

Why is Curriculum Development Important?

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9-10 AM CST



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Disclosures



- In the past 12 months, I have not had a significant financial interest or other relationship with the manufacturer(s) of the product(s) or provider(s) of the service(s) that will be discussed in my presentation.
- This presentation will not include discussion of pharmaceuticals or devices that have not been approved by the FDA.
- This presentation is comprised of my own personal viewpoints and not meant to represent the ABM, AAP, or any institution with which I am affiliated.



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Learning Objectives

- 1) Explain the importance of breastfeeding and lactation medicine as a core competency in medical education to ensure clinical readiness and accountability among future physicians.
- 2) Outline practical steps for initiating and sustaining BFLM curriculum development within medical institutions

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Physicians are the Gatekeepers of Health Care



Int. J. Environ. Res. Public Health 2012, 9, 1308-1318

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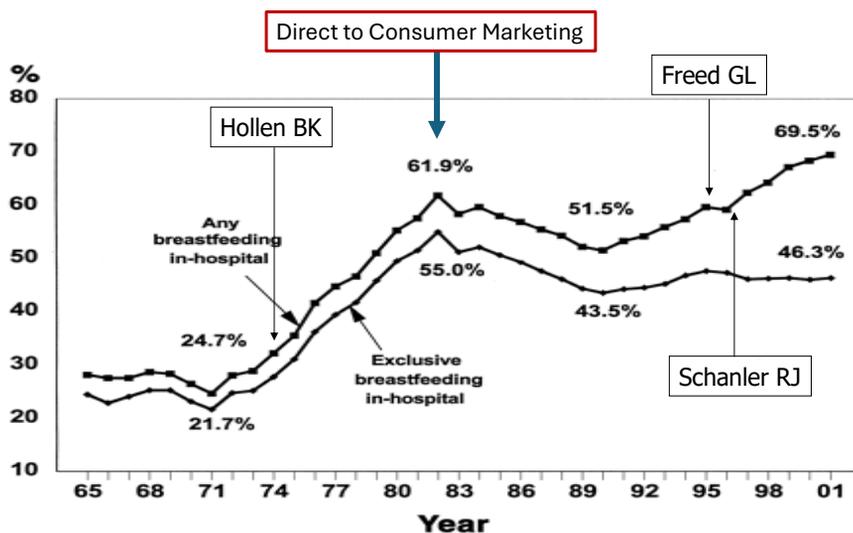
Engaging Physicians in Practice is a Challenge

- If physicians are not properly educated, they undermine breastfeeding (both process and outcome measures)
- “I won’t do that” examine babies in the rooms
- “ There’s nothing wrong with giving a supplement if it avoids hyperbilirubinemia or hypoglycemia”



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History of Physicians’ Knowledge and Attitudes

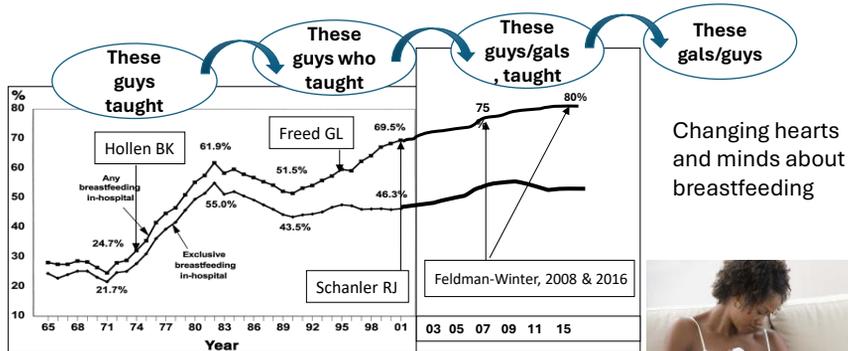


Graph data from the Mother’s Survey, Ross Products Division of Abbott



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The Lifecycle of Physician Breastfeeding Education



Graph data modified from the Mother's Survey, Ross Products Division of Abbott, and CDC NIS and mPINC



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Knowledge and Attitudes

- Sometimes it is what we don't say or are "too vague" in saying
- Sometimes it's not what we say... but what we do
 - give out formula company literature and portray bottle feeding as the norm in the office setting
- It does not matter what specialty you enter you will encounter a breastfeeding parent or child at some point in your career



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National Trends and Attitudes Among Pediatricians in US

WHAT'S KNOWN ON THIS SUBJECT: Pediatricians' recommendations about breastfeeding have consistently improved over the past several decades and were closely aligned with guidelines issued by the American Academy of Pediatrics, yet attitudes about the potential for breastfeeding success and meeting goals for breastfeeding have declined.

WHAT THIS STUDY ADDS: Pediatricians have continued to **improve their recommendations** for breastfeeding in alignment with American Academy of Pediatrics policy and the "Ten Steps to Successful Breastfeeding"; however, there are **modest declines in attitudes** about breastfeeding, and younger pediatricians are less confident in managing breastfeeding problems.

Feldman-Winter L, et al. Pediatrics. 2017 Oct;140(4):e20171229. doi: 10.1542/peds.2017-1229.



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National Trends and Attitudes Among Pediatricians in US

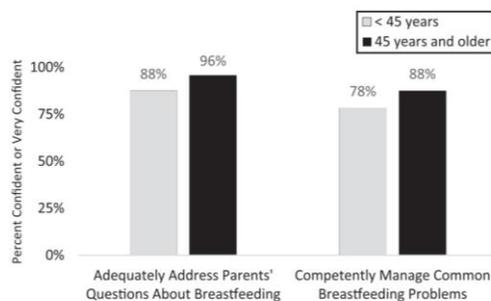
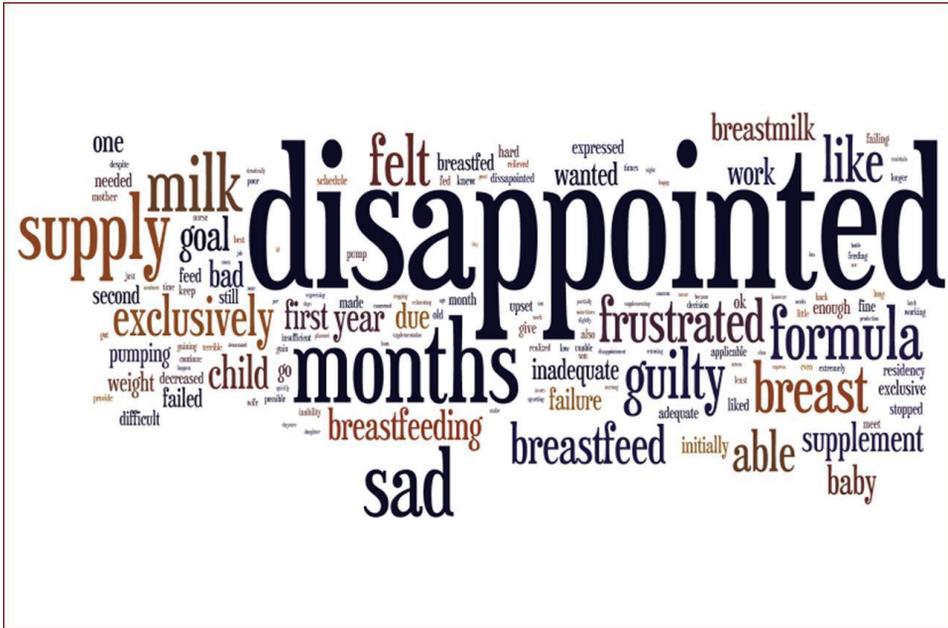


FIGURE 1
Pediatricians' confidence in their ability to care for breastfeeding concerns by age. * indicates a statistically significant difference between age groups ($P < .01$, χ^2 test). Data are from 2014 only.

