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IMPLEMENTATION OF BREAK TIME FOR EMPLOYEE NURSING MOTHERS AT
THE UNIVERSITY OF LOUISVILLE: A CASE STUDY

.....By

Robin Elise Weiss, C.L.C., L.C.C.E.

B.A., University of Louisville, 2001

M.P.H., University of Louisville, 2012

A Dissertation
Submitted to the Faculty of the
School of Public Health and Information Sciences of the University of Louisville
in Partial Fulfillment of the Requirements
for the Degree of

Doctor of Philosophy
in Public Health Sciences

.....Department of Health Management and Systems Sciences

Louisville, Kentucky

May 2015

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A Dissertation Approved on

April 14, 2015

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DEDICATION

To my first teacher, my mother:

Carol Horrar Ham

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The past few years have been an enormous period of growth for me. This was made possible with the guidance of many individuals. I would like to thank Dr. Barry Wainscott for listening to me over the years, for always being my advocate when I needed one and helping me understand the difference between advocacy and activism. Thank you to Dr. Bob Esterhay for inspiring me to think even further outside the box, and for giving me specific tools to get there. Dr. Susan Olson-Allen gave me great advice when I asked her for guidance on getting a Ph.D. She helped me understand how every class made a difference, even if it wasn't one that I could see right away. Dr. Pat Gagne reminded me, after years of focusing on populations, how much I loved the individuals and their voices. Thank you for the tools so that I may listen like a researcher.

I would also like to thank Eve Hiatt, Katie Adamchik, Brandon McReynolds, Katie Leslie, Susan Buchino, Marci Yesowitch Hopkins, and Jen Forristal for all of the study sessions and texts of support over the years and a huge shout out to Isaac Weiss for checking my statistics. Thanks to Kevin, Hilary, Benjamin, Isaac, Lilah, Owen, Clara, Ada, and Noa, my family, for putting up with a dissertation obsessed wife and mother.

Lastly, thank you to all of the employees who took the time out of their busy days to help make this research a reality. I will do my best to ensure that it is used to help others who wish to combine working and breastfeeding.

ABSTRACT

IMPLEMENTATION OF BREAK TIME FOR EMPLOYEE NURSING MOTHERS AT THE UNIVERSITY OF LOUISVILLE: A CASE STUDY

Robin Elise Weiss

April 14, 2015

This dissertation is a mixed methods look at the barriers to successful implementation of the Break Time for Nursing Mothers provisions of the Affordable Care Act (ACA) at an upper southern-midwestern university. As public health and medical officials push the desire for an increase in breastfeeding initiation and duration, many mothers must overcome barriers within the employment arena. Previous work has failed to look at how the university setting presents unique challenges with a diverse workforce, varied jobs, and differing space availability. In other settings, barriers have been identified; the goal of this dissertation was to identify what the specific barriers were within a university setting. A mixed methods approach was used interviewing both nursing employees as well as members of the university's lactation task force; in addition to this, a survey of employees who had utilized the Break Time provisions since 2010 was conducted. The outcomes confirmed that the barriers included space, time, and information, but included lack of social support as an additional barrier.

Recommendations are made to the university to help alleviate these barriers to full implementation of the Break Time for Nursing Mothers.

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CHAPTER I

INTRODUCTION

Breastfeeding is an important public health issue; providing numerous benefits for both mother and child such as reduced cancers in the mother (ovarian and breast), reduced infant deaths from diarrheal disease and infections, and in turn, offering lowered health care burdens for society. (World Health Organization 2009, Bartick 2013, Horta and Victora 2013, Horta and Victora 2013) It is estimated that if 90 percent of infants were exclusively breastfed for six months, the United States would save \$13 billion in health care related costs, including nearly the lives of 1,000 infants (Bartick and Reinhold 2010). Unfortunately, barriers to breastfeeding exist in many forms.

Successful breastfeeding is defined differently by various organizations. For the purposes of this study, we will define it as meeting personal goals for length of breastfeeding, while taking into account the American Academy of Pediatrics (AAP) and World Health Organization (WHO) recommendations. The AAP recommends that a baby be exclusively breastfed until the age of six months, at which point complimentary foods begin to be introduced; breastfeeding should continue at least until the age of one year and as long after is as mutually desired. (Johnston 2012) The WHO recommendations are for exclusive breastfeeding for the period of at least six months, continuing for a minimum of two years, and as long after as desired. (World Health Organization 2009) While they both recommend exclusive breastfeeding to the six-month mark, the WHO

recommendations recommend that breast milk be given to an infant for a longer period of time. It is important to note that the hazards of infant formula feeding are greater outside the United States.

