

Strengthening Systems to
Ensure All Infants Receive
Human Milk:

The Status of Human Milk Banking Worldwide

*„LAC MATERNUM“ - MUTTERMILCH
UND FRAUENMILCHBANKEN*

13 May 2019

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Maternal, Newborn, Child Health & Nutrition



PATH is a leader in global health innovation

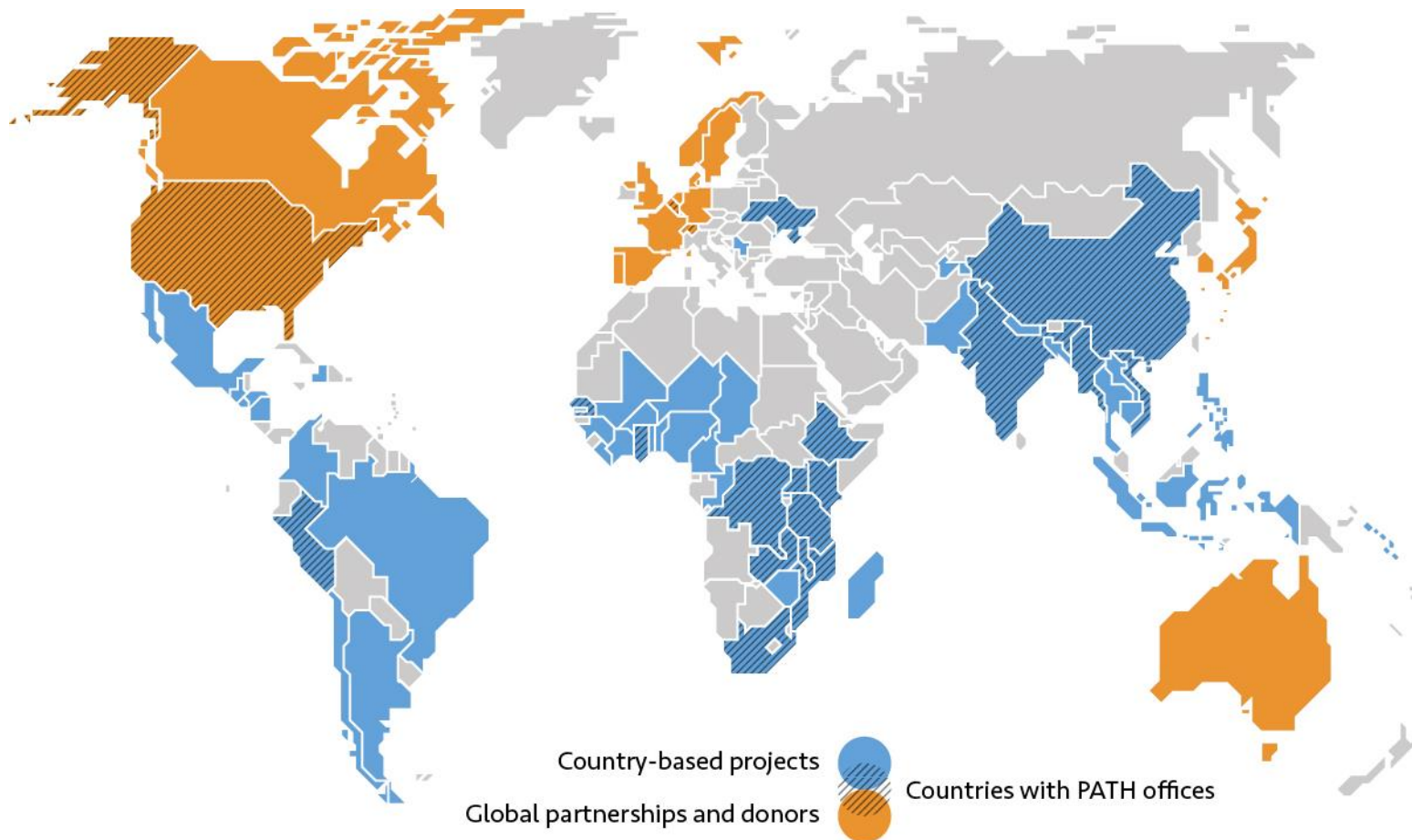
We harness our entrepreneurial insight, scientific and public health expertise, and passion for health equity...

...to save the lives of women and children.



Our global impact

Work in more than 70 countries
150 million people reached each year (average)



