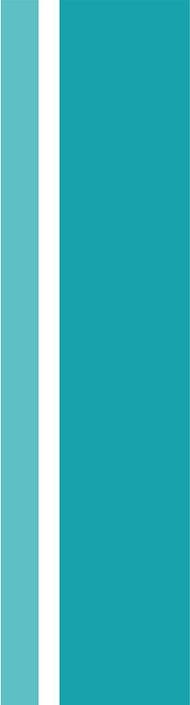


Next Level Family-Centered Care: How Family Integrated Care can benefit US NICUs

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Objectives – let’s talk about:

- The FICare model
 - What it is
 - How it differs from FCC
 - The evidence for improved outcomes for infants and families
- New research findings on FICare in US NICUs
- Tools for implementing FICare in diverse NICUs



2

Family-focused or involved NICU interventions and care models

Models of parent-partnered care

- **Family Integrated Care**
- Close Collaboration with Parents
- Family-Centered Care
- Primary nursing
- Care-by-parent
- Kangaroo mother care

Parent-delivered interventions

- Infant behavioral assessments
- Massage
- Skin-to-skin care (immediate and sustained)
- Infant feeding
- Developmentally supportive care
- Talking, reading, singing
- Comfort measures
- Family Nurture Intervention

Parent support interventions

- Parent-clinician communication
- Parent psychological support
- Parent education (individual and group)
- Supportive physical environments
- Supportive institutional and social policies
- Support after discharge

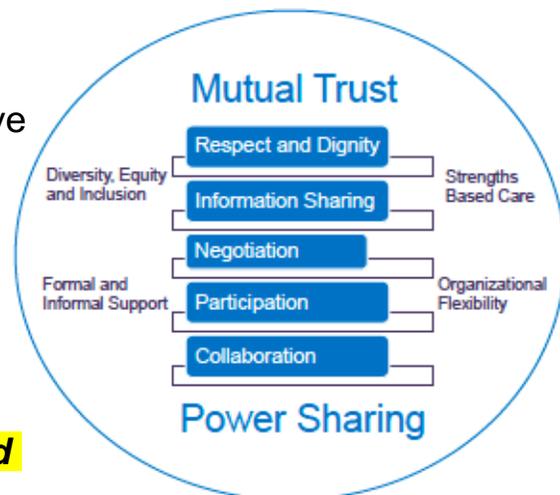
Franck et al., 2023 <https://pubmed.ncbi.nlm.nih.gov/37201991/>



3

Family-Centered Care (FCC) model of NICU care delivery

- Parents are supported to be active partners in shared decision-making and direct caregiving
- FCC approaches can improve parent and infant outcomes
- **FCC is inconsistently practiced within and across NICUs**

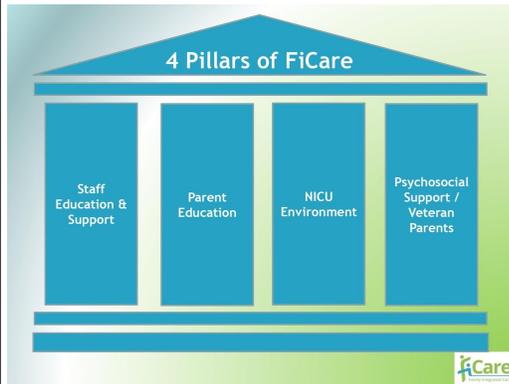


<https://pubmed.ncbi.nlm.nih.gov/37201991/>



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Family Integrated Care (FiCare) model of NICU care delivery



- **Based on FCC principles**
 - Provides a structured, parent co-designed program of NICU care delivery
 - Parents become primary caregivers and full partners in care planning/caregiving for their infant
- **Core activities**, localized and supplemented with other evidence-based FCC and developmental care practices



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Improved outcomes for preterm infants, parents, staff in NICUs providing FiCare compared with FCC

- **Infants:** improved feeding/ breast feeding, weight gain, post-discharge neurodevelopment, decreased risk of sepsis
- **Parents:** Lower maternal stress during NICU stay and lower chronic stress at 18 months, greater confidence in infant caregiving, improved communication between parents and the healthcare team
- **NICU Staff:** Great satisfaction, role fulfillment

