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ABSTRACT

Breastfeeding is widely recognized for its medical and neurodevelopmental benefits, leading to the American Academy of Pediatrics (AAP) recommending exclusive breastfeeding for the first 6 months of an infant's life with continuation through 2 years of age and beyond.¹ However, this literature review finds that despite the 2022 update to the AAP's recommendations, education on breastfeeding for physicians-in-training is inadequate. Though interventions have been shown to increase the breastfeeding knowledge and confidence of physicians, more research is needed to evaluate the efficacy of educational interventions. This paper emphasizes the urgency of implementing comprehensive interventions that address the gaps in breastfeeding education for physicians-in-training and underscores the importance of evidence-based approaches to improve the healthcare professionals' support of breastfeeding mothers in order to optimize health outcomes.

INTRODUCTION

Breastfeeding and human milk represent the natural and optimal standards for infant nutrition.¹ In particular, breastfeeding is associated with reduced incidence of otitis media, acute diarrheal disease, lower respiratory illnesses, sudden infant death syndrome (SIDS), inflammatory bowel disease, childhood leukemia, diabetes mellitus, obesity, asthma, and atopic dermatitis. Additionally, mothers who breastfeed also experience a lower risk of type 2 diabetes mellitus, breast, ovarian, and endometrial cancer, and hypertension. These extensive health benefits and positive impact on immediate and long-term medical and neurodevelopmental development highlight the crucial role of breastfeeding as a vital public health priority.¹ However, when physicians lack comprehensive training in breastfeeding, they will not be well-equipped to provide accurate information, guidance, and support to new mothers. Thus, it is notable that insufficient physician knowledge in breastfeeding has been correlated with decreased initiation and continuation of breastfeeding.² The decreased initiation of breastfeeding has a direct impact on the health outcomes of infants, as evidence by the increased incidence of various acute and chronic diseases in infants who are not breastfed compared to those who receive human milk.¹ Despite efforts to address gaps in medical education of breastfeeding, informant interviews and physician surveys in 2020 demonstrate that gaps still exist and physicians in pediatrics, obstetrics-gynecology, and family medicine desire to have more education about breastfeeding.³ Failure to address these gaps can result in inadequate support for breastfeeding mothers, leading to suboptimal outcomes for both mothers and infants.¹ The aim of this paper is to assess the current state of breastfeeding education for physicians-in-training, both at the undergraduate and graduate medical education levels. To explore this, a review of the literature was conducted.

METHODS

A review of the literature was conducted to identify studies that report on breastfeeding education at the levels of undergraduate and graduate medical education in the United States. A review of available studies was conducted in June 2022. Articles in one database, PubMed, were searched based on the following keywords: breastfeeding medical education. The search was then supplemented with the “snowball” method by looking at the references within each of the included articles. Studies that explored breastfeeding in medical education outside of the United States were excluded. *Breastfeeding: A Guide for the Medical Profession*⁴ is a reference text that was additionally used to supplement the search. A total of 18 references were used.

HISTORY OF BREASTFEEDING EDUCATION

In 1956, La Leche League was formed by mothers who wanted to be resources to women on their breastfeeding journeys.⁵ It wasn't until 1979 that the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) held an urgent meeting on infant and young child feeding and one of the themes called for more information, education and training of health workers.⁶ The United States held its first meeting exclusively about breastfeeding in 1984, entitled the *Surgeon General's Workshop on Breastfeeding and Human Lactation*, in which education of health care workers was one of the areas of needs discussed.⁴ Though it has been almost four decades since this meeting, implementation continues to be a challenge despite the agreement amongst healthcare organizations that there needs to be accountability in the training of healthcare workers in breastfeeding and human lactation.⁴

UNDERGRADUATE MEDICAL EDUCATION (UGME)

Undergraduate medical education in the United States consists of 4 years of learning that traditionally consists of 2 years of didactics followed by 2 years of clinic training. This training culminates in the D.O. degree for osteopathic medical students and M.D. degree for allopathic medical students. A review of undergraduate medical education curriculum on breastfeeding found that there were deficiencies in meeting the curricular objectives.⁷ In particular, when 137 medical students were surveyed, the results showed that 85% of respondents rated a score of 5/10 or less when questioned about their confidence in counseling patients about milk supply and common breastfeeding problems. Furthermore, a scoping review in 2019 found a deficiency in research looking at education about breastfeeding for physicians and nurses and additionally noted that breastfeeding education is not standardized across institutions.⁸

