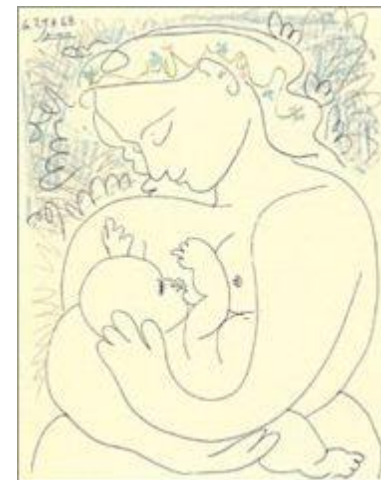




BFHI in the broader women's, childrens' and adolescent health context



Anthony Costello

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Department of Maternal, Newborn, Child and
Adolescent Health



BREASTFEEDING

It Rocks!



EVERY WOMAN
EVERY CHILD

The GLOBAL STRATEGY for WOMEN'S, CHILDREN'S and ADOLESCENT HEALTH

Objectives

1. SURVIVE

End preventable deaths



2. THRIVE

Ensure health and well-being



3. TRANSFORM

Expand enabling environments

Breastfeeding in low, middle and high income countries in the 21st century?

Lancet Series

Series

Breastfeeding 1

Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect

Cesar G Victora, Rajiv Bahl, Aluisio J D Barros, Giovanny V A França, Susan Horton, Julia Krusevec, Simon Murch, Mari Jeeva Sankaran, Nigel C Rollins, for The Lancet Breastfeeding Series Group*

The importance of breastfeeding in low-income and middle-income countries is well recognised, but there is still debate about its importance in high-income countries. In low-income and middle-income countries, children younger than 6 months of age are exclusively breastfed. With few exceptions, breastfeeding is shorter in high-income countries than in those that are resource-poor. Our meta-analyses indicate that breastfeeding is associated with lower risk of child infections and malocclusion, increases in intelligence, and probable reductions in overweight and obesity. We did not find associations with allergic disorders such as asthma or with blood pressure or cholesterol. There was an increase in tooth decay with longer periods of breastfeeding. For nursing women, breastfeeding was associated with a lower risk of breast cancer and it improved birth spacing, and it might also protect against ovarian cancer. The scaling up of breastfeeding to a near universal level could prevent 823 000 annual deaths of children younger than 5 years and 20 000 annual deaths from breast cancer. Recent epidemiological and biological research during the past decade expand on the known benefits of breastfeeding for women and children, both rich or poor.



Breastfeeding 2

Why invest, and what it will take to improve breastfeeding practices?

Nigel C Rollins, Nita Bhandari, Nemat Hajeer, Susan Horton, Chessa K Lutter, Jose C Martinez, Ellen G Piwoz, Linda M Richter, Cesar G Victora, on behalf of The Lancet Breastfeeding Series Group*

Despite its established benefits, breastfeeding is no longer a norm in many communities. Multifactorial determinants of breastfeeding need supportive measures at many levels, from legal and policy directives to social attitudes and values, women's work and employment conditions, and health-care services to enable women to breastfeed. When relevant interventions are delivered adequately, breastfeeding practices are responsive and can improve rapidly. The best outcomes are achieved when interventions are implemented concurrently through several channels. The marketing of breastmilk substitutes negatively affects breastfeeding: global sales in 2014 of US\$44.8 billion show the industry's large, competitive claim on infant feeding. Not breastfeeding is associated with lower intelligence and economic losses of about \$302 billion annually or 0.49% of world gross national income. Breastfeeding provides short-term and long-term health and economic and environmental advantages to children, women, and society. To realise these gains, political support and financial investment are needed to protect, promote, and support breastfeeding.

Lancet 2016; 387: 493-504
This is the second in a Series of two papers about breastfeeding
*Members listed at the end of the paper
Department of Maternal, Newborn, Child and Adolescent Health (MCA) (N C Rollins MD), and Department of Noncommunicable Diseases and Mental Health (C K Lutter PhD), WHO, Geneva.

