

“Uno de cada 10 bebés en el mundo  
nacen antes de tiempo”



17 DE NOVIEMBRE  
**DÍA MUNDIAL  
DEL PREMATURO**



# **Report of the KMC Workshop**

## **Bogota, Nov. 14-15, 2018**

**Juan M. Lozano, MD, MSc**

Department of Medical and Population Health Sciences Research  
Herbert Wertheim College of Medicine  
Florida International University  
Miami, FL, USA



## Outline

- Topics covered in the workshop
- Methods
- Summary of reports
- Frequent interaction / discussions



## Topics covered

- 1. Minimum set of indicators** to assess dissemination at country level.
- 2. Integrating KMC to the objectives** of NGOs, development partners and other institutions (public & private).
- 3. Implementation of KMC in all** hospitals in a country.
- 4. KMC transportation.**
- 5. All on board:** MOHs, academia and professional associations.
- 6. Systems for follow-up.**
- 7. KMC for term infants.**

# Methods

1. Sets of “**discussion points**” for each topic proposed by organizers.
2. **Facilitators** assigned to each topic.
3. Workshop **participants voluntarily joined one** topic / working group.
4. **Discussions** in seven parallel working groups (~8 h)
5. **Report** from each working group in a plenary session / discussion.

## Outline of Group 5 activities

- Introduction of moderators and participants
- Expectations
- Objectives for Group 5
- Presentation
- Small group work
- Feedback

A hand holding a pen is positioned over a desk covered with business reports and charts. The scene includes a pair of glasses, a paperclip, and various data visualizations like bar and line graphs. A semi-transparent dark box with white text is centered over the image.

# REPORTS

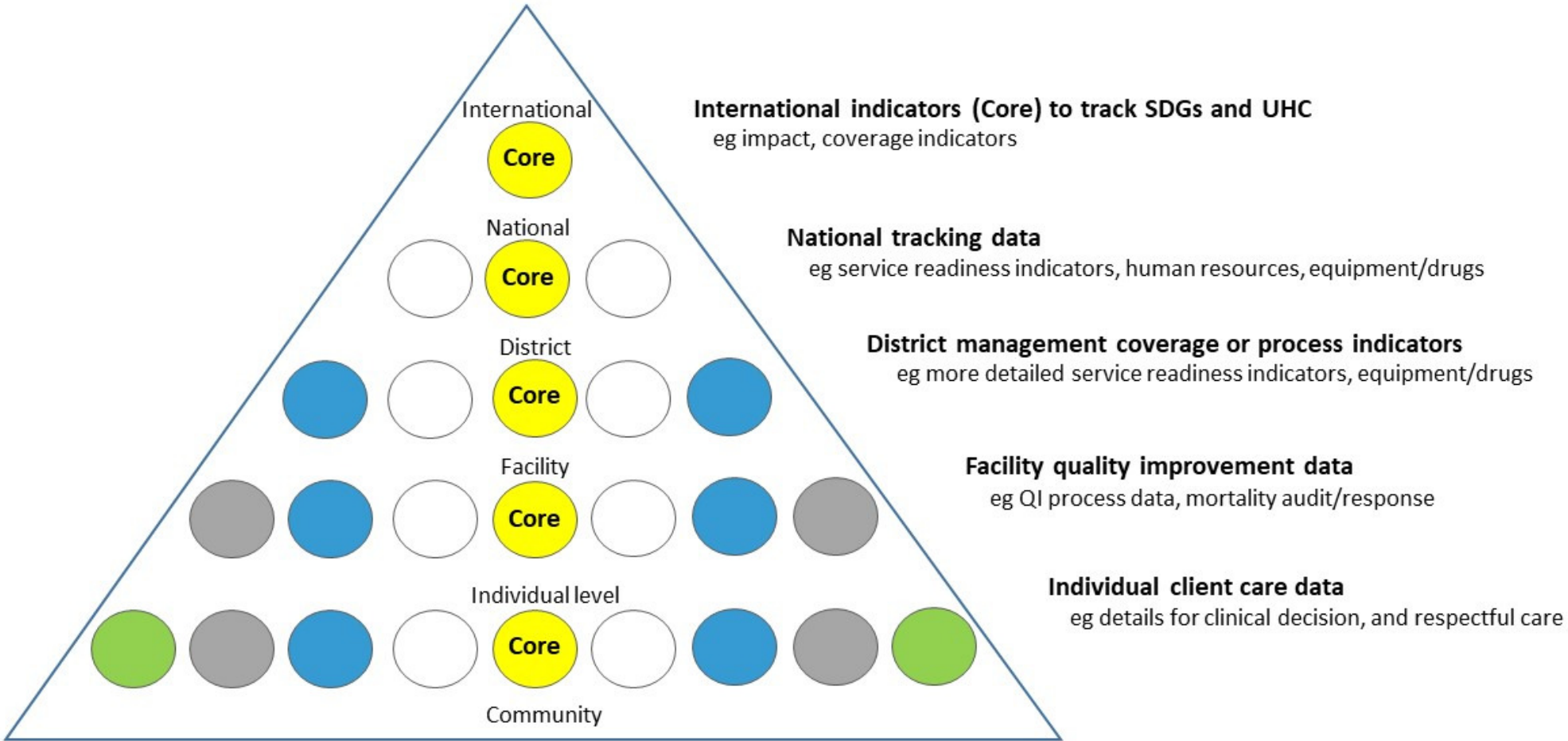
# 1 Indicators to assess national dissemination

