Integration of kangaroo mother care in health systems: a systematic review of barriers and enablers

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Global Maternal Newborn Health Conference

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Save the Children

Boston Children's Hospital

HARVARD SCHOOL OF PUBLIC HEALTH

Overview

- Conceptual framework
- Methods
- Results
- Conclusions

Conceptual Framework

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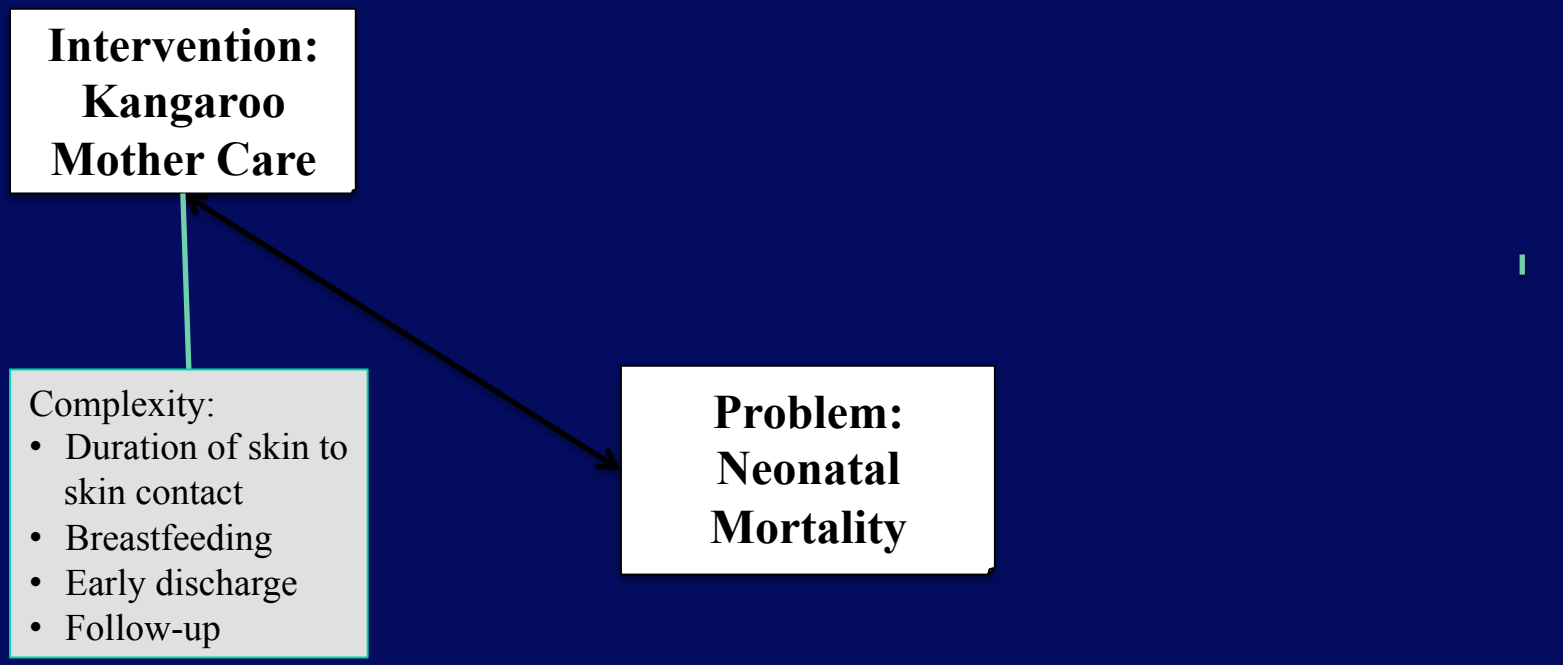
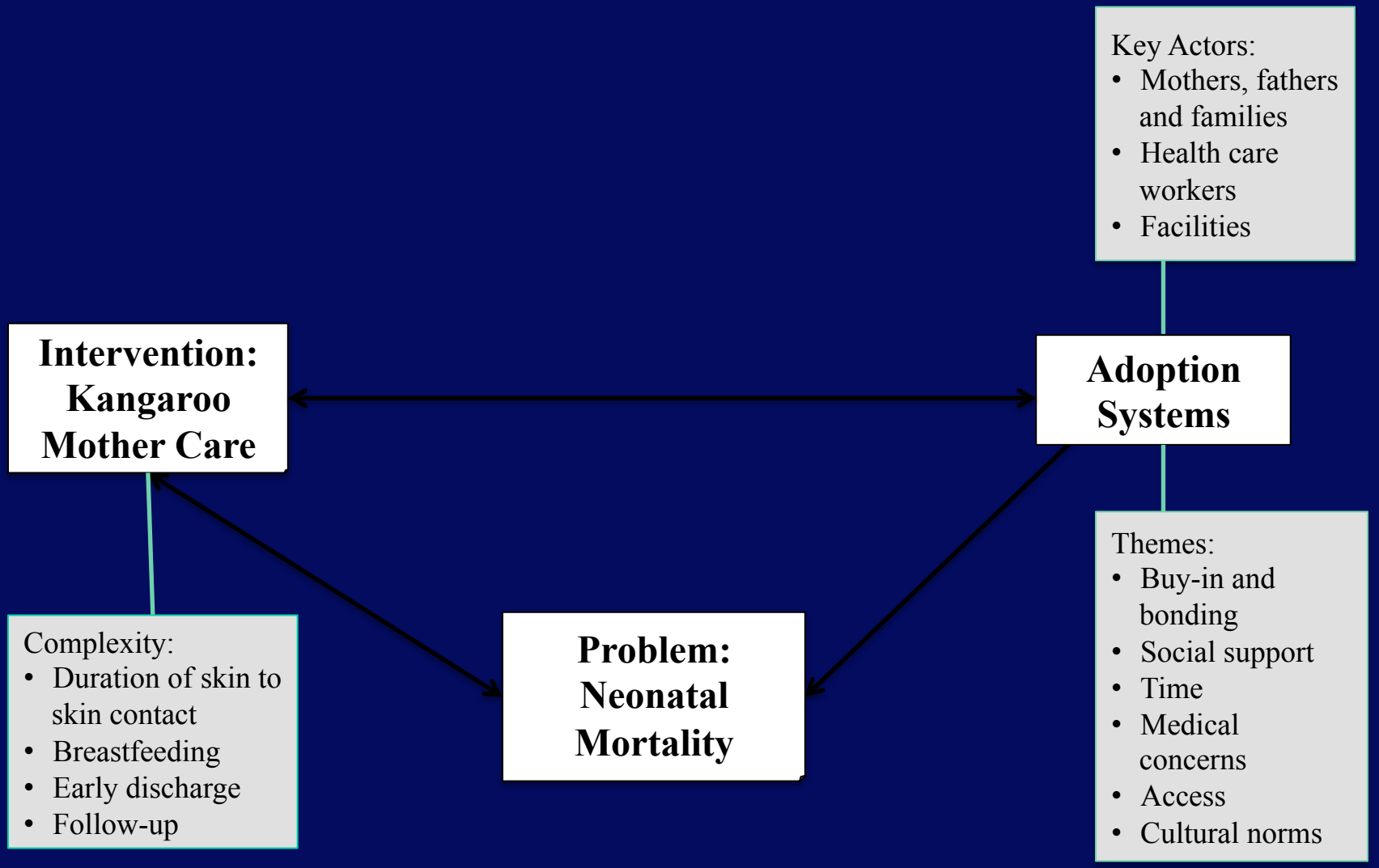