This lack of standardization varies from didactic delivery to clinical exposure and training to insufficient emphasis of breastfeeding concepts on board examinations.⁴ For example, there are instances of passionate faculty developing curriculum. However, this is neither consistent across institutions, nor a sustainable solution. Additionally, with the enormous amount of medical knowledge expected of medical students to learn, few will seek out this information because it is not emphasized on board examinations. Thus, it is essential that the board examiners include this content so that medical schools follow suit by including breastfeeding medicine into their curriculum. Lastly, in the clinical environment, breastfeeding education is often provided by non-physician providers, leading to gaps in medical students' understanding of how to incorporate breastfeeding medicine into future medical practice.⁴

In *Medical Education and Leadership in Breastfeeding Medicine*, Julie Scott Taylor and Esther Bell suggest a two-part educational framework to drive medical student learning via didactics and clinical work.⁹ Options for completing the didactic portion include a course with the Academy of Breastfeeding Medicine, American Academy of Pediatrics content, and other evidence-based curriculum. The clinical framework can include exposure to breastfeeding from postpartum wards to clinics such as primary care, as well as prenatal and postnatal visits.⁹

In summary, this review of the literature finds that undergraduate medical education in the United States currently lacks standardization and sufficient emphasis on breastfeeding medicine, with notable deficiencies in medical students' knowledge and confidence in counseling patients about breastfeeding. Furthermore, there is a deficiency in research and limited data available regarding the effectiveness of breastfeeding education for medical students. Thus, more research and data collection are needed to further evaluate the impact of educational interventions and improve the incorporation of breastfeeding medicine into medical curricula.

RESIDENT TRAINING

Residents in the fields of pediatrics, obstetrics-gynecology, and family medicine have direct relationships with lactating patients and receive education about breastfeeding throughout their training. A multidisciplinary approach to teaching about breastfeeding is achievable and accepted by residents.¹⁰ Furthermore, a targeted curriculum has been found to improve knowledge, practice, and confidence in breastfeeding management in residents as well as increase exclusive breastfeeding in patients.¹¹ In pediatric residents, a multimodal intervention assessing their knowledge, behaviors, and confidence found that accurate breastfeeding management increased from 22% to 65% after a breastfeeding training.¹² In obstetrics-gynecology residents, a combined lecture and simulation curriculum at Boston University School of Medicine improved residents' knowledge and confidence in breastfeeding.¹³ In 25 primary care residents, a video training improved their knowledge and confidence of breastfeeding, however they did not have increased comfort.¹⁴

One challenge of implementing a breastfeeding curriculum into resident education programs is a lack of time. A 2011 cross-sectional study surveyed pediatric program directors and found that residents receive a median of 9 hours of breastfeeding education throughout the 3 years of residency training.¹⁵ A subsequent 2017 cross-sectional study surveyed program directors of obstetrics- gynecology (OB) and family medicine (FM) programs and found that OB residents receive a median of 23 hours and FM residents receive a median of 8 hours of in 4 and 3 years, respectively.¹⁶ Of the barriers to breastfeeding education, 60% of the FM and OB programs reported that limited time was the most common with limited faculty time and lack of faculty with sufficient knowledge also being reported. Rodriguez and Shattuck note that there is a likelihood for this insufficient education to be affecting the residents' ability to provide education about breastfeeding initiation and duration, which contributes to the national suboptimal rates of breastfeeding.¹⁶

A 2019 CERA Program Directors Survey¹⁷ of breastfeeding education in family medicine residents similarly found that a passive didactic approach was used; however, they found the residents receive more hours than previously reported with a median of 15 hours of instruction in the 3 years of training. They found that time with lactation consultants, maternal child health visits in the resident continuity clinic, maternal child health practice after graduation, and competency evaluations by faculty were all seen in programs with the most breastfeeding education time and

perceived resident competence. Thus, to strengthen the resident training in breastfeeding counseling, programs may include lactation consultants, faculty observation, and group prenatal care.¹⁷

Apart from residency curriculum, additional opportunities exist for physicians to educate themselves about breastfeeding. Optional continuing education courses can be completed by interested learners and tutorials exist that achieve 8 of the Healthy People 2020 Maternal, Infant, and Child objectives.¹⁸ For those who are motivated, fellowships exist in breastfeeding medicine, women's health, and academic medicine. Physicians can also undergo training to become a Certified Lactation Counselor, an International Board-Certified Lactation Consultant, or a Fellow of the Academy of Breastfeeding Medicine.