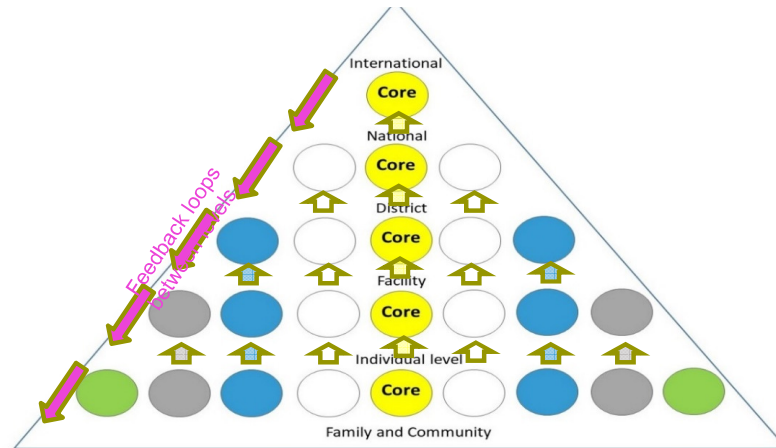
Discussion points:

1. Indicators needed for describing / assessing:
  1. Target population (#LB, %PTB, %LBWB, mortality...).
  2. Target health care facilities (# institutions, beds, HW...).
  3. Utilization of health care facilities (% institutional deliv., referrals...).
  4. Coverage of hospital-based KMC (% institutions KMC...).
  5. KMC uptake.
  6. Quality of KMC programs.
2. Potential sources of information.
3. Denominators for indicators.



# Hierarchy of Information Needs/ Data Pyramid





Level of Health System	Indicators specific for LBW <2.5kg and/or PT < 37 weeks	
<b>International indicators (Core) to track SDGs and UHC</b> Includes impact, coverage, process indicators	<b>WHO 100 core indicator:</b> Low Birth Weight Rate	<b>National</b> % of LBW/PT discharged EBF % of LBW/PT discharged in KMC % at risk ROP screened % of facilities care LBW/PT with KMC kit
	<b>Not yet core indicator</b> Preterm Birth Rate	<b>District</b> % of staff caring for LBW/PT are KMC trained % of LBW/PT babies Follow up per protocol (40 wk, 6mo, 1y, 2y, 3y)
	Neonatal Mortality Rate for LBW and PT	<b>Facility</b> % of eligible babies received KMC % of LBW/PT hypothermic episodes % of LBW/PT hypoglycaemic episodes % of babies weighed at birth % of babies EGA at birth % of LBW/PT referred in KMC % of LBW/PT EBF at 40 wk, 3mo and 6mo
	Infant Mortality Rate for LBW and PT	<b>Individual</b>
	Immediate Breast Feeding rate for LBW and PT	
	% countries with KMC in national policy	
	% countries with KMC included in benefit package	
<b>National tracking data</b>	e.g. impact, coverage, service equipment/drugs	
<b>District management</b>	e.g. coverage, more detailed service readiness indicators equipment/drugs	
<b>Facility management</b>	e.g. quality improvement process data	
<b>Individual client care</b>	e.g. details for clinical decision, client experience of care	

Numerator	Denominator
# LBW/PT babies born	# babies liveborn born
# LBW/PT babies died in 28 days	# LBW/PT liveborns
# LBW/PT babies died in 1 <sup>st</sup> year	# LBW/PT liveborns
# Immediate BF rate for LBW/PT	# LBW/PT liveborns
# countries with KMC adopted policy	# countries

Numerator	Denominator
# LBW/PT discharged EBF # LBW/PT discharged in KMC # LBW/PT babies screened for ROP # facilities with KMC stock out	# LBW/PT discharged # LBW/PT discharged # LBW/PT babies received oxygen ROP # facilities with KMC programmed
# KMC competency trained staff	# staff caring for LBW/PT babies
# days LBW/PT babies had KMC in facility	# days LBW/PT baby stayed in hospital
# LBW/PT babies referred in KMC	# LBW/PT babies referred



## 2 Integrating KMC to others' objectives

Discussion points:

1. Standardization:
  1. Definition of KMC.
  2. Inclusion criteria for KMC program.
2. Avoiding “simplification / trivialization” of KMC.
3. Best strategies to support first implementation of KMC programs / promote sustainability.
4. Compiling KMC manuals / tools that are easy to access.

# Standardization of the definition of KMC & avoiding trivialization

## Barriers:

- Countries have:
  - Different definitions of the number of hours of skin to skin contact.
  - Challenges achieving all 3 components of KMC.
- Follow up challenges for families who live far from hospitals & must travel far distances.

## Recommendations & Next Steps

- WHO guidelines updated & disseminated.
- Align KMC with Baby Friendly Hospitals.
- Bring together experience of LA countries to the world.
- Change the message:
  - From low tech to high skill.
  - Focus on training & mentoring.

# Supporting first implementation of a KMC program and promoting sustainability

## Barriers

- Acceptance from management with budget allocation & guidelines.
- Government ownership.
- Training and learning from functional KMC programs
- Retention of staff.
- Indicators to track progress
- Media and behavior change strategies.

## Recommendations & Next Steps

- Intensive training of healthcare providers with ongoing supervision.
- Strengthen health system links between districts and community facilities.
- Increase the emphasis on continuum of care, including starting KMC in ANC.
- Engagement professional associations.
- Government ownership & buy-in, including budget allocation.

# Compiling KMC Manuals that are accessible

## Barriers

- Electricity and internet issues.
- Language availability.
- Funding for translation.
- No central location.

## Recommendations & Next Steps

- Resources centralized into one online location that are curated and available in multiple languages.
- Translating existing resources into multiple languages.