Feldman-Winter L, et al. Pediatrics. 2017 Oct;140(4):e20171229. doi: 10.1542/peds.2017-1229.



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Dixit A, Feldman-Winter L, Szucs KA. 2015. Journal of Human Lactation



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Why Physicians Matter?

- Mother-infant pairs were recruited in the maternity section of the department of OB/GYN of the Chambery Teaching Hospital (Chambery, France), a level 3 maternity facility where an average of 2000 deliveries per year
- RCT of 17 primary care physician practices
- 5-hour training program to increase physician knowledge and counseling skills
- Enrolled mothers who attended vs. did not in 2 week follow up
- aOR exclusive breastfeeding at 4 weeks vs. not was 2.44 (95% CI; 1.18–5.03)

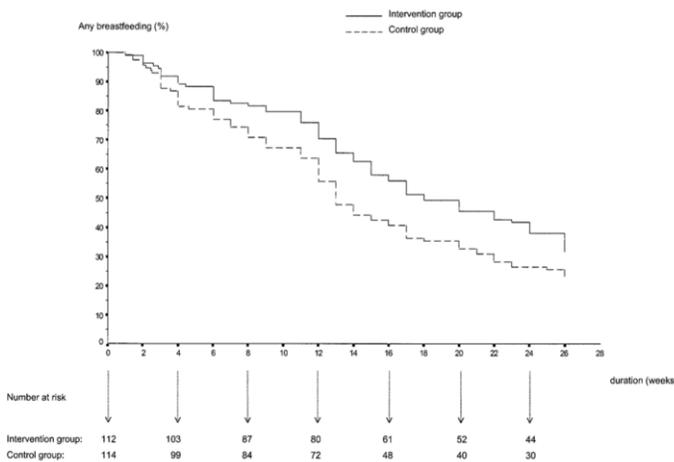


Fig 2. Kaplan-Meier estimates of any breastfeeding, stratified according to study group.

Labarere J. et al. Pediatrics. Feb 2005;115(2):e139-e146



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What Other HCP's Are Saying About Us

- Subtheme: ***Standing Up to Resistant Parties***
- *Interview on Skin-to-skin*- “They hound the nurses for a weight. They don’t really too much anymore. . . . And the reason they [did] that is just because it finalizes their note.”
- Interviewer: What do you think it took to make physicians okay with the process now?
- Interviewee 1: We just didn’t do it [what physicians wanted].
- Interviewee 2: Yeah, **nurses with backbone**

Burnham L, Gambari A, Beliveau P, Ustianov J, Parker MG, Merewood A.
 Perspectives of Nurses in Mississippi on Implementation of the Baby-Friendly
 Hospital Initiative. J Obstet Gynecol Neonatal Nurs. 2021 Jul;50(4):392-401.

Breastfeeding Disparities Highlight Systemic Racism

- Systemic racism underpins breastfeeding disparities
 - *Historical trauma of wet nursing*
 - *Generational trauma of not being able to nurse or nurture own children*
 - *Implicit and explicit bias in breastfeeding support*
- Black and Latino mothers more likely to be either uninsured or underinsured
 - *Lack resources for skilled lactation support*



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Scoping Review of Racism & Breastfeeding

Table 2. Types of Racism and Bias Defined in the Literature Reviewed

Type	Definition
Racism	
Cultural ²⁰	Transfer of negative stereotypes that can influence members of marginalized groups using intricate emotional processes such as psychological stress
Institutional ²⁰	Social environments and/or organizations that systematically constrain resources essential to the achievement of health and well-being
Bias	
Intentional and unintentional bias ²³	Health care providers having lowered breastfeeding expectations of patients based on race and ethnicity, SES, education, and class
Implicit bias ²²	Patients of color receiving substandard care and attention when compared with white counterparts; ignoring the concerns, experiences, etc of patients of color

Abbreviation: SES, socioeconomic status.
Sources: Griswold et al.,²⁰ Thomas,²² Johnson et al.²³

- 3 qualitative studies
- 1 retrospective analysis using PRAMS
- 1 secondary analysis of a prospective cohort with >15,000 women

Robinson K, Fial A, Hanson L. *J Midwifery Womens Health*. 2019;64(6):734-742.



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Racism and Breastfeeding

- **Lactation care and services provided to Black/African American women by Health care providers appeared to be more rushed and done with less than full attention**, compared with the services given to white women.
- Racism in the **employment setting** was associated with **lower** odds of continuing breastfeeding at 3 to 5 months compared with 3 months or less (OR, 0.77; 95% CI, 0.60-0.99).

Robinson K, Fial A, Hanson L. *J Midwifery Womens Health*. 2019;64(6):734-742.



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Mistreatment of Mothers

“The way I was treated during postpartum... If I was given adequate support with breastfeeding and actual education about it, I feel I would have been successful outright instead of struggling for months, and if I was not judged for being a younger mom, I would have felt safe and secure...”

– South Asian woman who gave birth in Nevada



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Build Back Better...A Curricula that is Anti-Racist

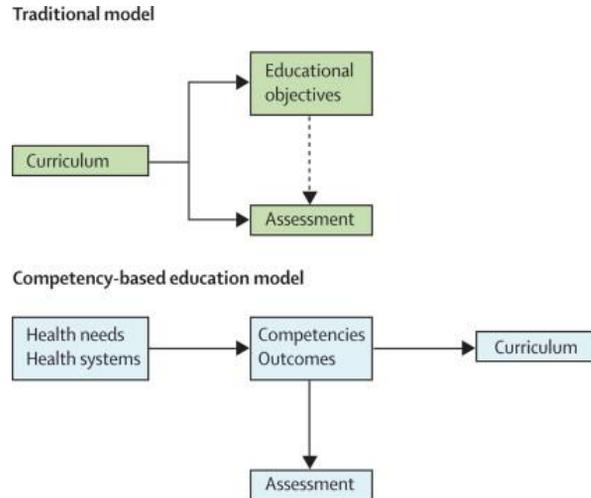
- **Acknowledge bias**- Racism can operate interpersonally, manifesting as implicit bias. Physicians may have anti-Black bias, recognized or not, and this bias can impact multiple facets of care, including access, patient-provider communication, diagnosis, and treatment decisions for Black patients.
- **Redesign the curriculum**- Teach our trainees about racial equity through educational offerings that go beyond antiquated concepts such as “cultural competency” and move toward historical and structural competency along with humility
- **Share**- MedEdPortal. Antiracism in medicine collection. 2020. Available at: https://www.mededportal.org/anti-racism?utm_source=twitter&utm_medium=mededportal&utm_content=996a85ad-ef8a-413c-9bc8-0ac82a6250a5& (accessed 10.16.21)

Jindal M, Heard-Garris N, Empey A, Perrin EC, Zuckerman KE, **Johnson TJ**. Getting "Our House" in Order: Re-Building Academic Pediatrics by Dismantling the Anti-Black Racist Foundation. Acad Pediatr. 2020 Nov-Dec;20(8):1044-1050.