7 billion vaccine vial

monitors ensuring that vaccines are potent when given

4 million people

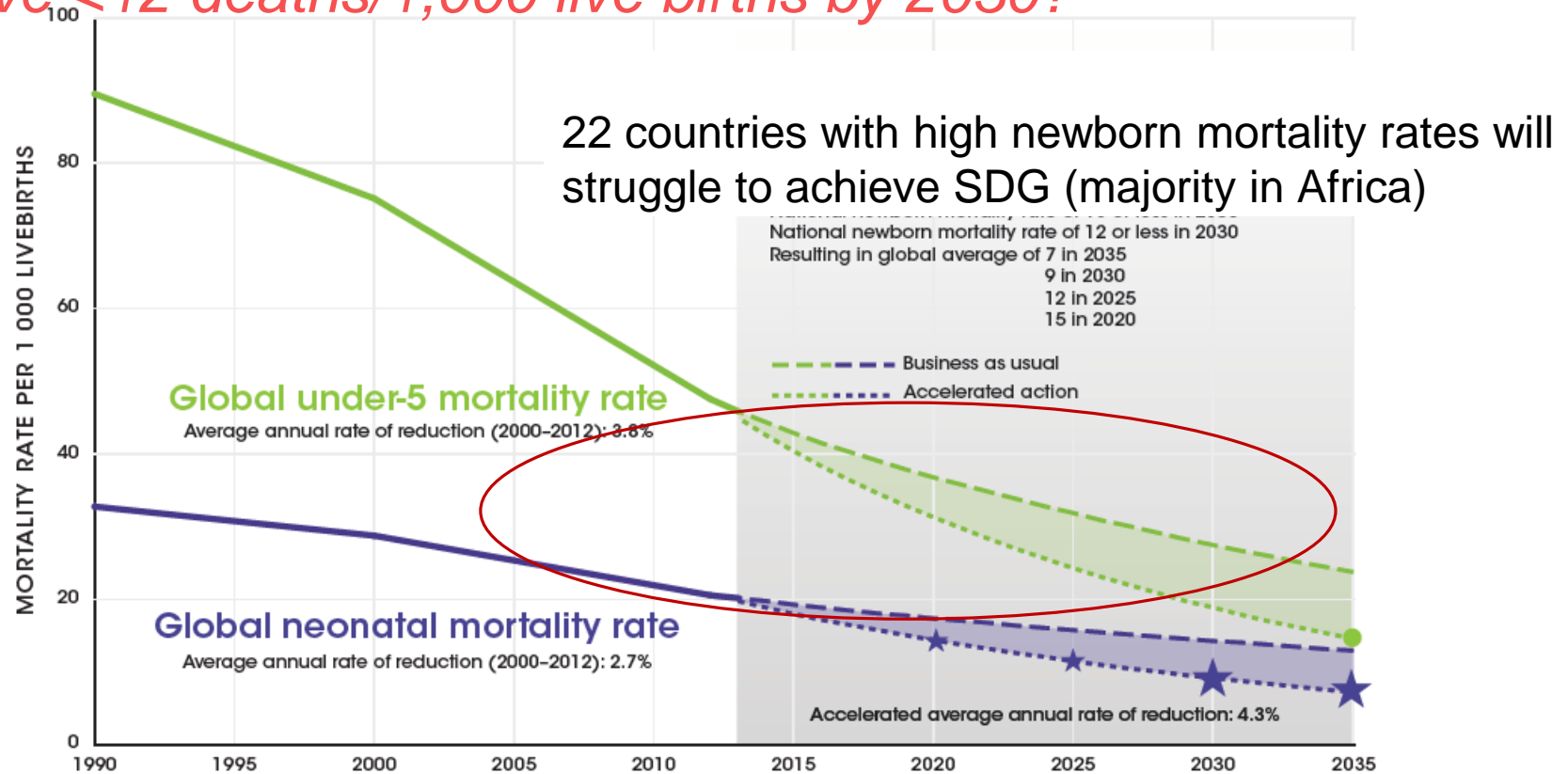
reached with rice fortified with critical micronutrients

7 million lives saved

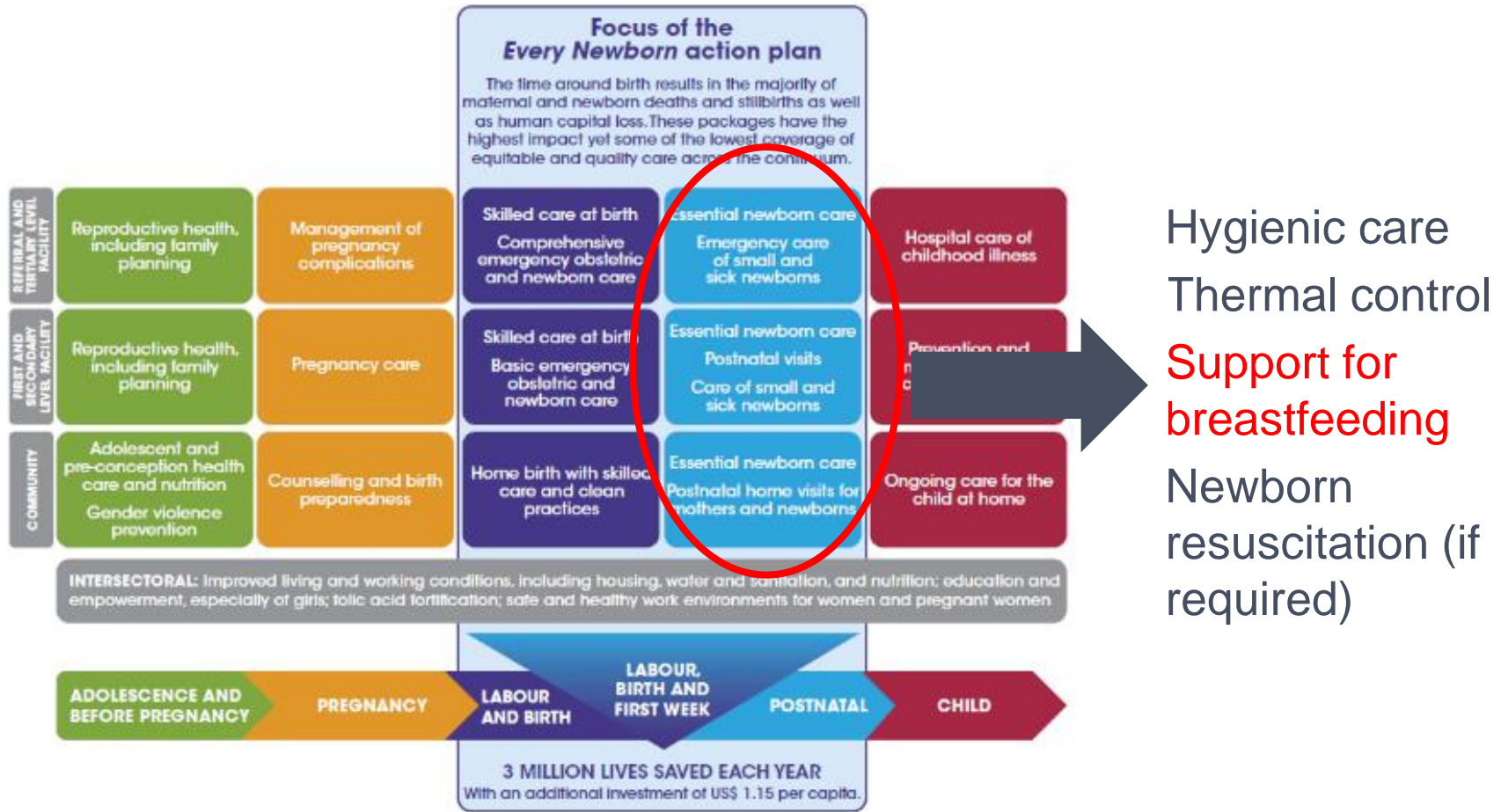
with PATH-pioneered approaches to malaria control

The problem: Every region of the world is experiencing increase in proportion of <5 deaths in neonatal period

Globally, will we reach SDG 3.2 newborn mortality target to achieve <12 deaths/1,000 live births by 2030?



Breastfeeding is a critical component of early and essential newborn care



Source: *The Lancet* Every Newborn Series, Mason E et al. *Lancet*, 2014 (27).



