Summary of Evidence for Alberta FICare™

Peer-reviewed published literature

'Gold Standard' evidence of efficacy of Alberta FICare (2020)

https://doi.org/10.1186/s12887-020-02438-6

Alberta FICare™ (known in research and development as Alberta Family Integrated Care) was tested in a cluster randomized controlled trial in 10 Level II neonatal intensive care units (NICU) with 654 mothers and 765 infants. We found:

- A 2.55-day reduction in moderate and late preterm infant hospital length of stay favoring Alberta FICare™
    - No concomitant increases in eAlberta FICarency department visits or hospital readmissions.
- Mothers were less distressed
- Mothers were more confident in the care of their infant

Healthcare providers making decisions about family centered care initiatives in their NICU can be confident that Alberta FICare™ will improve quality of family centered care, reduce preterm infant length of stay, and avoid health system costs.

Alberta FICare avoids costs for the health system at 2 months post NICU discharge (2024). https://doi.org/10.62116/NEC.2024.42.3.131

Alberta FICare offers high quality care, improved outcomes and showed it potential to reduce costs to the health system. Expanding Alberta FICare across Canada and replicating the trial would offer better insights into the intervention's potential to reduce healthcare costs.

Participating in Alberta FICare did not cost more for mothers of moderate and late preterm infants (2024). https://doi.org/10.1016/j.pecinn.2024.100365

Concerns have been raised about the additional costs to parents of participating in Alberta FICare. Compared to the Standard Care group, parents in the Alberta FICare group did not report significantly greater total, direct, non-medical expenditures. High costs for parents were related to travel and proximity of the NICU to their home.

Family Integrated Care curriculum aligned with Kern's Framework for continuing medical education (2023) https://dx.doi.org/10.5116/ijme.6566.4b2c

We used Kern's Framework to develop the curriculum for family integrated care for multidisciplinary neonatal care providers. Alberta Integrated Care is a model of care that integrates parents into their infant's care team from the time of admission. With practical tools and strategies, multidisciplinary team providers' roles broaden to focus on educating and supporting parents as they gain knowledge, skills, and confidences n their care of their infant. The Alberta Family Integrated Care curriculum is the only training that was developed using Kern's Framework, target multidisciplinary staff, and is accredited for continuing medical education in Alberta.

Value-based Healthcare Optimized with Alberta FICare™: A Case Study (2023)

https://doi.org/10.1097/naq.0000000000000552

Did you know it normally takes 17 years for positive research results to be put into practice?

We present Alberta FICare™ as a case study of value-based health care optimized through a learning health system framework. Value-based health care is a way of organizing health systems to transform outcomes and achieve the highest quality of care and the best possible outcomes with the lowest cost. With predictable processes and structures to facilitate evidence to implementation and finally sustainability, Alberta FICare™ realized a positive return on investment, creating $1.16 million in value over 2 years for the Alberta health system by freeing up costly NICU capacity through length of stay reductions. Typically, health care decision makers must choose between quality and cost. With Alberta FICare™, the health system receives higher quality family centered care at a lower cost.

Alberta Family Integrated Care reduced costs for moderate and late preterm infant hospitalization (2024). https://doi.org/10.62116/NEC.2024.42.3.131
The mean (standard deviation) unadjusted total costs per infant was $39,649 ($19,741) in the Alberta FICare group and $42,195 ($20,955) in the standard care group. Accounting for site geographic area and infant risk factors, the adjusted mean total cost per infant was lower in the Alberta FICare group, which showed its potential to reduce public health care system costs.

How to accelerate and sustain Alberta FICare™ in a learning health system (2024)
https://doi.org/10.1186/s43058-024-00644-2
Innovative models of care have the potential to improve the sustainability of health systems by improving patient and provider experiences, and population outcomes while simultaneously reducing costs. We present Alberta FICare™ as a case study to demonstrate how to recognize the distinctive points during research and quality improvement processes that contribute to the sustainment of effective interventions. The business concept of an inflection point – the position on the curve of a trajectory where the progress in implementation of an innovation is accelerated or decelerated- may be useful to understand implementation and sustain effective interventions. We suggest two contexts for application of strategic inflection points: research and health systems.

Provincial scale and spread of Alberta Family Integrated Care: From Cluster Randomized Controlled Trial to Health System Partnership (2021) (See volume 4, pp. 16 – 19) https://iktrn.ohri.ca/projects/casebook/
Alberta Family Integrated Care is a clinical-trial validated and family centered approach to integrating families into the care of their newborn in the neonatal intensive care unit (NICU). We describe moving from a cluster randomized controlled trial (cRCT) to full partnership with the health system as part scale and spread across all 14 NICUs in the province of Alberta, Canada.