Conceptual Framework



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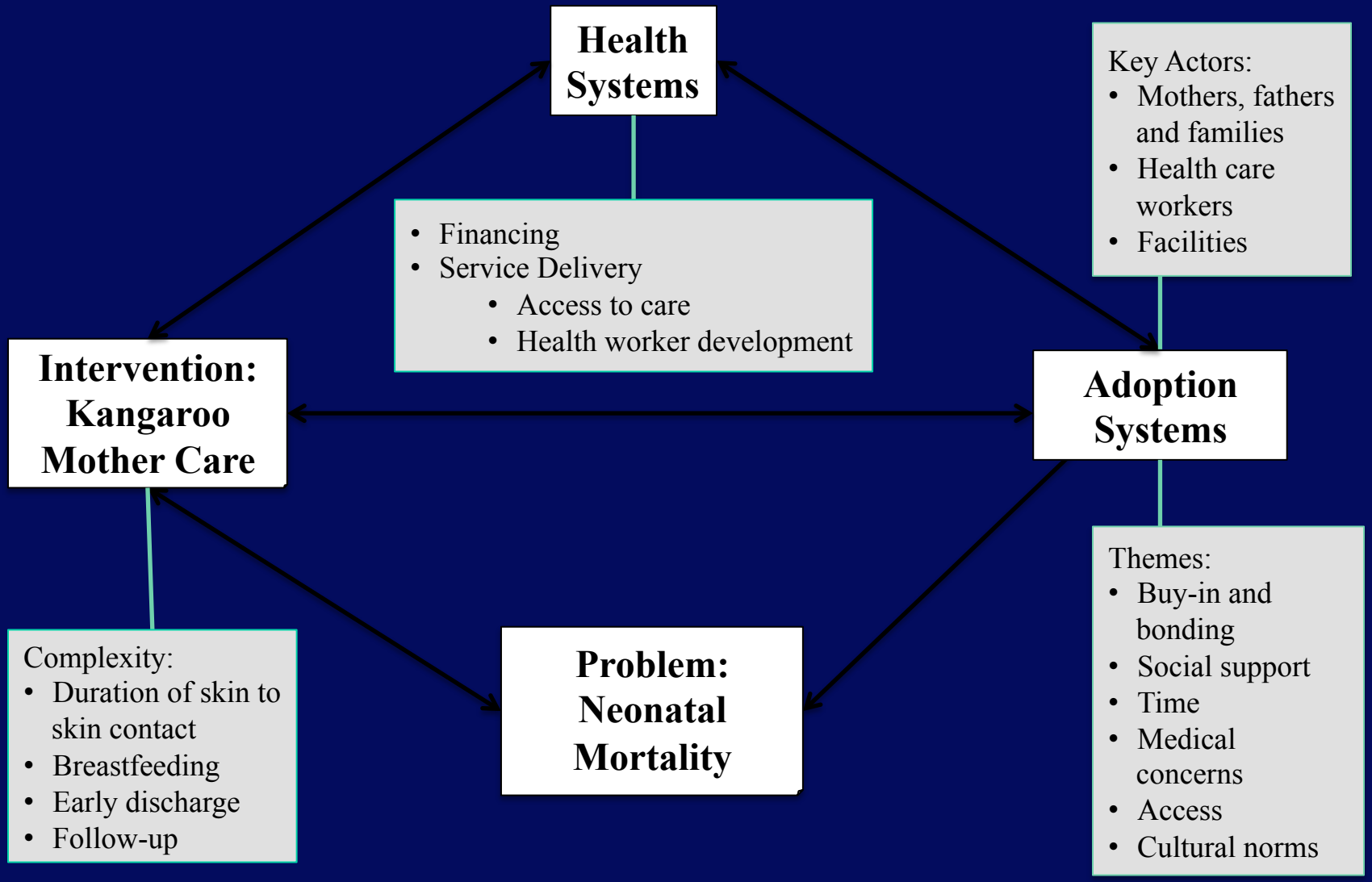

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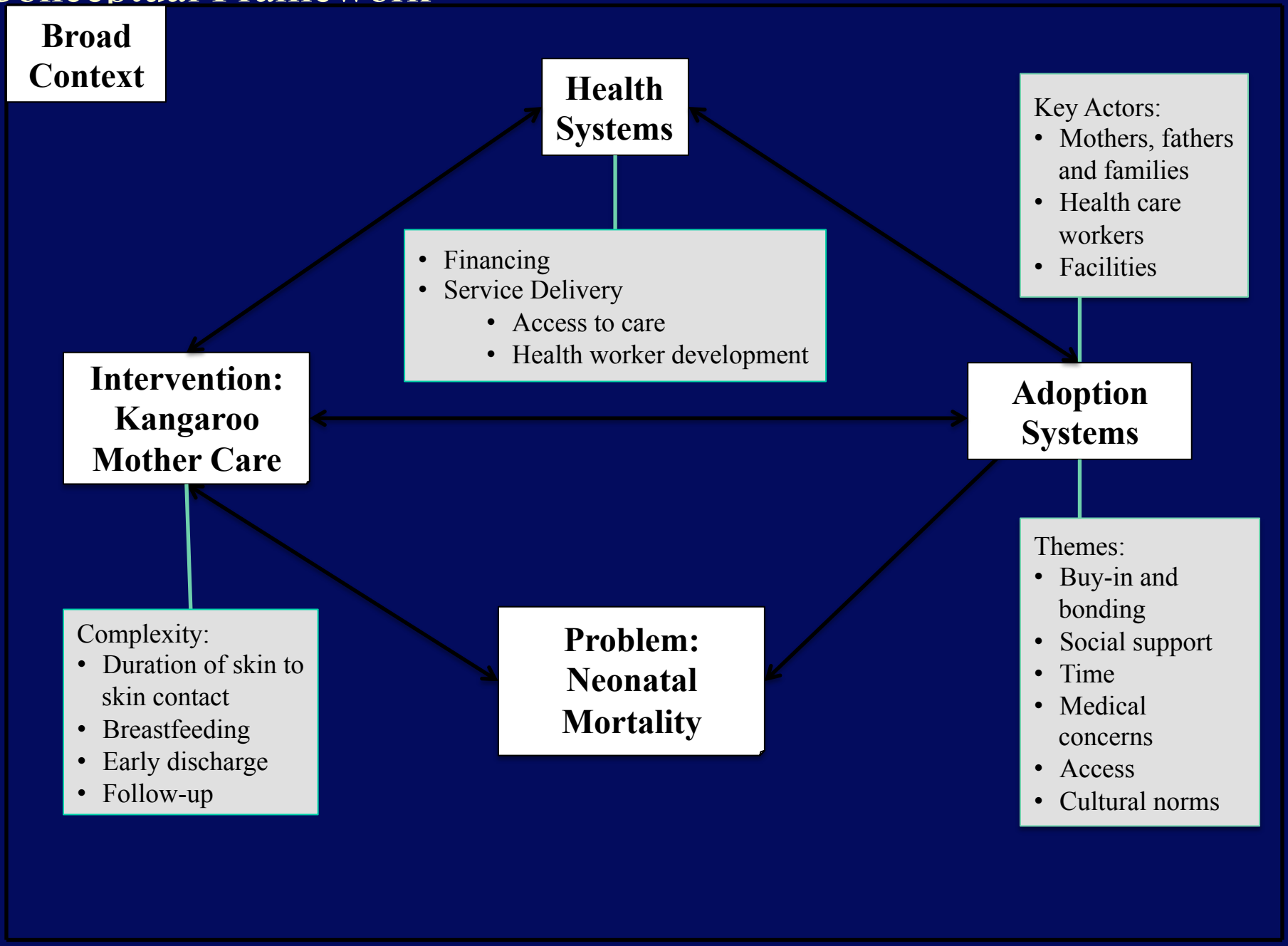