One of the biggest barriers to a successful breastfeeding relationship is that of continuing to provide breast milk while working. (Odom, Li et al. 2013, Mirkovic, Perrine et al. 2014) To this end, the Break Time for Nursing Mothers portion of the Affordable Care Act (ACA) was passed into law to assist mothers in making this transition back or into the workforce and to help remove barriers to successful breastfeeding. Successful implementation of this program will require the removal of obstacles at the employer level, which are site specific, as well as the removal of individual barriers.

PROBLEM STATEMENT

There has been a recent push by the medical and public health communities to increase the rates and length of breastfeeding in infants in the United States. As women reenter the workforce after having a baby, there becomes a need to support the process of breastfeeding in a manner that is supportive to the family and least disruptive to the work environment. The University is a challenging setting for many factors discussed in this dissertation. The purpose of this research is to assess the progress that the University of Louisville has made towards implementing the ACA's Break Time for Nursing Mothers portion of the law by looking at both the policy that is in place and the lived experiences of the women who are pumping or breastfeeding while working full time at the University.

While the Break Time for Nursing Mothers provisions were signed into law in March of 2010, there has been little published research on its actual implementation, particularly in regards to the university setting. The university setting is unique in the workspace. Some of the workforce is employed in typical offices with regularly scheduled hours, while others have varied hours and may not have a dedicated space to call their own, often moving from building to building or even campus to campus. Faculty and staff potentially have issues with understanding their rights and responsibilities, with knowing where to get information about their rights, where to pump or feed their infants, and what facilities are available to them on campus; where to complain if there is an issue and what a resolution should look like under the terms of the ACA, among other issues.

BACKGROUND

Why Breastfeeding and Breast Milk?

Breast milk is the optimal method of feeding human infants and young children, (American Academy of Pediatrics 2012) because it is a species specific food. Breast milk is uniquely made for each child, changing throughout the course of the child's breastfeeding time period to meet the nutritional and immunological needs of that specific child. (Lawrence and Lawrence 2010) This is something that infant formula cannot replicate. (Johnston 2012) Mothers often look to professional organizations, such as the AAP and WHO, for insights about the appropriate length of time to nurse. Pediatricians and other physicians and health professionals are supposed to look to their respective professional organizations for guidance about how to advise parents on breastfeeding issues, but they often rely on personal experience or information obtained

from other sources, which can be problematic. (Freed and Fraley 1992) The AAP recommends that mothers exclusively breastfeed for a period of six months, and continue to nurse at least for the period of one year from the time of birth. (Johnston 2012) The cost of not reaching 90 percent of the AAP goal for exclusivity in the first 6 months is the death of over 900 infants and the loss of billions of dollars, every year in the United States.(Bartick and Reinhold 2010)

The benefits of breast milk are widely studied in a variety of settings, and the evidence is clear – there are many benefits of breast milk for both the mother, baby, and society. (American Academy of Pediatrics 2012) An infant who is not breastfed, but fed infant formula has (Bartick and Reinhold 2010):

- Twice the risk of otitis media (ear infections)
- 3.6 fold increase in the risk of hospitalization for low respiratory infection in the first year
- 2.8 times more likely to suffer from gastroenteritis and diarrhea
- Increased risks of dying of Sudden Infant Death Syndrome (SIDS) and childhood cancer
- Greater risk of obesity and both Type 1 and Type 2 diabetes
- Greater risk of death for premature infants who are not breastfed risk from necrotizing enterocolitis (NEC) (an infection in the gut)

Breastfeeding is known to provide the infant with many benefits, such as those listed above. (Hauck, Thompson et al. 2011) The risks of formula feeding and the benefits of breastfeeding are dose dependent, meaning the more breast milk/feeding that is done, the

greater the benefit. This is one of the many reasons that the AAP recommends that breastfeeding last through the first year of life.

Mothers who breastfeed have benefits as well. (Hauck, Thompson et al. 2011, Meek 2011, Johnston 2012) If a mother does not breastfeed, she runs the risks of increased risks of certain types of cancer, poor child spacing (defined as pregnancies fewer than 24 months apart), Type 2 diabetes and metabolic syndrome. (World Health Organization 2013) Breastfeeding prevents this because of the hormonal shifts allowing the delay of the return of ovulation. These benefits are often due to the ovaries being put in a state of rest during the months of lactation, this is one of the mechanisms for the benefits received from breastfeeding. The duration of the anovulatory cycles varies from mother to mother, but often continues while the mother is nursing through the night, or at least six to twelve months on average for mothers nursing to or past the one year mark.