FROM THE FIRST
HOUR OF LIFE

Making the case for improved
infant and young child feeding
everywhere

unicef 
unite for children

Current systems are not
meeting the need – for
newborns around the world
EVERY MINUTE COUNTS

Of the 140 million live births in 2015,

77 million

newborns had to wait **too long** to be
put to the breast.



Only 45 per cent of newborns were put
to the breast within the first hour of life.

 = 10 million newborns

How do we care for vulnerable newborns who don't have access to their own mother's milk?

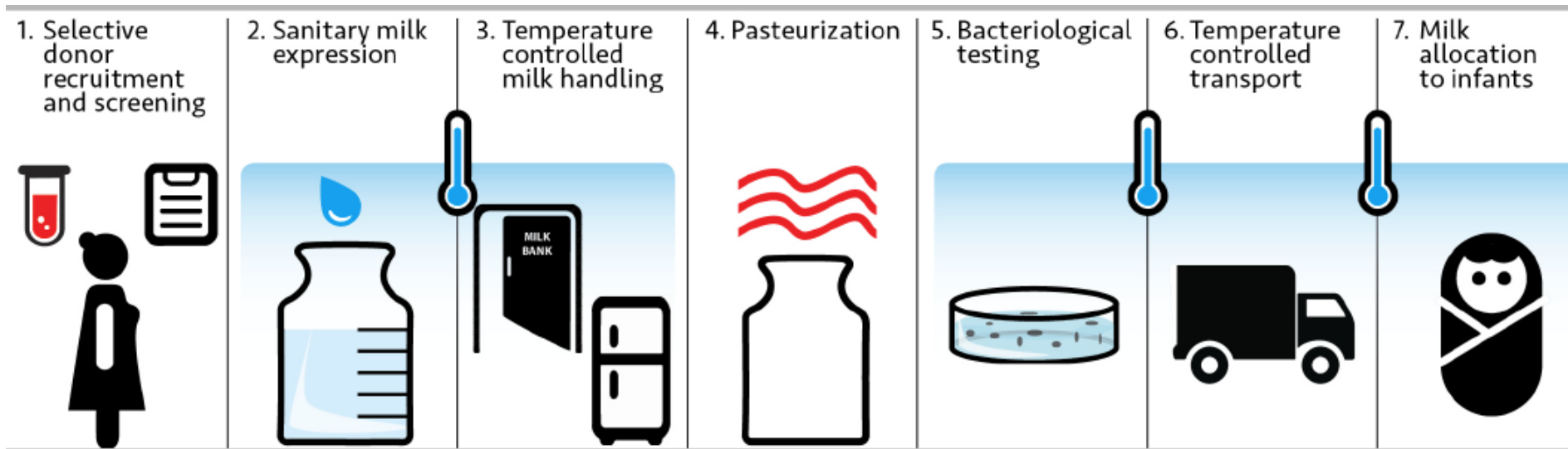


2011 WHO Recommendations on optimal feeding of low-birth-weight infants

No	Recommendation*	Type of recommendation	Quality of evidence (at least 1 critical outcome)
<i>What to feed?</i>			
<i>a. Choice of milk</i>			
1.	Low-birth-weight (LBW) infants, including those with very low birth weight (VLBW), should be fed mother's own milk.	<i>Strong</i>	<i>Moderate</i>
2.	LBW infants, including those with VLBW, who cannot be fed mother's own milk should be fed donor human milk (<u>recommendation relevant for settings where safe and affordable milk-banking facilities are available or can be set up</u>).	<i>Strong situational</i>	<i>High</i>
3.	LBW infants, including those with VLBW, who cannot be fed mother's own milk or donor human milk should be fed standard infant formula (recommendation relevant for resource-limited settings). VLBW infants who cannot be fed mother's own milk or donor human milk should be given preterm infant formula if they fail to gain weight despite adequate feeding with standard infant formula.	<i>Weak situational</i>	<i>Low</i>

What is a human milk bank?

Human milk bank: A service established to recruit breast milk donors, collect donated milk, and then process, screen, store, and distribute the milk to meet infants' specific needs for optimal health.



Processing of donor human milk at a human milk bank

Saving lives through donated milk is a century-old practice

The first human milk bank opened in Vienna, Austria, in 1909.



Milk banking in North America began in 1919 in Boston, USA.



First human milk bank Germany – **Magdeburg** in 1919.



Brazil milk bank was established in the 1940s.



Milk banking in the UK began in 1939 when quadruplets were saved.

First human milk bank in India opened in 1989.

THE PHILIPPINE HUMAN MILK BANKING
(MANUAL OF OPERATION)



First human milk bank in Vietnam opened in 2017.



The Philippines National Milk Bank

A global picture: The critical lack of human milk banks to ensure safe access



Limited global scale-up due to lack of...

