EtD 44. Should mothers of preterm infants have access to lactation consultant services vs. no access to lactation consultant services?

POPULATION:	Mothers of preterm infants
INTERVENTION:	Access to lactation consultant services
COMPARISON:	No access to lactation consultant services
MAIN OUTCOMES:	**Critical for making a decision** Exclusive breastmilk at hospital discharge Fully breastfeeding at hospital discharge any breastmilk at discharge **Important but not critical** Any breastmilk within 24 hours after birth Length of stay (days) Any breastmilk during hospital stay Time to full enteral feeds (days) Lactation consultant access
SETTING:	Postnatal neonatal setting
PERSPECTIVE:	Clinical guideline recommendation: patient perspective
BACKGROUND:	A preterm infant is born before the later stages of pregnancy which are important for the accretion of nutrients, resulting in nutrient deficiency and deficits in growth and neurodevelopment. Optimal nutrition plays a key role in growth, neurodevelopment, metabolism and the overall survival of preterm infants. Studies have shown that preterm infants fed their own mother's breastmilk experience considerable health benefits, a strengthened immune system, cognitive improvements and fewer complications compared to those who are not breastmilk fed. For this reason, mothers' breastmilk is considered an optimal source of nutrition. Despite mothers' breastmilk being so important, many mothers of preterm infants face a range of challenges when it comes to expressing breastmilk and breastfeeding; in particular, difficulties in establishing milk supply. Lactation consultants can provide education and support to improve breastfeeding outcomes, but they are a limited resource and some mothers do not have access to a lactation consultant so evidence of their impact is crucial. Important outcomes to consider are exclusive breastmilk at hospital discharge, fully breastfeeding at hospital discharge, any breastmilk at discharge and during hospital stay, as well as length of stay and time to full enteral feeds. Ensuring optimal breastmilk outcomes are achieved in a cost-effective way is critical in determining the overall health outcomes of the infant.
CONFLICT OF INTERESTS:	The following systematic review authors for this topic are on the Guideline Development Group: Chloe Bell and Luling Lin and Barbara Cormack

Assessment

Desirable Effects

How substantial are the desirable anticipated effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS

○ Trivial ○ Small ● Moderate ○ Large ○ Varies ○ Don't know		[1] USA. Survey and audit. Babies in neonatal care including preterm and term infants. [2] USA. Cross-sectional study. 45% of infants were <37 weeks' gestation. [3] USA. Retrospective chart review. Early preterm non-Hispanic Black infants. [4] USA. Retrospective chart review. Babies <34 weeks' gestation. [5] USA. Quality improvement project. Mean gestational age 36.9 weeks. [6] USA. Retrospective chart review. Mean gestational by time period in study age 34-36 weeks. [7] USA. Retrospective observational study. Babies <30 weeks' gestation. [8] Slovenia. Retrospective observational study. Very low birthweight preterm infants. [9] USA. Retrospective chart review. 64% of infants were <37 weeks' gestation. [10]USA. Cross-sectional study. Very low birth weight infants. [11] Ireland. Retrospective chart review. Very low birth weight infants. [12] USA. Descriptive correlational study and follow-up. 33% of infants were<37 weeks' gestation.

		[13] USA. Retrospective chart review. Very low birth weight infants. [14] USA. Retrospective cohort study. Babies </= 32 weeks' gestation. [15] France. National cohort. Babies 32-34 weeks' gestation. [16] USA. Quality improvement study. Very low birthweight infants. [17] Austria. Retrospective chart review. Very low birthweight infants. [18] USA. Retrospective study. Babies 23-41 weeks' gestation.

