

# Enhancing Optimal Breastfeeding and IYCF Practices - Need for Tools for Policy Makers



Photo: Linda Arturo, Ecuador



Photo: Chessa Lutter, USA

Dr. Chessa Lutter  
Senior Advisor, Food and Nutrition  
Pan American Health Organization/WHO  
Washington DC



## Fetal and Early Childhood Undernutrition, Mortality, and Lifelong Health

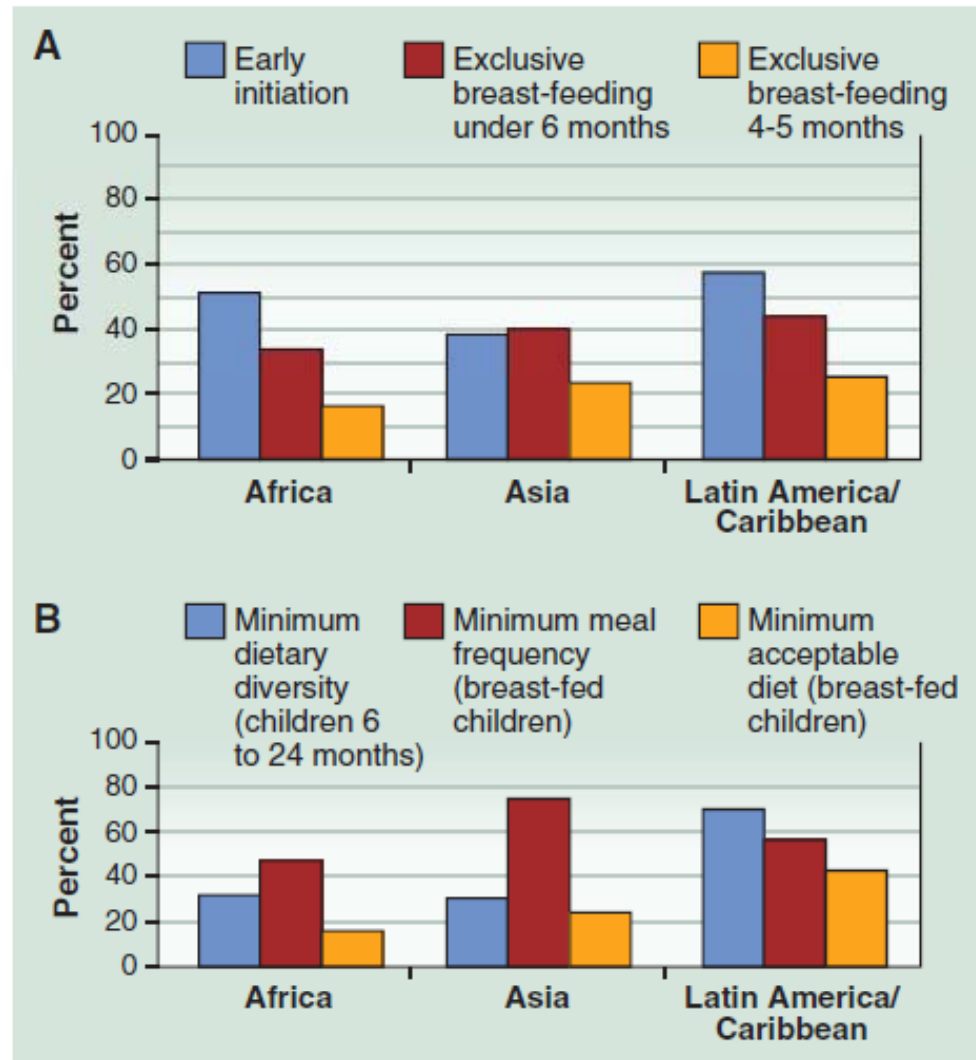
Chessa K. Lutter and Randall Lutter

*Science* **337**, 1495 (2012);

DOI: 10.1126/science.1224616

Child undernutrition is a major public health challenge, estimated to be responsible for 2.2 million annual deaths. Implementation of available interventions could prevent one-third of these deaths. Emerging evidence suggests that breast-feeding can lead to improvements in intelligence quotient in children and lower risks of noncommunicable diseases in mothers and children decades later. Nonetheless, breast-feeding and complementary feeding practices differ greatly from global recommendations. Although the World Health Organization recommends that infants receive solely breast milk for the first 6 months of life, only about one-third of infants in low-income countries meet this goal, just one-third of children 6 to 24 months old in low-income countries meet the minimum criteria for dietary diversity, and only one in five who are breast-fed receive a minimum acceptable diet. Although the potential effects of improved breast-feeding and complementary feeding appear large, funding for research and greater use of existing effective interventions seems low compared with other life-saving child health interventions.

# Breastfeeding and complementary feeding indicators of infants < 2 years



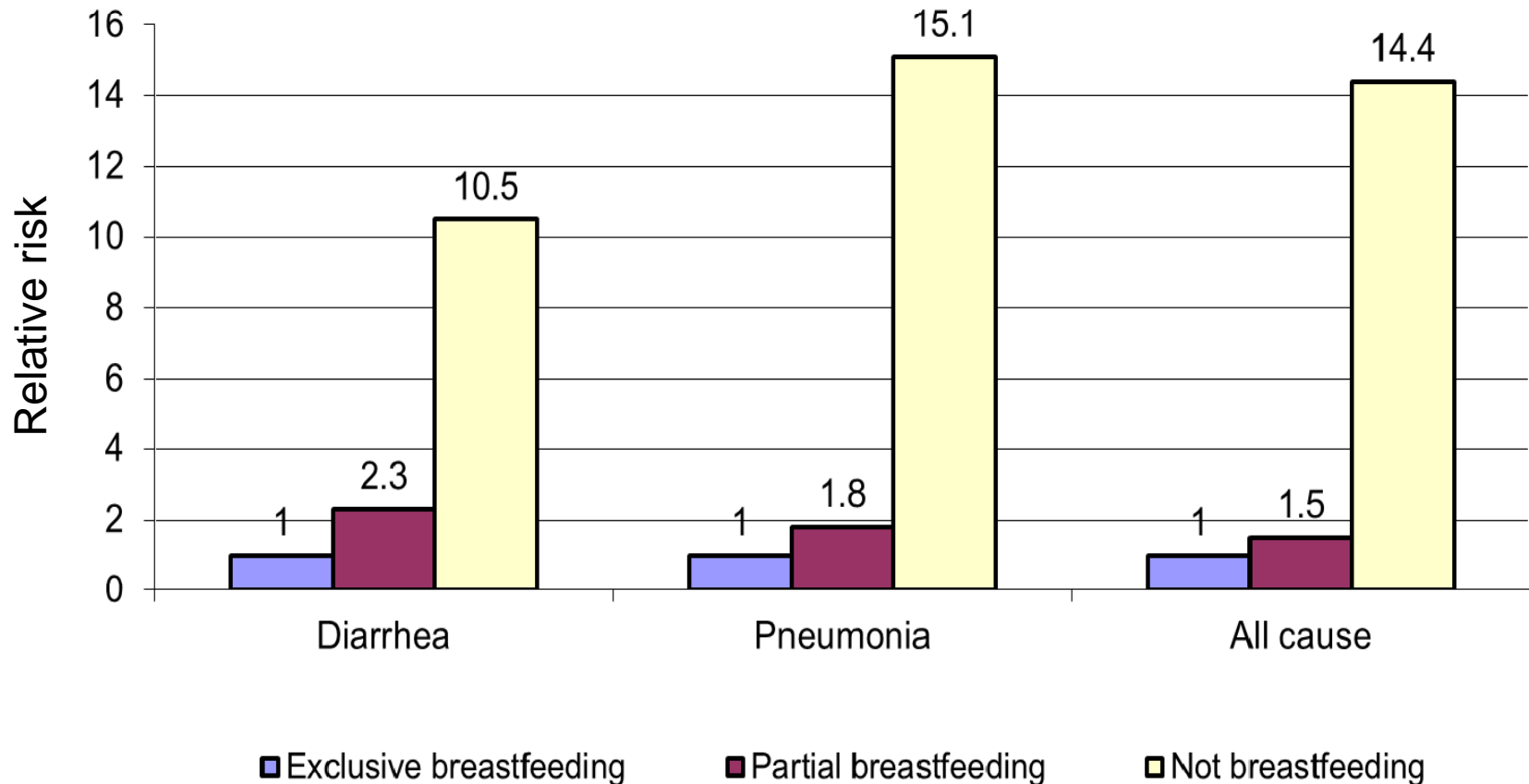
Source: Lutter and Lutter, Science, 2012 (data from 46 nationally representative surveys conducted between 2002 and 2008 representing 82%, 58% and 22% of the populations of Africa, Asia and Latin America, respectively).