# Aligning public & private providers for KMC

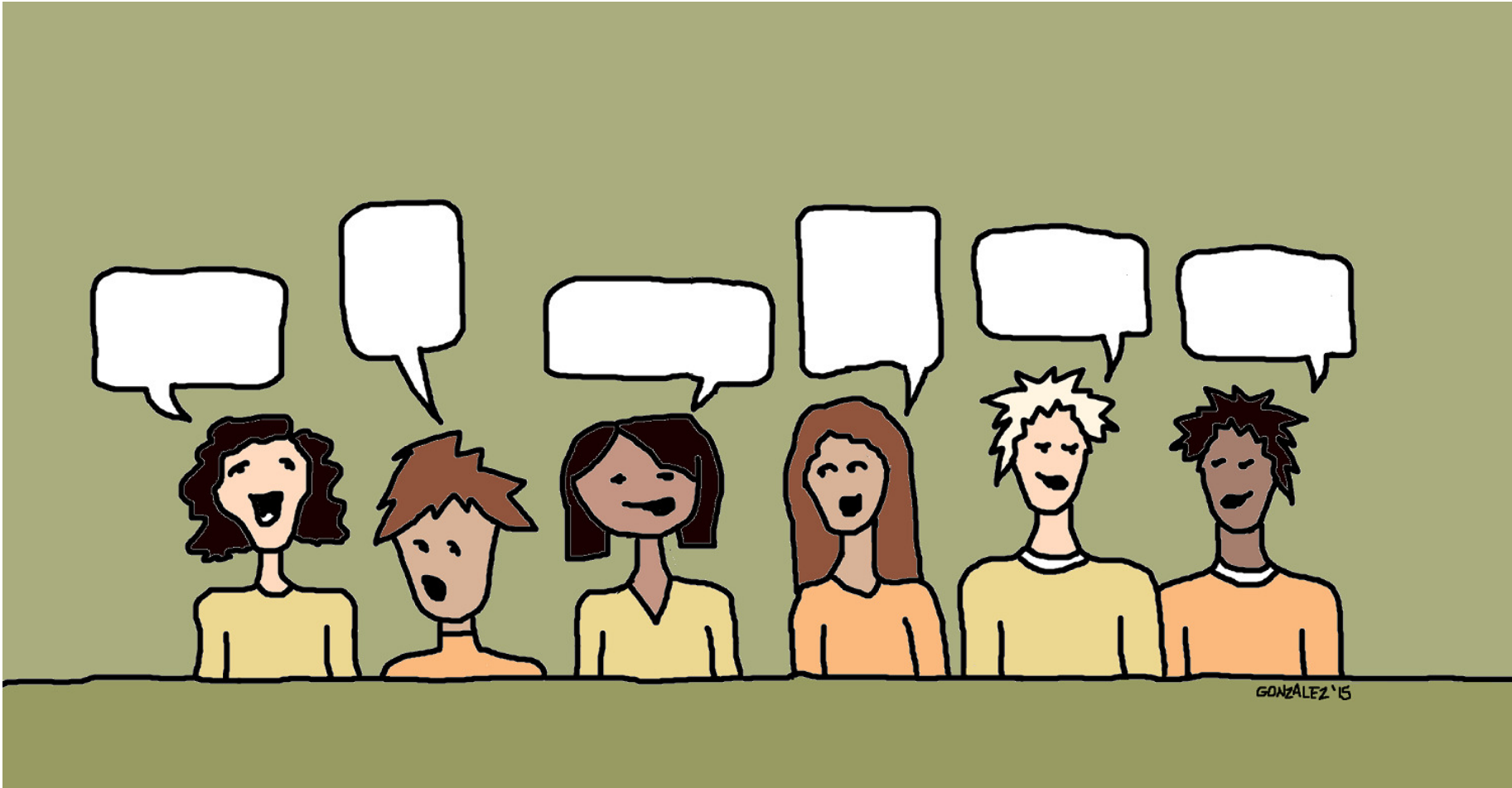
## Barriers

- Understanding the roles of both public and private providers.
- Standard guidelines.
- Budget availability.

## Recommendations & Next Steps

- Align both public and private providers under the same national plan.
- Include non-traditional partners into the promotion of KMC.





## **3 Implementation of KMC in all hospitals**

Discussion points:

1. Best strategies for implementing KMC across a country.
2. Basic hospital needs / requirements for KMC implementation.
3. Levels / steps of KMC implementation to facilitate hospital adoption
4. Involving the community in hospital-based implementation.

# Strategies for implementing KMC across a country

1. Development of a state policy (MOH leadership).
2. Current and adapted national KMC guidelines.
3. Articulation between state government, academia, and KMC programs.
4. Periodical surveys:
  - Enough information / knowledge about how to implement KMC.
  - Provide feedback to professionals, leadership and policy makers.
5. Periodic assessment of quality indicators of KMC implementation.

# Strategies for implementing KMC across a country

6. Accessible / available training in KMC.
7. KMC task teams and institutions empowerment.
8. Need for more KMC champions and leaders (from health centers, hospitals, ministry and families).
9. Inclusion of KMC in the curriculum of undergraduate and postgraduate students in medical / allied health professions.
10. Education and empowerment of mothers and community.
11. Host strategies of families of hospitalized preterm infants (housing, food and transportation facilities).

# Strategies for implementing KMC across a country

12. Networking (different hospitals and developmental partners).
13. Establishment of effective inter-sectoral coordination mechanisms at central and local levels of KMC implementation.
14. Inclusion of KMC in Baby Friendly Hospital accreditation and requirements for government insurance policies.
15. Provision of government and developmental partner's research grants on KMC.
16. Advocate for mother-friendly laws such as extended maternity leave and financial support.