Studies from multiple countries; mostly stable preterms; **Adoption of FiCare in the US has been slow.**

<https://familyintegratedcare.com/research/>



6



Franch et al. BMC Pediatrics (2022) 22:674
<https://doi.org/10.1186/s12887-022-03732-1>

BMC Pediatrics

RESEARCH **Open Access**

Check for updates

Neonatal outcomes from a quasi-experimental clinical trial of Family Integrated Care versus Family-Centered Care for preterm infants in U.S. NICUs

Linda S. Franck^{1*}, Caryl L. Gay¹, Thomas J. Hoffmann², Rebecca M. Kriz¹, Robin Bisgaard³, Diana M. Cormier⁴, Priscilla Joe⁵, Brittany Lothe⁶ and Yao Sun⁷

Franch et al. BMC Pediatrics (2023) 23:396
<https://doi.org/10.1186/s12887-023-04211-x>

BMC Pediatrics

RESEARCH **Open Access**

Check for updates

Maternal mental health after infant discharge: a quasi-experimental clinical trial of family integrated care versus family-centered care for preterm infants in U.S. NICUs

Linda S. Franck^{1*}, Caryl L. Gay¹, Thomas J. Hoffmann², Rebecca M. Kriz¹, Robin Bisgaard³, Diana M. Cormier⁴, Priscilla Joe⁵, Brittany Lothe⁶ and Yao Sun⁷

<https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-022-03732-1>
<https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-023-04211-x>

mfiCare
 USA Family Integrated Care

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Methods

Setting: Prospective enrollment from 3 diverse NICUs in California

Design: Quasi-experimental, time-lagged

Cohort 1: Usual Care FCC	Training	Cohort 2: Intervention mFICare
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Eligibility:

- **Infants:** ≤33 weeks gestation at birth, *all diagnoses*
- **Parents:** English-speaking, ≥18 years of age, with access to a smart phone or tablet (available in all 3 NICUs)
- *No minimal bedside time requirement*

Time Frame: April, 2017 to June, 2020 (no impact of COVID in sensitivity analyses)

Franch et al. BMC Pediatrics (2022) 22:674
<https://doi.org/10.1186/s12887-022-03732-1>

mfiCare
 USA Family Integrated Care

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Intervention

mFICare Group:

- Parents offered all 6 components of the mFICare bundle
- Monthly intervention fidelity audits and ‘booster’ training and support



Usual FCC Group:

- Usual FCC as defined by each site, general encouragement of parent participation in infant caregiving
- Parent mobile app online diary only



Franck et al. BMC Pediatrics (2022) 22:674
<https://doi.org/10.1186/s12887-022-03732-1>



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The (m)FICare Bundle

- Supportive physical environment/co-designed protocols/policies
- Clinical team (re) training
- Parent participation in weekday rounds
- Parent peer mentorship
- Parent group classes 2-5 times per week
- Expanded role for parents in infant caregiving
- Parent mobile app: FICare content, online diary



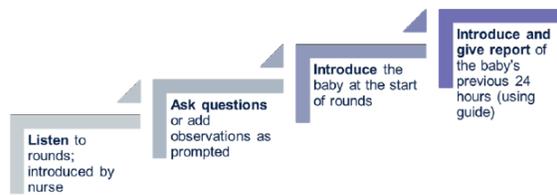
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Parent Involvement in Rounds

Why Involve Parents?

- Parents become more engaged and involved
 - o They have less questions and know more about the plan of care.
- Improve parental understanding regarding progression of baby's care
 - o They know what to look for and provide helpful observations
 - o Less time needed for follow-up communication
- Parents feel they are part of the team
 - o Less stress for the parents = Less stress for the team
 - o Better communication and patient experience

Stages of Parental Involvement in Rounds



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Bedside Tools for Rounds



mFiCare Parent Rounding Script

Rounds Prep

- Ask families if they want to participate in rounds.
 - Will they be present or remote (phone call)?
 - Do they want to learn to present during rounds?
 - Orient them to the Parent Rounding Script
 - Help them fill it out
 - Watch--> Demo --> Teach Back

• My name is _____ My baby _____ (name), was born at ___ weeks and ___ day(s) and is now ___ weeks and ___ day(s).

