Infant- & Family-Centred Developmental Care (IFCDC)
in a global *systems* perspective

Björn Westrup Neonatology Karolinska Institute, Stockholm
Kaye Spence Neonatology Sydney Children's Hospitals Network, Sydney
A global systems perspective

**HEALTH SYSTEM CARE NEEDED**

- Essential maternal and newborn care
- Extra care for small babies
- Care of preterm baby with complications
- Intensive neonatal care

**TERM BABIES**

- 120 million, including about 5 million term low-birthweight babies

**LOSS OF HUMAN CAPITAL**

- 2.6 million stillbirths
- 3.1 million neonatal deaths

**Children with moderate or severe long-term disability**

**Children with mild long-term disability e.g., learning or behavior**

**Other long-term effects e.g., higher risk of non-communicable diseases**

*Source: Analysis using data from Blencowe et al., 2012; Cousens et al., 2011; Liu et al., 2012*
Preterm birth–associated neurodevelopmental impairment

Blencoe et al., 2013.
Nurturing care: promoting early childhood development

... the evidence now strongly suggests that parents, caregivers, and families need to be supported in providing nurturing care and protection in order for young children to achieve their developmental potential.

Terminology

• Developmental Care (DC)
• Family Centered Care (FCC)
• Patient- & Family-Centered Care (PFCC) – USA
• Family Integrated Care (FiCare) – Canada
• Family Participatory Care (FPC) – India
• Infant- & Family-Centred Developmental Care (IFCDC) – Globally
Terminology

• Developmental Care (DC)
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• Infant- & Family-Centred Developmental Care (IFCDC) – Globally
Infant- and Family-Centred Developmental Care (IFCDC)

The generic term of nurturing care of the newborn with goal to ensure the best health and development into adulthood for every individual infant, by optimising both the individual care of the newborn as well as the hospital systems.

It is founded on the
• leading-edge work of Berry Brazelton and Heidelise Als
• Declaration of Infants’ Rights – World Association for Infant Mental Health (WAIMH) 2016
Note that "a generic term"

A name relating to a *class* or *group* of things/entities

- Non-specific
- General
- All-inclusive
- Collective
- Umbrella
Infant- and family-centred developmental care (IFCDC)

IFCDC is founded on
- The Declaration of Infant’s Rights
- Concepts of
  - neurobehaviour
  - neurodevelopment
  - parent-infant interaction (early relationship)
  - parental involvement
  - breastfeeding promotion
  - environmental and systems adaptation
Declaration of Infants’ Rights
World Association for Infant Mental Health

• Infants have unique nonverbal ways of expressing themselves and their capacities to feel, to form close and secure relationships, and to explore the environment and learn.

• All of which require appropriate nurturing since it is fundamental for building a lifetime of mental and physical health.

• Caregiving relationships that are sensitive and responsive to infant needs are critical to human development.

• Acknowledge the unique ways that infants express themselves and educate mothers, fathers, caregivers and professionals in their recognition of relationship-based attachment behaviors.
Declaration of Infants’ Rights
World Association for Infant Mental Health

• An infant is a citizen, and having the right for identity from the moment of birth.

• The infant’s status of a person is to include equal value for life regardless of gender or any individual characteristics such as those of disability.

• The Infant has the right to be given nurturance that includes love, physical and emotional safety, adequate nutrition and sleep, in order to promote normal development.

• Provide adequate circumstances, including time for mothers, fathers, caregivers to get to know their infants and become skilled in providing for their infant’s care and comfort.
• The infant shall, wherever possible, grow up in the care and under the responsibility of his parents

WAIMH. Declaration of Infants’ Rights. 2016.
https://perspectives.waimh.org/2016/06/15/waimh-position-paper-on-the-rights-of-infants/
IFCDC has three core principles:

• *Sensitive* care based on the behavioural communication of the infant is an essential foundation for child development

• *Parent engagement* is good for
  • parental well-being,
  • parent-infant relationship and consequently
  • child development

• *Individualised care* gives the baby a voice of its own
Global Perspective of Infant and Family Centered Developmental Care

**Theory Base & Training Requirements**

- Breastfeeding
- ISSC: Immediate Skin to skin contact
- Stable neonates at term
- KMC: Kangaroo Mother Care
- Basic, Intermediate and Advanced Programs
  - FIN: Close Collaboration, FINI, NBO, FICare, COPE etc.

