



Breastfeeding Education for Medical Students

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Scholarly Concentration in Physician as Communicator

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Abstract

Although several important national and global health organizations have called for all healthcare providers to be educated in basic lactation counseling, the pre-clinical curriculum at Warren Alpert Medical School (AMS) does not include guidelines or training for breastfeeding.

65 medical students at AMS participated in a survey to determine their baseline knowledge of and comfort with lactation assistance. A majority of respondents expressed discomfort with addressing basic lactation topics and techniques. Students were also unable to answer most multiple-choice questions about breastfeeding correctly.

Using the survey data to emphasize topics with the biggest knowledge and comfort gaps, an online course for medical students at AMS was designed.

Among the five New England states, Rhode Island has the lowest rates of breastfeeding and does not currently meet the Centers for Disease Control's "Healthy People 2020" goals on breastfeeding¹. As AMS is the only medical school in Rhode Island, and many of its students go on to practice in-state, this medical education project has the potential to improve access to breastfeeding support locally.

Background

Over twenty-five years ago, the World Health Organization and UNICEF together called for all healthcare providers to be trained in the skills necessary to support breastfeeding². Although breastfeeding is currently recommended as the optimal method of infant feeding by the American Academy of Pediatrics³ and the American College of Obstetricians and Gynecologists⁴, many U.S. medical students do not feel comfortable offering lactation guidance to new mothers⁵.

Physicians-in-training usually learn that most mothers *should* breastfeed, but they are rarely offered the tools to help their patients succeed in this often overwhelming and stigmatized undertaking⁶. There are common challenges associated with breastfeeding with which anyone providing healthcare to a new mother can become familiar. This project aims to educate and equip medical students with strategies to care for their breastfeeding families.

Survey Design

Medical students at Warren Alpert Medical School were invited to participate in an online survey assessing their *knowledge* about and *comfort* with breastfeeding. Participants answered 7 multiple-choice questions that tested their knowledge, and another 5 questions allowed students to rate their personal comfort with offering breastfeeding advice.

Four optional demographics questions were included in the survey (year of medical training, gender, anticipated specialty, and personal experience with breastfeeding). Participants were asked an optional question, "Is there anything else you would like to learn about breastfeeding or lactation counseling while in medical school?"

Survey Results

Knowledge-based Questions: Surveyed medical students were best equipped to answer questions related to *Anatomy & Physiology* (69% correct). Students were much less likely to answer questions in the four other categories correctly. Only two of 65 survey respondents correctly answered all seven multiple-choice questions.

Self Comfort Assessment: (percentages out of 65 participants)

Question Category	Not Comfortable (%)	Somewhat Comfortable (%)	Very Comfortable (%)
Anatomy & Physiology	66.2	26.2	7.6
Infant & Maternal Nutrition	83.1	12.3	4.6
Position & Latch	81.5	15.4	3.1
Common Problems	78.5	16.9	4.6
Risks and Benefits	62.5	26.6	10.9

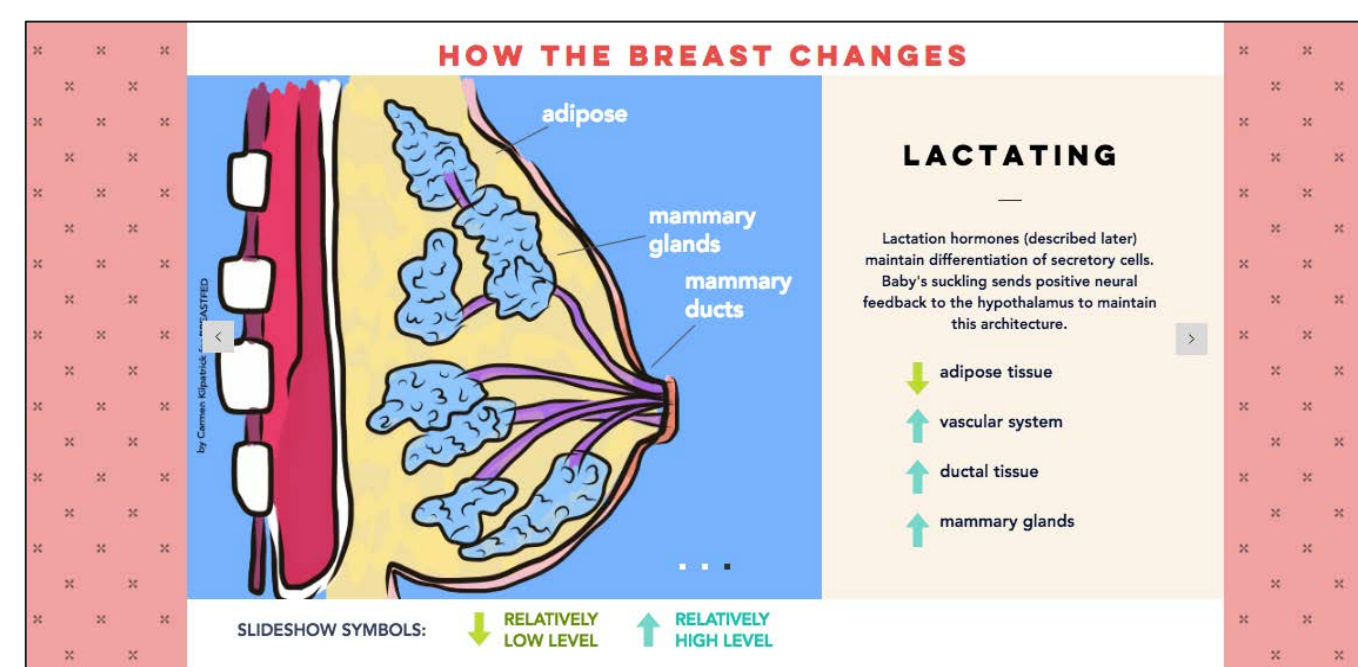
Curriculum

The survey data was analyzed, and an outline for an online, non-credit course was designed to emphasize topics which medical students were the least knowledgeable about and felt the least comfortable with. Then, drawing from almost 100 different resources including research publications, textbooks, and legal documents, a full manuscript for the course was drafted. The course consists of *five chapters*, and each chapter ends with a 15-question multiple-choice assessment. Course completion is commiserate on successful mastery of all chapters.