# Basic hospital needs / requirements

1. Welcoming parents in the NICU 24 x 7.
2. Facility preparedness for:
  - Kangaroo mothers (rest, feeding, comfortable chairs or beds).
  - KMC (sinks, feeding equipment, changing area, toilets, mobile screens, breast pumps, educational & recreational materials, resuscitation devices).
3. Database of hospital statistics (deliveries, PT / LBW infants, LOS in NICU, morbidities, mortalities, other infant outcomes).
4. Training for all health professionals involved in maternal & infant care.
5. Involvement of hospital authorities in planning & implementation of KMC.

## Basic hospital needs / requirements

6. Interdisciplinary team: psychologists, PT, OT, phono audiologist, social worker, nutrition, and subspecialties).
7. Establishment of well-structured KMC ambulatory program.
8. Providing teaching to increase parental empowerment on infant care
9. Options for parental difficulties (geographic characteristics, financial limitation, lack of family support, medical problems, etc.).
10. Assurance of follow up after discharge (provide transport support, etc.).
11. Networking (institutions, government, health services, development partners).

# Levels / steps of KMC implementation

## Stages of KMC implementation:

1. Planning and initiation of the KMC program in the hospital (infrastructure and training).
2. Sustaining the KMC program (hospital budget, human resources).
3. Facilitate ambulatory KMC follow up units.
4. Periodic assessment of the KMC program.



# Levels / steps of KMC implementation

## Levels / Steps to hospital-level adoption:

1. Needs assessment for KMC program in the hospital.
2. Training of KMC team (OB, peds / neonatologists, nurses, social workers) in existing KMC programs (KMC champions).
3. Back to hospital and training of other personnel.
4. Ensure supportive environment for KMC in the NICU.
5. Have written KMC policy approved by the hospital authorities.

# Levels / steps of KMC implementation

## Levels / Steps to hospital-level adoption:

6. Obtain:
  - Hospital written approval of the KMC program
  - Standard operation procedures
7. Empower KMC teams to implement and sustain the KMC program
8. Get hospital support for KMC (infrastructure, personnel, budget, etc.).
9. Obtain support from other institutions (government, NGOs) for continued resources, QA and training
10. Obtain support for research & research-related activities.

# Involving the community in hospital-based implementation

Sectoral community:

1. To develop inter-institutional networks through government policies.
2. Mandatory KMC training to first level professionals (midwives, social workers, doulas, traditional birth attendants).

# Involving the community in hospital-based implementation

## KMC Community:

1. Building kangaroo families' networks within and between KMC communities.
2. Involving all process actors in the implementation of KMC in the community.
3. Train and involve early childhood teachers with regards increasing awareness of KMC in the community.
4. Dissemination of appreciation letters and government KMC policies in the community.
5. Improve awareness of the community regarding KMC through different social media (TV documentaries, radio, print).

# Involving the community in hospital-based implementation

## KMC Community:

6. Celebration of world prematurity day and KMC awareness day in both hospital and community.
7. Increase community concern for preterm infants and KMC.
8. Development of an operations manual for KMC in the community.
9. Encouragement of volunteer groups who help to improve maternal well-being and provide support and counselling to the whole family.



## 4 KMC transportation

Discussion points:

1. Most common methods for neonatal transportation in different countries.
2. Challenges for neonatal transport.
3. Integrating KMC transport into health systems.
4. Best strategies to inform / convince PHW / 1<sup>st</sup> level facilities about KMC transportation.
5. KMC as mean of transportation in remote areas (only there?).
6. Training

# Most common modes of transportation

- **Community to health centre:**

- Taxi
- Motorcar
- Bus
- Boat
- Tractors
- Walking
- Ambulance - incubator

- **Within hospital:**

- Carrying the baby
- Incubator
- Hospital bed

- **Between hospitals:**

- Small cities
  - Tricycle
  - Ambulance
- Big cities
  - Ambulance
  - Helicopter