Standards

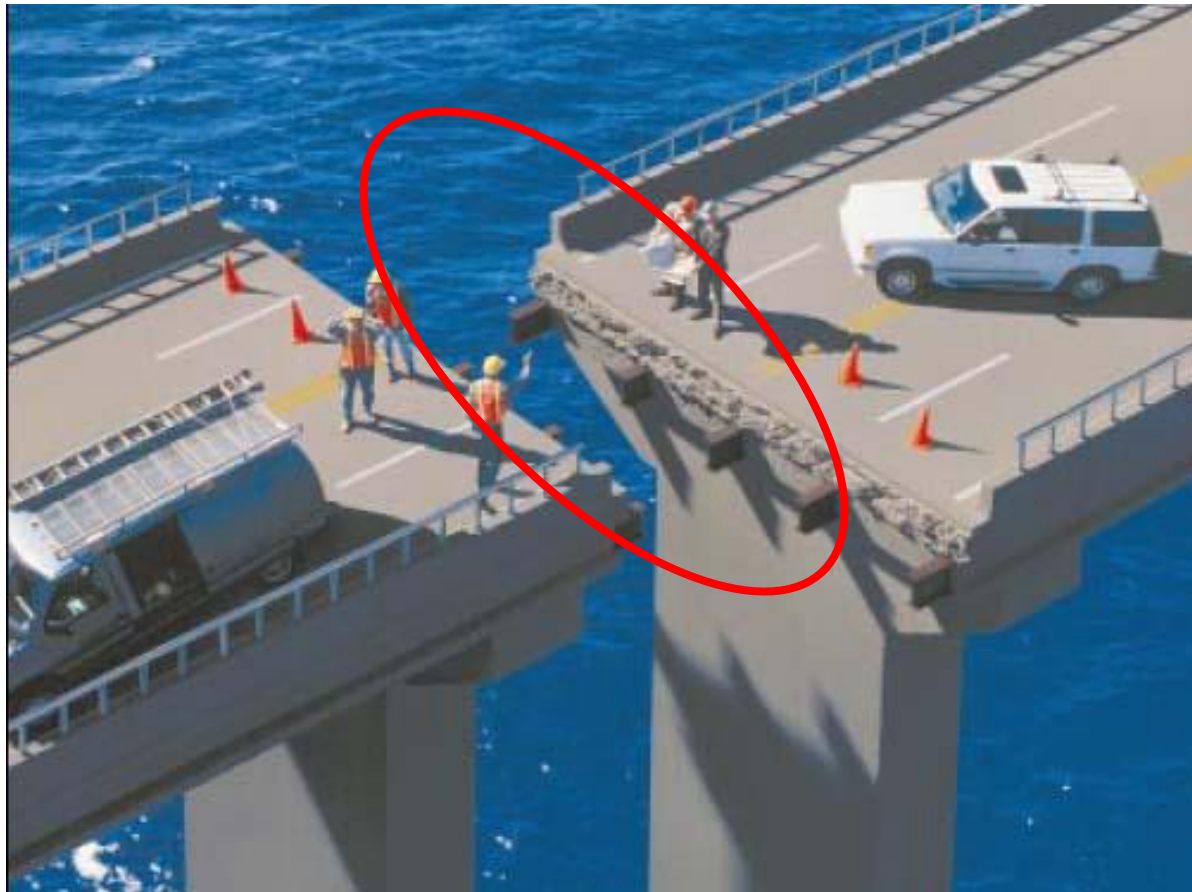
Policies

Data

Integration

Innovations

Historic separation of newborn and nutrition implementation priorities: A critical transformation of the field targeting newborn nutrition is urgently needed



A multi-pronged approach is needed to ensure **ALL** babies everywhere receive human milk



Innovative systems strengthening is required to enable and support an exclusive human milk diet

Supporting needs of mother *and* baby

OPEN

Journal of Perinatology (2016) 00, 1–6

www.nature.com/jp

STATE-OF-THE-ART

Establishing an integrated human milk banking approach to strengthen newborn care

A DeMarchis^{1,2}, K Israel-Ballard¹, Kimberly Amundson Mansen^{1,3} and C Engmann^{1,3,4,5}

Integrated systems embed donor human milk within breastfeeding promotion – Brazil as a global model



[J Hum Lact.](#) 2016 May;32(2):221-8. doi: 10.1177/0890334415598305. Epub 2015 Aug 4.

Implementation of a Donor Milk Program Is Associated with Greater Consumption of Mothers' Own Milk among VLBW Infants in a US, Level 3 NICU.

Parker MG¹, Burnham L², Mao W³, Philipp BL², Merewood A².

[J Perinat Med.](#) 2013 Mar;41(2):129-31. doi: 10.1515/jpm-2012-0196.

Presence of human milk bank is associated with elevated rate of exclusive breastfeeding in VLBW infants.

Arslanoglu S¹, Moro GE, Bellù R, Turoli D, De Nisi G, Tonetto P, Bertino E.

PATH as a catalyst harnessing global expertise: A decade of intensive learning, collaboration and focus on strengthening systems for newborn nutrition



**To build capacity,
integrate nutrition,
newborn systems, and
increase rigor to
demonstrate impact**

Regional activities:

- South Africa
- Kenya
- India
- Viet Nam



Utilizing a systematic approach for effectively establishing a new program

PHASE I: ESTABLISHING OWNERSHIP

- DEVELOP LEARNING EXCHANGES
- CONDUCT FORMATIVE ASSESSMENT
- INSTILL LOCAL OWNERSHIP FOR MOTHER-BABY FRIENDLY INITIATIVE PLUS (MBFI+)
- DEVELOP COUNTRY-SPECIFIC STRATEGY AND GUIDANCE

PHASE II: OPERATIONALIZING

- CONDUCT BREASTFEEDING PROMOTION
- ESTABLISH HUMAN MILK BANK QUALITY CONTROL SYSTEMS
- IMPLEMENT MBFI+ HUMAN MILK BANK PILOT PROGRAM AT LOCAL FACILITIES

PHASE III: RESEARCH AND EVALUATION

- CONDUCT RIGOROUS EVALUATION
- DISSEMINATE FINDINGS TO ENSURE SUSTAINABLE EXPANSION
- REVISE SYSTEM BASED ON PILOT RESULTS
- FINALIZE SCALE-UP PLAN



health

Department:
Health
PROVINCE OF KWAZULU-NATAL



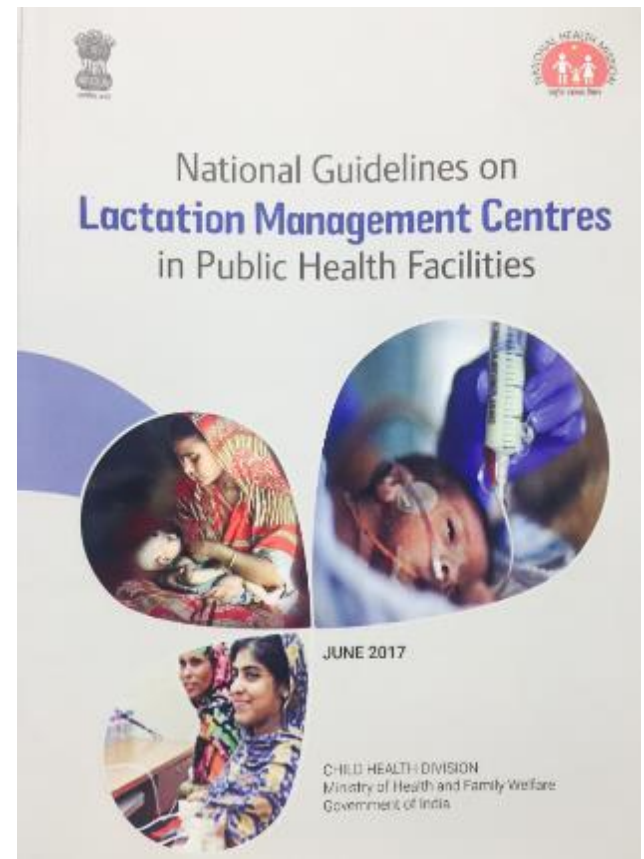
HMBASA



African Population and
Health Research Center

Strengthening national systems and evaluating an MBFI+ model in India

- PATH serves as technical lead to Government of India to determine guidelines and regulation.
- HMB Guidelines developed June 2017 for the Comprehensive Lactation Management Centers.
- Current systems strengthening project to integrate MBFI+ model at Sion Hospital (1st India HMB–25 years).
 - Rigorous evaluation to demonstrate impact and quality improvement.