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Traditional vs. Competency-based Education

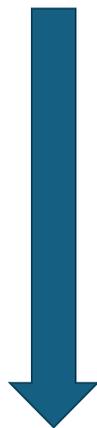


Frenk J. et. al. Lancet 2010.



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Competency-based Education



- **Health System needs**
 - Need to improve physician knowledge, skills and attitudes to support exclusive breastfeeding, address racism and disparities, work collaboratively as a team
- **Competencies**
 - Skills in taking history, doing assessments and counseling
- **Outcomes**
 - Increased Exclusive Breastfeeding; eliminate disparities
- **Assessment of Outcomes**
 - measure rates; interview the community
- **Assessment of Competencies**
 - Tools, such as WHO competency verification: [<https://www.who.int/publications/i/item/9789240008854>]
 - Direct observation, OSCE
- **Develop curriculum**



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Training Residents

Studied 14 programs; >20 residents per program from Pediatrics, OB/GYN, FM

TABLE 3 Improvements in Knowledge, Confidence, and PPs among Residents Exposed Versus Not Exposed to Curriculum

	Intervention			Control			OR	95% CI
	N	n Improved	n Not Improved	N	n Improved	n Not Improved		
Knowledge	154	129	25	106	69	37	2.767	1.541–4.970
Confidence	152	115	37	103	58	45	2.411	1.409–4.127
PPs	152	111	41	103	72	31	1.166	0.671–2.026
PPs, excluding cultural questions	152	106	46	101	52	49	2.171	1.289–3.658

CI indicates confidence interval.

2-3 times more likely to have greater knowledge, confidence and improved practice patterns

<http://www.aap.org/breastfeeding/curriculum/>
Source: Feldman-Winter et al. *Pediatrics*. 2010



Analysis by Specialty

Comparing intervention differences to control site differences by specialty: mean difference (p)

	<u>Pediatrics</u>	<u>OB/GYN</u>	<u>Family Medicine</u>
Knowledge	.14 } .057 .09 }	.18 } .05 }	.18 } .007 .02 } .009
Practice Patterns	.48 } .277 .35 }	.35 } -.05 }	.59 } .063 .31 } .302
Confidence	1.0 } .015 .58 }	.94 } .13 }	1.21 } .052 .50 } .072

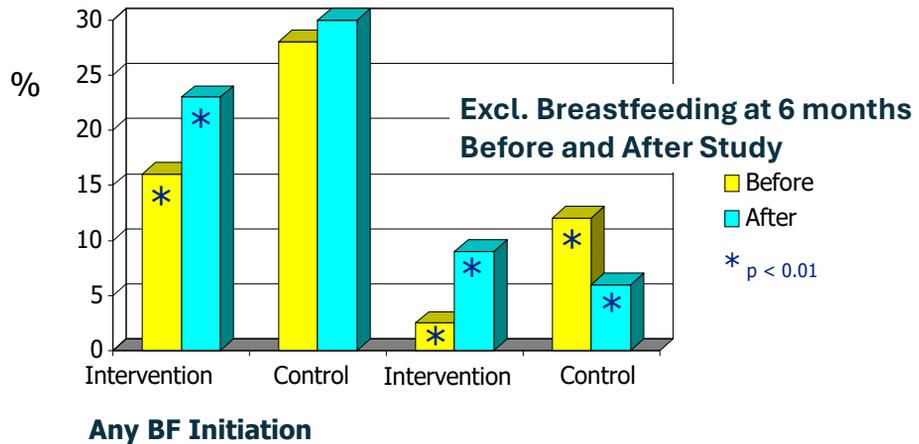
Feldman-Winter L et al. 2010 Aug;126(2):289-97. doi: 10.1542/peds.2009-3250. Epub 2010 Jul 5. PMID: 20603262.



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Residency Curriculum

Exclusive Breastfeeding



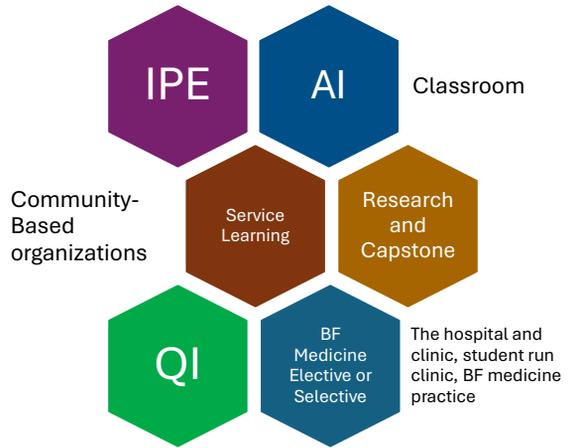
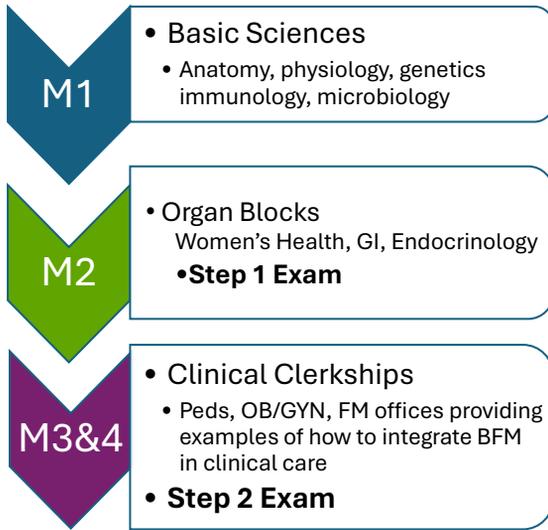
Feldman-Winter et al, Pediatrics 2010; 126:289-297

The Life Cycle of Medical Student Education

- Basic sciences- immunology, microbiology, genetics
- Introduction to women's health-anatomy and physiology
- Clinical clerkships
- IPE
- Electives and Selective
- Service-learning
- Research and Capstone Projects
- Quality Improvement
- AI



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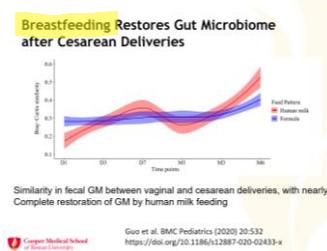
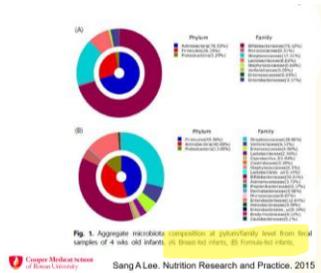
Begin Early in Medical School-M1

Cooper Medical School of Rowan University

LifeStages Workshop 2
Part 2: Development of the Microbiome

Presented by,
 Lori Feldman-Winter, MD, MPH
 Andrea Bottaro, PhD

Germs



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Life Stages Course at CMSRU 2021

