%	46%	46%	46%
<b>S. pneumoniae</b>	52%	52%	52%	52%
<b>N. meningitis type A</b>	2%	2%	2%	2%
<b>All other pathogens</b>	0%	0%	0%	0%
<b>Total</b>	100%	100%	100%	100%

Source: Default data, [Davis S, Feikin D, Johnson HL. The effect of Haemophilus influenzae type B and pneumococcal conjugate vaccines on childhood meningitis mortality: A systematic review. BMC Public Health 2013; 13\(Suppl 3\): S21. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3847464/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3847464/)

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### Baseline child mortality

#### Mortality rate

	<b>Mortality rate</b>
<b>Neonatal</b>	11.58
<b>Infant</b>	20.56
<b>Child</b>	24.19

Source: Calculated by authors using historical data from: UN Inter-agency Group for Child Mortality Estimation. CME info - Child Mortality Estimates. <http://childmortality.org>.

#### Percent of child deaths by proximate cause

<b>Neonatal</b>	<b>Percent</b>	<b>Post neonatal</b>	<b>Percent</b>
<b>Diarrhea</b>	0.4%	<b>Diarrhea</b>	13.1%
<b>Sepsis</b>	16.8%	<b>Pneumonia</b>	23.5%
<b>Pneumonia</b>	5.9%	<b>Meningitis</b>	1.9%
<b>Asphyxia</b>	25.0%	<b>Measles</b>	0.0%
<b>Prematurity</b>	27.2%	<b>Malaria</b>	0.0%
<b>Tetanus</b>	0.0%	<b>Pertussis</b>	1.0%
<b>Congenital anomalies</b>	16.5%	<b>AIDS</b>	1.2%
<b>Other</b>	8.3%	<b>Injury</b>	16.7%
<b>Total</b>	100.0%	<b>Other</b>	42.6%
		<b>Total</b>	100.0%

Source: Default data, WHO estimates for years 2000-2017.

[https://www.who.int/healthinfo/global\\_burden\\_disease/estimates/en/index2.html](https://www.who.int/healthinfo/global_burden_disease/estimates/en/index2.html)

Liu L, Oza S, Hogan D, et al. Global, regional, and national causes of under-5 mortality in 2000-15: an updated systematic analysis with implications for the Sustainable Development Goals. *Lancet* 2016.

<https://www.ncbi.nlm.nih.gov/pubmed/27839855>



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*Household status*

Poverty/food security

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Percentage of the population that is food insecure</b>	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%

Source: SIVESNU 2015

## **Intervention Coverages**

### *Notes*

- Abbreviations
  - HT = Historical trends
  - GC = Great Crusade
- Coverage levels in the Great Crusade model remain static after 2024.
- The Great Crusade fertility and aspirational model are not included in the tables for clarity.
  - The Great Crusade fertility model has the same coverages as the Great Crusade model.
  - Coverage levels in the Aspirational model reach 90.0% in 2024 and remain static till 2030.
- Coverages are linearly interpolated.

*Pregnancy*

Nutritional

<b>Input</b>	<b>Baseline (2020)</b>	<b>HT (2024)</b>	<b>HT (2030)</b>	<b>GC (2024)</b>	<b>Source</b>
<b>Calcium supplementation in pregnancy</b>	No data				
<b>Multiple micronutrient supplementation in pregnancy</b>	82.3%	82.3%	82.3%	90.0%	SIVESNU 2018

## Breastfeeding

### Breastfeeding Prevalence

Input	Baseline (2020)	HT (2024)	HT (2030)	GC (2024)	Source
Prevalence of early initiation of breastfeeding	66.2%	68.6%	72.0%	71.2%	Projected value calculated by authors using historical ENSMI data.