# Lactancia materna y prevención de mortalidad en niños menores de 5 años

		<b>Estimated under-5 deaths prevented</b>	
		<b>Number of deaths (<math>\times 10^3</math>)</b>	<b>Proportion of all deaths</b>
<b>Preventive interventions</b>			
19%	→ Breastfeeding	1301	13%
	→ Insecticide-treated materials	691	7%
	→ Complementary feeding	587	6%
	Zinc	459 (351)*	5% (4%)*
	Clean delivery	411	4%
	Hib vaccine	403	4%
	Water, sanitation, hygiene	326	3%
	Antenatal steroids	264	3%
	Newborn temperature management	227 (0)*	2% (0%)*
	Vitamin A	225 (176)*	2% (2%)*
	Tetanus toxoid	161	2%
	Nevirapine and replacement feeding	150	2%
	Antibiotics for premature rupture of membranes	133 (0)*	1% (0%)*
	Measles vaccine	103	1%
	Antimalarial intermittent preventive treatment in pregnancy	22	<1%

Source: Jones et al., How many child deaths can we prevent this year? The Lancet 2003;362:65-71.

# Risk of death in the first 6 months of life by feeding method



Source: Black et al., Maternal and child undernutrition; global and regional exposures and health consequences. The Lancet, January 2008.



# Long term benefits of breastfeeding

IQ benefit estimated at 3-6 points

Evidence on the long-term effects of breastfeeding

SYSTEMATIC REVIEWS AND META-ANALYSES

World Health Organization

Horta et al., World Health Organization:2007; Geneva.

## Breast-Feeding Linked to IQ Gain

### Study Ties Adult Intelligence to Nutrition in Infancy

By MARC KAUFMAN  
Washington Post Staff Writer

#### The Smarter Milk?

Infants breast-fed seven to nine months grew up to be more intelligent than infants breast-fed one month or less, a study concluded.

Duration of breast-feeding	1 month or less	2-3 months	4-6 months	7-9 months	More than 9 months
Average intelligence quotient*	99.1	100.8	101.3	106.1	104.4

\*Wechsler Adult Intelligence Scale performance IQ, adjusted mean. Test subjects were between ages 20 and 34. Average IQ is 100.  
SOURCE: Journal of the American Medical Association.

Results from the study, of more than 3,000 young men and women from Copenhagen, Denmark, strongly support the long suggested, but unproved, conclusion that breast-feeding makes babies not only healthier, but smarter.

As the first study to measure the effects of breast-feeding into the subjects' late teens and twenties, it could become an authoritative statement in the emotional debate over how to encourage nursing. Today, the practice is most common among white and wealthier women and least common among minority and poorer women.

"We are really quite certain that what we are seeing here is the effect of the duration of breast-feeding on an individual's intelligence," said June Machover Reinisch of the Kinsey Institute for Research in Sex, Gender and Reproduction, one of the study's authors. "The question that remains is what exactly is the aspect of breast-feeding that results in the greater intelligence."

"The evidence is growing that breast-feeding is among the most important lifelong benefits a mother can give to her child," she said.

Although public health officials, and even infant formula producers, recommend breast-feeding as the best way to nourish an infant for the first six to

See FEEDING, A9, Col. 1

Washington Post 2002

# Costo de prácticas subóptimas de la lactancia en EE.UU.

## PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

### **The Burden of Suboptimal Breastfeeding in the United States: A Pediatric Cost Analysis**

Melissa Bartick and Arnold Reinhold

*Pediatrics* 2010;125:e1048; originally published online April 5, 2010;

DOI: 10.1542/peds.2009-1616

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/125/5/e1048.full.html>

- US\$ 13 billón total
  - US\$ 2.5 billón costos de salud
  - US\$ 10.5 billón muertes prematuros

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# Effects of breastfeeding on maternal health

Outcome	BF measure	Effect size
Ovarian cancer	BF duration (months)	Risk reduced 28% for each year of BF
Breast cancer	BF duration (months)	Risk reduced 4.3% (1st report) and 28% (2nd report) for each year of breastfeeding
Diabetes type 2	BF duration (months)	Risk reduced 4% (1st analysis) and 12% (2nd analysis) for each year of breastfeeding
Hypertension	No BF versus EBF for 6 months	Risk increased by 29%

Lutter and Lutter. Fetal and early childhood undernutrition, mortality, and lifelong health. Science; 2012.



How best to reframe breastfeeding and complementary feeding so as to put them at the top of the health and development agendas?

- Set *targets* that are ambitious but realistic
- Clearly articulate the *effective set of policies and programs* (easier for BF than for CF)
- Identify *financing* needs
- Use/develop tools and systems to *measure implementation*
- Hold relevant stakeholders *accountable*

# Global targets 2025

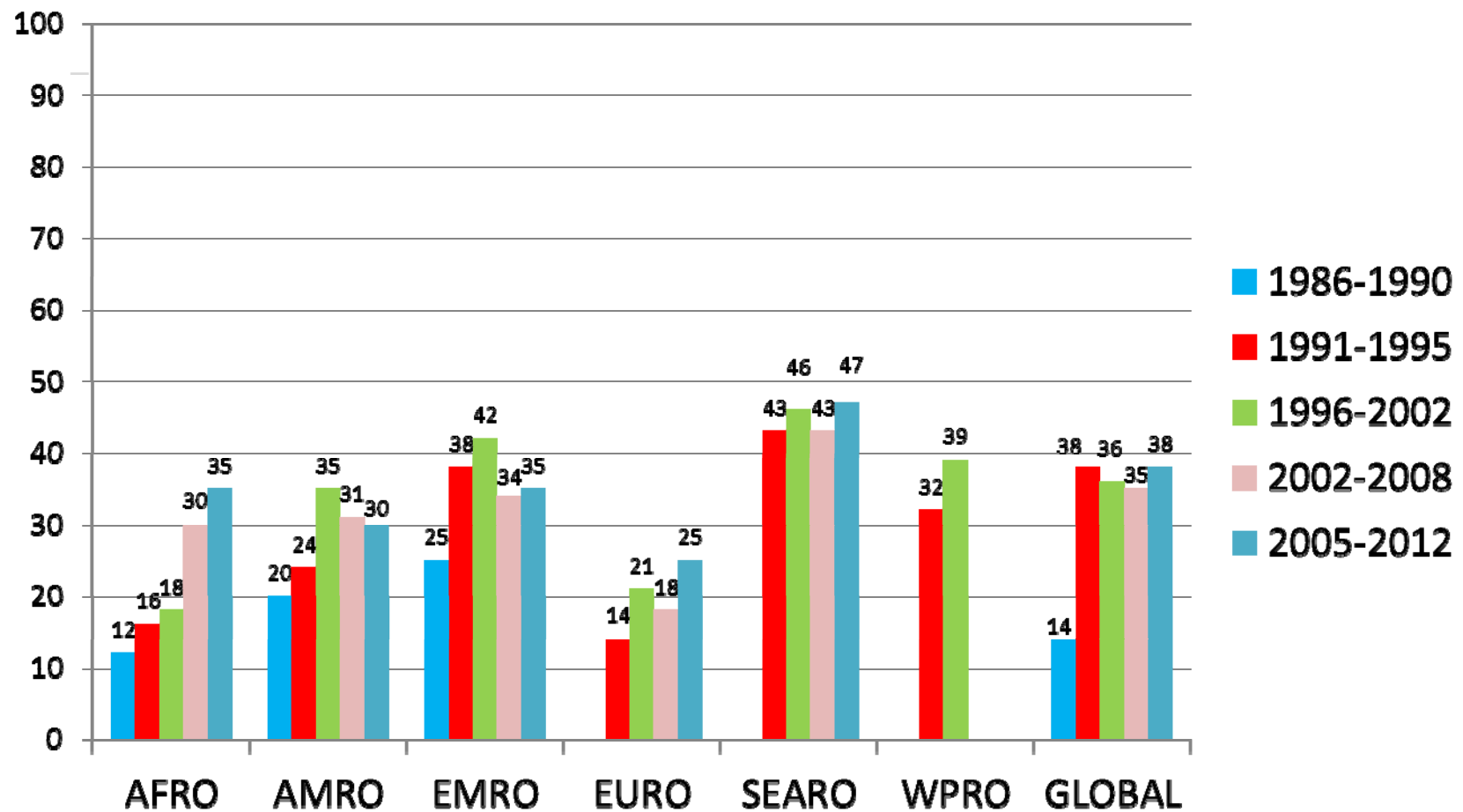
To improve maternal, infant and young child nutrition  
(WHA 65.11, May 2012)