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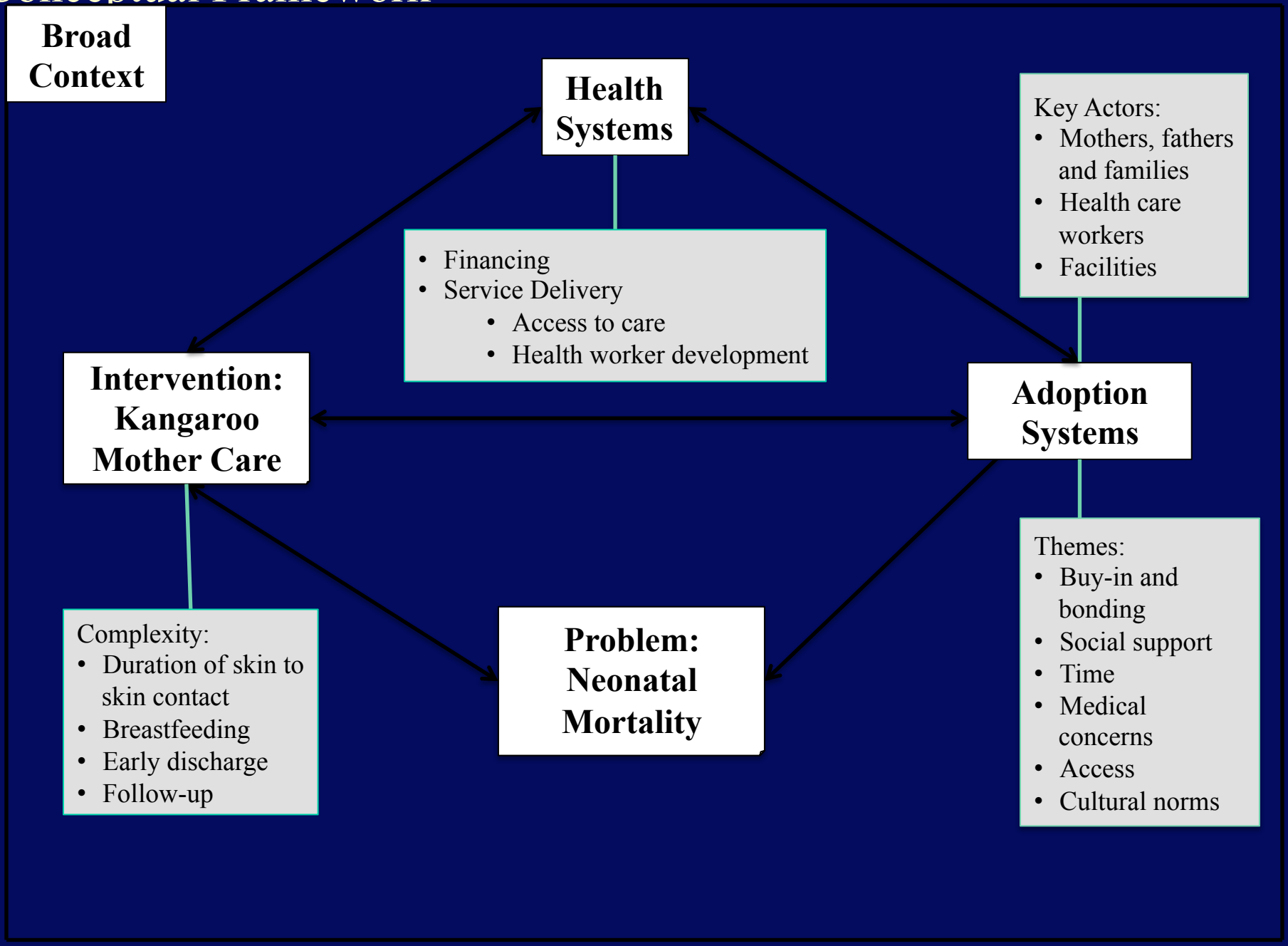