Outcomes	№ of participants (studies) Follow-up	Certainty of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects* (95% CI)	
				Risk with No Access to Lactation Consultant Services	Risk difference with Access to Lactation Consultant Services
Any Breastmilk within 24 hrs after Birth	262 (2 non-randomised studies)	⨁◯◯◯ Very low[a,b]	OR 1.79 (1.05 to 3.03)	Study population	
				577 per 1,000	**132 more per 1,000** (12 more to 228 more)
Lactation Consultant Access	735 (2 non-randomised studies)	⨁◯◯◯ Very low[a,c,d]	OR 21.81 (4.11 to 115.73)	Study population	
				245 per 1,000	**631 more per 1,000** (326 more to 729 more)
Length of Stay (days)	770 (6 non-randomised studies)	⨁◯◯◯ Very low[a,d,e]	-	The mean length of Stay (days) was **49.49**	MD **0.08 lower** (4.06 lower to 3.91 higher)
Any Breastmilk during Hospital Stay	3413 (7 non-randomised studies)	⨁◯◯◯ Very low[a]	OR 1.56 (1.14 to 2.13)	Study population	
				436 per 1,000	**111 more per 1,000** (32 more to 186 more)
Exclusive Breastmilk at Discharge	616 (4 non-randomised studies)	⨁◯◯◯ Very low[a,c,g]	OR 1.88 (0.88 to 4.02)	Study population	
				251 per 1,000	**135 more per 1,000** (23 fewer to 323 more)
Time to Full Enteral Feeds (days)	270	⨁◯◯◯	-	The mean time to Full Enteral Feeds	MD **1 lower**

	(2 non-randomised studies)	Very low[a,b]		(days) was **12.84**	(1.17 lower to 0.82 lower)
Fully breastfeeding at discharge - not reported	-	-	-	-	-
Any Breastmilk at Discharge	3629 (12 non-randomised studies)	⨁◯◯◯ Very low[a,c,d,]	OR 1.46 (0.93 to 2.27)	Study population	
				546 per 1,000	**91 more per 1,000** (18 fewer to 186 more)

a. Downgraded one level for risk of bias due to low quality of the studies.
b. Downgraded one level for imprecision due to insufficient sample size.
c. Downgraded two levels for inconsistency due to considerable heterogeneity.
d. Downgraded one level for imprecision due to wide confidence interval.
e. Downgraded one level for inconsistency due to substantial heterogeneity.
g. Downgraded two levels for imprecision due to insufficient sample size and wide confidence interval.

Undesirable Effects

How substantial are the undesirable anticipated effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
● Trivial ○ Small ○ Moderate ○ Large ○ Varies ○ Don't know	No undesirable effects reported **Undesirable effects for Māori** No additional evidence available	

Certainty of evidence

What is the overall certainty of the evidence of effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
● Very low ○ Low ○ Moderate ○ High ○ No included studies		

Outcomes	Importance	Certainty of the evidence (GRADE)

Any Breastmilk within 24 hrs after Birth	IMPORTANT	⨁◯◯◯ Very low
Lactation Consultant Access	IMPORTANT	⨁◯◯◯ Very low
Length of Stay (days)	IMPORTANT	⨁◯◯◯ Very low
Any Breastmilk during Hospital Stay	IMPORTANT	⨁◯◯◯ Very low
Exclusive Breastmilk at Discharge	CRITICAL	⨁◯◯◯ Very low
Time to Full Enteral Feeds (days)	IMPORTANT	⨁◯◯◯ Very low
Fully breastfeeding at discharge - not reported	CRITICAL	-
Any Breastmilk at Discharge	CRITICAL	⨁◯◯◯ Very low

Values

Is there important uncertainty about or variability in how much people value the main outcomes?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Important uncertainty or variability ● Possibly important uncertainty or variability ○ Probably no important uncertainty or variability ○ No important uncertainty or variability	Broom (2022) [1] included a staff survey in their cohort study, outlining that staff perceived that lactation consultants helped immensely in ensuring that mothers' educational needs around lactation were met and in mothers' confidence to continue breastfeeding post-discharge. There is no other qualitative research evidence available that discusses values regarding patient preferences, cultural values, or societal norms.	In an Aotearoa New Zealand context, it will need to be evaluated if mothers feel as though lactation consultant service support is valuable to their breastfeeding outcomes and overall hospital experience.