SURVIVE

Improving breastfeeding would annually save about 820,000 children under 5 years of age

87% infants are less than 6 months of age

Reduce infection deaths (<3mo) by 88%

Outcome	Types of comparison (breastfeeding categories)	Studies (n)	Age range of outcome	Pooled effect (95% CI)	Confounding and effect modification	Other biases	Conclusions
Effects on children, adolescents, or adults according to breastfeeding pattern							
Sankar et al (2015)*	Mortality due to infectious diseases	3	<6 months	OR 0.59 (0.41-0.85)	All studies from LMICs, where confounding by SEP would probably underestimate the effect of breastfeeding. Confounder-adjusted studies showed similar effects	Studies that avoided reverse causation (breastfeeding stopped because of illness) showed similar effects. No evidence of publication bias but very few studies available	Consistent evidence of major protection. Few studies used the four breastfeeding categories. In young infants, but evidence from other studies comparing any versus no breastfeeding is very consistent
Sankar et al (2015)*	Mortality due to infectious diseases	3	<6 months	OR 0.32 (0.14-0.74)	See above	See above	See above
Sankar et al (2015)*	Mortality due to infectious diseases	2	<6 months	OR 0.32 (0.04-0.31)	See above	See above	See above
Sankar et al (2015)*	Mortality due to infectious diseases	9	6-23 months	OR 0.48 (0.38-0.60)	See above	See above	See above
Horta et al (2013)*	Diarrhoea incidence	15	<5 years	RR 0.69 (0.58-0.82)	Most studies were from LMICs, where confounding would probably underestimate an effect. Confounder-adjusted studies showed similar effects. Three RCTs of breastfeeding promotion (not included in the meta-analysis) showed protection against diarrhoea mortality (pooled OR 0.69 [0.49-0.96])	Few studies that allowed for reverse causation also showed protection. Publication bias is unlikely to explain the findings, because results from large and small studies were similar	Strong evidence of major protection against diarrhoea mortality and admissions to hospital, particularly in young infants, based on a large number of studies
Horta et al (2013)*	Diarrhoea incidence	23	<6 months	RR 0.37 (0.37-0.50)	See above	See above	See above
Horta et al (2013)*	Diarrhoea incidence	11	6 months to 5 years	RR 0.46 (0.28-0.78)	See above	See above	See above
Horta et al (2013)*	Admission to hospital for diarrhoea	9	<5 years	RR 0.28 (0.16-0.50)	See above	See above	See above
Horta et al (2013)*	Lower respiratory infections (incidence or prevalence)	16	<2 years	RR 0.48 (0.40-0.77)	Most studies were from LMICs, where confounding would probably underestimate the effect of breastfeeding. Confounder-adjusted studies showed similar effects	Studies that avoided reverse causation showed similar effects. No evidence of publication bias	Strong evidence of a reduction in severe respiratory infections in breastfed children, based on a large number of studies
Horta et al (2013)*	Admissions to hospitals for respiratory infections	17	<2 years	RR 0.43 (0.33-0.55)	The only available RCT showed an RR of 0.85 (0.57-1.27), a non-significant reduction in admissions to hospital	See above	See above

(Table continues on next page)

SURVIVE





SURVIVE



The role of newborn nurses and midwives in resource poor settings

Paladay feeding of preterm with EBM

SURVIVE



Nepal earthquake





‘Buy only 1 can and you will get 2 free t-shirts, baby wipes and a 10% discount card.’