} Some areas private transport



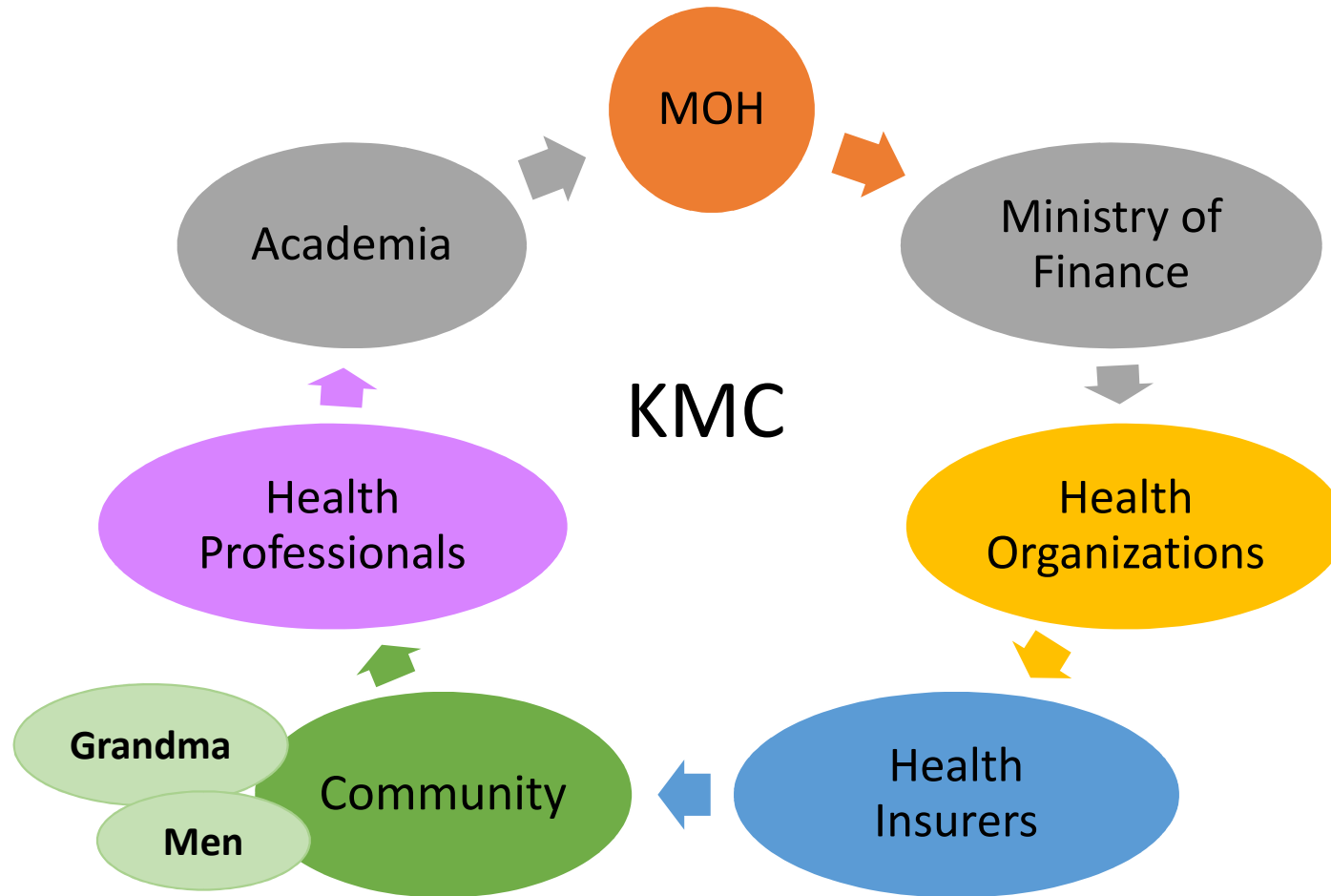
# Challenges

- Lack of policy – government national / state / hospital.
- Not available / No proper equipment maintenance.
- No training – no personnel – no manuals available.
- Kangaroo position not accepted / illegal for transport.
- Mother scared / shy to carry baby in KMC.
- Distance and condition of transport (condition of roads).
- No monitoring during the transport (TABAC).
- Not many studies available.
- Professionals not interested in KMC because it is not part of their work (no trained; no part of government).

# KMC as a part of Neonatal Transport

- Introduce KMC in all countries
- Integrate KMC as part of neonatal transport in all countries:
  - HIC countries:
    - Promotes brain growth and development.
    - Minimises mother / child separation.
    - Better stability during transport especially in difficult transport.
  - LMIC countries:
    - Additional to the above, an alternative for better transport.
    - May be the only way.

# Integrating of KMC transport into health systems



# Best Strategies

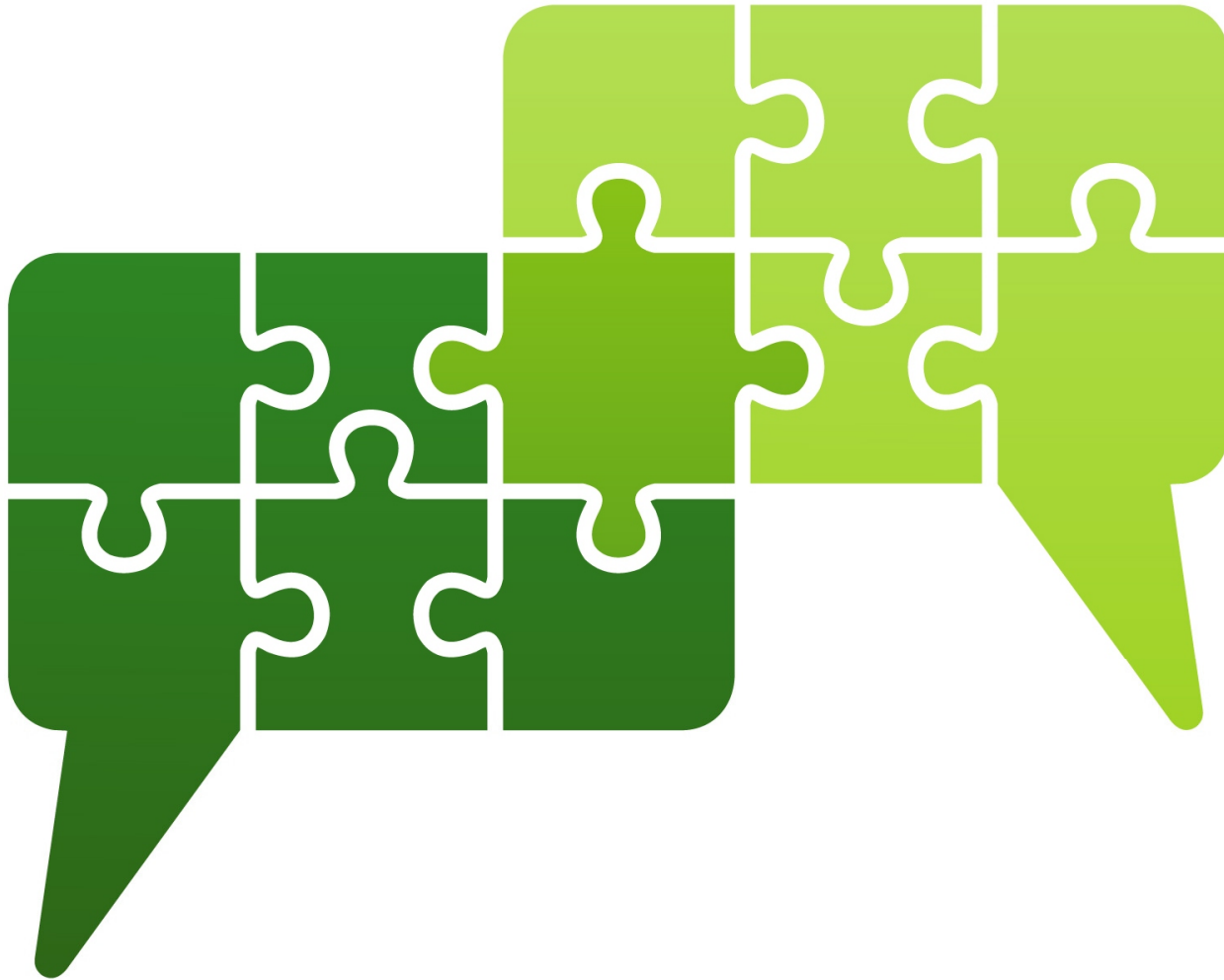
- Policy makers (national / state / hospital) should be involved
  - Recommend KMC practice and transport at all levels
- Introduce guidelines considering available resources (personnel, equipment, infrastructure, etc.).
- Discuss frequently with experts / experienced persons (local or other regions) to modify and improve the program.
- Introduce KMC in neonatal transport (if baby is stable) within and between hospitals.
- Include KMC as part of the curriculum for training new health professionals.