**Global Target Estimates Over next 10 years**

- ??%
- ??%
- ??%
- ??%

**Developmental Care Programs/Interventions**

- NICDCAP
  - NICDCAP Directed Care
  - NICDCAP Certified Nurseries

**Collaboration between organizations - some examples**

- COINN – Council of International Neonatal Nurses
- EADCare – European Association for Developmental Care
- EFCNI – European Foundation for Care of Newborn Infants
- ICM – International College of Midwives
- INKMC – International Network of Kangaroo Mother Care
- NFI – NICDCAP Federation International
- WAIMH – World Association of Infant mental Health
- WAPM – World Association of Perinatal Medicine
- WHO – Baby Friendly Initiative

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Theories and Training taught by Professional Organisations (eg NFI, Brazelton Touchpoint Center), higher education facilities, local health organization/services

The programs vary in regards to comprehensiveness of training and support for systems change. Some programs include several or all interventions exemplified above.

Global refers to all babies born in – high, middle and low resource settings

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Developed by Bjorn Westrup and Kaye Spence for the NFI – Work in Progress
• https://newborn-health-standards.org/
Infant- & Family-Centred Developmental Care

Synactive Model of systems perspective

H. Als 1992
Structure and function of the brain is different

25 weeks

Term
The premature infants' brain is undergoing a rapid development with delicate differentiation.

The development of the brain is regulated in our genes – but the fine regulation and differentiation is also dependent on sensory stimuli.

Synactive Model of systems perspective

Infant- & Family-Centred Developmental Care

H. Als 1992
Infant- & Family-Centred Developmental Care

Synactive Model of systems perspective

H. Als 1992
INSIDE MUM

- Baby feels held & contained
- Feels no pain
- Constant temperature
- Natural boundaries
- Can “smell” or taste mum’s amniotic fluid
- Registers day and night by difference in light through the womb
- Feels mums hand stroking her tummy
- Reassuring movement with mum
- Dark for developing eyes
- Hears mum’s voice
- Hears mums heartbeat
- Can sense mum’s emotions

Jill Bergman 2019
IN INCUBATOR/WARMER

- Hears loud sounds of stranger’s voices
- Hears slamming of incubator doors
- Pain of injections
- Feels movement as someone bumps incubator
- Bright lights for sensitive eyes
- Temperature changes as incubator is opened
- Smells antiseptic and plastic from gloved hand
- No constant to stabilize baby
- Cannot hear mum’s voice
- Cannot hear mum’s heartbeat
- Does not feel contained
- Fed through drip or NGT
- Hears monitors beeping
- Feels stranger’s hands and voice

Jill Bergman 2019
WHAT HAPPENS WHEN THE BABY IS SEPARATED FROM MOTHER?

1. First is Protest: (energy is being used)
   Protest is to get mum’s attention. The stronger and more assertive the baby is, the more it will protest. Preterm babies are often not strong enough to protest.
   • the baby becomes stressed
   • the heart rate increases
   • the breathing is faster
   • the hands and arms extend
   • the legs extend and wave around
   • fists clench

2. Second is Despair: (the body tries to conserve energy for survival)
   • The baby becomes still
   • the heart rate slows
   • the breathing slows and is irregular
   • the body becomes limp
ON MUM’S CHEST

Registers day and night by difference in light

Pain of injections

Constant temperature from mother’s skin

Feels SAFE & peaceful

Dark so can open eyes and connect with mum

Baby can sleep peacefully and brain wire properly

Can smell and taste mum’s milk

Hears mum’s voice

Calmed by mum

Hears mums heartbeat

Feels mums hand stroking her body

Reassuring Movement with mum

Can sense mum’s emotions

Eyes open

Jill Bergman 2019
Synactive Model of systems perspective
NIDCAP - *Newborn Individualized Care and Assessment Program*

*NIDCAP* is currently the most comprehensive IFCDC programme that really embraces *all* IFCDC aspects, theories and principles.