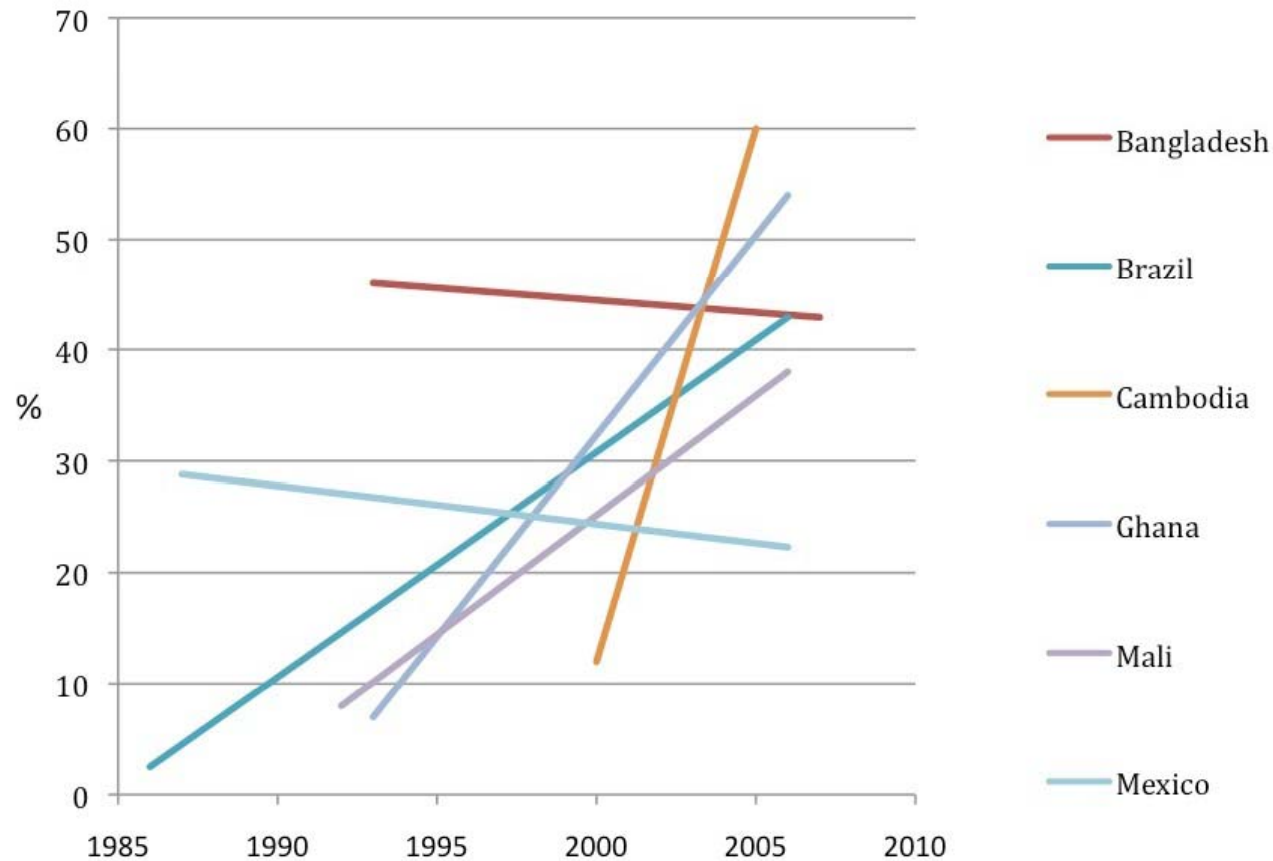
INCREASE THE RATE OF EXCLUSIVE BREASTFEEDING FOR THE FIRST 6 MONTHS TO AT LEAST 50%

- Global EBF is estimated to be 37% (2006-2010)
- Target implies a 2.3% relative increase per year, leading to an additional 10 million children exclusively breastfed
- Rapid increases are possible and have been achieved in a number of countries, for example Cambodia (12% to 60%), Mali (18% to 38%), and Peru (33% to 64%)

# Global situation: only one-third of children are exclusively breastfed

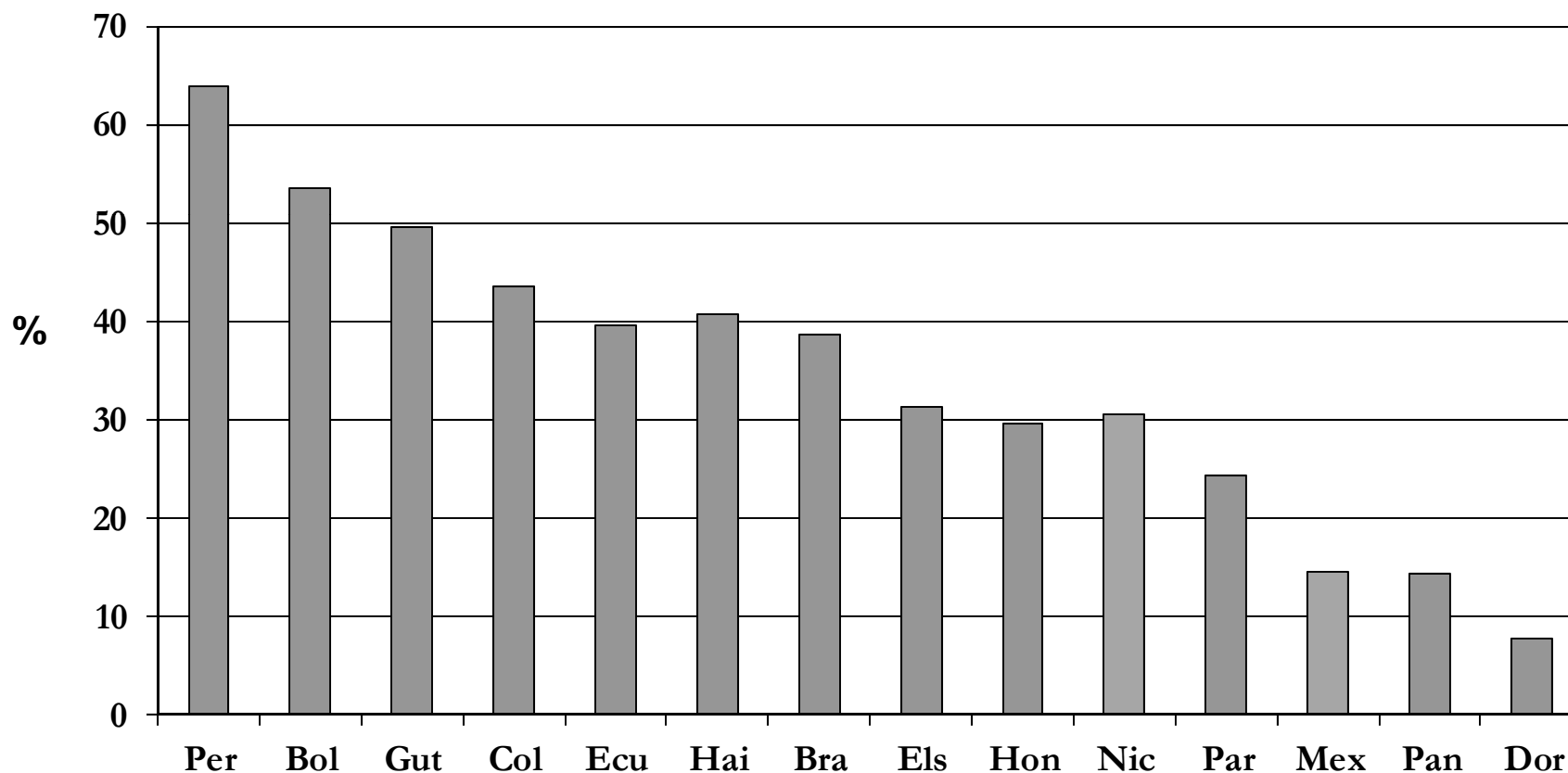


## Snapshot of global trends in exclusive breastfeeding (<6 month infants) inferred from pairs of nationally representative surveys, 1985-2010



Source: Lutter and Lutter (2012) Fetal and early childhood undernutrition, mortality, and lifelong health. Science 337: 1495-1499