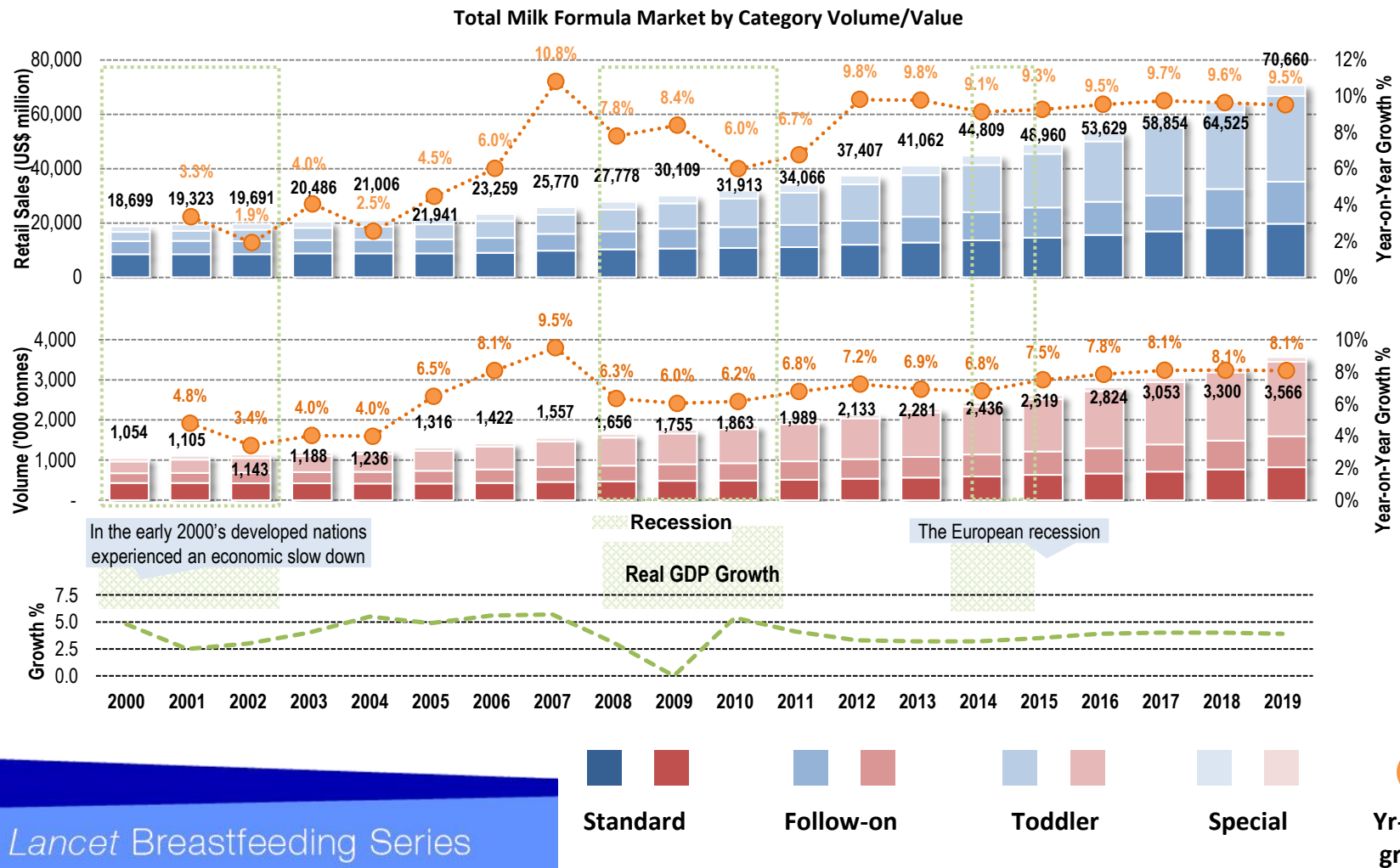
Chheangyi Kry added 3 new photos — with Monika Yin and 17 others.
June 7 · 🌐

Booth activation for Bibere 0-36 months. Buy only 1 can will get 2 free of T-shirt and baby wipe and get a discount card 10%
Location at : Siem Reap province.
For more info 0938822222
Bibere product of New Zealand

**COMMERCIAL
MALNUTRITION**

Breast milk substitute industry large and growing

By 2019, the market value is projected to reach US\$ 70.6 billion.



THRIVE

Breastfeeding and development

Breastfeeding protects against:

- **Acute otitis media (<2 yrs)**
- **Type 2 diabetes**
- **Obesity**

No evidence for effect on:

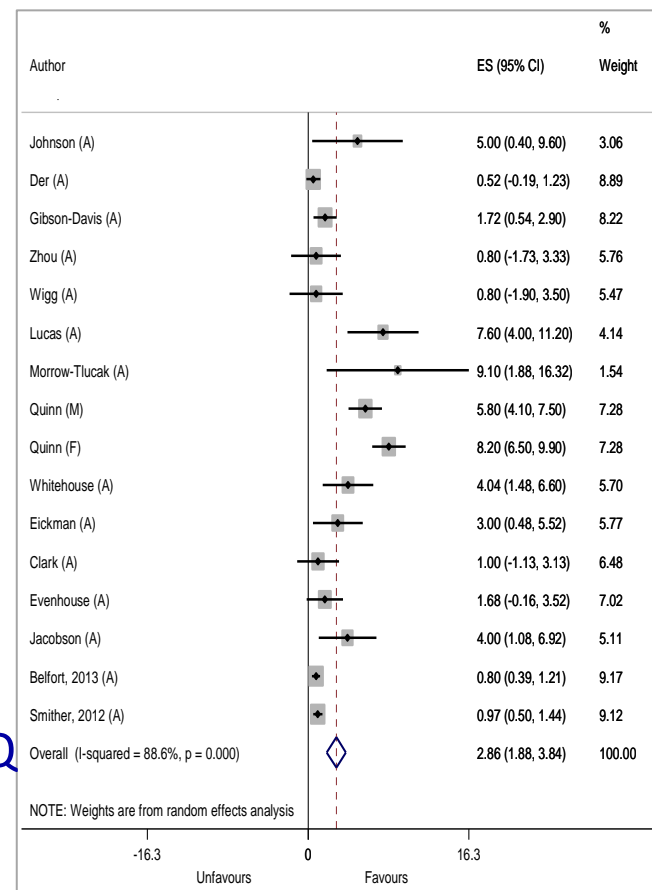
- Blood pressure
- Serum lipids
- Growth (wt or length)