Strengthening systems to establish the first human milk bank in Vietnam



ScalingUp
NUTRITION

59 countries are leading a global movement to end malnutrition in all its forms.

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Home / News / The first human milk bank in Vietnam opens, improving access to breast milk for thousands of at-risk infants

The first human milk bank in Vietnam opens, improving access to breast milk for thousands of at-risk infants

2017
03
March



alive&thrive
nourish. nurture. grow.

PATH
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Launch of the first human milk bank in East Africa: Kenya

KENYA HUMAN MILK BANKING GUIDELINES

2017



- Activities focus on establishing ownership and technical competency
 - Learning exchange to South Africa and Scotland
 - HACCP trainings and guidelines development
- Launched on 29 March 2019
- Conducting rigorous evaluation
- Center of Excellence model for the East African region

Kenyan hospital opens human milk bank – a rarity in sub-Saharan Africa

April 16, 2019 3:01pm BST



THE CONVERSATION

Academic rigour, journalistic flair



REPUBLIC OF KENYA



MINISTRY OF HEALTH



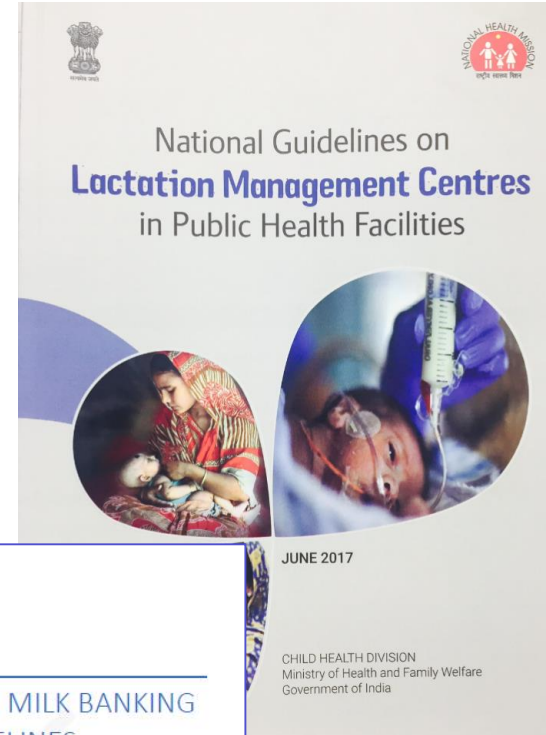
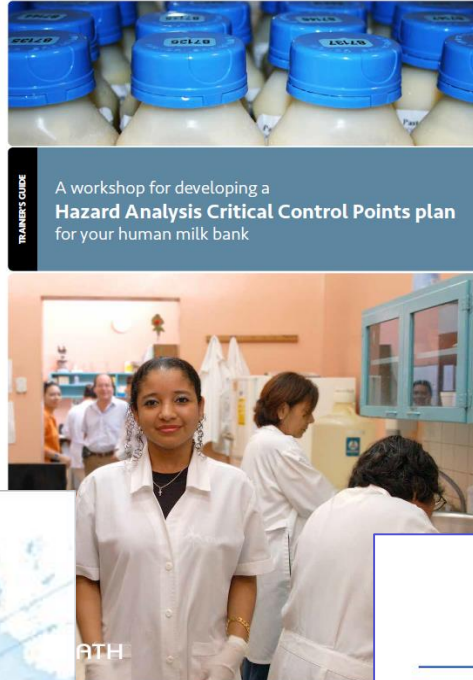
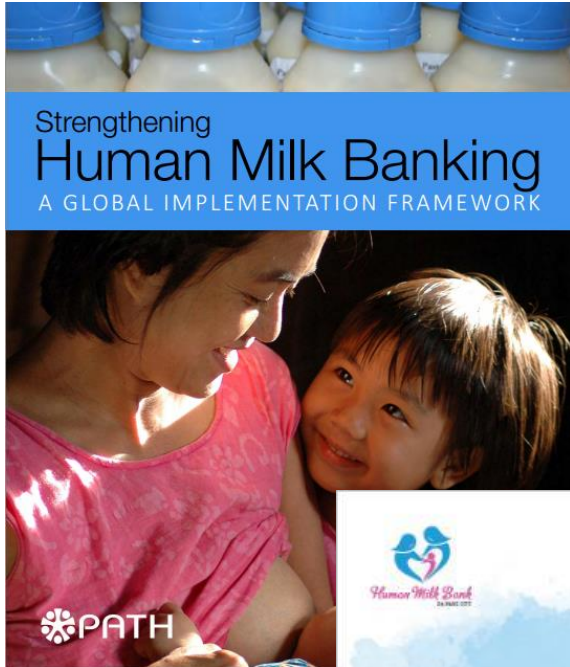
Development of associations of human milk banks