As the public health focus has shifted from one of managing infectious disease to one of addressing the issues related to chronic disease, starting at the beginning of life to help promote risk reduction makes the most sense from both a practical and economic sense. This is why breastfeeding initiation and duration that meet the minimum goals recommended by the AAP is the optimal target. (Sloan, Stewart et al. 2006, Fein, Labiner-Wolfe et al. 2008, Shealy, Scanlon et al. 2008)

All of the major health organizations including the World Health Organization (WHO), American Academy of Pediatrics (AAP), American Congress of Obstetricians and Gynecologists (ACOG), and the American College of Nurse Midwives state that breastfeeding is the optimal way to feed a baby. (American Academy of Pediatrics 2012)

Despite the fact that there was support from all of these organizations, breastfeeding rates in the United States have fallen short of every goal set for this measurement. (Centers for Disease Control 2013) Public health officials have been trying to increase the rates of breastfeeding in the United States for many years. (Murtagh and Moulton 2011, Office of the Surgeon General 2011) A measure for breastfeeding has been included in several years worth of Healthy People Goals, though, while gains have been made, the realization of dramatic changes has not been achieved, particularly in the area of duration of breastfeeding.(2010)

The bottom line is that breastfeeding is cost effective. For the individual mother, there is very little outlay of money needed to successfully breastfeed, while the costs of formula alone can run over \$1,000 in the first year (commercially purchased regular infant formula). (Bartick and Reinhold 2010) If there are troubles with lactation, support does need to be in place to help mothers through these issues. To this end, many hospitals and pediatricians' offices are now employing International Board Certified Lactation Consultants (IBCLC) and other breastfeeding experts to assist patients. (Grawey, Marinelli et al. 2013)

Currently about 76.9 percent of mother baby dyads initiate breastfeeding at birth (Centers for Disease Control and Prevention 2012). This number, however, is only indicative of the number of infants who ever attempt breastfeeding at the time of birth and does not accurately reflect the number of mothers who cease with breastfeeding in the first weeks of life. One of the reasons often cited for cessation of breastfeeding, and even the lack of initiation, is that the mother will be returning to work. (Sloan, Stewart et al. 2006)

One of the major facets of the lower than desired rates of both implementation of breastfeeding and the continuation of breastfeeding to meet the desired lengths from the AAP, are the fact that returning to the work force can impede a mother's motivation, activation, and achievement of these goals. (Shealy, Scanlon et al. 2008, Brodribb, Fallon et al. 2010, Jones, Kogan et al. 2011) There are many ways that this plays a part in the breastfeeding rates in the United States.

The individual, familial, and societal impact of breastfeeding is enormous. (Bartick and Reinhold 2010) Women do not take this decision lightly, but many different things go into a woman's decision regarding how she will feed her baby and, in the case of breastfeeding, for how long. (Sloan, Stewart et al. 2006, Fein, Labiner-Wolfe et al. 2008, Fein, Labiner-Wolfe et al. 2008, Fein, Mandal et al. 2008, Grummer-Strawn, Scanlon et al. 2008, Labiner-Wolfe, Fein et al. 2008, Li, Fein et al. 2008, Shealy, Scanlon et al. 2008, 2011, Jones, Kogan et al. 2011, Rasmussen and Geraghty 2011, Mirkovic, Perrine et al. 2014) Because of the many facets of this wide topic, I am choosing to focus on the employment aspects as both barrier and conduit for a successful breastfeeding experience. This is defined as mother reaching her personal goal, without influence due to external factors, including place or timing of employment.

Maternal Leave

While maternal leave is not expressly covered in this study, it does play a large role in a woman's decision and/or ability to successfully initiate and maintain a milk supply and choose to nurse her baby. Maternal leave in the United States is not standardized. (Mirkovic, Perrine et al. 2014) Some mothers will have no paid leave, some will take a few days or a week off, often returning to work for economic reasons before

they themselves have been given medical clearance. This is often before a good milk supply is established, which may also hinder the best intentions of the mother when it comes to breastfeeding.