• She has been admitted for _____.

• Today's weight is _____ gm. This is an (increase/decrease) of _____ gm from yesterday.

• We (have/ have not) been doing skin to skin care. (Circle one)

- o If applicable, I think _____ is preventing me from doing skin-to-skin.

• I feel my baby is doing (better/worse/same) as yesterday. (Circle one)

• I feel my baby is (comfortable/uncomfortable). (Circle one)

• My impression of my baby's feeding status is _____.

• My main concern about my baby today is _____.

• Notes _____

*Parent may present as much or as little of the above as they feel comfortable, but please encourage them to fill it out in its entirety.

Next steps

- Nurse, residents, NPs, attendings conduct rounds and make daily plan
- Before rounds concludes, medical team invites parent to share any questions or comments. Medical team may return in afternoon to discuss further concerns as needed.
- After rounds, nurse debriefs with parents to discuss any questions or issues that did not get addressed and makes follow-up plan if needed.



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Parent Mentor Program

"My parent mentor has been checking in on me and asking me if I have any questions which I appreciate, since I do not have much support right now"

- Locally recruited and trained; paid family liaison position, **OR**
- Families referred to national free NICU peer-support programs

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Parent Classes (examples)

One hour classes offered 2-5 times a week.
Open to ALL NICU families

Baby growth and development	Breastfeeding and Pumping	Developmental Care	Parenting your baby in the hospital
Helping babies breathe	Infant Massage	Feeding your baby in the NICU	Decreasing risk of infection
Planning for life at home with your baby	Sibling Support during your time in the NICU	Parent Wellness	Medication in the NICU and Home



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Parent Mobile App

- Tracking their NICU journey
 - Baby's progress
 - Who's who
 - Notes for rounds
 - Feelings
- Educational content
- Peer-support content
- Encouragement

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Participants

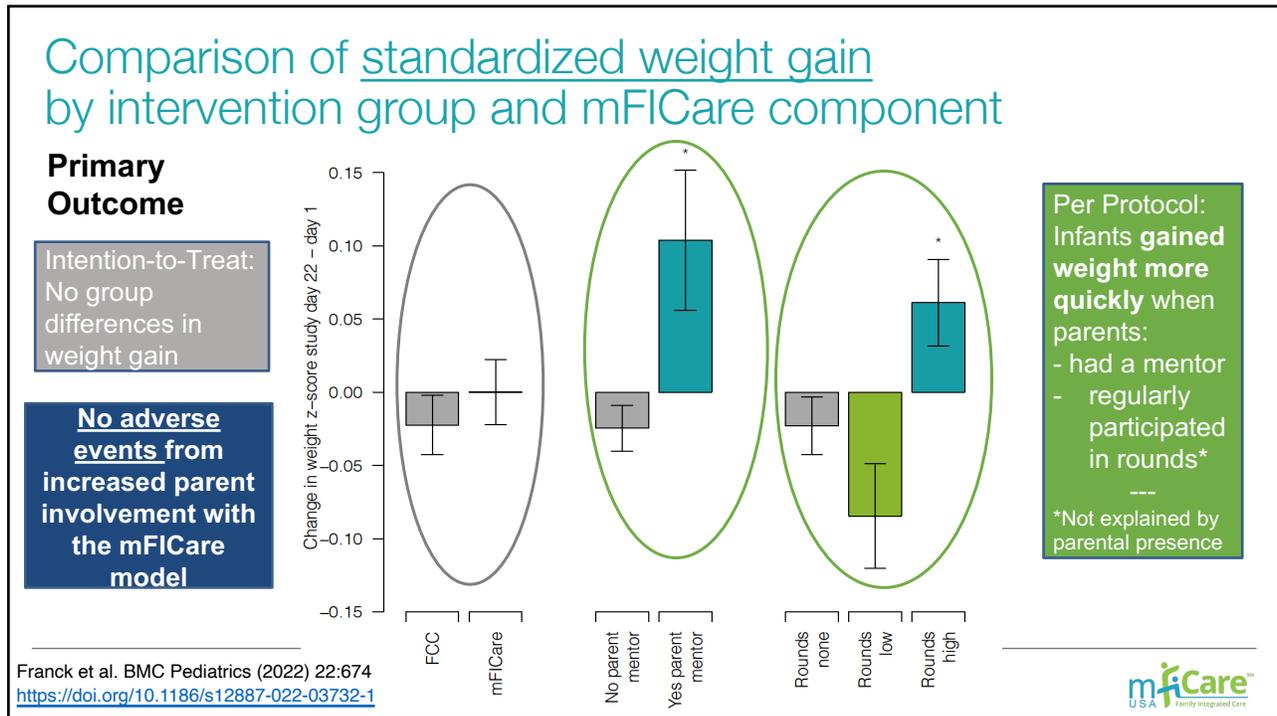
- Racially/ethnically diverse sample
 - 77% BIPOC
- Enrollment rates:
 - 59% FCC
 - 71% mFiCare
- Retention rates: 97-98%
- No baseline group differences
- mFiCare components successfully delivered in all 3 NICUs