	<1 month (2020)	HT (2024)	HT (2030)	GC (2024)
Exclusive	63.7%	65.1%	68.4%	67.7%
Predominant	13.5%	12.9%	11.5%	12.3%
Partial	19.1%	18.5%	17.1%	17.4%
None	3.7%	3.5%	3.0%	2.6%
Total	100.0%	100.0%	100.0%	100.0%

	1-5 months (2020)	HT (2024)	HT (2030)	GC (2024)
Exclusive	52%	53.9%	56.7%	56.0%
Predominant	16.9%	14.7%	14.7%	15.0%
Partial	25.8%	23.5%	23.5%	23.9%
None	5.3%	5.1%	5.1%	5.1%
Total	100.0%	100.0%	100.0%	100.0%

	6-11 months (2020)	HT (2024)	HT (2030)	GC (2024)
Any type	90.0%	90.0%	90.0%	90.0%
None	10.0%	10.0%	10.0%	10.0%
Total	100.0%	100.0%	100.0%	100.0%

	12-23 months (2020)	HT (2024)	HT (2030)	GC (2024)
Any type	71.3%	71.6%	72.1%	71.6%
None	28.7%	28.4%	27.9%	28.4%
Total	100.0%	100.0%	100.0%	100.0%

Source: Projected value calculated by authors using historical ENSMI data.

*Preventative*

Food and supplementation

Input	Baseline (2020)	HT (2024)	HT (2030)	GC (2024)	Source
<b>Comp. feeding (only education)</b>	62.6%	62.6%	62.6%	72.6%	ENSMI 2014-2015
<b>Comp. feeding (feeding &amp; education)</b>	62.6%	62.6%	62.2%	72.6%	ENSMI 2014-2015
<b>Vitamin A supplementation for children</b>	26.0%	26.0%	26.0%	51.0%	Vitamin A Deficiency in Children - UNICEF Data. <a href="https://data.unicef.org/topic/nutrition/vitamin-a-deficiency/">https://data.unicef.org/topic/nutrition/vitamin-a-deficiency/</a> . Published 2019
<b>Zinc supplementation for children</b>	86.1%	86.1%	86.1%	90.0%	SIVESNU 2018

WASH (water, sanitation and hygiene)

Input	Baseline (2020)	HT (2024)	HT (2030)	GC (2024)	Source
<b>Basic sanitation</b>	65.4%	65.7%	66.2%	90.0%	Projected value calculated by authors using historical data from:  WHO/UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation ( <a href="https://washdata.org/">https://washdata.org/</a> ). Data are available for all countries from 1996 to 2015.
<b>Point-of-use water filter or piped in water</b>	89.2%	91.4%	93.9%	91.4%	
<b>Handwashing with soap</b>	76.9%	77.1%	77.4%	90.0%	

Supplement to: Tschida S, Cordon A, Asturias G, et al. Projecting the impact of nutrition policy to improve child stunting: a case study in Guatemala using the Lives Saved Tool. *Glob Health Sci Pract.* 2021;9(4).

<https://doi.org/10.9745/GHSP-D-20-00585>

### *Vaccines*

<b>Input</b>	<b>Baseline (2020)</b>	<b>HT (2024)</b>	<b>HT (2030)</b>	<b>GC (2024)</b>	<b>Source</b>
<b>Rotavirus (2 doses)</b>	88.4%	90.0%	90.0%	90.0%	Projected value calculated by authors using historical data from ENSMI.

Supplement to: Tschida S, Cordon A, Asturias G, et al. Projecting the impact of nutrition policy to improve child stunting: a case study in Guatemala using the Lives Saved Tool. *Glob Health Sci Pract.* 2021;9(4). <https://doi.org/10.9745/GHSP-D-20-00585>

*Curative*

<b>Input</b>	<b>Baseline (2020)</b>	<b>Source</b>
<b>Kangaroo mother care (KMC)</b>	No data	

### *Fertility Risks*

#### Maternal age

<b>Less than 18 years old</b>	<b>2020*</b>	<b>2030*</b>	<b>GC (fertility) 2030</b>
<b>First birth</b>	8.0%	7.8%	0.0%
<b>Second and third birth</b>	0.9%	0.6%	0.0%
<b>Greater than third birth</b>	0.0%	0.0%	0.0%
<b>18 to 34 years old</b>			
<b>First birth</b>	26.5%	32.1%	39.9%
<b>Second and third birth</b>	39.5%	39.2%	39.8%
<b>Greater than third birth</b>	14.5%	9.1%	9.1%
<b>35 to 49 years old</b>			
<b>First birth</b>	0.5%	0.9%	0.9%
<b>Second and third birth</b>	3.3%	5.9%	5.9%
<b>Greater than third birth</b>	6.8%	4.4%	4.4%
<b>Total</b>	100%	100%	100.0%

Source: Calculated by authors using microdata from ENSMI 2014-2015.