Now in November M1 year: **Microbiology, Immunology, and Infectious Diseases (MIID)**

- 80 Min lecture by professor of immunology and BFLM specialists
- Highlight the following:
 - Development of the Microbiome
 - Life cycle changes to immune system in general
 - Impact of breastfeeding on the ontogeny of the immune system
 - Connect immunobiology with health outcomes associated with breastfeeding, exclusive vs. non-exclusive breastfeeding, and direct vs. indirect human milk feeding



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The microbes we acquire at birth affect our health throughout our lives

We are born 99% human
We die 90% microbial
(by cell count)



Unlocking the Secrets of the Microbiome
The New York Times

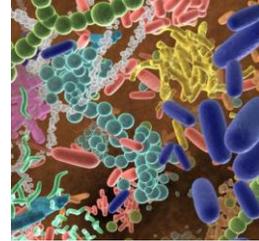
Humans have 20,000 somatic genes
Human microbiome has 5-10 million unique genes
These genes are “mobile” can integrate into the somatic cell genome



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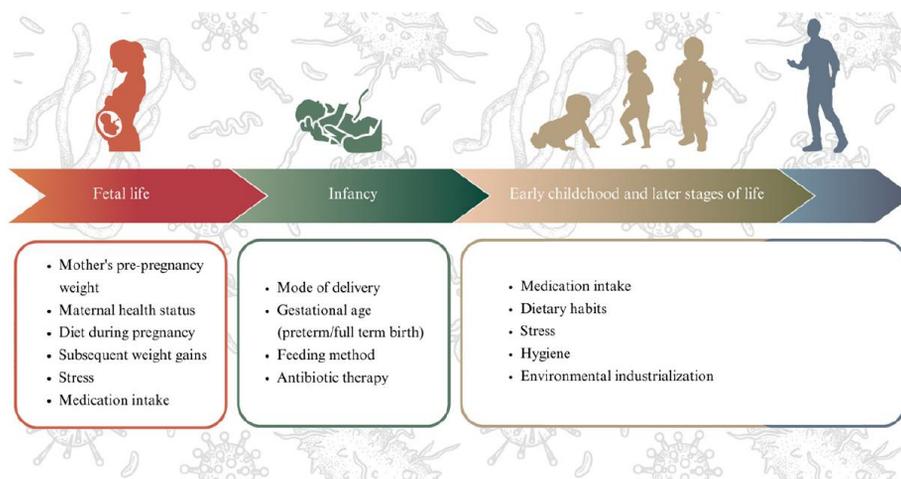
General Principles

- Microbiome evolves throughout the lifespan
- Alterations throughout life affect disease susceptibility
 - *Microbiota* can be symbiotic, commensal or pathogenic
 - *Microbiome* is comprised of the collective genomes of all microbiota inhabiting organs in the body
- Intestine of the fetus is minimally colonized
- Mom's vaginal flora is different during pregnancy
- Mode of delivery affects normal gut flora-
Vaginal Birth is Important
- Human milk (HM) also affects normal gut flora
 - HM is probiotic and prebiotic
 - anti-infective without being inflammatory
 - induces T cell memory and tolerance
- Infant is otherwise susceptible to infection



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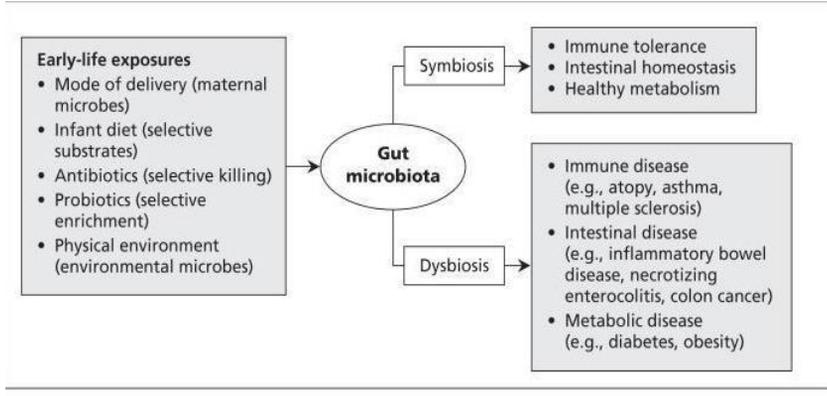
Factors Affecting the Development of the Microbiome



Adamczak AM, et al. Biomedicines. 2024 Feb 22;12(3):490.

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Exposures at Birth Lead to Lifelong Effects



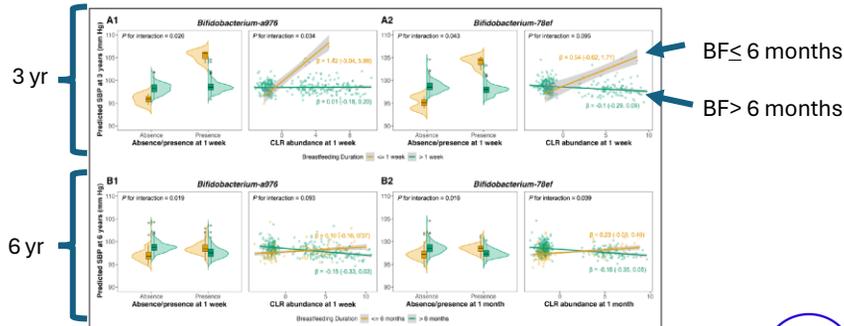
<http://biomeonboardawareness.com/cesarean-studies-microbiome-manipulation/>



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One Example: “Infant Gut Microbiota and Childhood Blood Pressure: Prospective Associations and the Modifying Role of Breastfeeding”

- Gut microbiota features at 1 week and 1 month of life were associated with BP at 3 and 6 years.
- Breastfeeding duration modified key associations including those for a diversity and *Bifidobacteria*.



Liu T, et al. *J Am Heart Assoc.* 2025 Mar 4;14(5):e037447.
 doi: 10.1161/JAHA.124.037447. Epub 2025 Feb 27. PMID: 40013588



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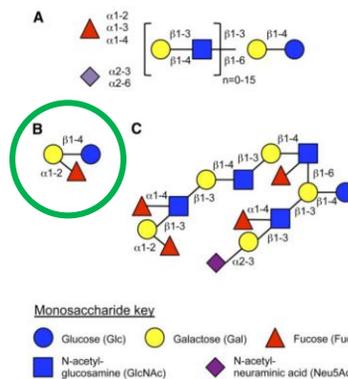
Colonization Essential to Prevent Allergy & Disease

- Newborn gut needs to be colonized shortly after birth
- But gut needs to differentiate between pathogens and commensals (share PAMPs)
- Immune response to flora leads to:
 - Colonization with commensal bacteria
 - Development of immunologic tolerance
- Hygiene hypothesis
 - If not exposed (Cesarean delivery) and/or unable to properly handle flora (via HM vs. IF) then allergy develops