In summary, resident physicians receive variable amounts of breastfeeding education during their postgraduate medical training. However, more research is needed to assess the impact of these educational interventions and address time constraints in incorporating comprehensive breastfeeding education into residency programs.

CONCLUSION

In conclusion, the findings of this review highlight the ongoing deficiency of research into breastfeeding education for medical students and resident physicians in the United States. Furthermore, breastfeeding medicine is a topic that is not consistently taught in medical schools and residency programs and thus physicians lack the confidence to educate mothers throughout the prenatal, postpartum, and infancy periods, which can ultimately result in suboptimal breastfeeding rates and decreased health benefits of both infants and mothers. There is a lack of standardized breastfeeding curriculum in undergraduate and graduate medical education, and more research is needed to evaluate the effect that standardization could have on medical student and physician knowledge and confidence in counseling the breastfeeding patient as well as if it impacts outcomes on the health of mothers and infants. It is important to note that this study is limited in scope in that it focuses on breastfeeding education for medical students and resident physicians in the United States and does not consider the global perspective or specific context of other healthcare professions.

REFERENCES

1. Meek JY, Noble L. Policy Statement: Breastfeeding and the Use of Human Milk. *Pediatrics*. 2022;150(1). doi:10.1542/peds.2022-057988
2. Holmes AV, McLeod AY, Thesing C, Kramer S, Howard CR. Physician breastfeeding education leads to practice changes and improved clinical outcomes. *Breastfeeding Med*. 2012;7:403-408. doi:10.1089/bfm.2012. 0028
3. Meek JY, Nelson JM, Hanley LE, Onyema-Melton N, Wood JK. Landscape Analysis of Breastfeeding-Related Physician Education in the United States. *Breastfeeding Med*. 2020;15(6):401-411. doi:10.1089/bfm.2019.0263
4. Lawrence RA, Lawrence RM, Noble L, Rosen-Carole C, Stuebe AM. *Breastfeeding: A Guide for the Medical Profession*. Philadelphia (Pa.): Elsevier; 2022.

5. La Leche League International. About LLLI: History. Available at: <https://www.llli.org/about/history/>. Accessed November 17, 2022.
6. WHO/UNICEF Meeting on infant and young child feeding. *J Nurse Midwifery*.1980;25(3):31-38.
7. Gary AJ, Birmingham EE, Jones LB. Improving breastfeeding medicine in undergraduate medical education: A student survey and extensive curriculum review with suggestions for improvement. *Educ Health (Abingdon)*. 2017;30(2):163-168. doi:10.4103/efh.EfH_180_15.
8. Chuisano SA, Anderson OS. Assessing Application-Based Breastfeeding Education for Physicians and Nurses: A Scoping Review. *J Hum Lact*. 2020;36(4):699-709. doi:10.1177/0890334419848414
9. Taylor JS, Bell E. Medical Education and Leadership in Breastfeeding Medicine. *Breastfeeding Med*. 2017;12(8):476-478. doi:10.1089/bfm.2017.0104.
10. Ogburn T, Espey E, Leeman L, Alvarez K. A breastfeeding curriculum for residents and medical students: a multidisciplinary approach. *J Hum Lact*. 2005;21(4):458-464. doi:10.1177/0890334405280990.
11. Feldman-Winter L, Barone L, Milcarek B, et al. Residency curriculum improves breastfeeding care. *Pediatrics*. 2010;126(2):289-297. doi:10.1542/peds.2009- 3250.
12. Hillenbrand KM, Larsen PG. Effect of an educational intervention about breastfeeding on the knowledge, confidence, and behaviors of pediatric resident physicians. *Pediatrics*. 2002;110(5):e59. doi:10.1542/peds.110.5.e59.
13. Radoff K, Forman R. Lactation Education for Resident Obstetricians: Promoting Breastfeeding Advocates for the Future. *J Midwifery Womens Health*. 2019;64(6):754-762. doi:10.1111/jmwh.13037.
14. McLeod K, Waller J, Wyatt TR. Using Videos to Teach Medical Learners How to Address Common Breastfeeding Problems. *MedEdPORTAL*. 2021;17:11136. doi:10.15766/mep_2374-8265.11136.
15. Osband YB, Altman RL, Patrick PA, Edwards KS. Breastfeeding education and support services offered to pediatric residents in the US. *Acad Pediatr*. 2011;11(1):75-79. doi:10.1016/j.acap.2010.11.002.