But not against:

- Asthma
- Eczema
- Food allergies

Longer breastfeeding associated with higher performance on intelligence tests

- **Average of 3 IQ points**, controlling for maternal IQ
- Improved academic performance (some studies)
- Increased adult earnings



THRIVE



STUNTING

THE GOAL

By 2025, reduce by 40% the number of children aged under 5 years who are stunted

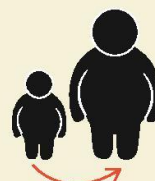
WHY IT MATTERS



Stunting is a largely irreversible outcome of **inadequate nutrition & repeated bouts of infection** during the first **1,000 days** of a child's life



Stunting has **long-term effects, including:** Diminished cognitive and physical development, reduced productive capacity and **poor health**



Stunted children have an increased risk of becoming **overweight or obese later in life**



Reduced school attendance results in diminished earning capacity; **an average of 22% loss of yearly income in adulthood**

RECOMMENDED ACTIONS

SCALE UP PREVENTION

WHAT? Scale up coverage of stunting-prevention activities

HOW? Improve the identification, measurement and understanding of stunting



MATERNAL NUTRITION

WHAT? Improve the nutrition of women of reproductive age

HOW? Enact policies and/or strengthen interventions to improve maternal nutrition and health, beginning with adolescent girls



SUPPORT BREASTFEEDING

WHAT? Support optimal breastfeeding practices

HOW? Implement interventions for improved exclusive breastfeeding and complementary feeding practices



COMMUNITY SUPPORT

WHAT? Provide community-based strategies to prevent infection-related causes of stunting

HOW? Strengthen community-based interventions, including improved water, sanitation and hygiene



Globally, approximately **162 million children** under the age of 5 years are stunted



SCOPE OF THE PROBLEM



Sub-Saharan Africa

40% of children under 5 are stunted



South Asia

Sub-Saharan Africa and South Asia are home to **three quarters** of the world's stunted children

39% of children under 5 are stunted

Report of the Commission on Ending Childhood Obesity



World Health Organization

ENDING CHILDHOOD OBESITY



Childhood Obesity

- In absolute numbers, there are more overweight and obese children living in low- and middle-income countries
- Childhood obesity undermines the physical, social and psychological well-being of children and is a known risk factor for adult obesity and noncommunicable diseases.
- As countries undergo rapid socio-economic transition, they face a double burden: inadequate nutrition and excess weight co-exist.
- Undernutrition in early life places children at especially high risk of developing obesity later in life, when diet and physical activity patterns change

THRIVE

Breastfeeding benefits women's health



Each year a mother breastfeeds **decreases the risk of developing invasive breast cancer by 6%**