While many mothers may qualify for the Family Medical Leave Act (FMLA), up to 12 weeks of unpaid leave for certain jobs in certain businesses, not all women have the financial flexibility to take time off of work without a paycheck. The United States is the only developed country in the world without paid maternity leave. (American Academy of Breastfeeding Medicine 2009, Allen, Belay et al. 2014, Borrell, Palencia et al. 2014) These policies have a great influence on both whether mothers choose to breastfeed and how long they are able to breastfeed or provide breast milk for their child. (Ogbuanu, Glover et al. 2011)

Workplace Issues

Break Time for Nursing Mothers is a part of the Patient Protection and Affordable Care Act (ACA) enacted on March 23, 2010. (2010) The Break Time provisions actually went into effect immediately. This small piece of the larger legislation is designed to help breastfeeding mothers successfully combine breastfeeding or breast milk feeding with employment for mothers who desire or require a job. The hope is that this will lift some of the current barriers to employee mothers who wish to meet the AAP recommendations for breastfeeding duration.

Mothers Returning to Work

Having women in the workplace is not a new phenomenon though it has gone through many phases of popularity and necessity. In some cultures, a woman working outside of the home is not acceptable, while in others it was not only acceptable but a

necessity. There have also been various phases in our history, for example the World War II era, when women were the majority of the domestic workforce (Baumslag and Michels 2003).

This rise of mothers in the workforce was made possible by the rise of the formula industry. Their “scientific formula” to feed babies was sold to mothers, as not only the potential temporary replacement for breast milk, but eventually as the ideal replacement for breast milk. Infant formula was even touted as better than breast milk until the WHO stepped in in 1981 to make demands on how formula was advertised. (World Health Organization 1981)

While men were at war, it was imperative that women join the workforce, but the children needed feeding and there weren’t enough wet nurses available, even if that had been socially acceptable at this point in history. (Baumslag and Michels 2003) Given the unacceptable nature of the breast milk substitutes that had been used prior to the advent of infant formula, the formula industry flourished. Previous iterations of formula were potentially very harmful, lacked good nutrition for the infant, and were poorly tolerated. (Baumslag and Michels 2003) Thankfully, today’s infant formulas are much better controlled and have allowed infants who did not have the benefit of breast milk to have a safe alternative, where there is clean water available.

Traditional jobs once deemed appropriate for women (e.g., teaching, nursing, etc.), did not lend themselves easily to breast milk expression. This, coupled with poor understanding of the physiology of the breast, poor techniques in breast milk expression and training, as well as the lack of technology for adequate pumping made breast milk expression very difficult. Prior to the commercial availability of the breast pump, the vast

majority of breast milk expression was done by hand, but even with this technique being widely used, the storage and transportation of the breast milk for the infant was primitive. These technologies have undergone a major revision and are now a huge business worldwide with many companies dedicated solely to lactation management. (Kroeger and Smith 2004, Wallace and Chason 2007, Rasmussen and Geraghty 2011)

Why Workplace Support Matters

In 2013, 69.9 percent of all mothers were participating in the labor force. (Bureau of Labor Statistics 2014) This is up from 59.6 percent in 2010.(Bureau of Labor Statistics 2012) While mothers with younger children were less likely to be employed, mothers with children under six year of age still maintained a 63.9 percent rate of employment. (Bureau of Labor Statistics 2014) In 2010, 38 percent of married women who had families were sole income earners. (Bureau of Labor Statistics 2012) For 29 percent of married couples where both partners work, the wife earns more money than her partner. (Bureau of Labor Statistics 2012) Some 57.3 percent of mothers (married and unmarried) with an infant under the age of one were in the workforce in 2013. (Bureau of Labor Statistics 2014) In 2011, 47 percent of all workers were mothers. (Bureau of Labor Statistics 2008)

There are many people who wonder why the support of the workplace would matter when it came to an issue that is often seen as solely a parenting decision or personal choice. Breastfeeding is a public health matter at its core. (Johnston 2012) Given the lack of adequate maternity leave and the fact that mothers need support when returning to work to make breastfeeding viable, support from the work place is the obvious place to start. Women who do not have the support of their employer often have

a shorter duration of breastfeeding (Corbett-Dick and Bezek 1997), often due to a decrease in milk supply. (Arora, McJunkin et al. 2000, Ortiz, McGilligan et al. 2004) In 2012, there were 18.9 percent of Kentucky mothers who had 12 month-old infants receiving any breast milk, which is well below the Healthy People 2020 Objective (MICH-21) of 34.1 percent. (Centers for Disease Control 2013)

This can lead to increased costs to the employer for a variety of reasons including poor retention, higher absenteeism, and more direct and indirect health care costs. However, when there is a supportive employer, mothers tend to breastfeed longer and therefore can decrease costs to the employer. (Galtry 1997) While the knowledge that breastfeeding leads to healthier babies, and therefore employees, who were not only healthier, but less likely to miss work due to absence for the illness of a dependent child, many organizations were unaware or unconvinced of the benefits for the organization. Due to this lack of action on the part of employers, the government took matters into consideration through the Department of Labor, as expressed through the Affordable Care Act.