Methods

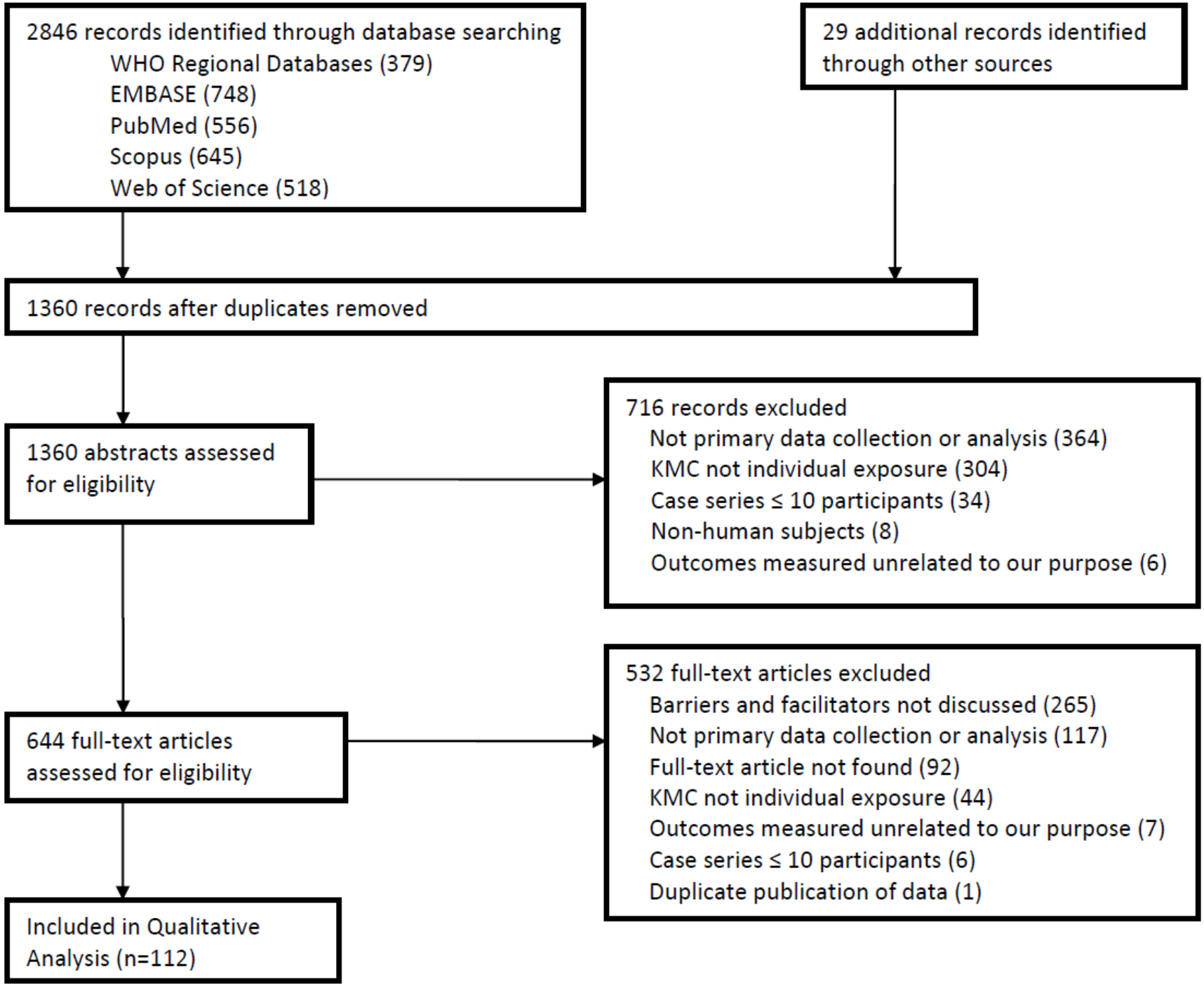
PRISMA Guidelines

Search strategy

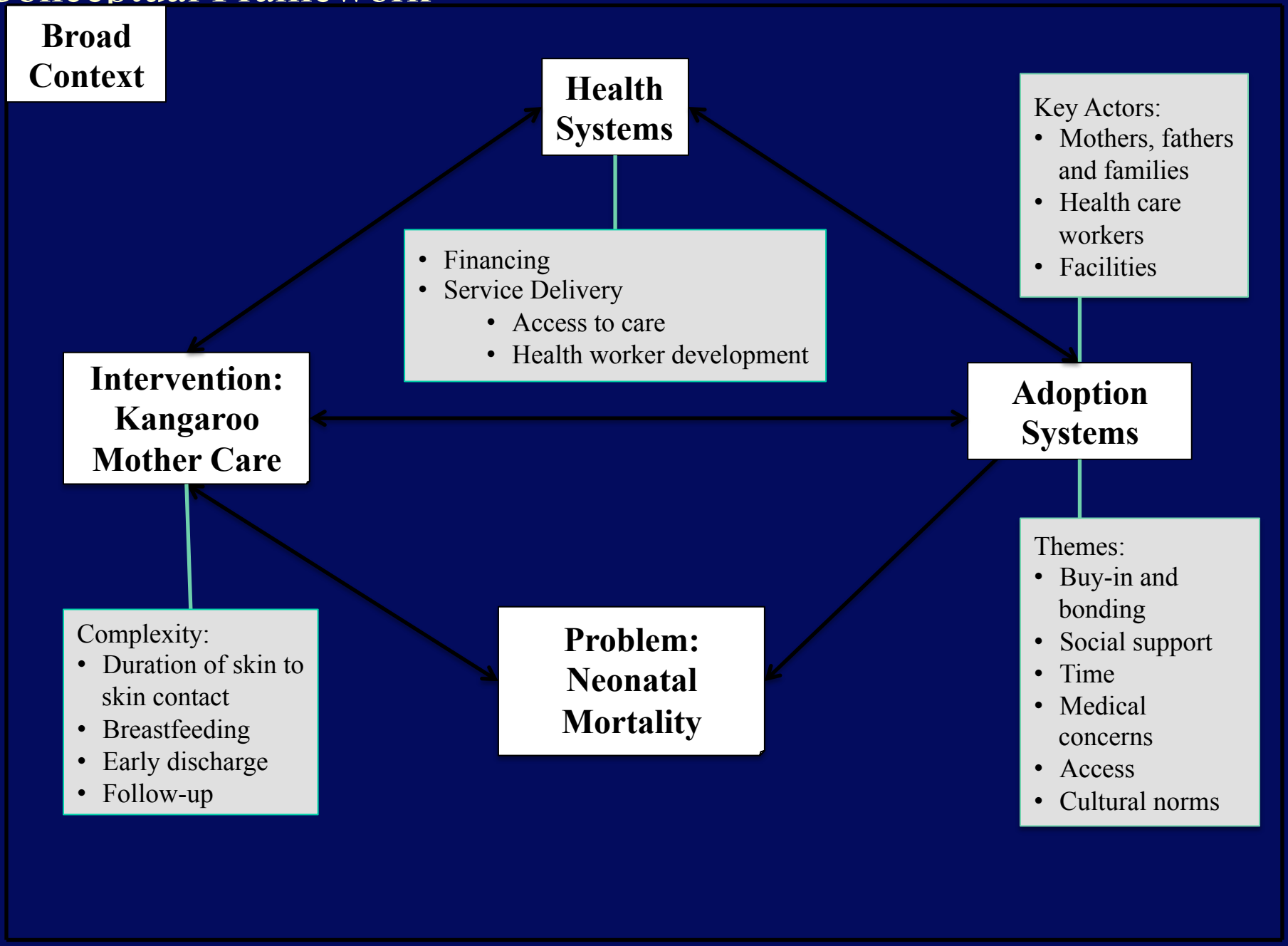
- Pubmed, Embase, WoS, Scopus, AIM, LILACS, IMEMR, IMSEAR, and WPRIM from January 1, 1960 to August 19, 2015
- "kangaroo mother care" OR "kangaroo care" OR "skin to skin care“
- Gray literature and hand searches

Inclusion criteria

- Primary data collection, case-control studies, cohort studies, randomized controlled trials, case series > 10 participants
- Barriers or facilitators to implementation of KMC


2846 records identified through database searching
WHO Regional Databases (379)
EMBASE (748)
PubMed (556)
Scopus (645)
Web of Science (518)
29 additional records identified through other sources
1360 records after duplicates removed
1360 abstracts assessed for eligibility
716 records excluded
Not primary data collection or analysis (364)
KMC not individual exposure (304)
Case series ≤ 10 participants (34)
Non-human subjects (8)
Outcomes measured unrelated to our purpose (6)
644 full-text articles assessed for eligibility
532 full-text articles excluded
Barriers and facilitators not discussed (265)
Not primary data collection or analysis (117)
Full-text article not found (92)
KMC not individual exposure (44)
Outcomes measured unrelated to our purpose (7)
Case series ≤ 10 participants (6)
Duplicate publication of data (1)
Included in Qualitative Analysis (n=112)

Conceptual Framework



Intervention - KMC

	More Common	Less Common	Quotes
Duration STS	• **As long as possible** • **24 hours/day** • **Early/Prolonged/Continuous** • **2 hours or more per day** • **To begin once newborn had stabilized**	• During breastfeeding • Less than 24 hours/day • To begin immediately after birth • To begin 24 hours after birth	• "Kangaroo Care is early, prolonged and continuous skin-to-skin contact between mother and her low birth-weight (<2500 g) infant."
Extended Duration STS	• **As long as possible** • **As long as circumstances permit** • Until 2500 g	• First month of life • Until 24 hours after birth • Until 37 weeks PMA	• "…mothers encouraged to continue KMC until the baby reached 2500g."
Breastfeeding	• **Exclusive** • **On Demand** • **"Breastfeeding encouraged"** • Breastfeeding would begin only after STS had been completed for a given period of time	• KMC integrated as a part of a larger breastfeeding package • Discharge after breastfeeding established • Breastfeeding only after suturing and STS had been completed	• "…exclusive breastfeeding wherever possible and early discharge from the health facility when breastfeeding has been established."
Newborn Clothing	• **Blanket cover** • **Naked** • **Diaper**	• Cap • Booties •	• "…undressed except for a diaper and was covered with gown and sheet."
Newborn Position	• **Sleeping upright** • **Vertical against chest** • **Between mother's breasts** • Held after being removed from incubator • Prone	• Upright • On adult's chest • On mother's or father's chest • Vertical under clothes • Prone position • Against mother's chest	• "The baby is kept upright, close to the chest of the adult."
Bathing	• Clean baby with damp or dry cloth	• Dry infant after birth	• "…dry infant right after birth and place it naked, STS"
Caregiver Clothing	• **Open Gown** • **Wrap (Cloth/Blanket)**	• Dupatta • Specialized KMC Bra	• "held in position with dupatta, sports bra or sling"
Caregiver Position	• **Upright** • **Prone** • **Inclined**	• Seated in Chair • Walking around	• "STS prone or semi-upright position…"
Early Discharge	• **"Early discharge" (undefined)** • **Early discharge based on clinical conditions** • **Infant weight gain, mother competency in KMC**	• STS encouraged before discharge • Discharge after breastfeeding established	• "Discharge when the mother shows an appropriate level of infant-handling competency and the infant is gaining weight."

Follow-up	• **Follow up (undefined)**
	• **"Adequate follow-up"**
	• Within the facility at:
	  • 1 -2 weeks
	  • 1-6 months
	  • 1 year
		• As a part of Brazilian MOH guidelines:
		  • Week 1: 3 times (home)
		  • Week 2: 2 times (home)
		  • Week 3: 1 time (home)
			• "…with a proper follow-up system in place for regular review of the infant."