Breastfeeding also **reduces the risk of ovarian cancer**

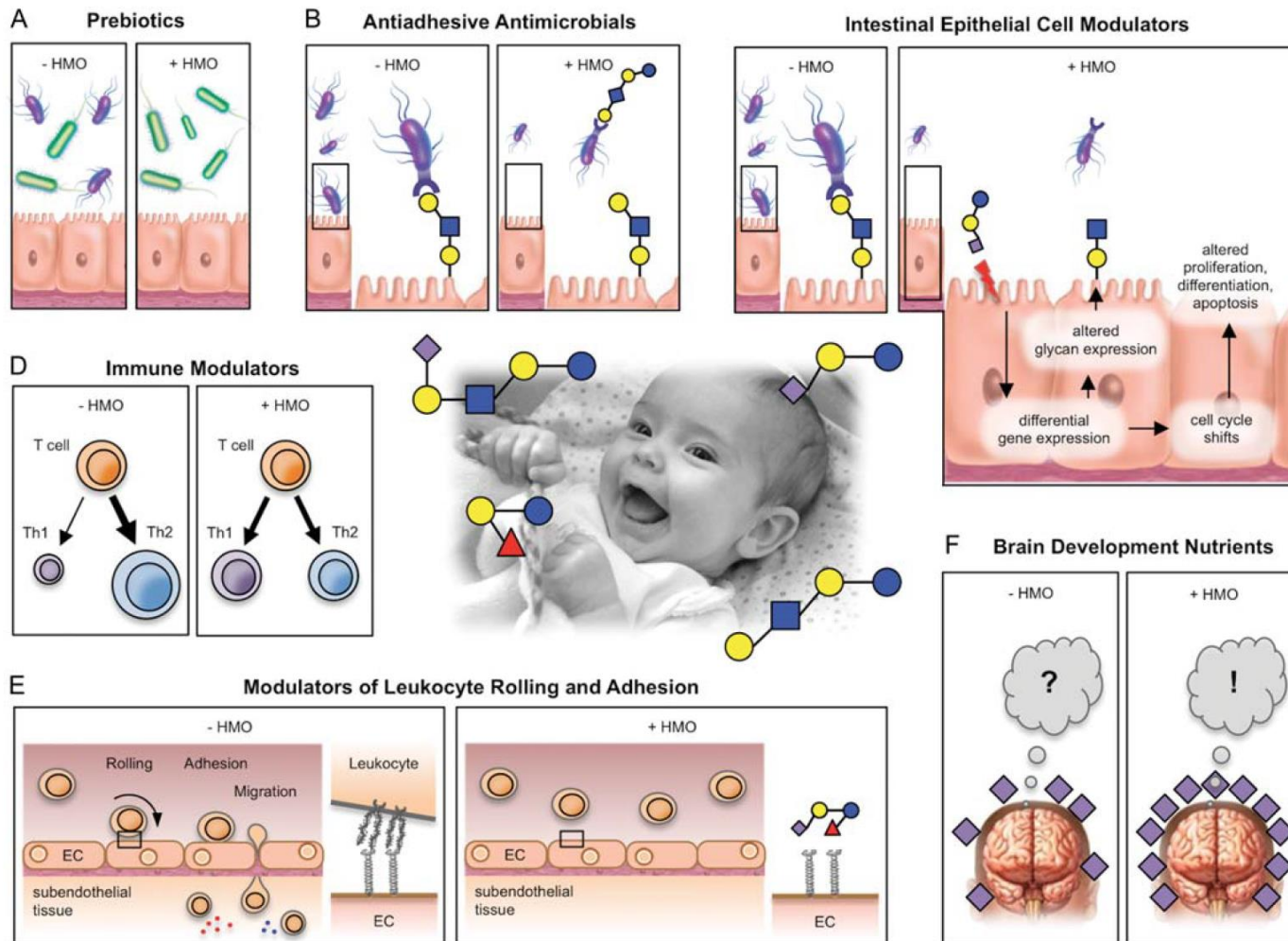
New impact modelling:

Current rates of breastfeeding prevent almost **20,000 deaths from breast cancer per year**