# Training health centers & transport teams in KMC for transportation

- Sensitize senior officials (health care system and ambulance services)
- Doctors, nurses
- Communities
  - Awareness regarding KMC
  - Parents' training
  - Cultural issues
    - In-utero transfer
    - Men
  - Birth attendants

# Training health centers & transport teams in KMC for transportation

- Requirements
  - Checklist
    - Brazil - 10 steps, India
  - Simulation
  - Making babies breathe
  - Manuals
  - How to recognize danger signals and immediate action



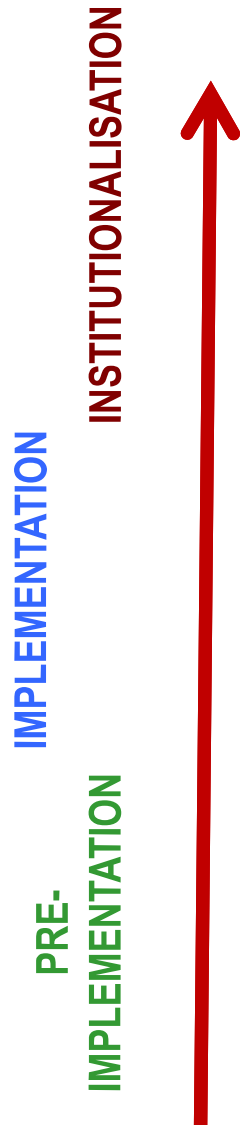
## **5 All on board: MOHs, academia, prof. societies**

Discussion points:

1. Who should be involved in national KMC implementation:
  1. Professional associations.
  2. Government agencies.
2. Role for academic institutions in KMC implementation.
3. Needs / best strategies to convince all to adopt KMC as routine strategy for PT / LBW infants.



# Stages of change



## 6. Sustain new practices

- Strong policy & ongoing training
- Minimum standards – monitoring & evaluation
- Report on improved indicators

## 5. Integrate into routine practice

## 4. Implement (Commence practice)

- Pre-service & ongoing education
- Standardization of curricula
- Teach one to teach one more
- Gov. guidelines

## 3. Prepare to implement (Take ownership)

## 2. Commit to implement

- Highlight magnitude of problem
- KMC cost-effective strategy
- Support by evidence for buy-in

## 1. Create awareness



## Ministries

- National policy
- National policy for private care
- Integration into national programs
- Insurance
- Assessment of facilities
- Accreditation



## Academia

- Medical & health sciences curricula
- Integral part of newborn training
- Uniformity across the country by different implementers