It differs from other interventions since it starts as soon as the baby is born – *the Ultra-Early Intervention*.

- Alters the environmental, treatment, and caregiving events that create stress/disorganization and interfere with physiological homeostasis.
- Promotes neurobehavioral organization of the infant by identifying and enhancing stable behaviours and reducing the incidence of stressful behaviours in order to support the emergence of maturation, energy conservation and recovery.
NIDCAP - *Newborn Individualized Care and Assessment Program*

- Governed by the infant’s current stage of development and current medical condition, NIDCAP promotes *resilience* by providing developmentally adequate support during:
  - care-giving
  - social interaction
  - examinations and procedures

- The parents are immediately guided how to understand the behavior of their baby. They are supported and encouraged to be actively involved as the infant’s primary caregiver

- Promotes bonding and attachment
Synactive Model of systems perspective

Infant- & Family-Centred Developmental Care

H. Als 1992
The Synactive Theory subsystems:
- Autonomic
- Motor
- State-
- Attentional / Interactive

The synactive theory focuses on how the individual infant handles environmental experiences, and social interaction which can be supportive or disrupt the infant’s balance.

Whenever development occurs, it proceeds to a state of increasing differentiation.

- **Breathing**: irregular, deep or shallow to smooth and regular.
- **Movements**: become better modulated and fine tuned;
- **Sleep–wake states**: Diffuse to robust

The infant always strives for integration of the subsystems.

**Appropriate stimulus** – infant will move towards the stimulus

**Inappropriate stimulus** (timing, too complex or too intense) – the infant will move away from the stimulus and avoid it.
Model of the Synactive Organization of Behavioral Development

The principles of synaction

- Continuous interaction between infant and environment
- Increasing differentiation of behavioural subsystems within the infant
- Continuous balance of avoidance and defence with approach and activation
The behavior of the infant is its primary way to communicate.
Autonomic-physiologic system

- Circulation
- Colour
- Respiration
- Bowel movements
- Temperature control
- Tremor, jitternes
Motor system
State system
Attentional and interactive system
Observe
Support...
Support during painful procedures
Shield infant from bright light and offer your finger to suck on.
Sidelying, flexed position, support of the back and hands in the midline by the mouth
Infants with catheters or chest tubes require more visual access but could be supported.
... self-regulation: control of bodily functions including autonomic stability, manage emotions, maintain focus and attention, enable social interaction -> parental bonding and infant attachment
selfregulation
Global Perspective of Infant and Family Centered Developmental Care

Theories and Training taught by Professional Organisations (e.g. NFI, Brazelton Touchpoint Center), higher education facilities, local health organization/services. The programs vary in regards to comprehensiveness of training and support for systems change. Some programs include several or all interventions exemplified above.

Global refers to all babies born in – high, middle and low resource settings.

Developed by Bjorn Westrup and Kaye Spence for the NFI – Work in Progress.
Breastfeeding

• **Breastfeeding is the normal way** of providing young infants with the nutrients they need for healthy growth and development.

• **Virtually all mothers can breastfeed**, provided they have accurate information, and the support of their family, the health care system and society at large.

• **Colostrum**, the yellowish, sticky breast milk produced at the end of pregnancy, is recommended by WHO as the perfect food for the newborn, and feeding should be initiated within the first hour after birth.

• **Exclusive breastfeeding is recommended up to 6 months** of age, with continued breastfeeding along with appropriate complementary foods up to two years of age or beyond.
Global Perspective of Infant and Family Centered Developmental Care

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**Global Target Estimates**

Over next 10 years...