1. Anatomy & Physiology of Breastfeeding
2. Infant & Maternal Nutrition
3. Position & Latch
4. Troubleshooting Common Problems
5. Risks & Benefits of Breastfeeding

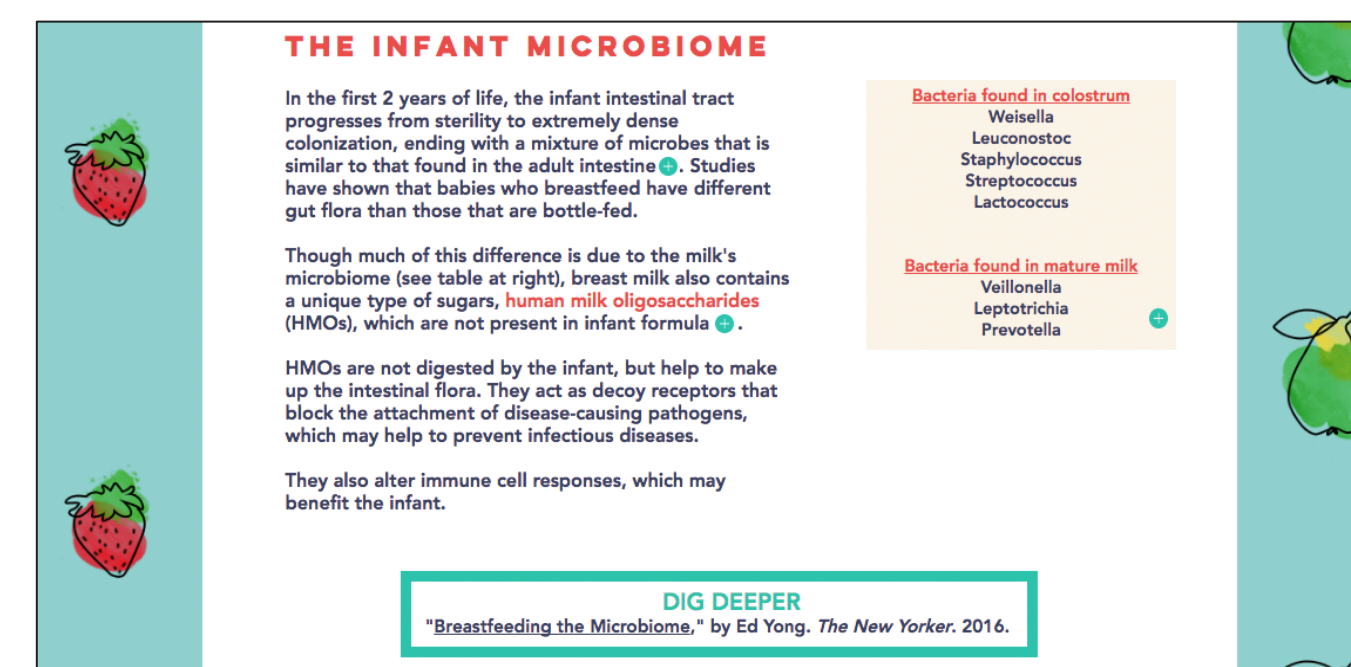
These three chapters were emphasized based on analysis of survey data

The Online Course



Above: students navigate through a set of labeled images that demonstrate the anatomical changes in breasts through three stages (non-pregnant, pregnant, lactating). This graphic is preceded by a short video reviewing relevant breast anatomy.

The interface of the online course is designed to be interactive, user-friendly, color-coordinated and simple to navigate. Every important concept in the curriculum is explained with text and graphics to accommodate different learning styles. All graphics and media on the website are created by Carmen Kilpatrick AMS MD¹⁹.



Above: the course manuscript is presented in a visually pleasing format, with important terminology highlighted in red. Every source is cited, as indicated by +. Students can open the original source in a new window by clicking this graphic.

Additional information outside the scope of the course is indicated by a standard DIG DEEPER box, which can lead students to interesting articles (like the one from *The New Yorker* magazine seen here), videos, scholarly research, and other media.



Above: after viewing a video demonstration of various breastfeeding positions, students get a visual "cheat sheet" of information from the video. This repetition of important concepts is standard for the entire course.

THINK CLINICALLY

Clinical pearls are always presented in a gray box!

TEST YOURSELF

Every so often a question will show up in a purple box, so students can assess their understanding of the chapter.

References

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Future Directions

While the research, manuscript, and layout for the online course are complete, media content (including some videos, graphics, charts, and animations) is still under production. Enrollment is scheduled to open in February 2017. The online course is expected to take students around 3 hours to complete.

A 45-minute, classroom crash course in breastfeeding assistance for medical students is also in the works. This class is scheduled to coincide with the Reproductive System block for second year students at Warren Alpert Medical School.

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