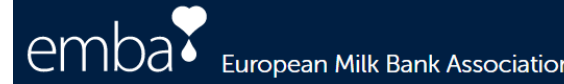
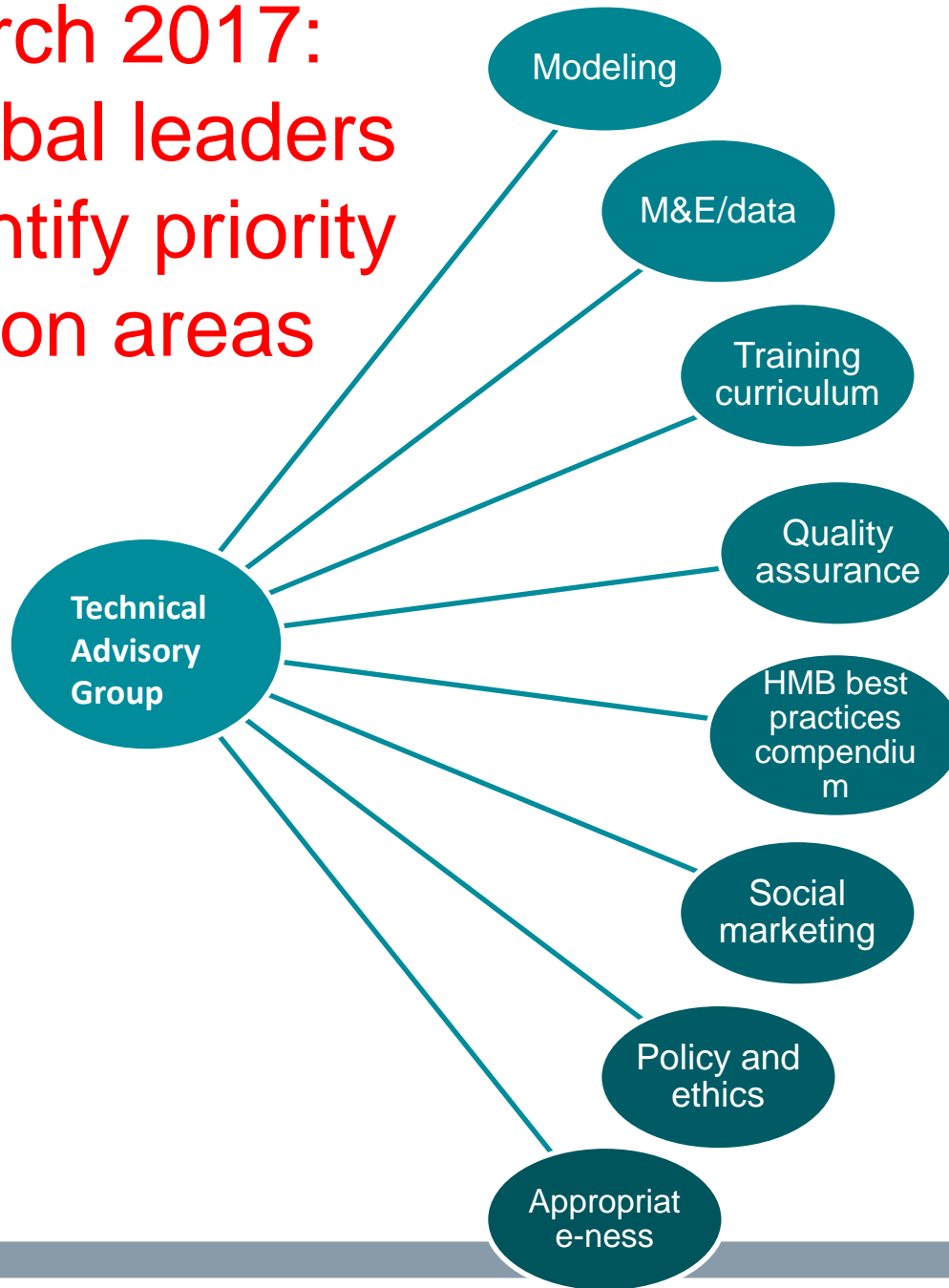
Development of associations of human milk banks



Initial guidance materials developed indicated that a global and comprehensive approach is needed



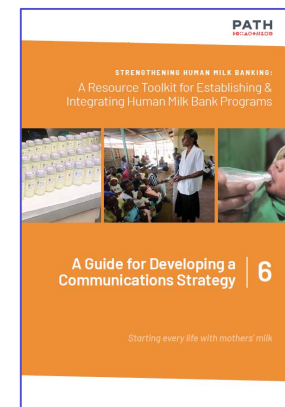
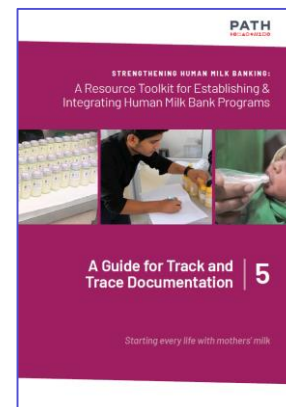
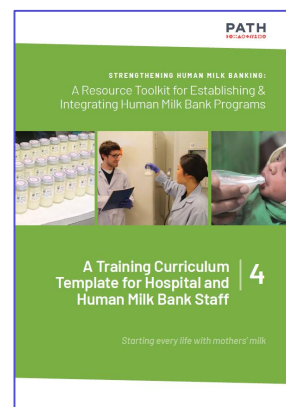
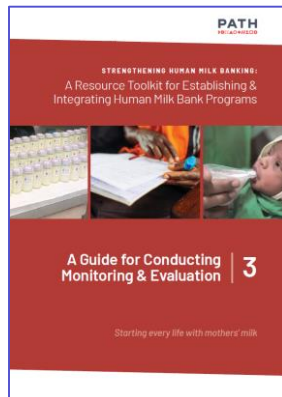
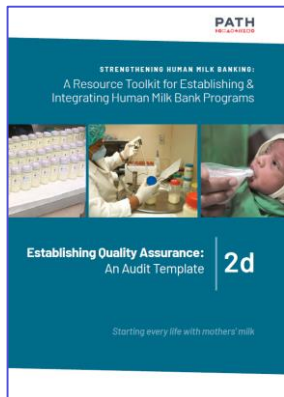
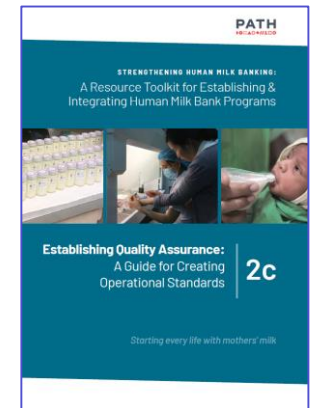
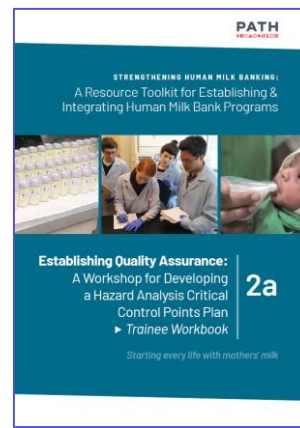
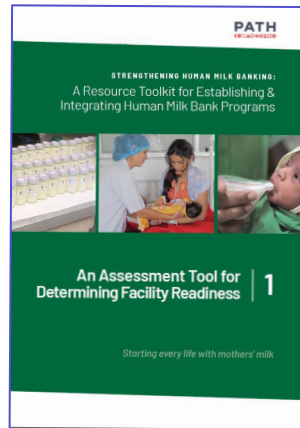
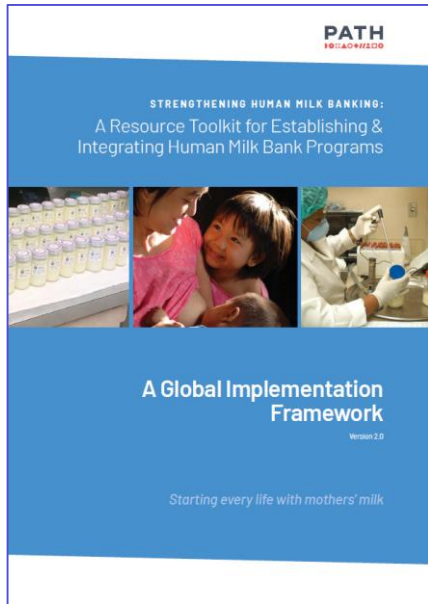
March 2017: Global leaders identify priority action areas