Human milk oligosaccharides: Every baby needs a sugar mama **IMMUNITY**

Lars Bode Glycobiology vol. 22 no. 9 pp. 1147–1162, 2012

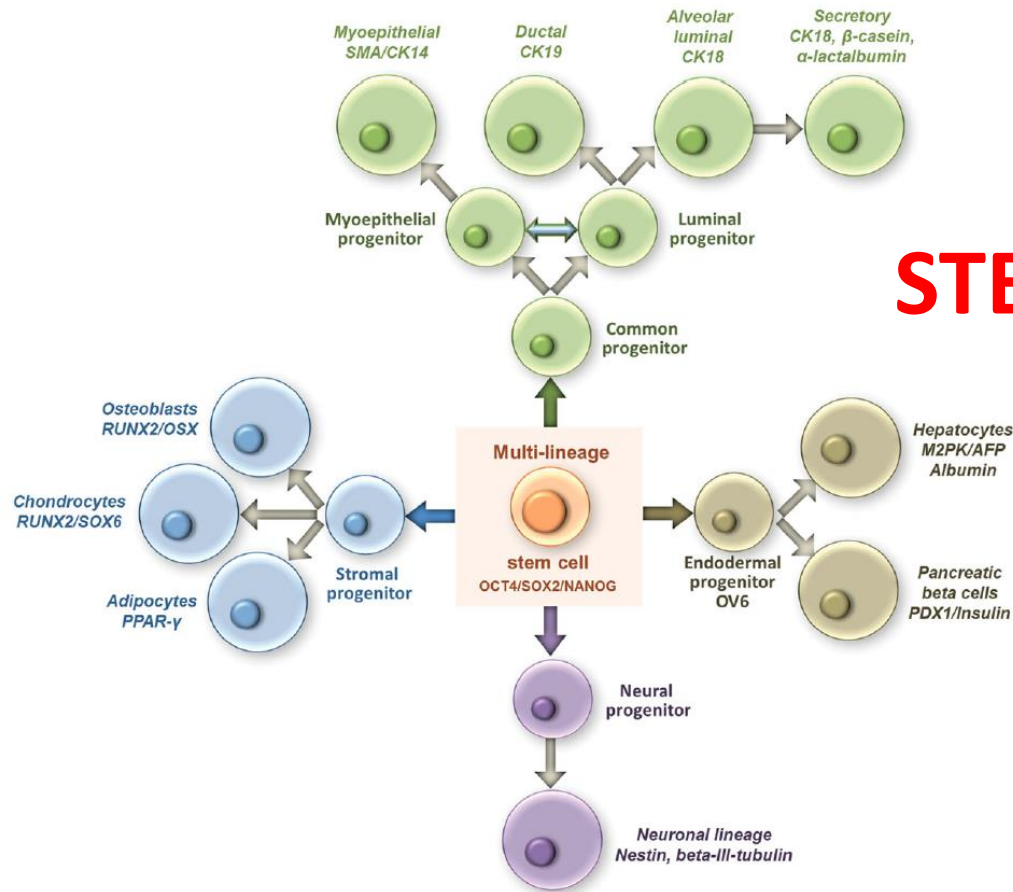
BRAIN DEVELOPMENT



Breastmilk Is a Novel Source of Stem Cells with Multilineage Differentiation Potential

STEM CELLS 2012;30:2164–2174

FOTEINI HASSIOTOU,^{a,b} ADRIANA BELTRAN,^c ELLEN CHETWYND,^d ALISON M. STUEBE,^d ALECIA-JANE TWIGGER,^b
PHILIPP METZGER,^{b,e} NAOMI TRENGOVE,^a CHING TAT LAI,^a LUIS FILGUEIRA,^b PILAR BLANCAFORT,^{b,c}
PETER E. HARTMANN^a



STEM CELL SUPPLY

Dynamics and Stabilization of the Human Gut Microbiome during the First Year of Life

Cell Host & Microbe 17, 690–703, May 13, 2015

Fredrik Bäckhed,^{1,2,*} Josefine Roswall,^{3,4} Yangqing Peng,⁵ Qiang Feng,^{5,6} Huijie Jia,⁵ Petia Kovatcheva-Datchary,¹ Yin Li,⁵ Yan Xia,⁷ Hailiang Xie,⁸ Huanzi Zhong,⁸ Muhammad Tanweer Khan,¹ Jianfeng Zhang,¹ Junhua Li,¹ Liang Xiao,⁸ Jumana Al-Kama,^{1,2} Dongya Zhang,¹ Ying Shikuan Lee,¹ Dorota Kotowska,⁸ Camilla Colding,⁹ Valentina Tremaroli,¹ Ye Yin,¹ Stefan Bergman,^{5,6} Xun Xu,¹ Lise Madsen,^{5,6} Karsten Kristiansen,^{5,6} Jovanna Dahlgren,^{1,12,*} and Jun Wang^{10,11,12,*}

Mother



Vaginally born/Breast feed



Vaginally born/Bottle feed



C-section

4 days



4 month



12 month



**OLD FRIENDS
HYPOTHESIS**

TRANSFORM an enabling environment to support breastfeeding: key actions

A package of actions, policies, and programs to support mothers at health facilities, home and work has the greatest impact

- Disseminate **accurate information** on the value of breastfeeding
- Foster **positive social attitudes** toward breastfeeding
- Demonstrate **political will** to support breastfeeding
- **Regulate** the breastmilk substitute industry by implementing, monitoring and enforcing the Code
- **Scale up and monitor** breastfeeding interventions
- Policy to ensure **maternity protection**

WHO, UNICEF and IBFAN: first joint global report on the status of the Code in 194 countries.