Intervention - KMC

- STS promoted as long as possible 24 hours a day
- Exclusive breastfeeding
- Early discharge and follow-up criteria were often not defined

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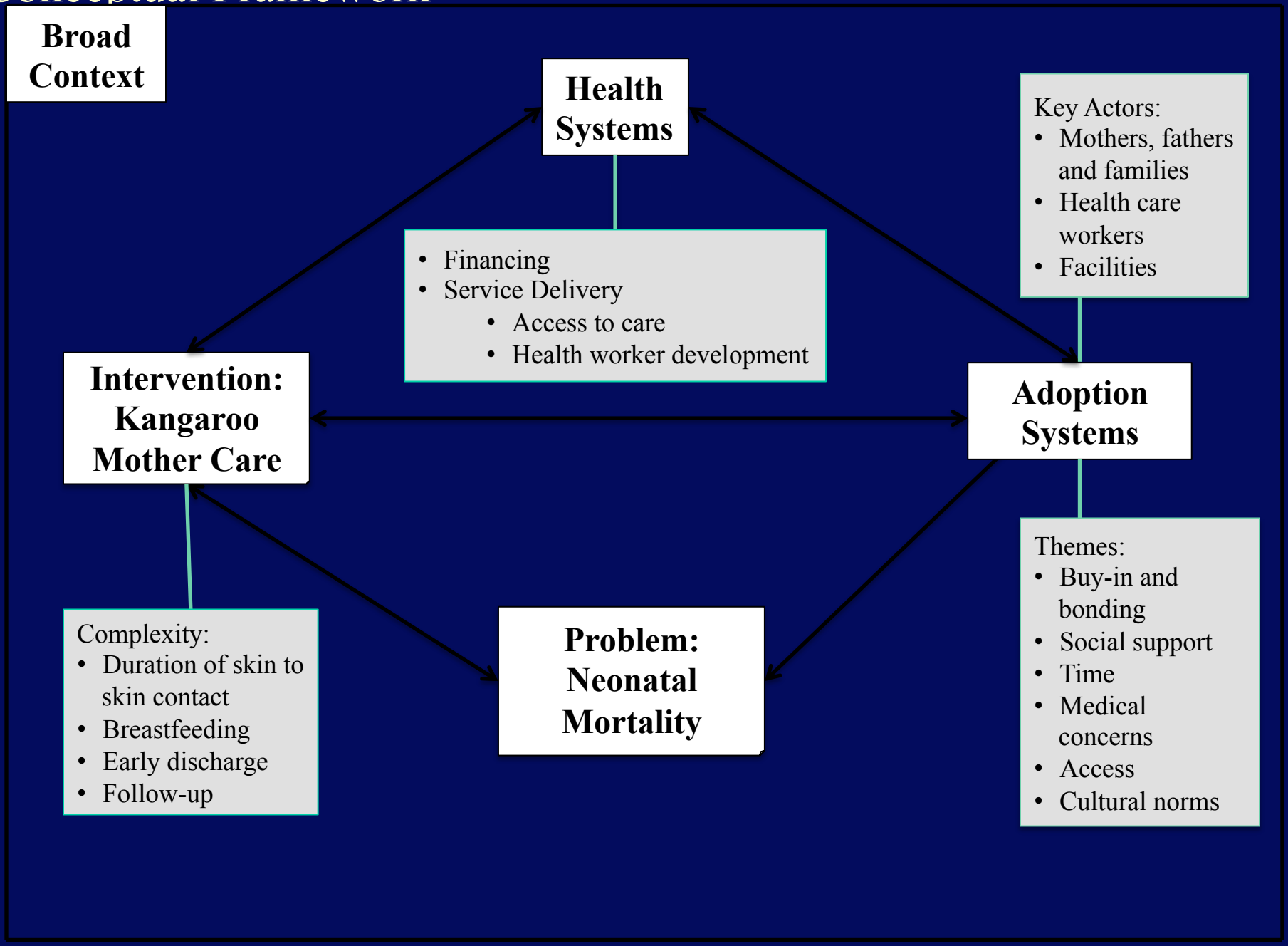

		Adoption Systems				Health Systems	Context
		Buy-in and Bonding	**Social Support**	**Time**	**Medical Concerns**	**Access**	**Cultural Norms**
Parents	Enablers	• Calming, natural, instinctive, healing for parents and infant	• Father, HCW, family and community support for mothers and fathers was crucial to success of KMC	• KMC at home allowed parents to perform other duties	• Helped mothers recover emotionally	• Belief that KMC was cheaper than incubator care	• Mother preferred KMC to incubator, inspired confidence • Gender equality
	Barriers	• Stigma, shame, KMC felt forced	• Fear, guilt, discomfort of family members to participate or condone KMC in public. • Privacy	• Caregivers were unable to devote time. • Mothers lonely in KMC ward	• Maternal fatigue and pain	• Associated costs • Transport	• Traditional, bathing, carrying and breastfeeding practices did not always align with KMC guidelines
Health care workers	Enablers	• Nurses more likely to use KMC after seeing positive effects • Support from more experienced nurses improved buy-in	• Management promotion of KMC • Role of parents and other health care workers	• KMC did not increase workload	• Temperature stability • Experienced nurses more comfortable with KMC	• Virtual communication and training • Integration of KMC into health care curriculum	• *No enablers found*
	Barriers	• Nurses fail to have strong belief in importance of KMC • Inconsistent knowledge and application of KMC	• Management did not prioritize KMC • Parents could serve as a hindrance to HCW	• Extra workload • Take away time from other patients	• Nurses did not feel KMC appropriate for infants who they felt were too small/young/ill.	• Difficulty finding time for training • Inadequate/inconsistent training	• Traditional protocols interfered (bathing, carrying) • Nurse excluded father from infant care was a cultural norm
Facilities	Enablers	**Leadership** • Management support	**Staffing Support** • Good communication • Use of committees to advocate for KMC	• Unlimited visitation preferred	• Access to private space including family rooms or privacy scree Higher breast milk feeding rates at discharge when breast feeding was allowed and encouraged throughout the hospital	**Access to Structural Resources** • Quiet atmospheres within facilities allows mothers to rest • Breast Milk Banks provides milk and can be an educational tool among mothers	**Reporting and Data** • Collection of data • Use of performance standards and quality improvement measures Site assessment tools
	Barriers	• Leadership lack of buy-in led to lack of adequate resources	• Staffing shortages, high staff and leadership turnover • Staff resisted changing protocols	• There was limited visitation time due to staff shortages	• Disagreement over clinical stability • Facilities did not provide food for mothers • Only LBW infants received KMC is some locations.	• Lack of money at the facility for mother's transportation • Distance to the hospital for mothers without hospital provided transportation • Lack of space and privacy for mothers to do KMC • Lack of money for transportation, beds, and KMC wrappers • Poor management of resources donated to the hospital	• Lack of use of data to document SSC practiced on EMR • Nurses not given feedback on KMC data collected • Visitation policies sometimes prevented mothers from performing SSC continuously. Staff found visitors to get in the way.

Level 1: Parents/Caregivers

	Buy In/Bonding	Social Support	Time	Cultural Barriers	Access & Training	Medical Concerns
Facilitators	**For Caregivers** • KMC was: calming, relaxing, comfortable, natural, instinctive, secure, logical, healing • Inspired caregiver confidence **For Newborns** • Slept longer, less anxious, happier, more willing to feed • Created a family bond • Emotional and physical recovery of mother	**Fathers** • Crucial to success of KMC, they alleviate workload, support, encourage, increase mother's confidence **HCWs** • Mother's less apprehensive to practice KMC if she has continuous training and support **Family/Community** • Grandmothers, sisters and others helping with chores increased uptake and duration of KMC • More likely to understand and respond well if another mother explained KMC	• Parents preferred to practice KMC at home than at the facility to attend to other responsibilities	• Many mothers with stable infants preferred KMC to incubators – it seemed more natural and gave the parent more confidence and control	**Cost** • Belief that KMC cut down on hospital bills because of early discharge • Assumed cheaper option than incubator care • Parents more likely to stay if services were free	**Mothers** • KMC helped mother's recover from post-partum depression • KMC helped to relieve stress and promote emotional well-being **Infants** • More restful • More likely to breastfeed • Happier • Learned mothers breathing patterns