#### Birth intervals

<b>Birth intervals</b>	<b>2020*</b>	<b>2030*</b>	<b>GC (fertility) 2030</b>
<b>First birth</b>	35.4%	43.3%	43.3%
<b>Less than 18 months</b>	3.0%	2.0%	0.0%
<b>18-23 months</b>	6.6%	4.3%	0.0%
<b>24 months or more</b>	55.0%	50.4%	56.7%
<b>Total</b>	100.0%	100%	100%

Source: Calculated by authors using microdata from ENSMI 2014-2015.

\*Note: The historical trends, Great Crusade, and aspirational models have the same fertility risk.



## MODEL OUTPUTS

### Stunting Prevalence

Stunting Prevalence Median % (95% CI)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Historical Trends</b>	46.48 (46.48 - 46.48)	46.51 (46.49 - 46.52)	46.51 (46.46 - 46.55)	46.38 (46.3 - 46.43)	46.39 (46.26 - 46.47)	46.25 (46.08 - 46.36)	46.29 (46.08 - 46.43)	46.19 (45.94 - 46.36)	46.11 (45.81 - 46.3)	46.18 (45.84 - 46.4)	46.09 (45.71 - 46.33)
<b>Great Crusade</b>	46.48 (46.48 - 46.48)	46.37 (46.3 - 46.42)	46.16 (45.99 - 46.27)	45.75 (45.46 - 45.93)	45.41 (44.98 - 45.68)	45.03 (44.5 - 45.37)	44.91 (44.3 - 45.3)	44.72 (44.06 - 45.15)	44.62 (43.93 - 45.07)	44.71 (43.99 - 45.17)	44.63 (43.89 - 45.11)
<b>Great Crusade (fertility)</b>	46.48 (46.48 - 46.48)	46.37 (46.29 - 46.42)	46.16 (45.96 - 46.28)	45.74 (45.4 - 45.95)	45.39 (44.88 - 45.71)	45.01 (44.37 - 45.41)	44.87 (44.13 - 45.34)	44.68 (43.86 - 45.2)	44.58 (43.69 - 45.13)	44.66 (43.71 - 45.24)	44.57 (43.57 - 45.18)
<b>Aspirational</b>	46.48 (46.48 - 46.48)	46.25 (46.12 - 46.33)	45.81 (45.49 - 46.02)	45.06 (44.51 - 45.44)	44.28 (43.45 - 44.85)	43.56 (42.52 - 44.28)	43.19 (42.01 - 44.02)	42.88 (41.61 - 43.78)	42.75 (41.44 - 43.68)	42.83 (41.5 - 43.77)	42.76 (41.41 - 43.71)

## Stunting Cases Averted

Stunting Cases Averted	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Historical Trends</b>	0 (0 - 0)	328 (126 - 680)	757 (228 - 1,590)	1,381 (457 - 2,803)	1,997 (646 - 4,196)	2,640 (766 - 5,659)	3,307 (924 - 7,087)	3,912 (1,038 - 8,418)	4,479 (1,148 - 9,662)	5,010 (1,272 - 10,836)	5,496 (1,362 - 11,934)
<b>Great Crusade</b>	0 (0 - 0)	2,938 (2,042 - 4,290)	7,254 (5,128 - 10,384)	12,878 (9,246 - 18,153)	19,684 (14,292 - 27,303)	24,308 (17,683 - 33,587)	27,584 (20,082 - 38,095)	29,551 (21,413 - 40,947)	30,178 (2,1691 - 42,078)	30,345 (21,663 - 42,546)	30,313 (21,466 - 42,772)
<b>Great Crusade (fertility)</b>	0 (0 - 0)	2,973 (2,000 - 4,462)	7,324 (5,022 - 10,767)	13,027 (9,041 - 18,820)	19,884 (13,987 - 28,356)	24,637 (17,254 - 35,116)	28,038 (19,538 - 40,140)	30,098 (20,724 - 43,549)	30,853 (20,838 - 45,302)	31,120 (20,648 - 46,349)	31,213 (20,277 - 47,222)
<b>Aspirational</b>	0 (0 - 0)	5,254 (3,572 - 7,631)	13,760 (9,598 - 19,489)	25,324 (17,975 - 35,240)	39,632 (28,567 - 54,259)	49,992 (36,174 - 68,041)	57,128 (41,473 - 77,443)	61,107 (44,284 - 82,853)	62,067 (44,754 - 84,412)	62,069 (44,665 - 84,557)	61,625 (44,172 - 84,193)