- ??%
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- ??%

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Developed by Bjorn Westrup and Kaye Spence for the NFI – Work in Progress
The Scale of the Problem
2.6 million neonatal deaths every year

60% occur within 3 days of birth

Neonatal preterm birth and neonatal encephalopathy top 2 leading causes of death in under 5 in 2015

High levels of long-term neurodevelopmental impairment among survivors

Progress in reducing mortality has been slowest in the neonatal period

Kangaroo mother care - KMC

Effective low cost intervention recommended by WHO

Continuous skin-to-skin contact, exclusive breastfeeding

Average 40% lower mortality, reduces infection, improves thermal control and nutrition

Currently introduced after stabilization, missing peak period of medical vulnerability

Small-scale studies suggest immediate KMC (iKMC) may reduce mortality and improve physiological state => WHO iKMC Study (2017...)
Synactive Model of systems perspective

Infant- & Family-Centred Developmental Care

H. Als
Infant- & Family-Centred Developmental Care

Synactive Model of systems perspective
Infant- and Family-Centred Developmental Care (IFCDC)

"The Karolinska Way" - NIDCAP-based care
Start the care in the Delivery Room

- NICU staff stay in the delivery room
- Connect to gases
- Colostrum expression and feeding
- Nasogastric tube
- Start enteral feeding
- Iv line. Start iv fluid if needed
- Keep the infant warm and measure the temperature
1522 gr in week 31.
Immediate SSC with mother and nCPAP.
Periferal line.
At 30 min of age to incubator and transport to NICU

Keep the family together
Either family room with parents or ICU room with 2-4 beds

Plan för Karolinska Danderyd from 2009.
New Karolinska Solna 2016 and
Karolinska Huddinge from 2013 have similar design.
Recommended by NICU design experts (Robert White, JENS 2015, Budapest).
Mother Neonatal Intensive Care Unit (MNICU)
Safdarjjang Hospital, New Delhi
Mother Neonatal Intensive Care Unit (MNICU)
Safdarjung Hospital, New Delhi
Mother, infant and grandmother/surrogate
The role of the medical staff

more complex and maybe challenging

but

much more rewarding

Task oriented relationship based

Teacher

Doer-

Facilitator

facilitator of bonding and attachment
Synactive Model of systems perspective
Couplet Care
coupling the medical care of the infant and mother in the NICU
as soon as mother’s condition allows

- Early breastmilk production
- Lower blood pressure for PE mothers
- Less reported pain
- Lower stress and anxiety in mothers and fathers
- Parents the most important persons in the baby’s life from the very start
Most mothers are eligible for Couplet Care, but not when:

- Eclampsia and severe pre-eclampsia
- Large bleeding or haemodynamic unstable
- Other reasons for ICU care
- Contagious disease
- Severe psychiatric illness
Length of stay in *intensive care* (level II and level III)

Adjusted for: gestational age at birth\(^A\), non-Swedish-speaking background\(^A,B\), setting\(^A,B\)

<table>
<thead>
<tr>
<th></th>
<th>Family care</th>
<th>Standard care</th>
<th>difference days</th>
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<tbody>
<tr>
<td></td>
<td>n = 183</td>
<td>n = 182</td>
<td></td>
</tr>
<tr>
<td>All infants(^A), mean</td>
<td>13.3</td>
<td>18.0</td>
<td>-4.7 d (p = .02)</td>
</tr>
<tr>
<td>By gestational age(^B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 – 29 w, mean</td>
<td>32.4</td>
<td>43.1</td>
<td>-10.6 d (p = .04)</td>
</tr>
<tr>
<td>30 – 34 w, mean</td>
<td>6.0</td>
<td>8.5</td>
<td>-2.5 d (p = .02)</td>
</tr>
<tr>
<td>35 – 36 w, mean</td>
<td>1.5</td>
<td>2.5</td>
<td>-1.0 d (p = .24)</td>
</tr>
</tbody>
</table>
### Infant morbidity