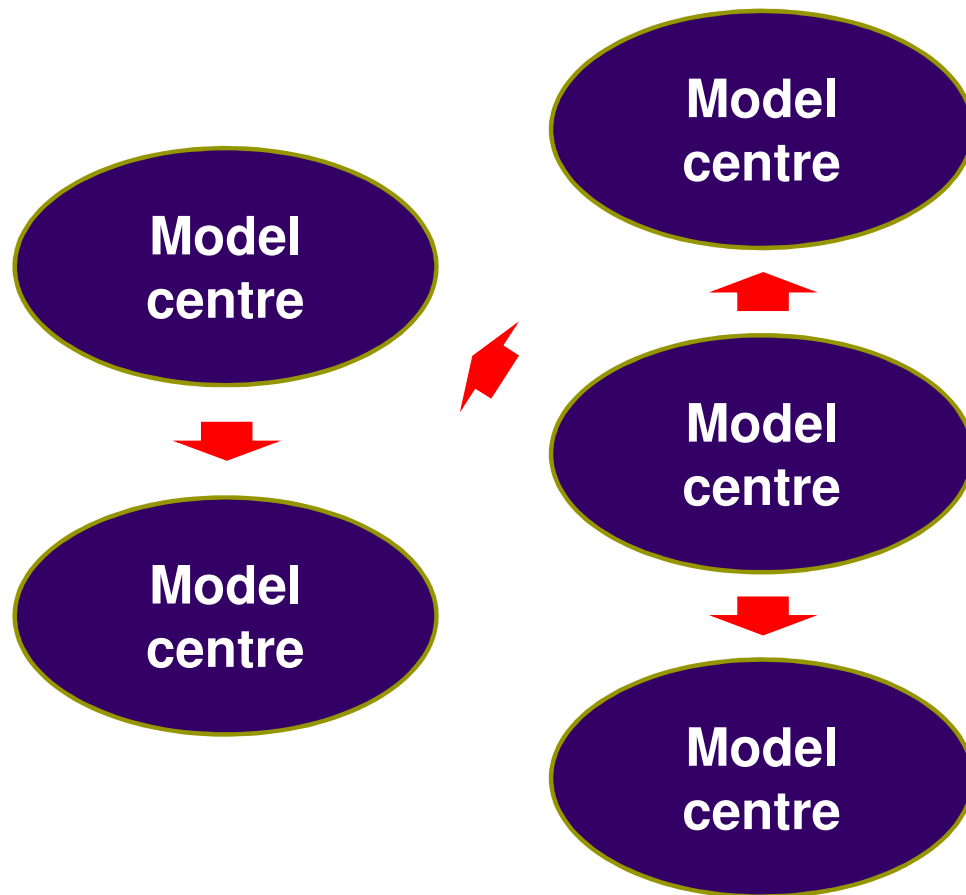
## Professional Bodies

- Pediatricians, neonatologists
- Nurses, OBGyN, community specialists, social workers
- Current updated evidence to be used
- Standing agenda

# Strategic Alliances & Lobbying

- International organizations
- State (Congressmen)
- Scientific & Professional Associations
- Universities
- Civil society
- Parents

# Establishing a KMC program



- Create a model (reference) center
- Snowballing effect – cover entire country
- Strengthen networks of parents of premature babies
- Advice / consultation by international organizations
- Continue supportive supervision, surveillance & monitoring

# Points for success

- Develop key generic messages that aren't context specific
- Look for simple language to present key ideas for policy makers
- Appropriate capacity development of human resources and adequate numbers – invest in people
- Communication strategies
- Identify forums and processes to share key messages
- Use pre-existing programs/existing examples of KMC hospital to promote awareness
- Encourage appropriate linkages with other developmental disciplines

**JOIN THE DISCUSSION**



## 6 Systems for follow-up

Discussion points:

1. National system of high-risk follow-up recommended by MOHs / professional organizations.
2. Compliance with national recommendations.
3. National system of “tracking” KMC discharges and follow-up.
4. Minimum requirements for scaling up a high-risk FU system.
5. Strategies for monitoring compliance with ambulatory KMC.
6. Role for community-based high risk FU of KMC discharges.
7. Risks and benefits for community-based ambulatory KMC.

## **National system of HR FU recommended by MOH and concerned professional organizations**

- Countries may have follow up systems for high-risk patients, but not for KMC.
- Most advanced to get a national system is Colombia (guidelines developed by the Kangaroo Foundation adopted by MOH).
- Other settings: individual institutions have adopted systems, but these cannot be considered national.
  - Adapting models developed in other settings to their own needs.
  - These institutions could become models for further replication.



# Compliance with national recommendations

- No “hard” figures are available.
- It is perceived that compliance with FU is higher (even reaching 100%) if:
  - Patients and parents were involved in hospital KMC.
  - Follow-up takes place at the same city where hospital KMC was provided.
- FU rates fall when children and parents are from disperse populations (rural areas far away from KMC center providing follow-up).

# National system of “tracking” KMC discharges and follow-up

- Given the organization of the national health system, the MOH in Colombia has systems to monitor all components of KMC, including FU.
  - Institutions that do not provide appropriate FU can be identified. Incomplete FU may jeopardize reimbursement for KMC services provided.
- No other countries among those present have similar systems (at MOH level).

# National system of “tracking” KMC discharges and follow-up (cont.)

- Institutions use similar methods to track down patients LFU:
  - Health workers report patients missing appointments.
  - Social work tracks patients using complementary methods:
    - Direct contact (phone, home visits).
    - Through insurers / payers for services.
    - Last resource: governmental childhood welfare institutions.
- Positive incentives for increasing FU:
  - Reimbursing transportation expenses.
  - Providing food or basic supplies (diapers) during visits.
- Patients LFU can also be contacted through parents' chats.

# Minimum requirements for scaling up a HR system to be adopted at country level

- Flexible KMC guidelines to facilitate scaling-up.
- Providing hospital KMC may increase FU:
  - Providing opportunities for education / motivation for parents.
  - Ensuring continuity of care.
- Centers of excellence can serve as role models:
  - Providing education on KMC to future health professionals or for GME (residents).
  - Increasing public awareness on KMC.
  - Providing consultants to facilitate replicating processes.