## Stunting Cases Averted by Intervention

### *Historical Trends*

Stunting Cases Averted	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Birth intervals</b>	0 (0 - 0)	0 (0 - 62)	9 (0 - 161)	17 (0 - 281)	30 (0 - 466)	44 (0 - 761)	54 (0 - 939)	66 (0 - 1,140)	80 (0 - 1,261)	91 (0 - 1,432)	101 (0 - 1,609)
<b>Breastfeeding</b>	0 (0 - 0)	16 (3 - 52)	42 (2 - 128)	95 (8 - 254)	144 (10 - 386)	217 (14 - 563)	266 (16 - 696)	332 (19 - 867)	407 (26 - 1,059)	440 (24 - 1,154)	499 (27 - 1,304)
<b>Filtered water/piped in water</b>	0 (0 - 0)	312 (155 - 563)	677 (275 - 1,240)	1,218 (500 - 2,167)	1,728 (703 - 3,157)	2,253 (858 - 4,091)	2,812 (1,024 - 5,112)	3,310 (1,164 - 6,012)	3,761 (1,284 - 6,886)	4,200 (1,423 - 7,697)	4,594 (1,547 - 8,422)
<b>Basic sanitation</b>	0 (0 - 0)	0 (0 - 0)	15 (5 - 28)	35 (13 - 65)	58 (21 - 109)	86 (29 - 160)	113 (36 - 210)	141 (44 - 262)	144 (44 - 269)	170 (51 - 319)	194 (58 - 365)
<b>Hand washing with soap</b>	0 (0 - 0)	0 (0 - 0)	14 (5 - 29)	16 (6 - 33)	36 (13 - 74)	40 (14 - 82)	63 (21 - 128)	65 (21 - 134)	89 (27 - 183)	113 (34 - 232)	113 (34 - 232)
<b>Rotavirus vaccine</b>	0 (0 - 0)	3 (2 - 3)	3 (2 - 3)	3 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (1 - 3)	2 (1 - 3)	2 (1 - 3)	2 (1 - 3)	2 (1 - 3)

Great Crusade

Stunting Cases Averted	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Micronutrient supplementation (iron and multiple micronutrients)</b>	0 (0 - 0)	17 (8 - 30)	48 (26 - 83)	89 (49 - 152)	138 (78 - 232)	178 (102 - 293)	194 (111 - 319)	203 (116 - 336)	204 (116 - 340)	200 (113 - 333)	197 (109 - 329)
<b>Birth intervals</b>	0 (0 - 0)	6 (0 - 69)	14 (0 - 176)	23 (0 - 306)	39 (0 - 496)	63 (0 - 901)	80 (0 - 1,143)	96 (0 - 1,375)	113 (0 - 1,471)	124 (0 - 1,624)	134 (0 - 1,786)
<b>Breastfeeding</b>	0 (0 - 0)	45 (4 - 104)	121 (7 - 279)	223 (14 - 505)	363 (36 - 789)	467 (45 - 997)	512 (51 - 1,089)	538 (54 - 1,144)	540 (54 - 1,155)	530 (53 - 1,132)	520 (51 - 1,114)
<b>Complementary feeding</b>	0 (0 - 0)	758 (737 - 766)	2,199 (2,147 - 2,222)	4,340 (4,241 - 4,389)	7,172 (6,997 - 7,266)	9,214 (9,011 - 9,313)	10,640 (10,380 - 10,757)	11,389 (11,061 - 11,527)	11,532 (11,113 - 11,698)	11,455 (10,981 - 11,625)	11,265 (10,745 - 11,441)
<b>Zinc supplementation</b>	0 (0 - 0)	438 (411 - 478)	924 (865 - 1,004)	1,482 (1,376 - 1,602)	2,105 (1,948 - 2,278)	2,257 (2,084 - 2,451)	2,423 (2,228 - 2,632)	2,509 (2,298 - 2,728)	2,503 (2,277 - 2,725)	2,488 (2,253 - 2,714)	2,454 (2,213 - 2,677)
<b>Filtered water/piped in water</b>	0 (0 - 0)	350 (201 - 567)	764 (445 - 1,230)	1,334 (781 - 2,132)	1,905 (1,121 - 3,028)	2,668 (1,569 - 4,204)	3,452 (2,030 - 5,436)	4,069 (2,385 - 6,405)	4,536 (2,644 - 7,166)	4,938 (2,866 - 7,799)	5,308 (3,064 - 8,387)
<b>Basic sanitation</b>	0 (0 - 0)	885 (449 - 1,467)	2,116 (1,093 - 3,476)	3,590 (1,870 - 5,861)	5,291 (2,773 - 8,598)	6,281 (3,300 - 10,102)	6,822 (3,584 - 10,960)	7,124 (3,730 - 11,438)	7,128 (3,712 - 11,485)	7,036 (3,648 - 11,340)	6,920 (3,567 - 11,156)
<b>Hand washing with soap</b>	0 (0 - 0)	437 (229 - 805)	1,044 (551 - 1,898)	1,772 (937 - 3,193)	2,611 (1,385 - 4,676)	3,097 (1,639 - 5,484)	3,364 (1,778 - 5,952)	3,513 (1,850 - 6,212)	3,515 (1,840 - 6,237)	3,470 (1,809 - 6,159)	3,412 (1,769 - 6,059)
<b>Rotavirus vaccine</b>	0 (0 - 0)	3 (2 - 3)	3 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 2)	2 (2 - 2)