The Maternal Newborn Child and Youth Strategic Clinical Network™ enhanced this unique collaborative opportunity first as the knowledge user in the cRCT and then as full partner for scale and spread. The Innovation Pipeline in Alberta Health Services provided funding, networks, and support structures to identify gaps, generate evidence, and then rapidly move to provincial scale and spread.

Based on this provincial scale and spread experience we provide three integrated knowledge translation recommendations:

1. Engaging early and often contributes to stakeholder knowledge and understanding

2. Listening, emphasizing the positive, and being genuine, adaptable, and practical contributes to stakeholder trust and commitment, and
3. forming a true partnership with knowledge users is key to negotiating and mitigating barriers.

Accelerated Journey to Home from the Neonatal Intensive Care Unit (2022)
https://doi.org/10.1177/23333936221097113
Neonatal intensive care units (NICUs) are highly technological critical care environments that can be overwhelming for parents during an already stressful time. We explored mothers' experiences of parenting in the NICU grouped by model of care (Alberta FICare™ and standard care). A core social process of Journey to Home was identified.

With Alberta FICare™, mothers experience an enhancement to standard care related to building reciprocal trust that formed the foundation for relationships with healthcare providers that accelerated their journey to home. Relational communication, a component unique to Alberta FICare™ training, may be critical to teach healthcare providers how to build trusting relationships with parents of infants in NICUs. To facilitate integration of parents into the NICU care team and accelerate the journey to home, NICU leaders may wish to consider embedding Alberta FICare™ training in staff orientation.

An Actionable Model of Family Integrated Care (2021) https://doi.org/10.3390/jcm10245871
Alberta FICare™ is an actionable model of family integrated care that empowers parents to partner with the healthcare team in the care of their infant, from the time of admission.

With Alberta FICare™, infants were first placed skin-to-skin earlier, achieved full enteral feeds more quickly, and spent less time on Total Parental Nutrition.

To achieve value-based healthcare, it is increasingly important to implement effective models of care. Alberta FICare™ improves neonatal and maternal outcomes, without downstream healthcare utilization, all of which may reduce healthcare system costs.

Human milk feeding for moderate and late preterm infants at age 2 months: Insights from a cluster randomized controlled trial 2-month follow-up (2024)
https://doi.org/10.1016/j.pecinn.2024.100345
At age 2 months, we compared two groups (Alberta Family Integrated Care vs Standard Care) using three categories of human milk feeding: exclusive human milk, non-exclusive human milk, and no human milk. Compared to mothers in the standard care group, mothers in the Alberta Family Integrated Care group were less likely to provided exclusive human milk versus no human milk. There were no group differences between exclusive human milk and non-exclusive human milk feeding. Mothers with higher education on maternity leave or employed prior to the infant's birth were more likely to provide exclusive human milk. Infant who received exclusive human milk at discharge were more likely to continue at age 2 months. Higher maternal breastfeeding self-efficacy at discharge was associated with a greater likelihood of feeding exclusive human milk at age 2 months.

More Confident and Satisfied Fathers in the NICU (2022)
https://doi.org/10.3390/jcm10245871
Upon admission of their infant to the neonatal intensive care unit (NICU), fathers have reported shock and anxiety, a general sense of lack of control, difficulty transitioning into

fatherhood as a result of the critical care needs of their infant, and a lack of information exclusive to them.

Alberta FICare™ is an actionable model of family integrated care that empowers parents to partner with the healthcare team in the care of their infant, from the time of admission. Fathers' experiences in the NICU eAlberta FICared across seven themes: fear of the unknown, mental preparation, identifying the father's role, parenting with supervision, effective communication, post-neonatal intensive care transition, and family life.

With Alberta FICare™, fathers attributed their level of confidence and positive NICU experience, which continued post-discharge, to the care and attention they received during hospitalization.

Alberta FICare™ Improves Longer-Term Preterm Infant Development (2022)
https://doi.org/10.3390/jcm11061684
Compared with their full-term counterparts, moderate and late preterm infants are at increased risks of developmental delay, cognitive delay, communication impairments, and behaviour challenges.

With Alberta FICare™, the risk of communication delay was significantly lower for infants between 6- and 24-months corrected age compared with standard care.

Facilitators and barriers to implementation of Alberta family integrated care (FICare) in Level II neonatal intensive care units (2021) https://doi.org/10.1136/bmjopen-2021-054938
Implementation of family centered care initiatives is often challenging due to a poor understanding of contextual factors of the implementing organization.

Neonatal care providers and hospital administrators described key facilitators and barriers to implementing Alberta FICare™.

Facilitators	Barriers
• Absorptive capacity for change • Compatibility of the innovation with the implementing organization • Available resources • Access to knowledge for neonatal care providers • Engagement of key stakeholders • Evaluation	• Design and delivery of staff training • Relative priority against competing initiatives • Learning climate of the implementing organization

These findings reinforce that contextual factors are fundamental influencers of implementation of family centered initiatives in healthcare settings. Therefore, context should be assessed and strategically managed. Liminality uses a standardized process to support operationalization of Alberta FICare™ with fidelity.