Balance of effects

Does the balance between desirable and undesirable effects favour the intervention or the comparison?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ Favours the comparison ○ Probably favours the comparison ○ Does not favour either the intervention or the comparison ● Probably favours the intervention ○ Favours the intervention ○ Varies ○ Don't know	**Lactation consultant services versus no lactation consultant services - very low certainty evidence** Increase in any breastmilk within 24 hours after birth, lactation consultant access, any breastmilk during hospital stay Decrease time to full enteral feeds Uncertain effect on any breastmilk at discharge, duration of hospital stay, exclusive breastmilk at discharge **Balance of effects for Māori** No additional evidence	

Resources required

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Large costs ● Moderate costs ○ Negligible costs and savings ○ Moderate savings ○ Large savings ○ Varies ○ Don't know	**Lactation Consultant Salary - Health New Zealand** $116,040 to $127,674 per annum In Australian neonatal units, the recommended staffing level for International Board-Certified Lactation Consultants is 1 FTE (Full-Time Equivalent) per 235 infant admissions to neonatal intensive care. Therefore, the cost would be $494 to $543 per infant admission Starship Child Health, Auckland City Hospital has approx. 850 admissions per year. Additionally, some guidelines suggest 0.1 FTE per 1000 deliveries for program development/administration and education, and 0.1 to 0.2 FTE for research.	

Certainty of evidence of required resources

What is the certainty of the evidence of resource requirements (costs)?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS

○ Very low ○ Low ● Moderate ○ High ○ No included studies	Certain. **Certainty of evidence of required resources for Māori** No additional evidence available	

Cost effectiveness

Does the cost-effectiveness of the intervention favour the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Favours the comparison ○ Probably favours the comparison ○ Does not favour either the intervention or the comparison ○ Probably favours the intervention ○ Favours the intervention ○ Varies ● No included studies	One cost-effectiveness study by Rice *et al* [19], in the UK, assessed the cost-effectiveness of providing *enhanced staff contact* to mothers of low-birth-weight infants in NICU, defined as providing individualised education, support and care plans by specially trained NICU staff. Compared to standard care, the intervention was found to lower overall costs and improve health outcomes across all weight groups, driven largely by increased breastmilk intake and reduced NEC. The model estimated savings of £66–£586 per infant and quality-adjusted life-years (QALYs) of +0.01 – +0.25, with the largest cost saving (£586 per infant) and health gain (+0.25 QALYs) in the 500–999 g group. These findings suggest that enhanced staffing focused on lactation support may be a **cost-effective strategy**, especially for infants under 1,750 g. However, the authors emphasised that this was the first economic evaluation in this field and highlighted the need for further research to confirm these findings with greater confidence. The only cohort study research evidence around the cost of access to lactation consultant services versus no access is from Gonzalez 2003 [9]. However, it would need to be considered that this data is from 2003 and from the USA. Data from Gonzalez, 2003, showed that: Cost of NICU stay below $10,000: 27% before initiating lactation consultant services in a single hospital versus 33% after initiating lactation consultant services. Cost of NICU stay between $10,000-19,999: 27% before initiating lactation consultant services in a single hospital versus 29% after initiating lactation consultant services. Cost of NICU stay between $20,000-29,999: 14% before initiating lactation consultant services in a single hospital versus 11% after initiating lactation consultant services. Cost of NICU stay at or above $30,000: 31% before initiating lactation consultant services in a single hospital versus 26% after initiating lactation consultant services. **Cost effectiveness for Māori** No evidence available.	A cost-effectiveness analysis may need to be undertaken in Aotearoa New Zealand.