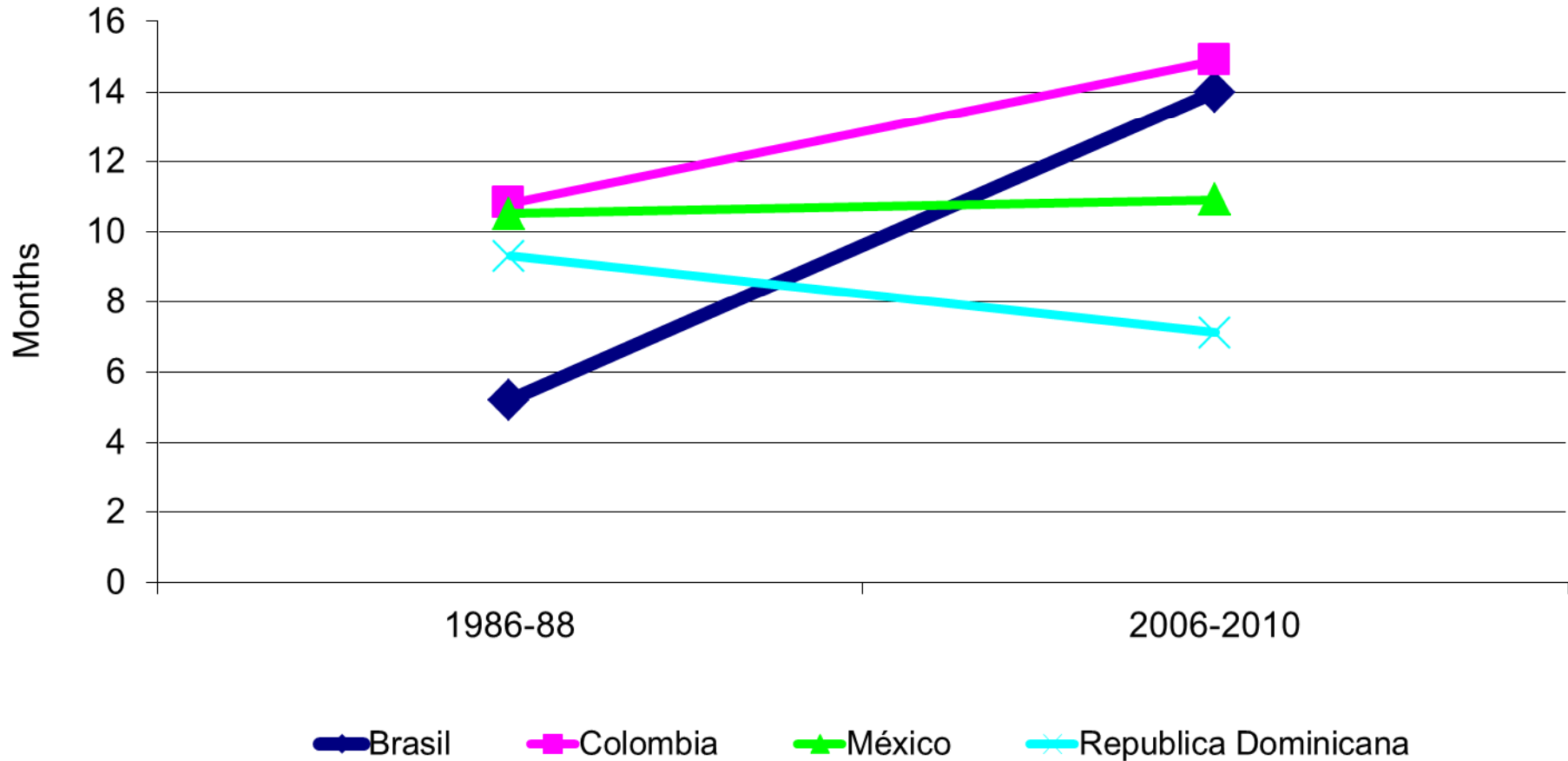
## Exclusive breastfeeding in infants < 6 months (%) in Latin America and the Caribbean: Nationally representative surveys 2004-2010



Source: Organización Panamericana de la Salud (OPS). Situación Actual y Tendencias de la Lactancia Maternal en América Latina y el Caribe: Implicaciones Políticas y programáticas Washington, DC: OPS; por publicar



## Changes in the duration of breastfeeding (months) in Brazil, Colombia, Mexico and the Dominican Republic



Source: Lutter and Morrow. Protection, Promotion and Support and Global Trends in Breastfeeding. Advances in Nutrition, 2013 .



Iniciativa Mundial sobre Tendencias de la Lactancia Materna (WBTi)

## *Iniciativa Mundial sobre Tendencias de la Lactancia Materna (WBTi)*

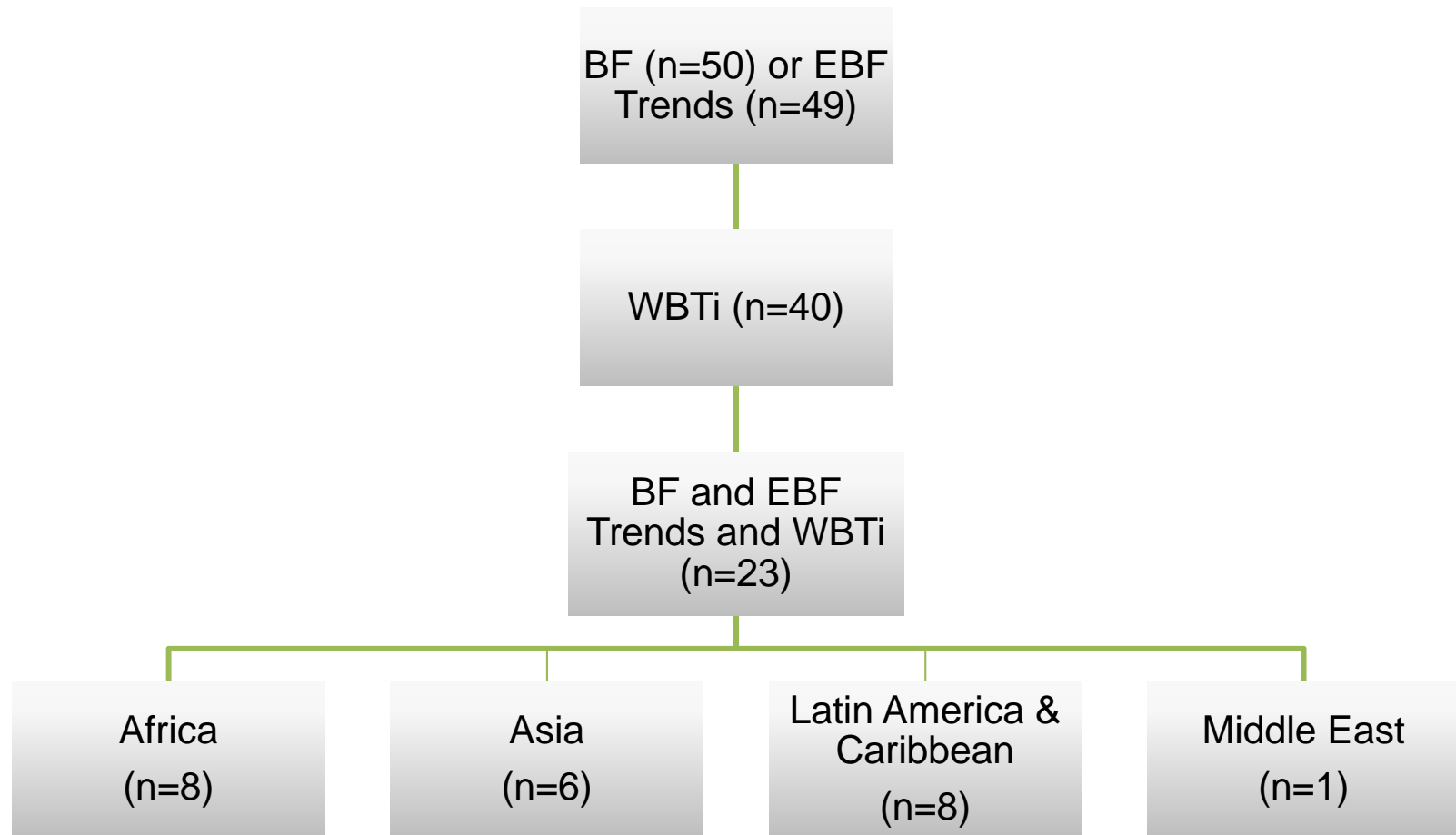
*Seguimiento, Evaluación y Monitoreo de las Prácticas, Políticas y Programas a Nivel Mundial para la Alimentación de Lactantes y Niños(as) Pequeños(as) Utilizando un conjunto de herramientas web para el análisis y la acción*

*GBICs Global Breastfeeding Initiative for Child Survival - Iniciativa Mundial de Lactancia Materna para la Supervivencia Infantil*



Iniciativa de la Red Mundial de Grupos pro Alimentación Infantil (IBFAN)