- Younger and smaller than previous studies
- Sicker and more complex care than previous studies
- No group differences in clinical or discharge characteristics

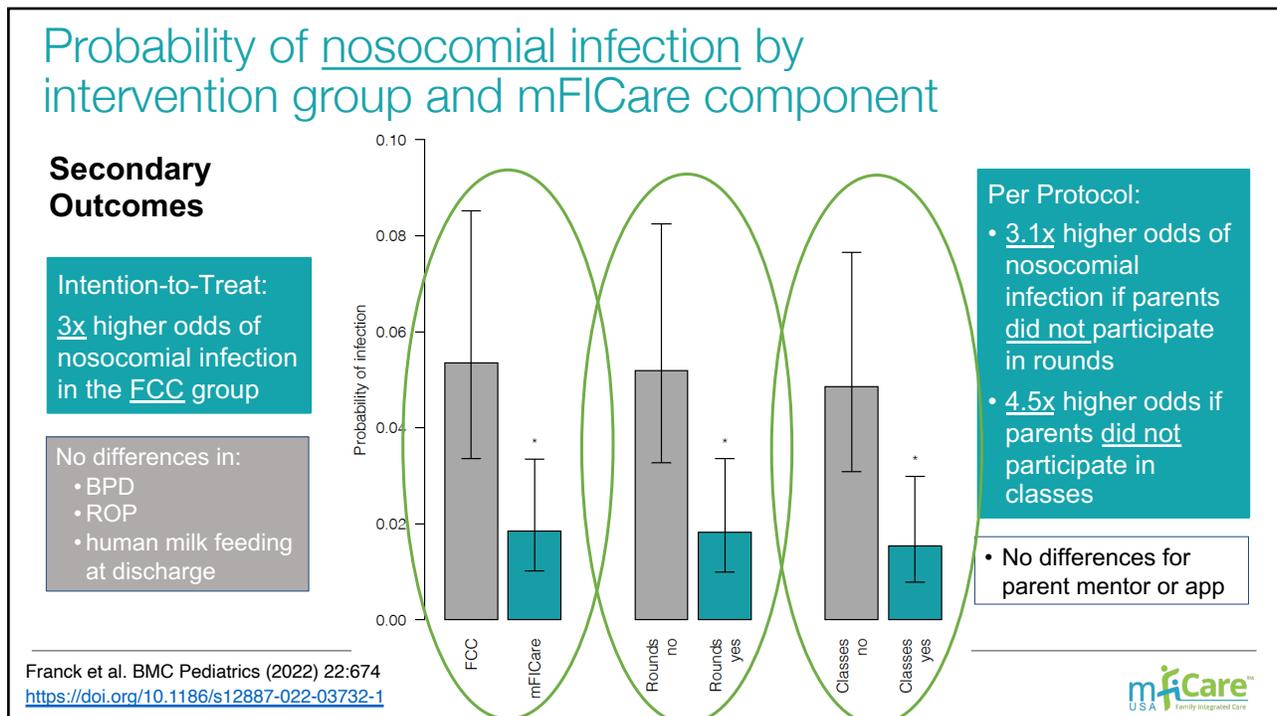
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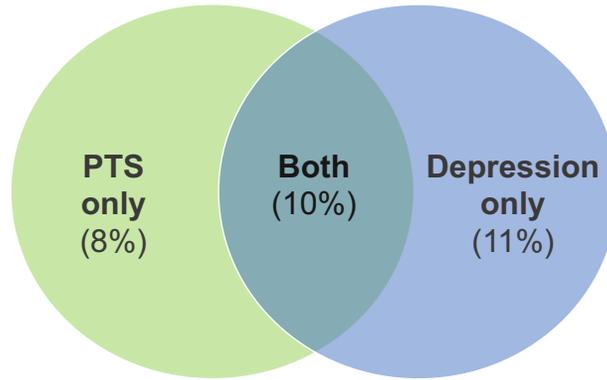
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Maternal post-discharge mental health* (n=89 each group)