Level 1: Parents/Caregivers

	Buy In/Bonding	Social Support	Time	Cultural Barriers	Access & Training	Medical Concerns
Barriers	**KMC felt forced** • Some did not feel a bond • Expected to perform KMC with little • Could not see newborn during KMC **Stigma** • Mothers reported shame of having a pre-term infant • Fathers ashamed to perform KMC • Caregiver's lied about carrying a newborn on their chest • Others presumed the newborn was ill or deformed	**Fathers** • Fear, guilt, doing KMC publically, felt KMC was the role of the mother • Mothers did not want father to perform KMC **HCW** • Unclear instruction • Did not respect family privacy • Unsupportive, loud, uncaring **Family/Community/Other** • Difficult to convince older generations • Lack of understanding or agreement decreases uptake • Attitudes and peer pressures negatively influenced desire to perform KMC • Lack of social pressure in KMC ward, NICU or facility to comply	• Caregivers unable to devote time • Other responsibilities at home/ • work interfered • Mothers lonely and depressed in KMC ward	**Traditional Newborn Care:** • Bathing practices interfered • Infants traditionally carried on back in some areas, thus carrying on the front seemed odd • If breastfeeding not pursued KMC less likely to continue • Milk expression got in the way	**Access** • Cost associated with travel, food, lodging, parking, clinical fees • Lack of transport and distance to facility **Training** • Mixed messages from HCWs, particularly in regards to timing and duration of KMC • Caregivers did not feel comfortable practicing KMC without training from HCWs	**Mothers** • Fatigue • Post-partum depression and pain hindered KMC • Particularly after a C-section • Fear of wires and cords attached to infant • LBW infants were too small, weak • Some aspirated and were returned to NICU

Level 1: Parents

- *"Every time I hold her, the monitors-everything-did better. Her oxygen sats did better, I really think I helped her…and think that the human contact and…hearing my heart and everything, I really think that helped her." {Neu, 1999}*
- *"Mothers felt they were doing KMC mechanically and not developing a natural connection to newborn" as there was no information given to them about KMC before they were told to begin. {Lemmen, 2013}*

Level 2: Health Care Workers

	Buy In	Social Support & Empowerment	Cultural Norms	Time	Training
Facilitators	• Nurses were more likely to perform KMC if they believed it worked • Support from more experienced nurses	**Management** • Management promotion of KMC and mobilization of resources • Nurses involvement in care related decision making **Other Caregivers** • Parents performed KMC/ supported nurses • Multiple health worker support facilitated KMC	*No facilitators noted*	**Workload** • Some nurses reported that KMC did not increase the amount of time they spent on each patient	• Virtual communication and training • Expanding training to other healthcare personnel besides nurses • Integration of KMC into health care school curriculums
Barriers	• Many nurses fail to have strong belief of importance in KMC • Inconsistent application of KMC within facilities • Concerns on the stability of the infant	**Management** • Lack of support from management and leadership • Felt newborn care was not a priority in the health system **Other Caregivers** • Some health care workers considered parents a hindrance to KMC • Lack of parental participation when it was needed by nurse	**Father** Female nurses reluctant to let fathers participate **Traditional Newborn Care** • Bathing practices after birth delayed STS • Wrapping infants soon after birth delayed STS • Staff did not believe in use of hat and socks	Workload • Many nurses believed KMC would add to their workload • Nurses feared that KMC would take away time from other critical patients • Staffing shortages • Training mothers to do STS would take additional time out of health staff's schedule	• Difficult to accommodate schedules and find time to conduct KMC training • KMC training not part of a broader health care training curriculum • Inadequate training lead to conflicting knowledge on time and duration of STS • Without proper knowledge very little KMC buy-in among health care staff

Level 2: Health Care Workers

- Buy In
  - *"I find it a great joy when the mums do hold the baby against their chest.... You get the same buzz out of it and so do the dads." {Chia, 2006}*
  - *"Major barriers to the practice of KMC include concerns about security of intravenous and arterial catheters and a fear of accidental extubation." {Engler, 2002}*
- Cultural Norms:
  - *"Mothers and female health professionals are usually the most reluctant to allow fathers to participate." {Charpak, 2006}.*
  - *"Even in hospitals babies are bathed immediately after delivery so why do I want them to delay the bathing…Babies are normally bathed shortly after birth because it will help them feel clean and healthy" {Hill, 2010}.*
- Time
  - *"KC takes too much work, too much time" and "[I am] not willing to take the extra time with the family that KC requires" {Engler, 2002}.*

Level 3: Facilities

	Buy-in/Social Support Leadership & Staffing	Reporting/Time	Access/ Transport	Medical Concerns/ Structural Resources
Facilitators	• Support from management • Good communication • Use of Committees to advocate for KMC	• Collection of data • Use of performance standards and quality improvement measures • Site assessment tools • Include KMC in statistics	*No facilitators noted*	• Access to private space/ privacy screens • Quiet atmosphere so mothers could rest and the baby would not be disturbed • Breast Milk Banks to disperse education among mothers
Barriers	• Staffing shortages • High staff turnover • Not always time for the nurses to be trained • Leadership buy in lead to lack of adequate resources • Management reluctance to allocate resources and space for KMC • High leadership turnover	• Lack of use of data; KMC not often recorded on patients chart of EMR • No record of STS use • No feedback to the nurses on why the data is collected, so nurses stop recording whether or not a patient is practicing KMC	• Mother's lacked money for transportation to and from the hospital • Distance to the hospital – mother's might have to take several different buses to get to the hospital • Follow up for discharge of LBW infants difficult when mothers can't afford to get to facility	• Lack of space for KMC • Lack of space for mothers to remain in the hospital with their newborn • Lack of privacy • Lack of money for transportation, lack of beds, lack of KMC wrappers • Mismanaged resources

Level 3: Facilities

- Leadership and Staffing
  - *'We're still kind of stumbling a little bit because of our lack of manpower to.move forward with a lot of our things. I think the intent and the will is there, just we require more team members.''* {Lee, 2012}
  - *"'We practise intermittent KMC in our hospital', but when one visits unannounced, virtually no one is ever found to be practising it, often because of real or convenient "staff shortages", or because the individual interested in KMC is not on duty"* {Bergh, 2003}
- Transport
  - *"We do have mothers that are incarcerated or hospitalized or don't have transportation since they live so far away and so that's obviously some of the reasons why babies are not held."* {Lee, 2012}
- Structural Resources
  - *"most of the facilities did not provide food for the mothers, who were thus then dependent on their relatives for their daily sustenance" {Bergh, 2013}*

Level 4: Policy Makers

	Buy In/Bonding	Social Support	Time	Cultural Norms	Access and Training	Medical Concerns
Facilitators	• Demand generation by mothers who suggested the implementation of countrywide KMC campaign	• Areas with higher gender equality promote easier uptake of STS • Temporary government benefits for parents in NICU stay • Governmental paid parental leave for mothers and fathers • Free access NICUs	• Unlimited visitation preferred	• Tailor KMC behaviour change communication materials to local situations. Mobilize entire communities with behaviour change programming for newborns	• Prioritize KMC budget • Improve up and down KMC referrals • Educate mothers on typical neonatal behaviours • Written feeding policy for mothers and eligibility criteria for newborns • Consistent definition of continuous, community, ambulatory, intermittent KMC	• Higher breastfeeding rates at discharge when breastfeeding was allowed and encouraged in all rooms and parents had unrestricted access
Barriers	• Implementing continuous KMC was difficult. Many facilities reported performing continuous KMC however few actually practiced it, most performed under 20 hours/day	• Crowding and insufficient space for visitation in NICU • Visitation policies difficult due to strained communication between parents and staff • Visitors were an obstacle to breastfeeding and KMC performance	• Shortages of staff nurses limiting parental access and shortened visitation time • Staff felt parents a hindrance • No time to train nurses in KMC protocols	• Staff resisted change when it came to implementing new KMC protocols • Difficulty teaching to use electronic medical records (EMR) for KMC	• Staff need to bargain with manager to increase resources for newborn care • Few written KMC protocols • No checklist for KMC admission procedures • Follow-up and discharge procedures not well structured • KMC not budgeted • Space limitations included discharge criteria in 2 hours	• Disagreement over definition of clinical stability • Facilities did not provide food for mothers, without food they could not produce breast milk • In some areas, despite protocols for all infants to receive KMC, only LBW infants were given KMC

Recommendations

1. Development and global acceptance of an operational definition of KMC
2. Inclusion of non-facility HCW and the community in KMC training and awareness campaigns
3. Allocation of resources to facilities including: beds, wraps, chairs, private spaces and money for transportation for the mothers.
4. Creation of a uniform set of policies that are distributed to all facilities, with recommendations of culturally appropriate modifications for known cultural barriers.
5. Integration of KMC training into pre-service curriculum for all health care practitioners, including management and leadership. Use of virtual trainings for current health care workers (where feasible).