*Great Crusade (fertility)*

Stunting Cases Averted	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Micronutrient supplementation (iron and multiple micronutrients)</b>	0 (0 - 0)	9 (3 - 15)	25 (11 - 42)	46 (22 - 76)	71 (36 - 116)	91 (47 - 145)	99 (51 - 157)	104 (53 - 165)	105 (52 - 166)	103 (51 - 163)	101 (49 - 161)
<b>Maternal age and birth order</b>	0 (0 - 0)	14 (8 - 15)	41 (28 - 42)	75 (56 - 76)	118 (92 - 119)	183 (150 - 186)	247 (204 - 254)	300 (244 - 309)	344 (273 - 356)	375 (296 - 388)	409 (319 - 425)
<b>Birth intervals</b>	0 (0 - 0)	17 (0 - 235)	48 (0 - 650)	88 (0 - 1191)	138 (0 - 1835)	224 (0 - 2906)	298 (0 - 3821)	369 (0 - 4722)	431 (0 - 5512)	482 (0 - 6173)	536 (0 - 6867)
<b>Breastfeeding</b>	0 (0 - 0)	46 (4 - 105)	123 (7 - 277)	226 (14 - 500)	366 (34 - 778)	470 (43 - 974)	516 (48 - 1,060)	542 (50 - 1,110)	546 (49 - 1,118)	536 (48 - 1,099)	527 (47 - 1,084)
<b>Complementary feeding</b>	0 (0 - 0)	761 (725 - 767)	2,196 (2,096 - 2,220)	4,337 (4,134 - 4,380)	7,169 (6,820 - 7,251)	9,170 (8,739 - 9,291)	10,571 (10,013 - 10,719)	11,302 (10,620 - 11,477)	11,441 (10,609 - 11,615)	11,377 (10,411 - 11,558)	11,211 (10,108 - 11,379)
<b>Zinc supplementation</b>	0 (0 - 0)	438 (411 - 478)	924 (863 - 1,001)	1,482 (1,364 - 1,598)	2,107 (1,919 - 2,281)	2,260 (2,042 - 2,453)	2,425 (2,176 - 2,627)	2,514 (2,237 - 2,716)	2,510 (2,208 - 2,712)	2,498 (2,172 - 2,699)	2,466 (2,121 - 2,666)
<b>Filtered water/piped in water</b>	0 (0 - 0)	352 (195 - 568)	767 (431 - 1,221)	1,340 (754 - 2,107)	1,911 (1,083 - 2,985)	2,678 (1,510 - 4,120)	3,467 (1,946 - 5,305)	4,084 (2,268 - 6,235)	4,558 (2,490 - 6,961)	4,965 (2,685 - 7,588)	5,345 (2,853 - 8,178)
<b>Basic sanitation</b>	0 (0 - 0)	891 (433 - 1,470)	2,124 (1,055 - 3,450)	3,606 (1,801 - 5,790)	5,309 (2,674 - 8,470)	6,301 (3,170 - 9,901)	6,846 (3,429 - 10,708)	7,144 (3,541 - 11,151)	7,157 (3,488 - 11,174)	7,071 (3,411 - 11,050)	6,964 (3,315 - 10,894)
<b>Hand washing with soap</b>	0 (0 - 0)	440 (221 - 806)	1,049 (533 - 1,884)	1,780 (905 - 3,155)	2,619 (1,338 - 4,608)	3,109 (1,577 - 5,373)	3,378 (1,703 - 5,808)	3,525 (1,758 - 6,046)	3,531 (1,732 - 6,058)	3,489 (1,694 - 5,991)	3,436 (1,647 - 5,906)
<b>Rotavirus vaccine</b>	0 (0 - 0)	3 (2 - 3)	3 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 2)	2 (2 - 2)	2 (2 - 2)