29% of mothers had symptoms of post-traumatic stress, depression or both



*Too few fathers had follow-up data

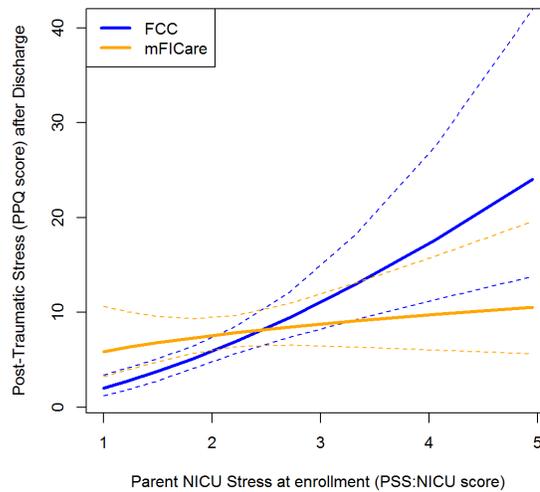
No overall group effect : PTS and depression levels similar in FCC and mFICare groups

Franck et al. BMC Pediatrics (2023) Aug 10;23(1):396.
<https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-023-04211-x>



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Results: Post-Traumatic Stress Intention-to-Treat analysis



Same differential effects for:

- Depression symptoms
- Rounds
- Classes

Dotted lines indicate the 95% confidence interval for each group.

Franck et al. BMC Pediatrics (2023) Aug 10;23(1):396.
<https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-023-04211-x>



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What did NICU Staff think?

- Staff were mostly positive about mFICare
- Implementation can be improved

How do mFICare (parent-led) rounds compare with standard rounds on...

Category	Much worse	Somewhat worse	Neutral	Positive (Blue)	Positive (Green)
Parent/clinician relationship	0%	0%	~10%	~40%	~50%
Shared decision-making	0%	~5%	~15%	~35%	~45%
Patient care planning	0%	0%	~10%	~40%	~50%
Team's understanding of the...	0%	~5%	~25%	~30%	~35%
Efficiency of rounds	~10%	~15%	~25%	~10%	~35%

Franck et al., Adv Neonatal Care (in press)

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What did parents think?

- Mostly positive about mFICare
- Implementation can be improved

“A lot of it [mFICare] are geared towards the parent and it’s really good because I feel like all the attention is for the patient and not for yourself. Realizing that you also need a lot of care during this time is really important.”

“...they kept telling me how important breastfeeding was and then I would call and say, “I’ll be there at 9 so don’t do a bottle feeding or a tube feeding because I’ll be there...,” and then I’m literally like five minutes late and I call and say, “I’m five minutes late, I’m on the bridge,” Then I get there and they’re like, “Yeah, we already fed the baby, we just had to move on.”

Franck et al., under review

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What have we learned about FICare in the U.S. Context?