Scoping Review of Education for Women About Return to Driving After Abdominal Surgery (2023) https://doi.org/10.1016/j.jogn.2022.11.002

This scoping review explores the education and the evidence informing the education that is given to women about when to return to driving after abdominal surgery. After a comprehensive search of scientific databases and the relevant grey literature, we found that the education given to women was varied. Women were told to return to driving from 1 to 10 weeks after abdominal surgery; this education was primarily provided by health care providers, although some education was provided in leaflets. Additionally, education about return to driving had a weak evidence base, where provided evidence was based on common sense, traditional practice, perceptions of insurance policies, a woman's comfort level, or her ability to deploy an eAlberta FICarency brake. There is a need for more research to inform the criteria used to assess driver fitness after abdominal surgery, especially to support family-centered care in NICUs. Unnecessarily delaying return to driving after an abdominal surgery such as caesarean birth may limit the opportunities for mothers to parent their infant in the NICU.

The Work of Mother in the NICU: A Critical Analysis of Alberta Family Integrated Care Parent Journals (2022) https://doi.org/10.1097/ANC.0000000000000984

Integrating parents in the care of their infant in the neonatal intensive care unit (NICU) with Alberta FICare™ has demonstrated positive outcomes for parents, infants, and the health system. Considering these positive effects, Ringham and colleagues use institutional ethnography to analyze 101 parent journals and describe how mothers' work in the NICU was coordinated by institutional processes – or the organizational rules and procedures that influence a set of human interactions. This type of inquiry ensures that mothers' experiences are captured to describe what is actually happening, rather than to find meaning in the experiences. Three dominant discourses eAlberta FICared: (1) feeding policies and practices, (2) roller coaster of emotions, and (3) the work of mothering in the NICU. Every day NICU rules and institutional activities coordinated mothers' work in the NICU, including decision-making and infant feeding. Mothers' activities were coordinated by practices that prioritize progression toward discharge rather than supporting them through the roller coaster of emotions and practical challenges of being present in the NICU. With Alberta FICare™, healthcare providers learn relational communication practices to understand the challenges parents encounter in the NICU and support them to navigate constant and unexpected changes.

Does Breastfeeding Self-Efficacy Theory Apply to Mothers of Moderate and Late Preterm Infants? A Qualitative Exploration (2020) https://doi.org/10.1111/jocn.15304

In this article, Brockway and colleagues shared the stories of 14 mothers' experiences with breastfeeding their preterm infant in a Level II neonatal intensive care unit. In some cases, these stories are heart wrenching and demonstrate how societal pressures of 'breast is best' and institutional influences created a rift in relationships that erodes the ability of healthcare providers to provide breastfeeding support for women. When the role of mothers is relegated to providers of milk to their critically ill newborn, adoption of maternal identity is compromised. To maintain human milk feeding after discharge, mothers articulated the importance of direct breastfeeding at discharge. Except for vicarious learning, Brockway and colleagues mapped mothers' experiences of feeding their critically ill newborn onto breastfeeding self-efficacy theory. While breastfeeding self-efficacy theory is relevant to mothers of preterm infants, health care providers need to be aware of institutional culture and policies that negatively affect breastfeeding self-efficacy and feeding outcomes.

Relational Communications Strategies to Support Family-Centered Neonatal Intensive Care (2016) https://doi.org/10.1097/JPN.0000000000000195

This article gives voice to the art and science of relational communications with parents of critically ill newborns who require neonatal intensive care. Benzies describes how healthcare providers can rethink communications patterns to meaningfully involve parents in the neonatal care team. Through the art of circular questioning, Benzies reveals strategies that contribute to the development of mutually beneficial trusting relationships with parents during their hospital stay. Benzies challenges healthcare providers to reinforce parental self-efficacy in the care of their critically ill newborn through the application of commendations. Benzies recommends relational communication training, including tools and strategies, in initiatives designed to increase parental involvement in the care of their critically ill newborn.

Alberta FICare was not associated with child neurodevelopment of moderate and late preterm infants at age 18 months (2025). https://doi.org/10.3390/jcm14020586

Alberta FICare was not associated with decreased risk of neurodevelopmental delay in in moderate and late preterm infants at age 18 months corrected age. Maternal parenting stress may play a greater role in the development of moderate and late preterm infants and should be addressed post-discharge.

Alberta FICare was used as a case study for researchers to identify ways to interventions from ideation to sustainment (2024). https://doi.org/10.1186/s43058-024-00644-2

In this qualitative study, we used Alberta FICare as a case study for researchers to identify characteristics of their intervention and strategic inflection points in research and scale processes that lead to sustainment of an effective intervention.