<table>
<thead>
<tr>
<th></th>
<th>Family care n = 183</th>
<th>Standard care n = 182</th>
<th>OR (95% CI)(^A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verified Sepsis, %</td>
<td>7.1</td>
<td>9.8</td>
<td>0.68 (0.3-1.6)</td>
</tr>
<tr>
<td>Verified NEC, %</td>
<td>2.7</td>
<td>3.3</td>
<td>0.83 (0.2-2.8)</td>
</tr>
<tr>
<td>Diagnosed. PDA, %</td>
<td>15.3</td>
<td>16.9</td>
<td>0.90 (0.4-1.9)</td>
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<tr>
<td>IVH grade II-III, %</td>
<td>3.3</td>
<td>3.8</td>
<td>0.95 (0.3-3.2)</td>
</tr>
<tr>
<td>ROP stage II-V, %</td>
<td>2.7</td>
<td>6.6</td>
<td>0.34 (0.1-1.1)</td>
</tr>
<tr>
<td>BPD moderate-severe, %</td>
<td>1.6</td>
<td>6.0</td>
<td><strong>0.18</strong> (0.04-0.8)</td>
</tr>
</tbody>
</table>

Adjusted for: gestational age at birth, non-Swedish-speaking background, setting.
# Mothers’ mental distress
at discharge and at 3 months of infant’s corrected age

<table>
<thead>
<tr>
<th>Mothers</th>
<th>Family care</th>
<th>Standard care</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety, discharge (STAI), mean</td>
<td>35.4*</td>
<td>39.0</td>
<td>0.03</td>
</tr>
<tr>
<td>Parenting stress, 3 m (SPSQ), mean</td>
<td>2.41</td>
<td>2.52</td>
<td>0.29</td>
</tr>
<tr>
<td>Anxiety, 3 months (EPDS), mean</td>
<td>2.88*</td>
<td>3.68</td>
<td>0.04</td>
</tr>
<tr>
<td>Depressive symptoms (EPDS), %</td>
<td>14.9%</td>
<td>17.3%</td>
<td>0.72</td>
</tr>
</tbody>
</table>
Exclusive or partial breastfeeding at discharge and at 3 months

- At discharge
  - 35-36 weeks
  - 30-34 weeks
  - < 30 weeks
- At 3 months
  - 35-36 weeks
  - 30-34 weeks
  - < 30 weeks

Örtenstrand, unpublished

Family care
Standard care
Methods: a nappy change

• Salivary cortisol before (baseline) and 30 minutes after (response) a nappy change

• The nappy change was performed by the mother at the time of discharge from the hospital
  Median 36 (31-43) wks PMA
Mothers’ and infants’ baseline salivary cortisol

FAMILY PARTICIPATION 24/7
\[ r = 0.31 \ p = 0.001 \ (n=152) \]

REGULAR VISITS (approx. 10 hours)
\[ r = 0.14 \ p = 0.14 \ (n=137) \]

Mörelius et al 2012, Örtenstrand et al 2010
Continuous SSC after Preterm Birth
Mörelius E et al, Acta Paed 2015

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Mean hours (SD) spent in skin-to-skin contact per day for the SSC group and SC group, respectively.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Skin-to-skin contact</td>
</tr>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Day 1</td>
<td>20</td>
</tr>
<tr>
<td>Day 2</td>
<td>18</td>
</tr>
<tr>
<td>Day 3</td>
<td>17</td>
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<tr>
<td>Day 4</td>
<td>17</td>
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<tr>
<td>Day 5</td>
<td>16</td>
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<tr>
<td>Day 6</td>
<td>15</td>
</tr>
<tr>
<td>Day 7</td>
<td>14</td>
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<tr>
<td>Day 8</td>
<td>12</td>
</tr>
<tr>
<td>Day 9</td>
<td>7</td>
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<tr>
<td>Day 10</td>
<td>4</td>
</tr>
<tr>
<td>Day 11</td>
<td>1</td>
</tr>
<tr>
<td>Day 12</td>
<td>1</td>
</tr>
</tbody>
</table>
Salivary cortisol reactivity during *nappy change* at one month corrected age (p=0.01) if practicing Kangaroo Mother Care. The results indicate that KMC including close parental contact and human touch, have a buffering effect on the infant’s stress reactivity during handling (diaper change).