Equity

What would be the impact on health equity?		
JUDGEMENT	**RESEARCH EVIDENCE**	**ADDITIONAL CONSIDERATIONS**
○ Reduced ○ Probably reduced ○ Probably no impact ● Probably increased ○ Increased ○ Varies ○ Don't know	**Equity for Māori** Māori mothers of preterm pēpi face systemic barriers that affect their ability to establish and maintain breastfeeding. Early and frequent breastmilk expression is vital to improving milk supply and long-term breastfeeding success, yet pēpi Māori are less likely to be exclusively breastfed at discharge. Delayed or infrequent expression may worsen these outcomes and reinforce existing inequities. Given the impact of colonisation on health systems and whānau support, structured support for early and consistent expression can empower wāhine Māori. Prioritising these practices in neonatal care may enhance breastfeeding rates and promote culturally responsive care for whānau Māori with preterm pēpi. **Equity for Pacific families** Access to neonatal lactation consultants may be inconsistent for Pacific families, especially where services are not culturally grounded or translated. Delayed or missed referrals can impact breastfeeding outcomes. Equity requires timely access to trained consultants who understand and respond to the needs of Pacific mothers and infants. **Equity for underrepresented groups** Mothers in rural, migrant or underserved communities may not receive early referral to lactation support, especially if they face language or financial barriers. Without this, breastfeeding may not be established. Equity demands timely, accessible lactation care for all mothers of preterm infants, regardless of background or location. Promoting early and frequent expression can improve outcomes by creating more equitable opportunities for breastfeeding success. Ensuring access to equipment, culturally appropriate education and staff support across all neonatal settings is essential to closing the gap in feeding disparities.	

Acceptability

Is the intervention acceptable to key interest-holders?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS

○ No ○ Probably no ● Probably yes ○ Yes ○ Varies ○ Don't know	Patients and whānau are likely to support the intervention, given the direct impact on infant health and wellbeing, and the absence of documented harms in the literature. Providers may place high value on the desirable outcomes but could have concerns about increased cost. However, improved early outcomes may reduce later complications and associated workload. Policymakers may be more likely to accept the resource implications if access to lactation consultant services is shown to reduce the overall cost of neonatal intensive care, as reported by Gonzalez (2003) in the Aotearoa New Zealand context. Autonomy and informed consent remain essential. Families should be supported to understand the purpose and implications of the intervention and be included in shared decision-making processes.	

Feasibility

Is the intervention feasible to implement?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ● Probably yes ○ Yes ○ Varies ○ Don't know	Financial, logistical, technical and organisational factors need to be taken into consideration in order to determine the overall feasibility of the intervention. **Feasibility for Māori** No additional data available	

Summary of judgements

	JUDGEMENT						
DESIRABLE EFFECTS	Trivial	Small	**Moderate**	Large		Varies	Don't know
UNDESIRABLE EFFECTS	**Trivial**	Small	Moderate	Large		Varies	Don't know
CERTAINTY OF EVIDENCE	**Very low**	Low	Moderate	High			No included studies
VALUES	Important uncertainty or variability	**Possibly important uncertainty or variability**	Probably no important uncertainty or variability	No important uncertainty or variability			

	JUDGEMENT						
BALANCE OF EFFECTS	Favours the comparison	Probably favours the comparison	Does not favour either the intervention or the comparison	**Probably favours the intervention**	Favours the intervention	Varies	Don't know
RESOURCES REQUIRED	Large costs	**Moderate costs**	Negligible costs and savings	Moderate savings	Large savings	Varies	Don't know
CERTAINTY OF EVIDENCE OF REQUIRED RESOURCES	Very low	Low	**Moderate**	High			No included studies
COST EFFECTIVENESS	Favours the comparison	Probably favours the comparison	Does not favour either the intervention or the comparison	Probably favours the intervention	Favours the intervention	Varies	**No included studies**
EQUITY	Reduced	Probably reduced	Probably no impact	**Probably increased**	Increased	Varies	Don't know
ACCEPTABILITY	No	Probably no	**Probably yes**	Yes		Varies	Don't know
FEASIBILITY	No	Probably no	**Probably yes**	Yes		Varies	Don't know

Type of recommendation

Strong recommendation against the intervention	Conditional recommendation against the intervention	Conditional recommendation for either the intervention or the comparison	**Conditional recommendation for the intervention**	Strong recommendation for the intervention
○	○	○	●	○

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