Summary

- KMC is a complex intervention that is behavior driven and includes multiple elements.
- Success of integration requires high user engagement and stakeholder involvement.
- Future research
  - Effect of specific interventions to improve uptake.
  - Target gaps in knowledge on the context sensitive factors of KMC implementation

Thank you!

Ellen Boundy

Rifat Atun

Roya Dastjerdi

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Stacie Constantian

Tobi Skotnes

Bina Valsangkar

Stephen Wall

Adoption System: Parents

Parents Interaction With:	Themes
Other Parents	**Social Support**: Community support among other parents in the community, spousal support, and familial support plays an important role in facilitating KMC
	Culture: In some cultures mothers want to abandon a preterm baby to avoid stigma from other parents
HCW	**Social Support**: Parents depend largely on the support from a large variety of health care workers including NICU nurses, community health workers, nutrition workers and midwives
	Education: Mothers depend on health care worker advice and teaching of KMC.
Facilities	**Access to Facilities**: Parents fear they cannot afford to deliver their babies in a facility
	Structural Resources: Mothers reported that facilities with structural resources such as private spaces and appropriate beds facilitated KMC (while at home there were competing priorities)
Policy Makers	**Uniform Policies**: Not all facilities have the same KMC policy implemented – hard for mothers that transfer hospitals
	Education: Mothers felt that mass education campaigns that educated other mothers and community members in KMC would facilitate KMC use and acceptance

Adoption System: Health Care Workers

HCW Interaction With:	Themes:
Parents	**Social Support**: KMC does not take priority, when NICU staff get busy KMC mothers are the first ones dropped from routine supervision
	Culture: In some countries health care workers are working to save the preterm infant against mothers wishes/cultural norms to "get rid of" the baby
	Buy-In/Bonding: Witnessing the positive effects of KMC encourages and inspires health care workers to continue to implement KMC
Other HCWs	**Communication**: Current approach to KMC is very siloed with little communication between staff. No greater buy in of KMC among non-NICU/maternity ward staff
	Leadership: Nurses and other staff performing KMC feel like they have to negotiate with leadership and management to get adequate space and resources for KMC
Facilities	**Structural Resources**: Lack of adequate resources makes implementation hard for HCWs
	Staffing: Staffing shortages within facilities put pressure and stress on HCW that take on greater workloads
Policy Makers	**Trainings**: Government sponsored trainings hard for staff to attend especially in facilities with staffing shortages

Adoption System: Facilities

Facilities Interaction With:	Themes
Parents	**Structural Resources**: Facilities with lack of resources result in mothers being discharged in as little as 2 hours after giving birth
HCWs	**Training**: Hard to coordinate health care worker's schedules to find a time for KMC training
	Buy-In: Leadership and Management did not believe in or prioritize KMC since they are not included in training
Other Facilities	**Communication**: There is very little communication between facilities. Coordination and consistency on KMC policy and guidelines improves continuity of care for mothers who have to transfer hospitals
Policy Makers	**Uniform Policies**: KMC guidelines at the national level are uniform, but some facilities modify the practice to make it more culturally appropriate, while others don't leading to a no-nuniform implementation across facilities

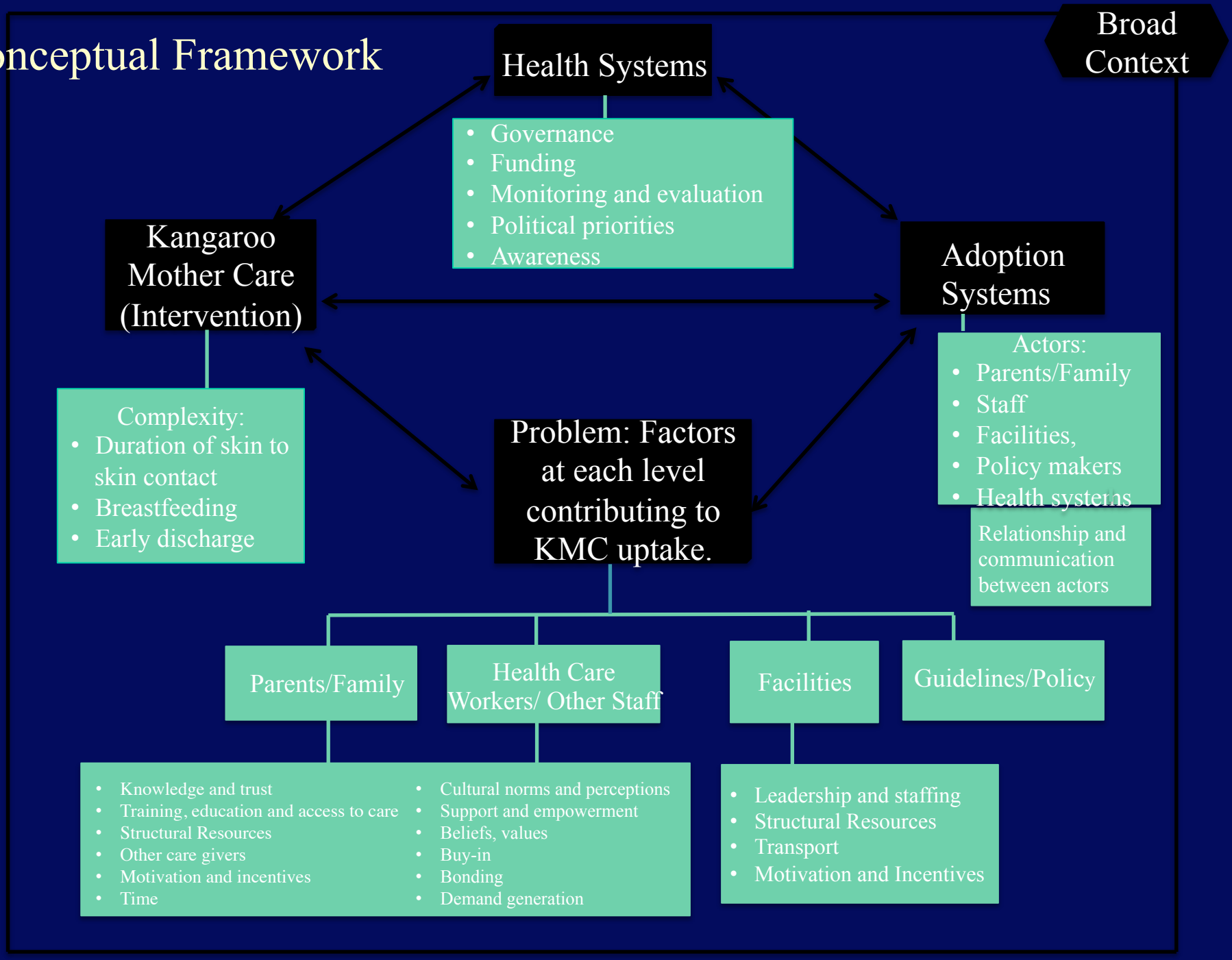
Adoption System: Policy Makers

Policy Maker Interaction With	Themes
Parents	**Demand generation** Mothers believed Policy Makers could be most effective with a mass education campaign that utilitizes drama, radio, television and other avenues to reach communities on a large scale
HCWs	**Trainings**: Policy makers and government in some countries offer KMC training to health care workers to facilitate and streamline KMC practices between facilities
Facilities	**Targeted Expansion**: Policy makers seek to expand and scale up KMC across their country. However, sometimes expansion involves facilities that rarely have LBW infants and have very little reason to use STS. This is not the best use of resources because health care staff in these facilities are likely to lose the skills from lack of practice/use
Policy Makers	**Culture**: Country minister of health's set forth KMC protocols that do not always match the WHO definition and that do not always take into cultural practices and traditions

Adoption System: Recommendations

1. Inclusion of non-facility HCW and the community in KMC training and awareness campaigns
2. Inclusion of leadership in KMC training to increase buy-in.
3. Allocation of resources to facilities including: beds, wraps, chairs, private spaces and money for transportation for the mothers.
4. Creation of a uniform set of policies that are distributed to all facilities, with recommendations of culturally appropriate modifications for known cultural barriers.
5. Integration of KMC training into pre-service curriculum for all health care practitioners, including management and leadership. Use of virtual trainings for current health care workers (where feasible).