Mörélius et al 2015
Mother-infant salivary cortisol correlation at four months PMA - Still face as a stressor

SSC “24/7” vs Standard SSC

ρ=0.65, p=0.005 (n=17)

ρ=0.14, p=0.63 (n=15)

Möreléus et al 2015
Methods (Measures)

**DURING THE 1st WEEK POSTPARTUM AND AT DISCHARGE**

Cotton buds, at least 1 h after food intake.

- After collection, the saliva was centrifuged, frozen at −20 °C, and stored at −70 °C. A radioimmunoassay for cortisol was used to analyze cortisol concentrations in the saliva (Orion Diagnostica, Turku, Finland). Samples were run in duplicate, and all samples from each individual were run in the same assay.

- Just shielded from sun light and shipped to the lab for analysis, at the latest within two weeks.

**COSTS & FEASIBILITY**

- Approx 50 USD / sample
Conclusions

This model of IFCDC

• Reduces the total length of stay for infants born prematurely, especially during need of intensive care.
• Reduces the incidence of BPD
• Reduces mothers’ anxiety and may have a positive effect on their feelings of competence as a parent.
• Enhances the mother-infant coherence in stress regulation
• Enhances breastfeeding 3 months post discharge
Couplet Care in Safdarjang Hospital, New Delhi, India
Mother, infant and grandmother/surrogate
Couplet Care in Safdarjang Hospital, New Delhi, India

Medical Round of infant by neonatal team

Medical Round of mother by obstetric team
Synactive Model of systems perspective

H. Als (1992)
Indian Ministry of Health and Family Welfare
28th of February 2018: D.O No. Z.28020/ 75/2012-CH

**Indian Guidance Note on revised Special Nursery Care Units / SNCU:s configuration**

There is a lot of scope for improving quality of care provided for the **900,000 infants yearly** cared for in SNCUs.

- dissemination of Kangaroo Mother Care (KMC)
- **Family Participatory Care (FPC) guidelines**
  - empowered the mother to stay with the newborn
  - provide **developmentally supportive care (IFCDC?)**
Indian Guidance Note on revised
Special Nursery Care Units (SNCU):s configuration

Step down/ KMC unit is to be renovated or merged as
**Mother Newborn Care Unit (MNCU)**
Preferably as a part of SNCU complex to keep the mother-baby dyad together to fulfill the following objectives
• observational care for *newborns* who do not require intensive care in SNCU.
• Making provisions for the *mothers of SNCU* admissions (Bed, diet and treatment)

• **COUPLETT CARE for all of India!**
• (in xx? years)
Global Perspective of Infant and Family Centered Developmental Care

Theory Base & Training Requirements

Breastfeeding
ISSC
Immediate Skin to skin contact
Stable neonates at term
KMC
Kangaroo Mother Care
stable neonates, continuous, 24/7, Follow-up program
Basic, Intermediate and Advanced Programs
FIN E, Close Collaboration, FINI, NBO,
FiCare, COPE etc.

NIDCAP
NIDCAP Directed Care
NIDCAP Certified Nurseries

Global Target Estimates
Over next 10 years

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Developed by Bjorn Westrup and Kaye Spence for the NFI – Work in Progress
Other initiatives / programs for developmental care

FiCare
Little Steps
Individual unit programs
Family and Infant Neurodevelopmental Education
(FINE)
Foundation toolkit for IFCDC

derived by NIDCAP Federation International

Copyright: Inga Warren and Erasmus MC.
FINE – Family and Infant Neurodevelopmental Education

Participants
- FINE 1 / in preparation
- FINE 2
- FINE 1 + FINE 2

* Participants from Italy, Spain, Norway and India attended the trainings abroad.