- mFICare is **feasible, safe and accepted** by staff and parents
- **mFICare can reduce:**
 - **Nosocomial infections** among preterm infants
 - **Post-traumatic stress and depression symptoms** in mothers with high NICU-related stress
- FICare components that may have the greatest impact:
 - **Peer mentorship:** better weight gain
 - Parent active **participation in rounds:** better weight gain, lower infection, improved maternal mental health
 - **Group classes:** better weight gain, lower infection, improved maternal mental health
 - mFICare app may reinforce benefits – needs further work



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Implementing modified family integrated care in a U.S. neonatal intensive care unit: nursing perspectives and effects on parents

Zuzanna Kubicka^{1,2,3,4}, John Fiascone^{1,2}, David Williams^{3,4}, Eyad Zahr^{1,2}, Amy Ditzel^{1,2}, Diana Perry^{1,2}, Tamara Rousseau^{1,2}, Molly Lacy^{1,2} and Bonnie Arzuaga^{1,2}

- Modified FICare model (no peer mentor program or group classes) in a community level III U.S. NICU (east coast)
- Case-control design; 79 parents participated prior to FICare; 90 after
 - Parent stress was lower with FICare
 - Parents learning 5 - 15 infant-care skills had lower stress compared to those learning <5
 - Parent use of an educational app was associated with improved communication
- NICU nurses reported positive associations of FICare for parents and staff
- **Conclusions: Any degree of FICare participation decreases parental stress; increased parental participation has multiple positive associations**

Kubicka 2023 <https://doi.org/10.1038/s41372-023-01601-y>



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**START WHERE YOU ARE.
USE WHAT YOU HAVE.
DO WHAT YOU CAN.**

Arthur Ashe



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FiCare Implementation Resources

<https://familyintegratedcare.com>



FiCare supports the full integration of families in the care of their infants in the NICU



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FCC LEADERSHIP NEEDED for successful implementation




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Next Level FCC

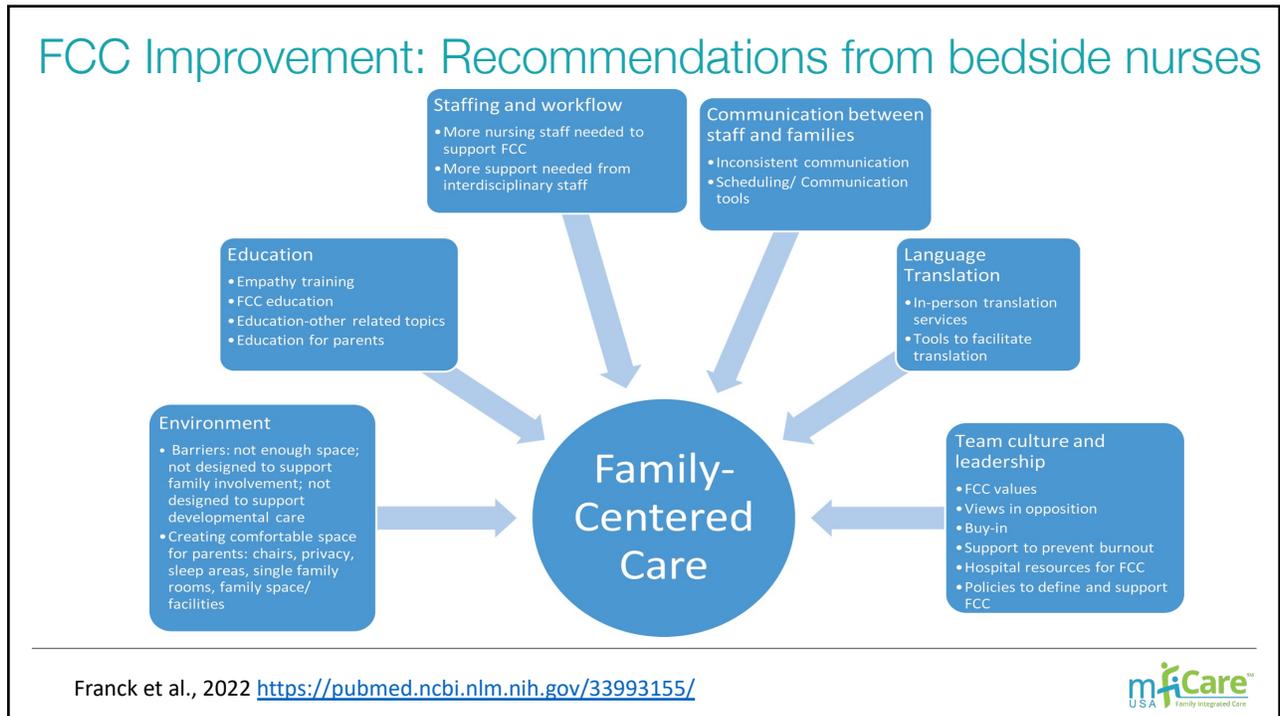
- Include former NICU families in the QI team along with representatives from all the main professional groups and decision-makers involved in providing care to neonates.
- Engage with parent-led organizations to expand support for NICU families and as partners in QI.
- Provide training and support for NICU family QI partners, and training for staff on how to engage families in QI.
- Consider evidence-based FCC models, and NICU culture change that might be needed to improve delivery of FCC.
- Support NICU staff to deliver high-quality FCC.
- Incorporate FCC structure, process and outcome metrics into NICU QI.