Multi-pronged approach needed to advance the entire field forward

Strengthening Human Milk Banking: A Resource Toolkit for Establishing and Integrating Human Milk Banks

*First set of global standards -
launched February 2019*



Available at: <https://www.path.org/programs/maternal-newborn-child-health-and-nutrition/strengthening-human-milk-banking-resource-toolkit/>

Objectives and aim of resource toolkit

A 22 month process involving workshops with technical experts, pre-testing in multiple countries and critical review by leaders in the field.

This toolkit is comprised of 11 separate core documents to guide critical steps for establishing human milk banking as an integrated component within breastfeeding support and neonatal care.

In-depth focus on readiness, quality assurance, operations, auditing, training, monitoring and evaluation, and communications.

Accompanying materials, including templates, standards, and tools are included for direct use.

This toolkit, in its entirety, is freely available and globally accessible. The content was developed to be adaptable to local context requirements to maximize effectiveness and reach.

STRENGTHENING HUMAN MILK BANKING:
A Resource Toolkit for Establishing &
Integrating Human Milk Bank Programs



**A Global Implementation
Framework**

Version 2.0

Starting every life with mothers' milk

STRENGTHENING HUMAN MILK BANKING:
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Integrating Human Milk Bank Programs



**An Assessment Tool for
Determining Facility Readiness | 1**

Starting every life with mothers' milk

STRENGTHENING HUMAN MILK BANKING:
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Establishing Quality Assurance:

A Workshop for Developing
a Hazard Analysis Critical
Control Points Plan

► *Trainee Workbook*

2a

Starting every life with mothers' milk

STRENGTHENING HUMAN MILK BANKING:
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Establishing Quality Assurance:

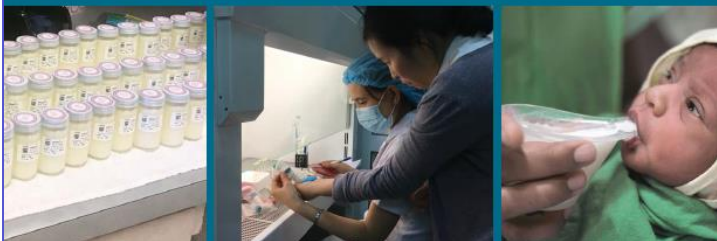
A Workshop for Developing
a Hazard Analysis Critical
Control Points Plan

► *Trainer Guide*

2b

Starting every life with mothers' milk

STRENGTHENING HUMAN MILK BANKING:
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Establishing Quality Assurance:
A Guide for Creating
Operational Standards

2c

Starting every life with mothers' milk

STRENGTHENING HUMAN MILK BANKING:
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Establishing Quality Assurance:
An Audit Template

2d

Starting every life with mothers' milk

STRENGTHENING HUMAN MILK BANKING:
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**A Guide for Conducting
Monitoring & Evaluation | 3**

Starting every life with mothers' milk

STRENGTHENING HUMAN MILK BANKING:
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Integrating Human Milk Bank Programs



**A Training Curriculum
Template for Hospital and
Human Milk Bank Staff | 4**

Starting every life with mothers' milk

STRENGTHENING HUMAN MILK BANKING:
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**A Guide for Track and
Trace Documentation | 5**

Starting every life with mothers' milk

STRENGTHENING HUMAN MILK BANKING:
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**A Guide for Developing a
Communications Strategy | 6**