*Aspirational*

Stunting Cases Averted	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Micronutrient supplementation (iron and multiple micronutrients)</b>	0 (0 - 0)	11 (0 - 20)	30 (12 - 53)	55 (24 - 96)	83 (39 - 145)	106 (53 - 183)	115 (58 - 198)	121 (61 - 207)	121 (61 - 209)	119 (60 - 205)	117 (58 - 202)
<b>Birth intervals</b>	0 (0 - 0)	7 (0 - 90)	17 (0 - 222)	28 (0 - 381)	46 (0 - 608)	74 (0 - 1,096)	94 (0 - 1,384)	112 (0 - 1,660)	132 (0 - 1,771)	145 (0 - 1,953)	158 (0 - 2,148)
<b>Breastfeeding</b>	0 (0 - 0)	638 (121 - 1,416)	1,650 (281 - 3,602)	3,008 (526 - 6,425)	4,642 (853 - 9,695)	5,820 (1,008 - 12,077)	6,550 (1,193 - 13,464)	6,936 (1,281 - 14,201)	6,979 (1,291 - 14,305)	6,887 (1,287 - 14,074)	6,766 (1,263 - 13,813)
<b>Complementary feeding</b>	0 (0 - 0)	2,337 (2,151 - 2,479)	6,739 (6,247 - 7,074)	13,239 (12,278 - 13,912)	21,819 (20,181 - 22,987)	28,230 (26,136 - 29,564)	32,666 (30,148 - 34,167)	34,976 (32,187 - 36,520)	35,358 (32,418 - 37,022)	35,154 (32,187 - 36,812)	34,611 (31,645 - 36,224)
<b>Zinc supplementation</b>	0 (0 - 0)	451 (418 - 499)	989 (905 - 1,099)	1,612 (1,444 - 1,809)	2,304 (2,044 - 2,601)	2,492 (2,191 - 2,826)	2,682 (2,346 - 3,044)	2,782 (2,426 - 3,158)	2,773 (2,410 - 3,150)	2,760 (2,395 - 3,135)	2,725 (2,363 - 3,094)
<b>Filtered water/piped in water</b>	0 (0 - 0)	378 (202 - 626)	841 (458 - 1,382)	1,470 (808 - 2,410)	2,081 (1,158 - 3,388)	2,928 (1,639 - 4,737)	3,789 (2,127 - 6,121)	4,463 (2,502 - 7,199)	4,972 (2,776 - 8,031)	5,415 (3,022 - 8,731)	5,829 (3,242 - 9,386)
<b>Basic sanitation</b>	0 (0 - 0)	951 (447 - 1,605)	2,329 (1,122 - 3,906)	3,949 (1,926 - 6,605)	5,782 (2,861 - 9,607)	6,895 (3,445 - 11,382)	7,488 (3,754 - 12,351)	7,813 (3,912 - 12,873)	7,814 (3,897 - 12,889)	7,717 (3,845 - 12,711)	7,600 (3,774 - 12,501)
<b>Hand washing with soap</b>	0 (0 - 0)	477 (231 - 893)	1,158 (571 - 2,147)	1,949 (967 - 3,598)	2,852 (1,430 - 5,225)	3,399 (1,711 - 6,174)	3,691 (1,862 - 6,696)	3,852 (1,940 - 6,977)	3,852 (1,932 - 6,984)	3,805 (1,906 - 6,888)	3,747 (1,872 - 6,775)
<b>Rotavirus vaccine</b>	0 (0 - 0)	3 (2 - 3)	3 (2 - 3)	3 (2 - 3)	3 (2 - 3)	3 (2 - 3)	3 (2 - 3)	3 (2 - 3)	2 (2 - 3)	2 (2 - 3)	2 (2 - 3)