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Composition of HMOs



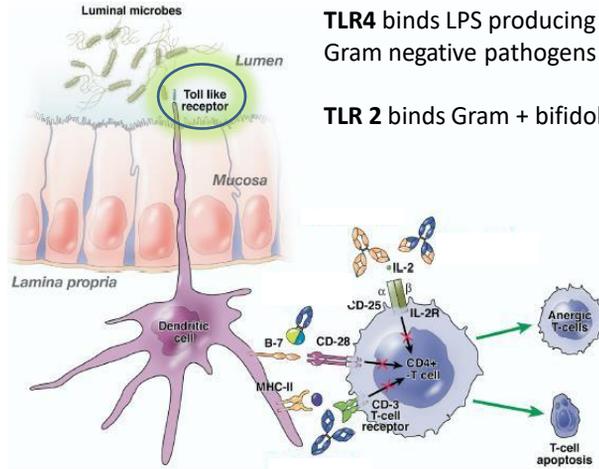
If $n = 0$, the lactose backbone is either sialylated or fucosylated to form human milk tri-saccharides such as 2'-fucosyllactose (*B*). If $n > 0$, complex HMO are formed that can be branched and also modified like the sialylated and fucosylated iso-lacto-N-decaose (*C*). **Also HMOs can be secreters or non-secreters depending on genetics and fucosylation.**

Bode L, Jantscher-Krenn E. Adv Nutr. 2012 May 1;3(3):383S-91S.
doi: 10.3945/an.111.001404.



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Specific Toll-Like Receptors are necessary for proper colonization



TLR4 binds LPS producing Gram negative pathogens

TLR 2 binds Gram + bifidobacteria

Rutgeerts P Gastroenterology 2009



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Human Milk Components Modulate TLR's

TABLE 1 Human milk components modulate TLR signaling¹

Molecules in human milk	Identified in milk	TLR signaling pathways modulated	References
sTLR signal pathway inhibitors			
sTLR2	Yes	Anti-inflammatory via TLR2	(44, 45)
sCD14	Yes	Anti-inflammatory via TLR2/4	(46, 47)
sTLR4	No	Anti-inflammatory via TLR4	(48, 49)
sTLR5	No	Anti-inflammatory via TLR5	(50)
Glycoproteins			
Lactadherin	Yes	Anti-inflammatory (TLR4)	(51-53)
Lactoferrin	Yes	Anti-inflammatory via TLR4	(54, 55)
Unknown protein (>80 kDa)	Yes	Proinflammatory via TLR4	(56)
Peptides			
β-defensin 2	Yes	Anti-inflammatory via TLR7	(57)
Oligosaccharides			
3'-GL	Yes	Anti-inflammatory via TLR3	(58)
2'-GL	Yes	Anti-inflammatory via TLR4 (CD14)/ST2/3/SOCS2	(3)
LNFP III	Yes	Proinflammatory via TLR4/ ERK/MAPK	(59)
3SL	Yes	Proinflammatory via TLR4	(60)
DSLNT	Yes	Anti-inflammatory; TLR targets not known	(61)

¹ CD, cluster of differentiation; DSLNT, disialyllacto-N-tetraose; ERK, extracellular signal-regulated kinase; LNFP III, lacto-N-fucopenaose III; MAPK, mitogen-activated protein kinase; sCD, soluble cluster of differentiation; SOCS, suppressor of cytokine signaling; STAT, signal transducer and activator of transcription; sTLR, soluble toll-like receptor; TLR, toll-like receptor; 2'-FL, 2'-fucosyllactose; 3'-GL, 3'-galactosyllactose; 3SL, sialyl (α2,3) lactose.

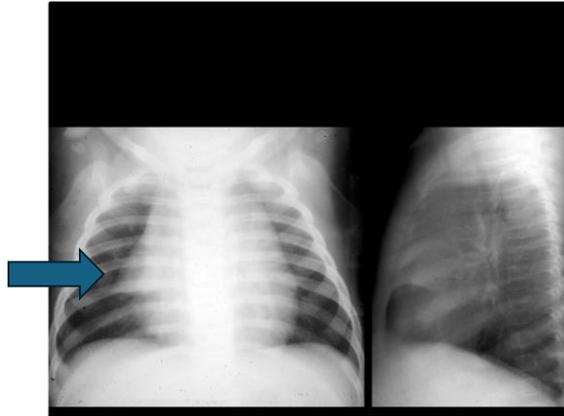
He Y, et al. Adv Nutr. 2016 Jan 15;7(1):102-11.



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Normal Thymus Seen in Breastfed Infants

Radiology Cases of Normal Thymus Sail Sign



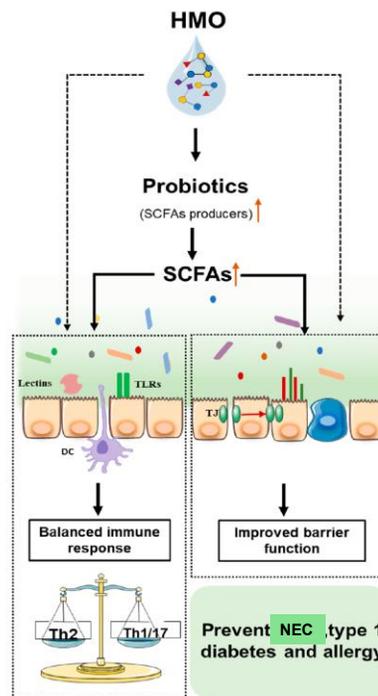
Breastfed infants can have a thymus that is nearly **twice the size** of a formula-fed infant at around 4 months of age; this is because breast milk contains factors that promote healthy thymic development and immune function.

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Human Milk Balances Immune Responses

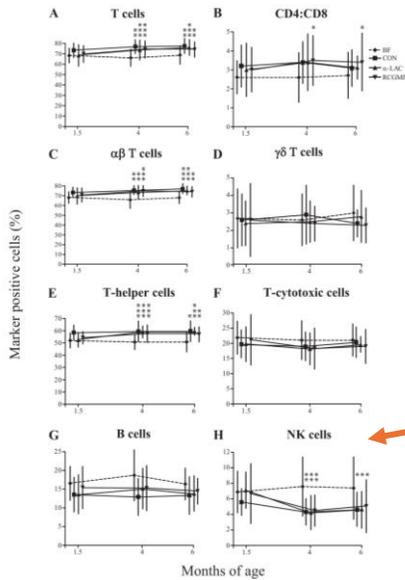
- **Newborns have Th responses that are skewed toward Th2**--- Allergy
- HMO's and commensal bacteria **modulate and downregulate Th2** responses and shift balance **toward Th1/17**---pro-inflammatory, autoimmunity/tolerance
- **Balance is essential** to prevent allergy, protect against too much inflammation but at same time be disease fighting, and not induce autoimmunity but permit tolerance

Zhu L, et. Al. J Agric Food Chem. 2023 Nov 1;71(43):15908-15925.



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Exclusive Breastfeeding Impacts Ontogeny of Immune Cells



- Frequencies and composition of immune cells in blood of breastfed (BF) (**dotted line**) and formula-fed (FF) infants at 1.5, 4, and 6 mo. of age
- FF infants displayed an ongoing maturation of **adaptive** immunity cells (ALLERGY) and a delayed recruitment of **innate immunity** cells (INFECTION) as compared with BF infants.
- **NK cells which are higher in BF infants important in cancer surveillance and detecting diseased self**

Andersson Y et al. Formula Feeding Skews Immune Cell Composition Toward Adaptive Immunity Compared to Breastfeeding. J. Immunol 183, 4322-28, 2009.