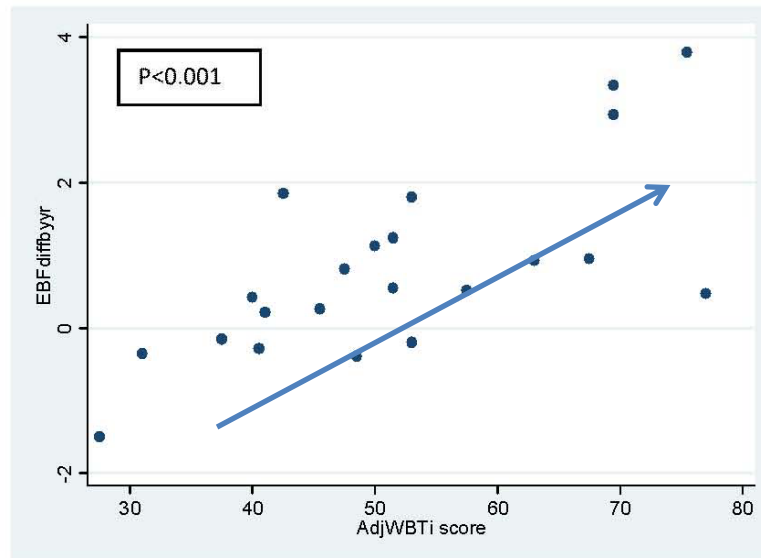
# Breastfeeding and WBTi data



# Annual increase in exclusive breastfeeding by WBTi

Advances in Nutrition ADVANNUT/2012/003111 Version 1

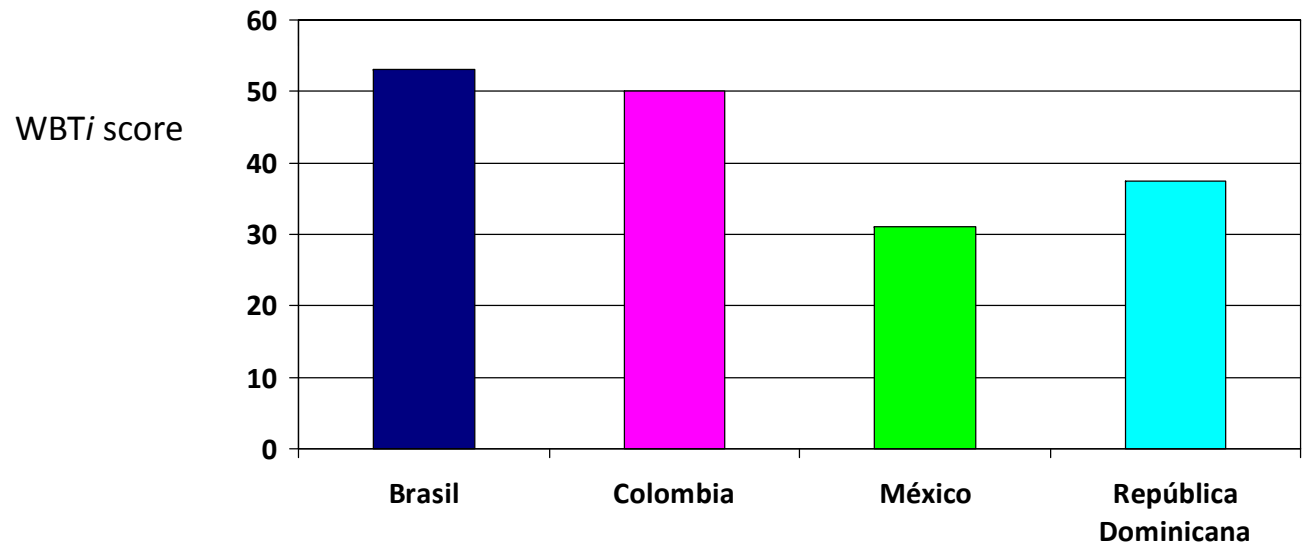
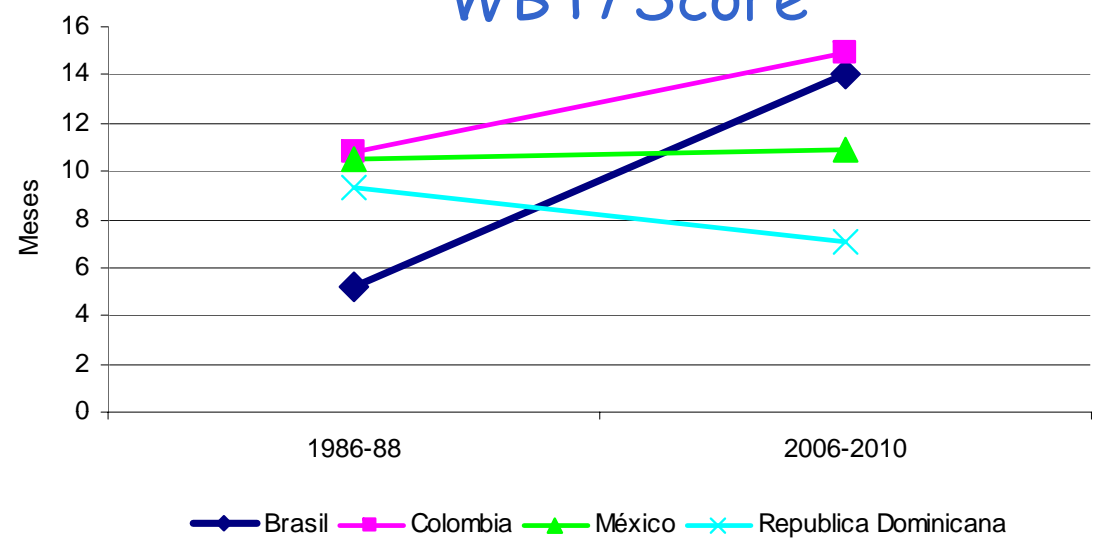
**Figure 2. Annual increase in exclusive breastfeeding by adjusted WBTi score**



WBTi explained 62% of the change in exclusive breastfeeding

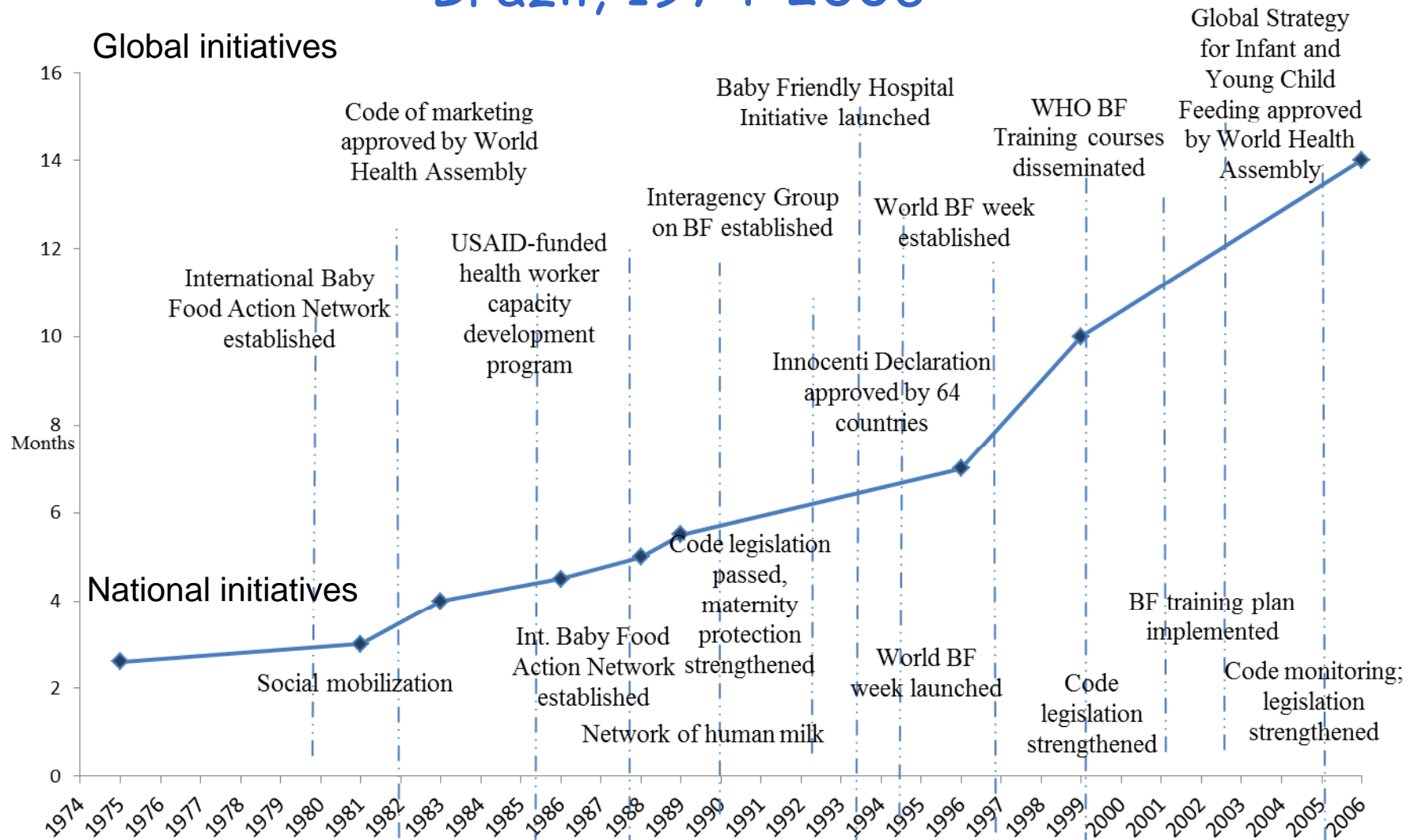
Source: Lutter and Morrow. Protection, Promotion and Support and Global Trends in Breastfeeding. Advances in Nutrition; 2013.