## **Minimum requirements for scaling up a HR system to be adopted at country scale (cont.)**

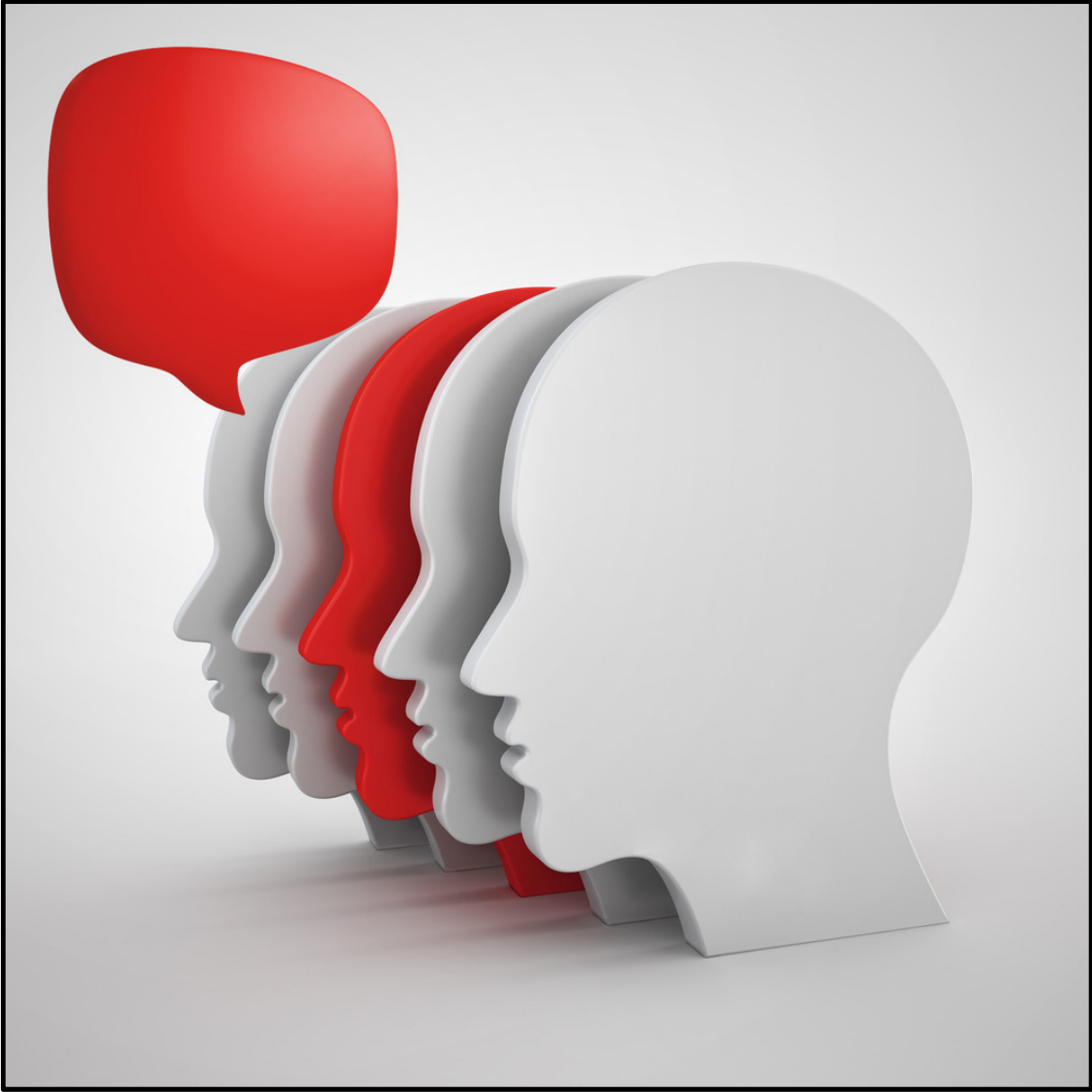
- KMC champions for linking or “pressuring” public and private stakeholders.
- Involve professional organizations (societies of neonatology or pediatrics, for example).
- Link KMC to high-risk prenatal (opportunities for enhancing motivation with FU).
- Parents’ groups may have political influence and can facilitate scaling-up efforts.
- Centers to document processes and outcomes when providing KMC.

## **Strategies for monitoring compliance with ambulatory KMC (at hospital and patient level)**

- No well-established systems for monitoring compliance.
- Such systems would require:
  - Identifying indicators for processes / outcomes.
  - Developing data collection instruments to retrieve data on those indicators.
  - Developing information systems to compile / share the information.
- Systems as those used for following-up immunizations compliance (EPI) could be developed.
- It is critical to identify and involve all stakeholders that are relevant.

# Role for community-based high risk follow-up care of KMC discharges

- No direct experience or good knowledge about community high-risk FU care among members of the group.
- The strategies used for the Integrated Management of Childhood Illness (IMCI) by WHO could be taken as a model for this.
- No good evidence about risks and benefits was available to the group.
- It is necessary to assess the risk and benefits before implementing.





## **7 KMC for term infants**

Discussion points:

1. State of the art 2018
2. Essential newborn care initiatives

## RESOLUTION OF THE INTERNATIONAL NETWORK OF KANGAROO MOTHER CARE ABOUT SKIN-TO-SKIN CARE FOR FULL TERM NEWBORNS

**Preamble:** Full term newborns are very immature and require 20-30 years to complete physical, emotional and brain maturation. Maturation occurs through

stro  
with  
Therefore, we RESOLVE THAT

- Skin-to-skin care is the natural habitat for all newborns where they receive comfort, nutrition, security and love, and should be practiced with all newborns as identified in the Bogota Declaration.
- Skin-to-skin care should be practiced by all mothers or designated caregivers regardless of feeding method.
- Skin-to-skin care should be initiated immediately after birth for stable newborns.

## Policy for the Prevention and Management of Sudden Unexpected Postnatal Collapse (SUPC)

### Definition of SUPC:

Unexpected cardiorespiratory collapse requiring resuscitation that is experienced by any newborn who is breastfeeding or is skin-to-skin care (SSC) with mother during the first 2 hours after birth

### Policy Goal:

- Ensure continuous monitoring of any newborn who is breastfeeding or is skin-to-skin (STS) with mother during the first 2 hours after birth.
  - Monitoring may be done by continuous observation and/or pulse oximetry.

### Background:

- Susie to write