Franck et al., 2023 <https://pubmed.ncbi.nlm.nih.gov/37201991/>

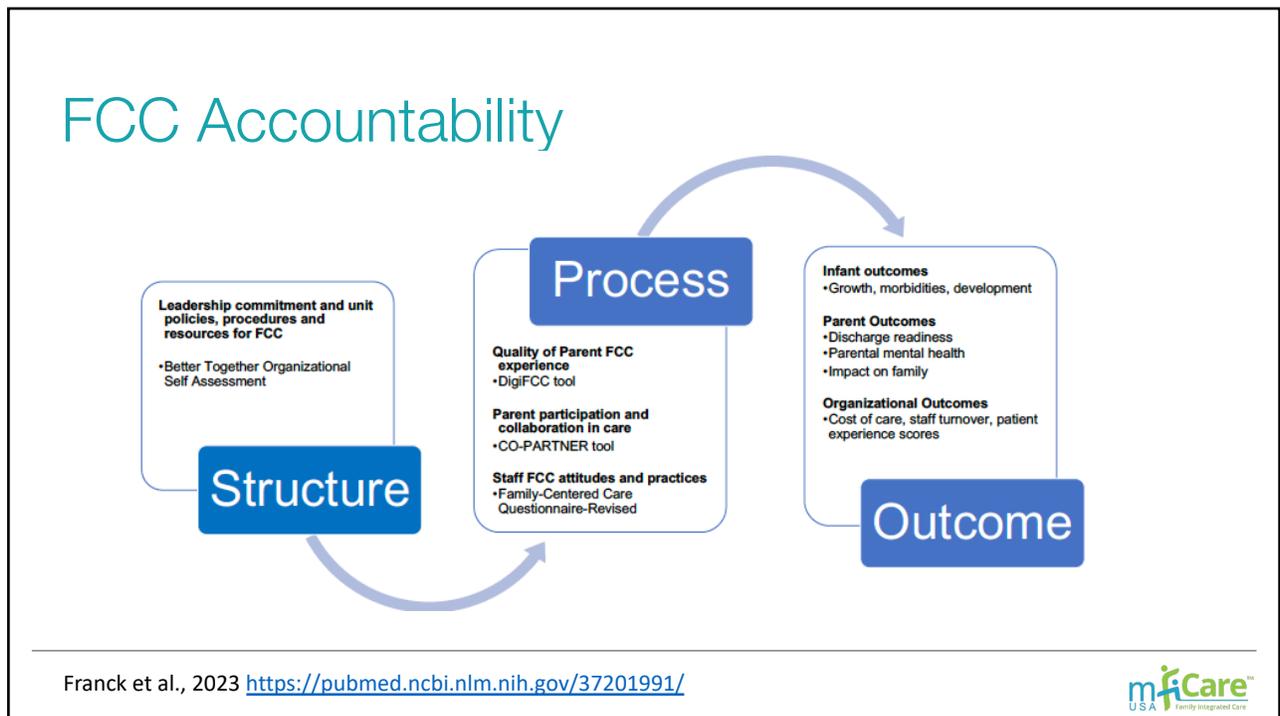




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