# Changes in the duration of breastfeeding (months ) in Brazil, Colombia, Mexico, and the Dominican Republic and WBTi Score



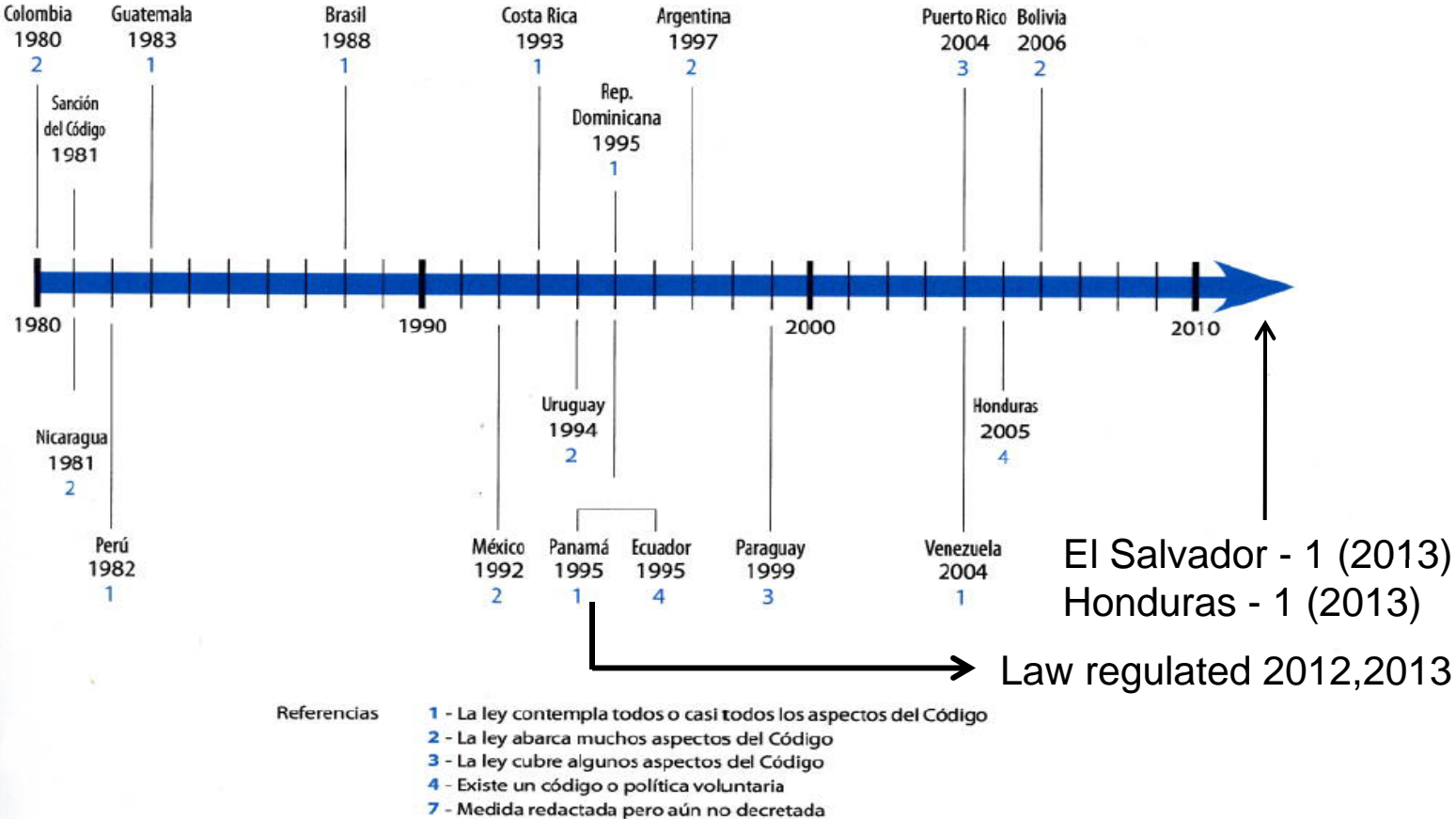


# Chronology of initiatives at the global and national level and changes in breastfeeding duration in Brazil, 1974-2006



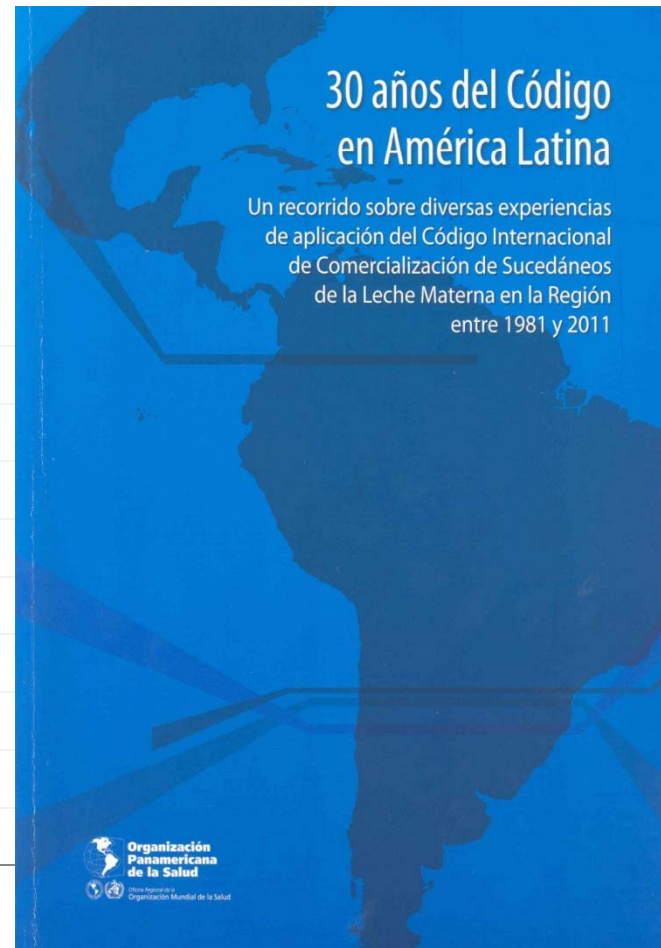
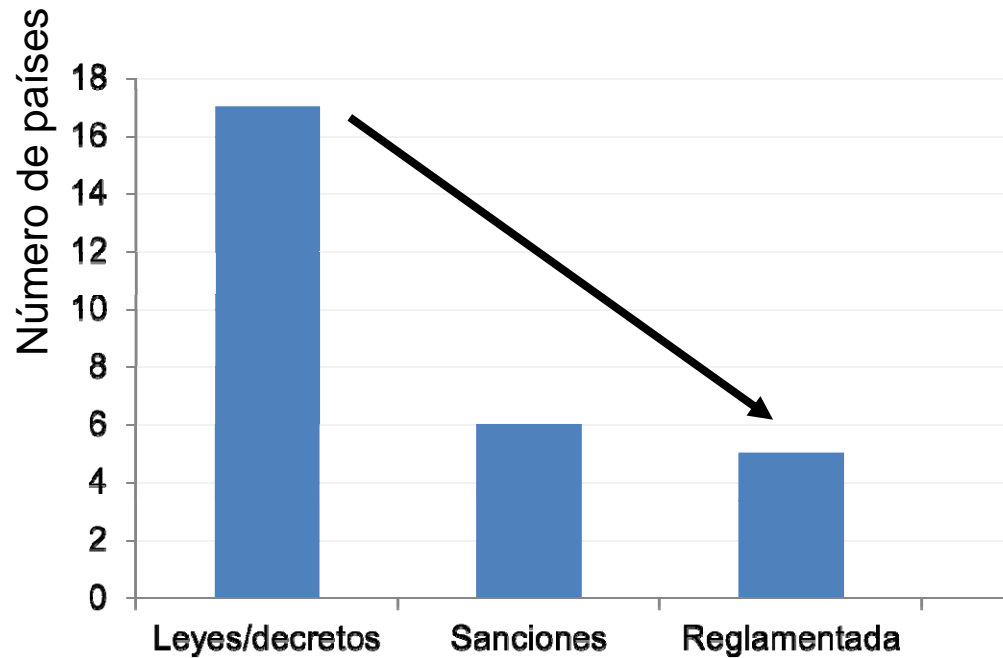
Source: Lutter and Morrow; Advances in Nutrition; 2013.