Starting every life with mothers' milk

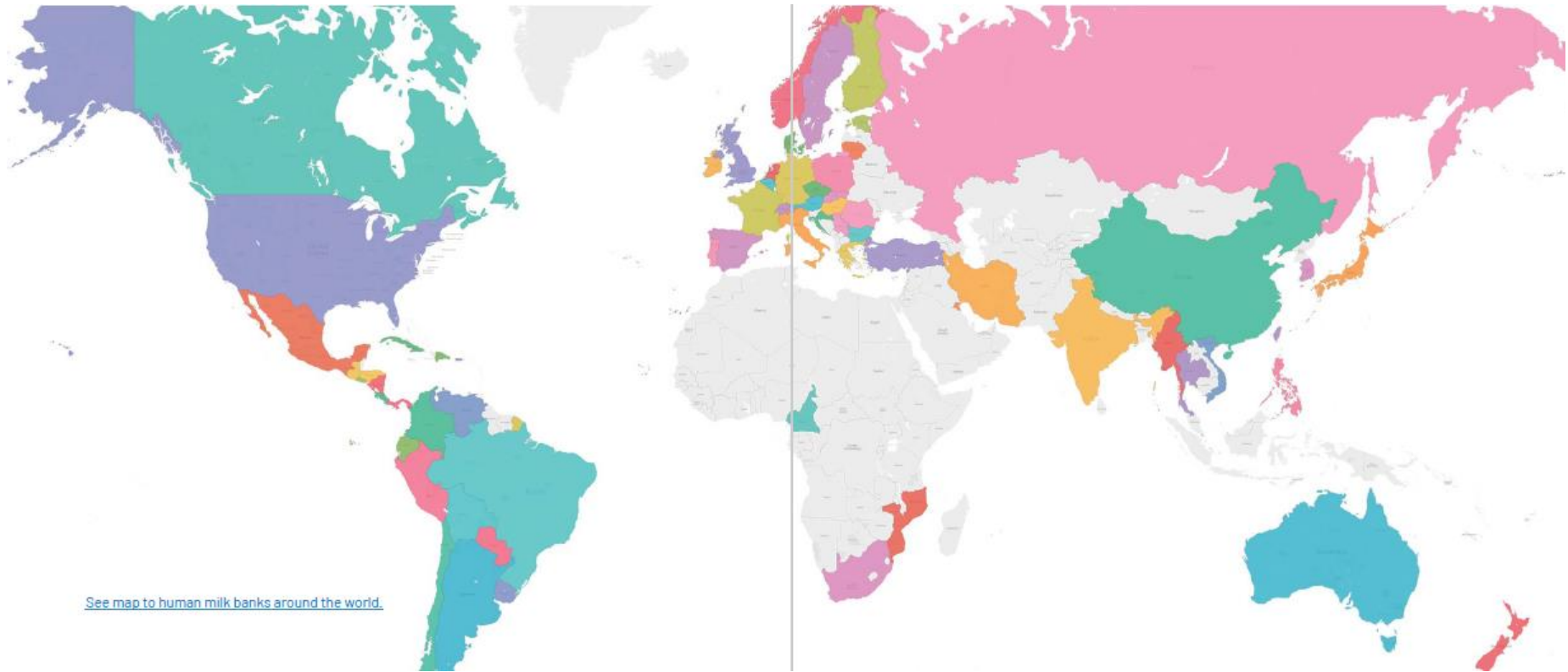
STRENGTHENING HUMAN MILK BANKING:
A Resource Toolkit for Establishing &
Integrating Human Milk Bank Programs



A Counseling Guide for
Engaging Bereaved Mothers | 7

Starting every life with mothers' milk

Interactive global map of human milk banks and contact information – Tableau Public



https://public.tableau.com/profile/human.milk.bank.global.map#!/vizhome/HumanMilkBankGlobalMap_0/HumanMilkBankGlobalMap

To achieve global impact:

**Advocating for global
guidance from WHO to
guide safety and
appropriate use of donor
human milk**

Blood

Donor

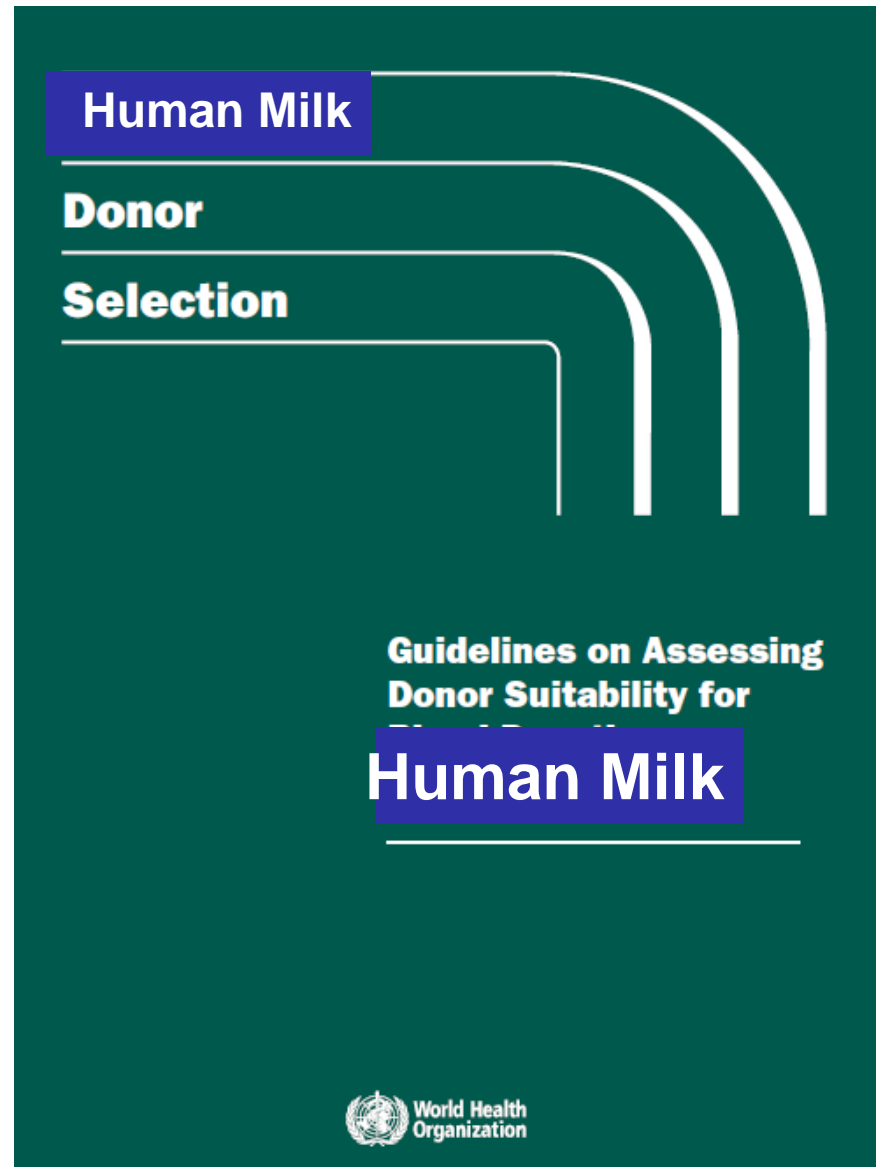
Selection

**Guidelines on Assessing
Donor Suitability for
Blood Donation**



To achieve global impact:

Advocating for global guidance from WHO to guide safety and appropriate use of donor human milk



Transforming newborn nutrition and the role of human milk to achieve a paradigm shift –

Creating a global movement through unified focus

A Global Association of Human Milk Banks



A shared vision

Imagine a world where all infants have access to human milk.



A photograph of a woman with braided hair, wearing a patterned top, breastfeeding her baby. The baby is wrapped in a colorful cloth. The background is a simple, textured wall.

Thank you!

Kiersten Israel-Ballard
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PATH
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