Breastfeeding is Associated with a Healthy Microbiome and Immune System

For Mom

- Breastfeeding burns as many as **500 extra calories** each day, which may make it easier to lose the weight you gained during pregnancy.
- Women who breastfeed longer have **lower rates of type 2 diabetes, high blood pressure, and heart disease.**
- Women who breastfeed have **lower rates of breast cancer and ovarian cancer.**
- Breastfeeding triggers the release of **oxytocin** that causes the uterus to contract and may decrease the amount of bleeding you have after giving birth.

For Baby

- Breast milk has the right amount of fat, sugar, water, protein, and minerals needed for a baby's growth and development.
- Breast milk is easier to digest than formula, and breastfed babies have less gas, fewer feeding problems, and less constipation.
- Breast milk contains **antibodies** that protect infants from certain illnesses, such as ear infections, diarrhea, respiratory illnesses, and allergies.
- Breastfed infants have a **lower risk of sudden infant death syndrome.**
- If your baby is born preterm, breast milk can help reduce the risk of many of the short-term and long-term health problems.

For additional information and resources, go to www.acog.org/breastfeeding

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

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Barriers to Breastfeeding in the US

- **Social factors:** Social norms, cultural attitudes, formula marketing (no implementation of the WHO Code)
- **Family and social support:** family and friends
- **Healthcare:** Lack of access to lactation specialists, lack of support from healthcare workers
- **Work and child care:** Better now with the PUMP Act of 2022
- **Individual factors:** Race, income, education, age, and trauma
- **Policies:** Lack of parental leave policies/maternity care practices
- **Equipment and privacy:** Lack of policies/equipment, & privacy
- **Historical factors:** Legacy of trauma, slavery, and marginalization of communities

<https://www.cdc.gov/breastfeeding-data/breastfeeding-report-card/index.html>



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Make it Fun: Kahoot! Game



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Kahoot Sample Questions

1. Which of the following factors is LEAST likely to alter the composition of the infant's microbiome?

- a. Mode of delivery
- b. Maternal dairy consumption**
- c. Gestational age
- d. Feeding commercial milk formula

2. Promotion of early immune tolerance by breastfeeding is associated with delayed development of adaptive immunity vs innate immunity.

- a. True**
- b. False

3. Which cell type is going to be more abundant in an exclusively breastfed 6 m.o. compared to a formula-fed infant?

- a. B cells
- b. CD4 T cells
- c. NK cells**
- d. Eosinophils

4. Which component is most likely to differ between human milk from mothers residing in California vs North Dakota?

- a. Lactose
- b. Secretory IgA concentration
- c. Alpha-lactalbumin
- d. Human milk oligosaccharides**

5. Which of the following components of human milk helps to organize the newborn's isolated lymphoid follicle?

- a. Mucin
- b. Lactoferrin
- c. Human milk microbiota**
- d. Human milk stem cells



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Questions on the MIID Exam

Question #: 1

A 1-day-old male is breastfeeding but is supplemented with infant formula during the first hour of life. The decision to supplement with infant formula was made by the team in the neonatal intensive care unit, where he spent the first 4 hours of life due to a low blood glucose level. Which of the following best explains the health effects of the decision made by the neonatal ICU team?

- A. Leads to stools being colonized with more bifidobacteria
- B. Allows for stool flora that engages in microbial "crosstalk" with the intestinal microvilli
- C. Results in a higher proportion of natural killer cells
- ✓D. Increases probability of microbial dysbiosis**

Question #: 2

A 28-year-old female is 2 days postpartum and is scheduled for discharge from the hospital. Her baby was born at 37 weeks by spontaneous vaginal delivery and is doing well. The mother has been exclusively breastfeeding since birth but plans to supplement with infant formula after going home. The benefits of continuing to exclusively breastfeed to achieve optimal health and development of the baby's immune system and microbiome are discussed with the patient. Which of the following molecular mechanisms underlies this health benefit?

- A. Downregulation of T-helper 1 responses
- B. Upregulation of T-helper 2 responses
- ✓C. Inhibition of soluble toll-like receptor 2 responses**
- D. Activation of toll-like receptor 3 responses



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M2: Organ Blocks

- Women’s Health/Intro to OB/GYN
 - Anatomy and Physiology
 - Composition of Human Milk
 - Routine Care- prenatal, peripartum, postpartum
 - Common problems
- Endocrinology
 - Risk factors for low milk supply or delayed lactogenesis
 - Hormonal treatments and lactation

Make it fun!



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Use the AAP Breastfeeding Curriculum

Free, online curriculum for those educating future physicians in medical school, residency, or other settings

No longer just a “residency curriculum”

Curriculum layout:

- Medical Knowledge
- Patient Care
- Systems Based Practice
- Practice Based Learning
- Interpersonal Communication Skills



*Breastfeeding
Curriculum*

Innovative Learning Approaches

Mini-Chalk Talks: visual teaching during patient care where “teacher is equipped with solely a writing utensil and writing surface.” –Pitt & Orlander, 2016

Videos: Short video can be used in the flipped classroom approach. Watch at home and discuss in class.

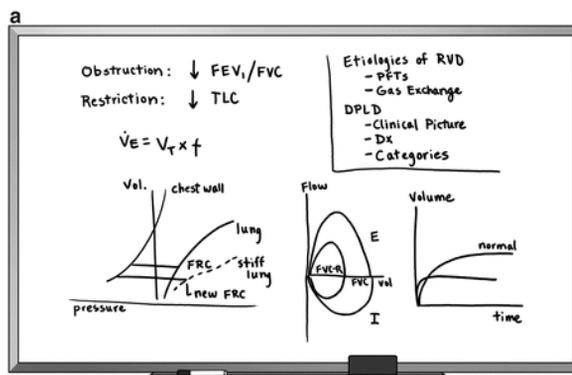
Case Studies: Case studies can be used in the flipped classroom approach



Breastfeeding Curriculum

Role Play Scripts: Scripts allow learners to both play the role of patient and provider

Chalk Talks Ideal for Learners



Berger G.N., Kritek P.A. (2016) How to Give a Great “Chalk Talk”. In: Mookherjee S., Cosgrove E. (eds) Handbook of Clinical Teaching. Springer, Cham. https://doi.org/10.1007/978-3-319-33193-5_9

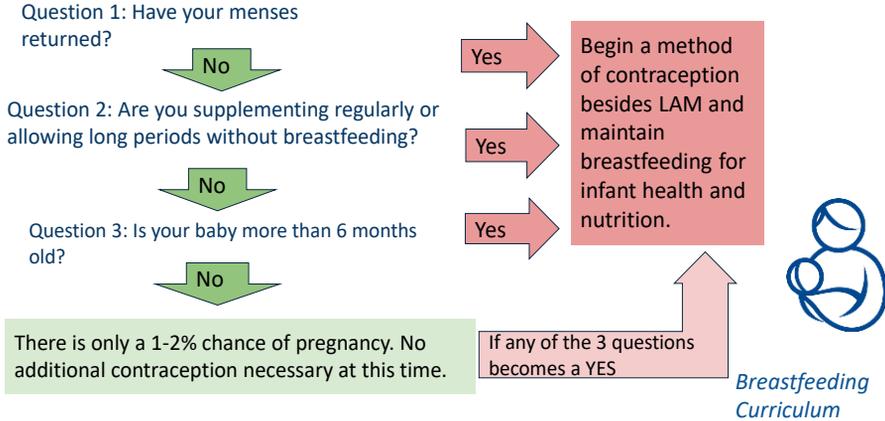


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Mini-Chalk Talk Example:

Lactational Amenorrhea Method (LAM) Algorithm

What are the three questions that providers want postnatal patients to ask themselves to see if LAM is an effective option?