**Figura 1. El Código en los países de América Latina:  
su adopción en una línea de tiempo**



Source: Organización Panamericana de la Salud. 30 años del Código en América Latina, Washington DC: OPS, 2011

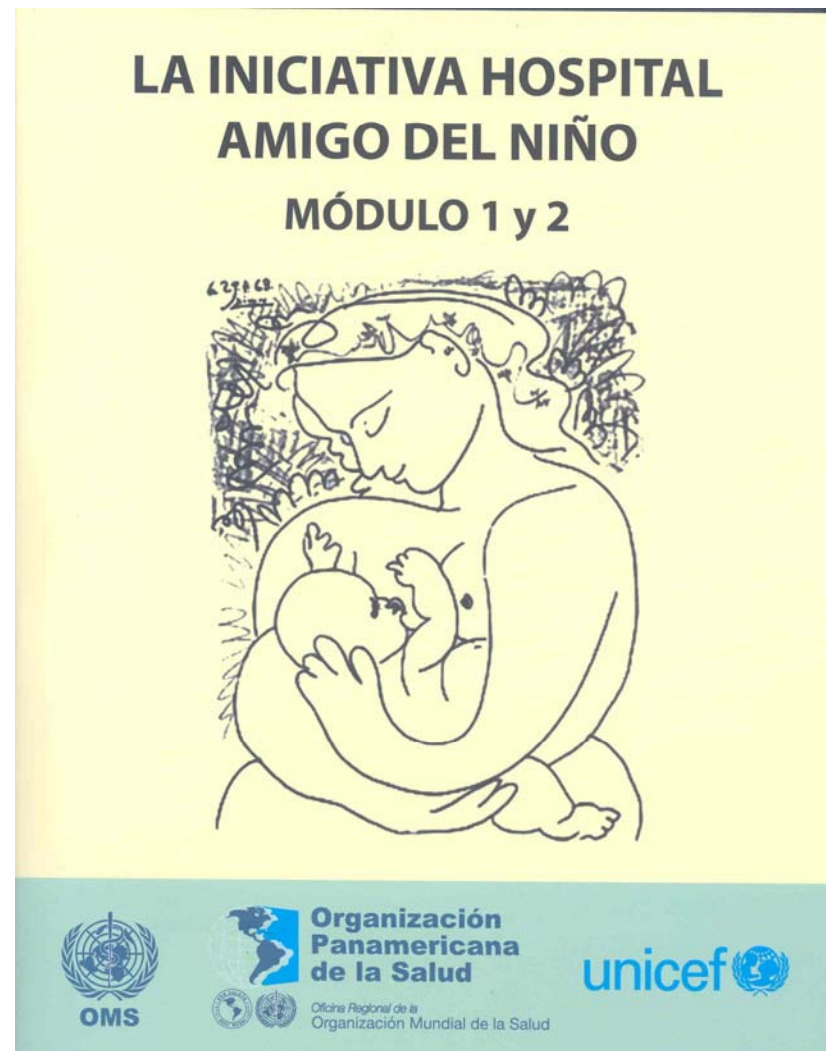
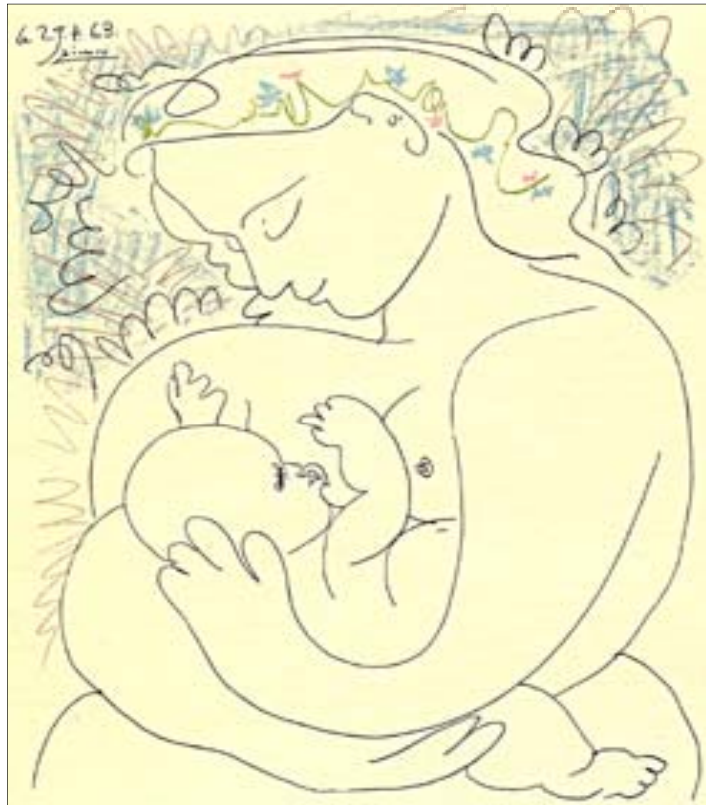
# Weak application of Code laws



OPS. Washington DC, 2011

Declaración Innocenti, 1990

Baby Friendly Hospital Initiative  
(1991, updated 2009)

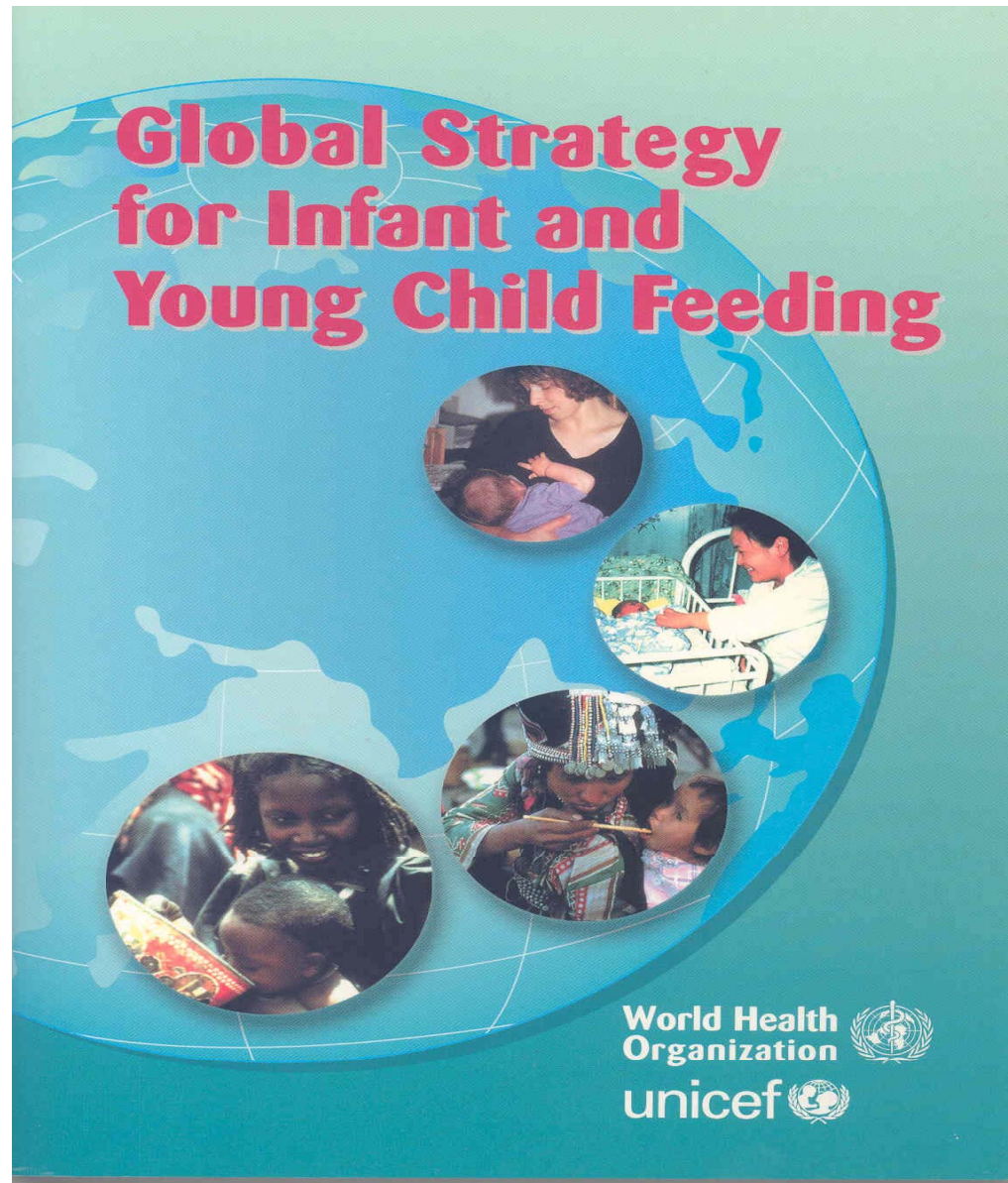


BFHI implementation must be systematically measured and publically reported via website