NO IFS, NO BUTS, NO MAYBES

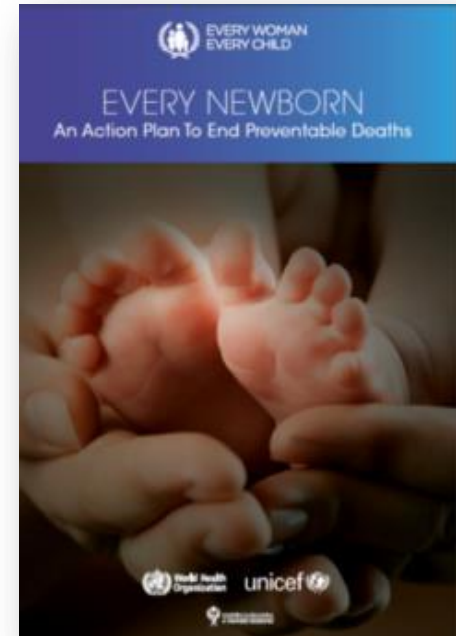
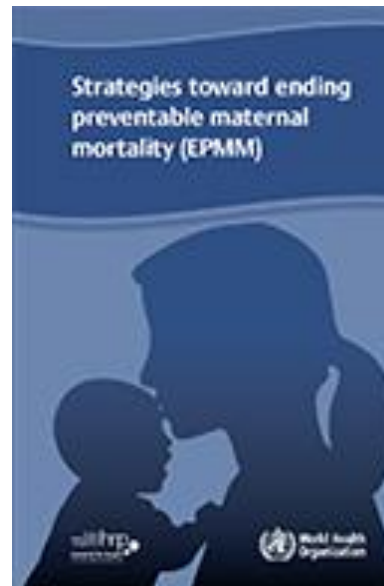
“From tobacco, to sugar, to formula milk, the most vulnerable suffer **when commercial interests collide with public health**.

Robust advertising regulation— covering all milk products for children up to 3 years, and banning social media promotion—is the next step to protect them.”

TRANSFORM

QUALITY, EQUITY, DIGNITY

Halving facility deaths of mothers and newborns in five years



A systems approach

*A Global Network for
Quality of Care and Patient Safety
for mothers and newborns*

Eight quality standards

1. Evidence-based care
2. Health information system
3. Referral
4. Communication
5. Respect
6. Emotional support
7. Competent motivated staff for Emoc and ENC
8. Physical environment

STANDARDS FOR IMPROVING QUALITY OF MATERNAL AND NEWBORN CARE IN HEALTH FACILITIES



SUPPORT MUMS TO BREASTFEED ANYTIME, ANYWHERE



WE CAN **ALL** HELP MAKE SOCIETY
BREASTFEEDING-FRIENDLY

TRANSFORM

Economic case for investing in breastfeeding

Economic gains:

US\$302 billion/year

(0.47% of global GNI)

Due to increased productivity
associated with higher intelligence

Estimated health benefits:

reduced annual healthcare costs

totalling **nearly \$400**

million in the U.S., UK, Brazil and
urban China

	Estimated percentage loss in gross national income	Estimated loss in 2012 US\$
Eastern and southern Africa	0.04%	\$0.1 billion
West and central Africa	0.06%	\$0.3 billion
Middle East and north Africa	0.97%	\$11.8 billion
South Asia	0.05%	\$1.0 billion
East Asia and Pacific	0.31%	\$28.1 billion
Latin America and the Caribbean	0.39%	\$12.1 billion
Eastern Europe and central Asia	0.75%	\$17.6 billion
Subtotal (low-income and middle-income countries)	0.39%	\$70.9 billion
High-income countries	0.53%	\$231.4 billion
World	0.49%*	\$302.0 billion (total estimated loss)

Estimates are based on data for 96 countries (of 197 countries in the UNICEF's 2014 database)⁹¹. For details about data and included countries, and country-level results, see appendix pp 115–16. *Global average, weighted by gross national income.

Table 2: Estimated economic losses from cognitive deficits associated with regional infant feeding practices compared with every infant breastfeeding until at least 6 months of age.



THANK YOU

My twitter
[@globalhlthtwit](https://twitter.com/globalhlthtwit)