Conceptual Framework



Health System at the Facility Level

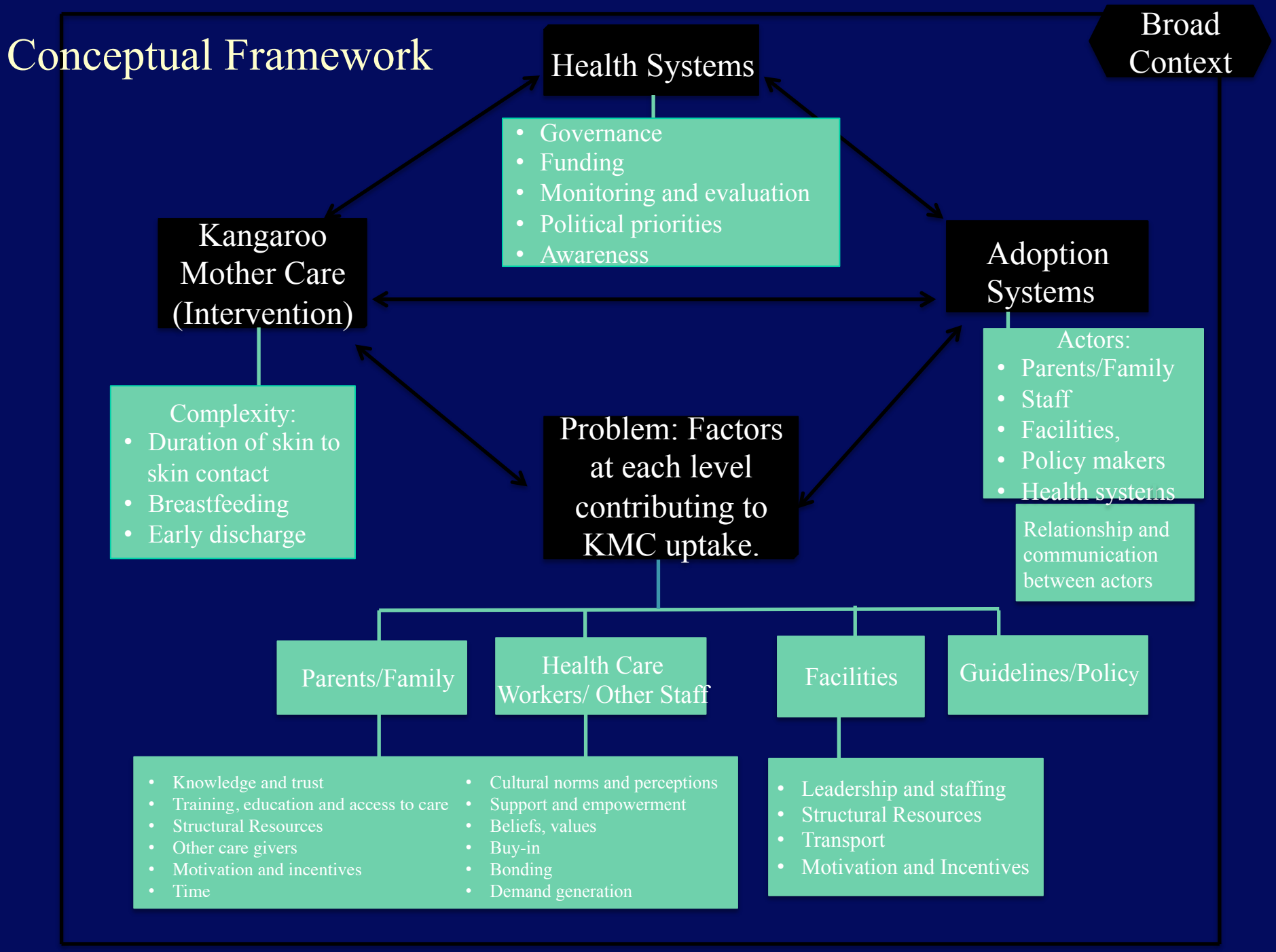
Country	Arising Themes	Recommendations
Malawi	• Improve intermittent KMC protocols • Better record keeping	• Create checklists to ensure intermittent KMC implemented more systematically • Improve communication and record keeping
Mali	• Improve intermittent KMC protocols	• Encourage mothers to practice intermittent KMC more diligently
Uganda	• Improve discharge policies • Formalized social support	• Create better specified discharge criteria
Brazil	• Formalized social support	• Family participation is essential for success, it should occur at facility and at home
USA	• Continuing in-service training	• Support and troubleshoot problems as they appear for KMC. Continued in-service KMC training of staff and parents

Health System at the Regional Level

Country	Arising Themes	Recommendations
Multi-Country (Africa)	• Behavior change communication materials	• Tailor behavior change communications for specific in-country situations
Malawi	• District implementation plans include a KMC budget • Continuous in service training	• District implementation plans should include a KMC budget and protocols for training CHWs (including in-service trainings) • KMC community mobilization
Rwanda	• KMC budgeted at all levels • In-service training • Strengthen follow-up • Community sensitization • Provision of meals for mothers	• KMC needs to be part of the budget at all implementation levels • Strengthen follow-up • Map out how KMC is included in different curricula • Training and regular supervision should be maintained
Mali	• Continuous in-service training • Communication between regional, district and community facilities • Strengthen follow up	• Two-tiered KMC structure in the community and the facility including continuous in-service trainings • Abolish user-fees for L&D services to increase use of skilled birth attendants

Health System at the Country Level

Country	Arising Themes	Recommendations
Sweden/ Norway	• Paid maternal and paternal leave	• The right to paid parental leave that is 2 weeks for fathers and 1 year for mothers
Mali	• Use of new accredited KMC training center by district, regional and country level implementers • KMC included as performance indicator for MoH activities	• Clarify roles and responsibilities of players at different levels • Establish an implementation network at all levels (regional hospitals, national and regional directorates of health) • Renewed and upfront commitment by the MoH for the implementation of KMC at all relevant HFs • Engage systematically with professional associations and other bodies to include KMC in professional development programs
Malawi	• Strengthen pre-service KMC training • Less turnover of medical personnel at national level	• Less rotation of medical personnel at national level. Strengthen pre-service education in KMC
India	• Community KMC	• National Rural Health Mission (NRHM) should include KMC • Village level accredited social health activists to promote KMC in the community among pregnant women


Conceptual Framework
Broad Context
Health Systems
Governance
Funding
Monitoring and evaluation
Political priorities
Awareness
Kangaroo Mother Care (Intervention)
Adoption Systems
Complexity:
Duration of skin to skin contact
Breastfeeding
Early discharge
Problem: Factors at each level contributing to KMC uptake.
Actors:
Parents/Family
Staff
Facilities,
Policy makers
Health systems
Relationship and communication between actors
Parents/Family
Health Care Workers/ Other Staff
Facilities
Guidelines/Policy
Knowledge and trust
Training, education and access to care
Structural Resources
Other care givers
Motivation and incentives
Time
Cultural norms and perceptions
Support and empowerment
Beliefs, values
Buy-in
Bonding
Demand generation
Leadership and staffing
Structural Resources
Transport
Motivation and Incentives

Summary

- KMC is a complex intervention that is behavior driven and includes multiple elements.
- Success of integration requires high user engagement and stakeholder involvement.
- Future research
  - Effect of specific interventions to improve uptake.
  - Target gaps in knowledge on the context sensitive factors of KMC implementation

Thank you!

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