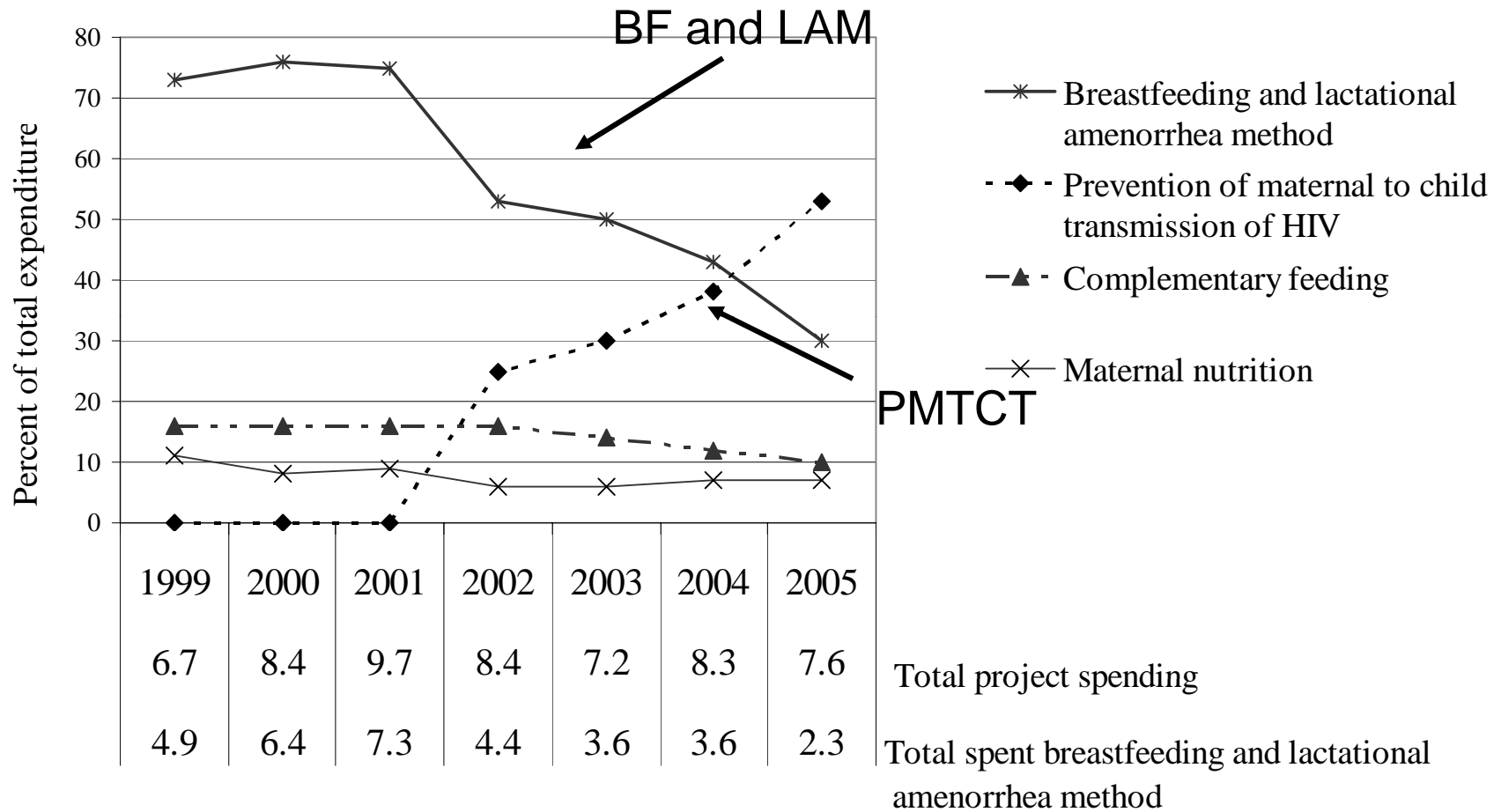
- Proportion of all hospitals that provide maternity services that are certified
  - year of certification
  - year of recertification
- Proportion of all newborns born in hospitals that are Baby Friendly



# Global Strategy for IYCF, WHA 2002

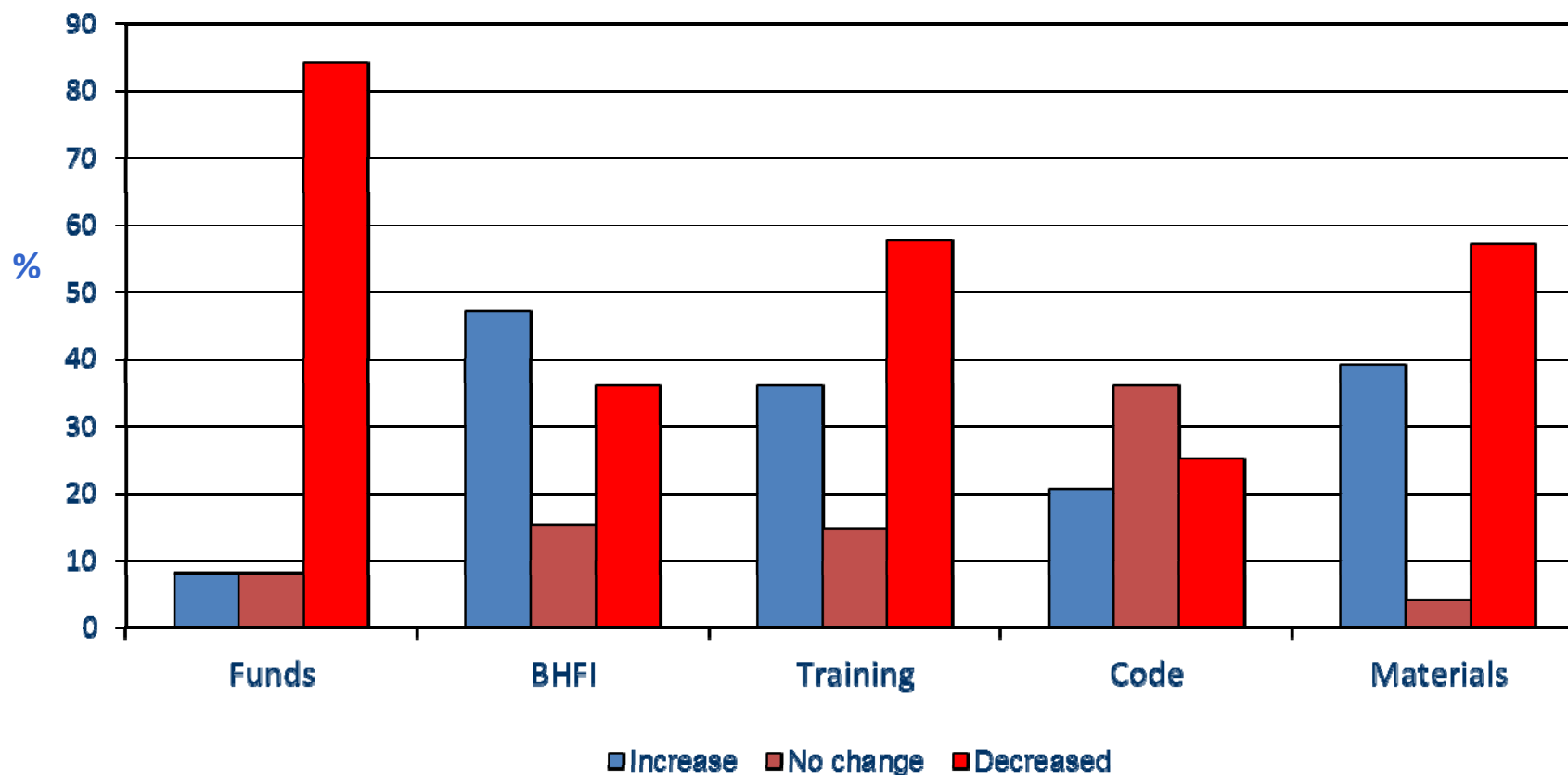


# Global expenditure (%) (US\$ million) in BF promotion by USAID flagship maternal and child nutrition, 1999-2005



Source: Lutter et al., Backsliding on a key intervention in public health: The case of breastfeeding Promotion. Am J Public Health; 2011.

## Changes in activities to promote breastfeeding (%): decades of 1990 versus 2000



Lutter et al. Backsliding on a key health investment in Latin America and the Caribbean: the case of breastfeeding promotion. *Amer J Public Health*. 2011;101:2130-6.

# BFHI implementation must be systematically measured

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  - year of certification
  - year of recertification
- Proportion of all newborns born in hospitals that are Baby Friendly

# Tools and systems

- Global survey for routine assessment of BFHI
- Tools/systems to assess financing for IYCF
- Costing tools
- Code monitoring instrument
- DHS questions on coverage indicators for IYCF
- Include the 10 steps as part of overall hospital certification that permits hospitals to operation legally

# Key outcomes of 2013 UNICEF/WHO Meeting

- Leadership and accountability
- Leverage existing global initiatives
- Strengthen the investment case
- Positioning
- Media and communication
- Resource mobilization
- Advocacy recoringing

# Key messages



## Global set of tools for

- Code monitoring
- Assessment of BFHI implementation
- Measuring economic benefits
- Estimating BF promotion implementation costs

Integrate monitoring into ongoing systems, e.g., ongoing hospital certification

Create system to track the US\$4.1 billion pledged investments in young child nutrition according to priority actions