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FINE:

a pathway for infant- & family-centred developmental care education

Step 1 Foundations
Step 2 Practical Skills
Step 3 Innovations

SPECIALIST:
E.g., NIDCAP
IBIAP/TOP
MITP
Essential themes

INFANT DEVELOPMENT

- Brain
- Neurobehavioural
- Sensory
- Motor

OBSERVATION
(based on synactive theory, Als 1982)

- Autonomic / Motor / State / Attention
- Self regulation

FAMILY

- Attachment / attunement
- Engagement
- Partnership
- LOVE
Essential themes cont

**REFLECTION**
- Thinking about what we do and how we feel
- Learning from experience

**EVIDENCE**
- Best practice
- Direct evidence
- Supporting evidence
- Consensus

**SYSTEMS**
- Openness
- NICU culture and organisation
- Learning styles
- Change management
2. PRACTICAL SKILLS: groups < 8, 12 weeks

Objectives

<table>
<thead>
<tr>
<th>Objective</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware of and ready to change own practice</td>
<td>• Reflection</td>
</tr>
<tr>
<td></td>
<td>• Mentoring</td>
</tr>
<tr>
<td>Sees infant as an active communicator</td>
<td>• Observation</td>
</tr>
<tr>
<td>Individualises care.</td>
<td>• Reflection</td>
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<tr>
<td>Partners with and learns from parents</td>
<td>• Active listening</td>
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<td>• Parent participation</td>
</tr>
<tr>
<td>Identifies strengths and challenges in team</td>
<td>• Tools to evaluate practice</td>
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<tr>
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<td>• Site assessment</td>
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Bridging the gap

1. Between theory and practice
2. Between professionals, family and infant
Global Perspective of Infant and Family Centered Developmental Care

Theory Base & Training Requirements

- Breastfeeding
- ISSC: Immediate Skin-to-skin contact, Stable neonates at term
- KMC: Kangaroo Mother Care, stable neonates, continuous, 24/7, Follow-up program
- Basic, Intermediate and Advanced Programs: FINÉ, Close Collaboration, FINI, NBO, FitCare, COPE etc.
- NIDCAP: NIDCAP Directed Care, NIDCAP Certified Nurseries

Global Target Estimates Over next 10 years

- ??%
- ??%
- ??%
- ??%

Collaboration between organizations - some examples

- COINN – Council of International Neonatal Nurses
- EADCare – European Association for Developmental Care
- EFCNI – European Foundation for Care of Newborn Infants
- ICM – International College of Midwives
- INKMC – International Network of Kangaroo Mother Care
- NFI – NIDCAP Federation International
- WAIMH – World Association of Infant Mental Health
- WAPM – World Association of Perinatal Medicine
- WHO – Baby Friendly Initiative

Theories and Training taught by Professional Organisations (e.g. NFI, Brazelton Touchpoint Center), higher education facilities, local health organization/services.

The programs vary in regards to comprehensiveness of training and support for systems change. Some programs include several or all interventions exemplified above.

Global refers to all babies born in – high, middle and low resource settings.

Developed by Bjorn Westrup and Kaye Spence for the NFI – Work in Progress
Infant- & Family-Centred Developmental Care

Synactive Model of systems perspective

- Infant
- Parent
- NICU System
- Hospital System
- Family System
- Community System

Political decisions
Hosp Admin decisions
Structural changes
Shortage of beds
Shortage of nurses

Modified after H. Als 1992
Discussion Points

- Global spread of IFCDC
  - Start from the top? => Breastfeeding, KMC, iKMC ...
- Collaborations for the global spread
- Measurement of the global spread