Source: American College of Nurse-Midwives https://pdf.usaid.gov/pdf_docs/PNACC294.pdf

Short Video Example

<https://www.aap.org/en/learning/breastfeeding-curriculum/medical-knowledge-goal-a/>

Essential Activities

1. Assign learners to review this 4-minute video on anatomy and physiology of lactation.



Breastfeeding Curriculum



The BOWER®
FOUNDATION



The IPE Experience for Breastfeeding: A CHAMPS Initiative



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Cooper Medical School
of Rowan University

What is IPE?

- *Interprofessional education* refers to occasions when students from **two or more professions** in health and social care learn together during all or part of their professional training with the object of **cultivating collaborative practice** for providing patient-centered care.
- “Students will learn from and about each other...”
 - Dr. Didlake



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What is the standard?

LCME PRINCIPLES FOR EDUCATION TO DEVELOP INTERPROFESSIONAL COLLABORATIVE SKILLS (ELEMENT 7.9)

Approved by the LCME June 2018

- Element 7.9 states
 - *The faculty of a medical school ensure that the **core curriculum of the medical education program** prepares medical students to function **collaboratively on health care teams** that include health professionals from other disciplines as they provide coordinated services to patients. These curricular experiences include **practitioners and/or students from the other health professions.***



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Why is IPE Required?

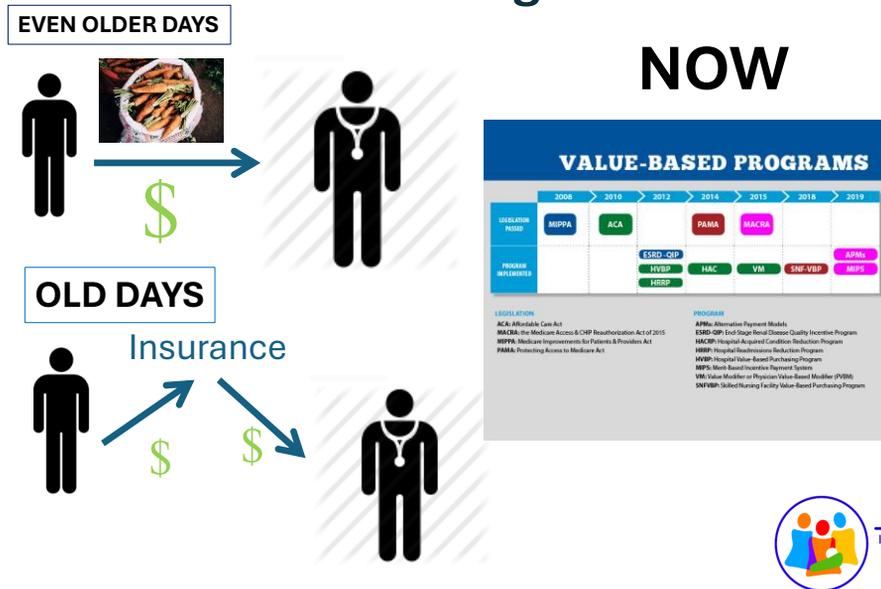
Quality and Safety are Key Concerns

- **Medical Errors Now Third Leading Cause of Death in the U.S. (2016)**
- 250,000 deaths per year
- **Breastfeeding is a “normal physiologic process” but that does not mean hcp’s don’t need to have knowledge, appropriate attitudes, skills and competencies in order to protect, promote, support, manage breastfeeding**
- **Preventing the breastfeeding disaster and providing equitable care**



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We can't do it alone...the system has changed



The doctor is now part of a team (*may* develop, organize and even lead the team)

- Relies on a different skills set:
 - Change from competitor to teammate
 - Thinking must change- executive functions
 - Collaboration, the greater good
 - Knowledge, tolerance, understanding of each other
 - Cultural humility, honesty and integrity
 - Moving as the speed of trust

Breastfeeding IPE Learning Objectives: Teamwork

- Students **will learn how multiple professionals that impact breastfeeding work together**, such as pediatric and maternal care providers, pharmacists, lactation specialists, social workers, psychologists, nutritionists, and dentists, to provide inter-professional breastfeeding care across the continuum.
- Students will learn **how to communicate** the breastfeeding history, assessment, management and follow-up plans across professions.
- Students will learn **who are the key stakeholders** in building a prenatal, intrapartum, and post-natal breastfeeding support team.
- Students will **appreciate a team-based approach** to supporting the recommendations for breastfeeding and managing common problems that fosters an environment of mutual respect for the professionals involved in the care.
- Students will learn **how their particular scope of practice is related to breastfeeding** in the patient-care delivery setting, in populations, and in public health interventions.



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Breastfeeding IPE Learning Objectives: Health Partnerships

- Students will learn the **determinants of a mother's decision to breastfeed** and likelihood in meeting her personal goals for breastfeeding
- Students will be able to **recognize the needs of breastfeeding patients and families from diverse backgrounds** to deliver culturally congruent care
- Students will appreciate the **skills and attitudes necessary to work in partnership with the community** to increase breastfeeding, support breastfeeding goals, overcome barriers to breastfeeding, and thereby improve the health outcomes of the community
- Students will learn how to **appraise the social context of breastfeeding, understand the role of peer support, and how to coordinate care across the continuum.**

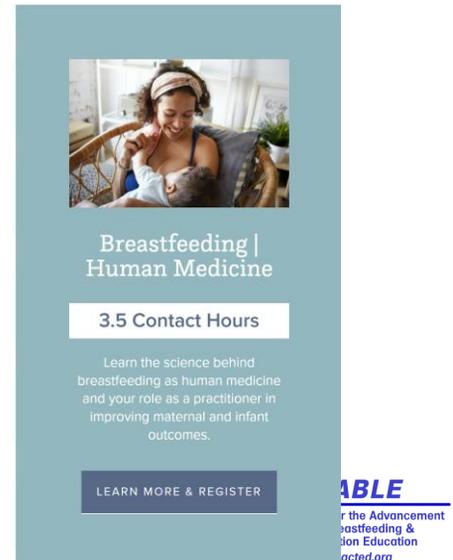


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The UMMC Breastfeeding IPE basics

- **NOW FREE OPEN GLOBAL ACCESS!!**

➤ <https://inspire-health.org/courses/>



Breastfeeding |
Human Medicine

3.5 Contact Hours

Learn the science behind breastfeeding as human medicine and your role as a practitioner in improving maternal and infant outcomes.

LEARN MORE & REGISTER

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Convert Passive IPE to Active Learning: QI

- Create an interprofessional team: physicians, APNs, PAs, nurses, lactation consultants, dietitians, dentists, speech pathologists, safety officer, office manager, etc.
- Invite students to lead the project
- Set an aim, for example, implement ABM clinical protocol #14: [Breastfeeding Friendly Office \(English revised 2021\)](#) in office practices where students learn
- Divide tasks among team members
- Develop communication plan: elevator speech, project charter, SMARTIE aim statement for quality improvement

Service Learning and Capstone: A Baby Café in Camden



Empowering Future Physicians for Breastfeeding Success

Madeline Larkin, MS¹, Lori Feldman-Winter, MD, MPH, NABBLM-C², Sindy Ferreira, MPH, IBCLC³, Megan Thorn, BS¹, Sydney Silverman, MS¹, Alison Blumstein, BS¹, Holly Seybold, BA¹, Guy Hewlett, MD, FACOG⁴

Background

Breastfeeding disparities persist, largely due to inadequate physician knowledge, skills, and attitudes about breastfeeding. In response, a Baby Café (BC) model was implemented to serve the dual purpose of a community-based breastfeeding support group and a medical student service-learning opportunity. The Cooper-Camden Baby Café (CCBC) was established through funding from the New Jersey Healthy Communities Network (NJHCN) as both New Jersey's first BC and the first in the nation affiliated with a medical school.

Short Description

The CCBC is New Jersey's first Baby Café and the first in the nation affiliated with a medical school. Launched in January 2025, the CCBC provides free, bilingual breastfeeding support for families in Camden, New Jersey, while offering Cooper Medical School of Rowan University (CMSRU) medical students hands-on service-learning opportunities at the café. Since opening, seventeen families have attended accounting for fifty-five visits and forty-four students have participated in supporting breastfeeding families. This innovative partnership between the Baby Café and CMSRU addresses breastfeeding disparities while also training future physicians, offering a sustainable model for dissemination.

Conclusion

The CCBC represents an innovative model that both improves breastfeeding support in the underserved Camden community and enhances medical education through service-learning. Its integration within CMSRU has created a sustainable platform for training future physicians in breastfeeding medicine. Early engagement from both families and students reflects a growing demand for this type of collaborative, community-based care. The CCBC is a blueprint for future BC, collaborations with medical schools with the mission of promoting breastfeeding support and education.

Methods

In early 2024, a pediatrician and bilingual IBCLC collaborated to establish NJ's first BC. Funding was secured through outreach to statewide stakeholders, and a non-profit partner was identified: Cooper Medical School of Rowan University (CMSRU). CMSRU's established community partnerships allowed access to donated, public-use space and provided the opportunity for medical students to engage in service-learning at the café.

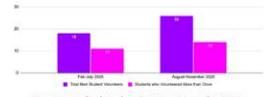


Figure 1. Medical Student Participation at the CCBC

Photos



Results

The CCBC launched on January 23rd, 2025, staffed by a bilingual IBCLC and medical students, and welcomes families every Thursday from 12-2pm. In the first school year (Feb-July 2025), 18 total student volunteers, with 11 (61%) returning for multiple sessions. So far in the second school year (Aug-Nov 2025), there have been 26 total volunteers, with 14 (54%) volunteering multiple times (6x1). From Feb through Sept 2025, 17 families were enrolled and its sessions were held with 55 encounters overall, indicating families returning for multiple sessions (6x2). The most common concerns families came with were sore nipples/poor latch, low breastmilk supply, and pump/bottle issues (6x3). Together, students and families learned about milk supply solutions, latching supports, and the unique breastfeeding dynamic for each dyad.

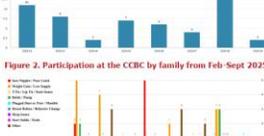


Figure 2. Participation at the CCBC by family from Feb-Sept 2025

Author Affiliations

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3. Cooper Camden Baby Café, Cooper Medical School of Rowan University, Camden, NJ
4. Office of Engagement and Community Impact, Cooper Medical School of Rowan University and Department of Obstetrics and Gynecology, Cooper University Hospital, Camden, NJ

Funding

Thank you to our funders:
NJ Department of Health, Grant 59900 via NJ Healthy Communities





Figure 3. Breastfeeding Challenges of Families Served at the CCBC

References



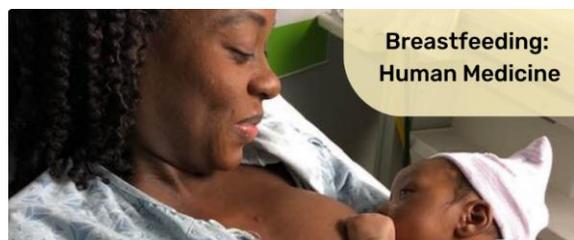




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Clerkships in Pediatrics, Family Medicine and OB/GYN ...if you see it you can learn about it

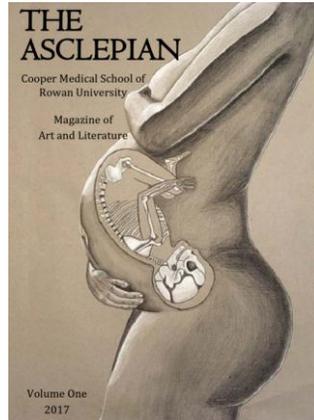
- Prenatal education about breastfeeding
- Intrapartum care and the Ten Steps
- Normal newborn feeding patterns
- Common problems: hyperbilirubinemia, hypoglycemia, weight loss
- Discharge planning
- Peer and community support
- Milk expression
- Newborn and infant care
- Safer Sleep
- Maternal Mental Health



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Use Skills in Narrative Medicine

- Write reflections about what it is like to breastfeed in your community.
- Participate in research at the Center for Humanism
- Choose a selective on early relational health, medical ethics, Law and Medicine, and Climate Change...how can breastfeeding be a case example for each selective?



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JAMA EDITORIAL

In Support of Breastfeeding Support in Primary Care

Dimitri A. Christakis, MD, MPH

“general pediatricians are ‘drowning in a sea of advice’ .”

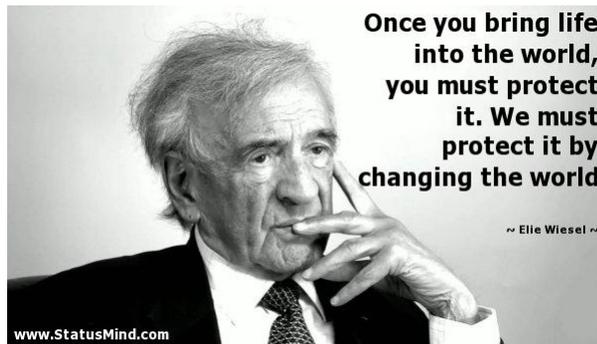
“I contend we should [be] draining the sea [of advisory directives] and selectively refilling [with] things for which there is sound evidence and proven value. If we were to take this approach, we might well add **breastfeeding support**, right after vaccinations.”



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Conclusions

- There is a need to improve physician education
- Opportunities exist
- Collaborate and share



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Questions??



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