Break Time for Nursing Mothers and the Affordable Care Act

The passage of the Patient Protection and Affordable Care Act (ACA) in 2010 made federal regulations for time away from work duties for breastfeeding employees to pump or express their milk or breastfeed their infants, if possible. (2010) The ACA requires that employers with more than fifty employees provide a reasonable break time for female employees to express breast milk for up to a year after the child's birth, including the adoption of a child. (If an employer has fewer than fifty employees they

are not subject to these provisions “if compliance with the provision would impose an undue hardship” though they may choose to comply.)

It is important to note that the ACA does specify that employers are not required to compensate for breaks taken for pumping or feeding purposes. This means that the employee will not be compensated for time away from their job, if they are paid hourly. Salaried employees are not affected, assuming their duties are met. This means that there is not a monetary drain on employees for the use of break time to pump/feed. At the University of Louisville, the employee must use the ACA nursing break with concurrent breaks and are not necessarily compensated for this time beyond normal breaks. (Vice President for Human Resources and University EEO Officer 2014)

In addition to providing time, the employer must provide a room, other than a bathroom, that is shielded from view to express milk. It is important to note though this does not preempt state laws that may already provide greater protections, though this is not the case in the Commonwealth of Kentucky. The room that is provided for the employee does not have to be used for pumping alone; it can be a multi-purpose room, e.g. an office, boardroom, meeting room, etc. This room should be private during the time that an employee is expressing milk, but may have more than one employee at a time in the room, as long as they cannot see one another.

It is important to note that prior to the ACA, several leading agencies and documents have called on businesses to provide this type of service for employees voluntarily, with few heeding that call. (U.S. Department of Health and Human Services, Health Resources and Services Administration et al. 2008, Ogbuanu, Glover et al. 2011, Stratton and Henry 2011) Examples of requests have come from the Healthy People

2010, the American Academy of Pediatrics and the Department of Health and Human Services. Those who did implement programs were able to see better employee retention; more engaged employees, and financial benefits from these and other effects. Many of these previous documents served as the baseline for the ACA guidelines. (Munday 2008, Ogbuanu, Glover et al. 2011, Stratton and Henry 2011, Abdulloeva and Eyler 2013)

Financial Incentives

The ACA-type regulations on businesses to support break time breastfeeding have led to positive financial implications for companies that were participating. With the new guidelines implemented there is the potential to save \$13 billion dollars costs from infants alone if 90 percent of women breastfeed to the six month mark. (Bartick and Reinhold 2010) When you look at the costs of maternal health, you see “\$17.4 billion, with direct and indirect health costs just shy of \$1 billion in 2011 dollars.” (Bartick 2013) The National Business Group on Health, which is a nonprofit organization, says that creating the breastfeeding friendly work places reduces health problems, absenteeism, health claims, and increases retention.

Hiring parents is a risk faced by employers due to potential absenteeism caused by the illness of the children. When children chose to stay home or are forced to stay home due to illness, someone has to stay home with the child. This burden is one that more often falls on mothers. (Guendelman, Kosa et al. 2009) Since breastfeeding infants tend to have fewer illnesses than non-breastfed infants, this is a benefit to the employer. (Cohen, Mrtek et al. 1995)

Studies have shown absenteeism can cost more than 15 percent of a company's payroll, which can be up to \$775 per employee; and one day absences to care for sick children are twice as frequent for mothers of formula fed children. Also breastfeeding has been shown to reduce insurance claims for businesses, this is particularly of interest when the company is self-insured. One study showed that for every 1,000 babies not breastfed there were 2,000 more physician visits, 212 extra days in a hospital, and 609 extra prescriptions. (Ball and Wright 1999)

RESEARCH QUESTIONS

This research involved three main components: key informant interviews with members of the lactation working group from the University of Louisville; interviews with full time female employees who had breastfed and/or pumped while working at the University; and a survey of full time female employees who had been pregnant, breastfeeding, or pumping while working at the University since the Affordable Care Act has been signed into law. The intention was to be able to answer the following research questions:

1. With the implementation of the ACA's employer policy requiring time for breastfeeding or pumping, what are the barriers to successful breastfeeding for mothers who are full-time employees of the University of Louisville?
2. What is the University doing to facilitate successful breastfeeding?

DELIMITATIONS

This study was limited to people involved with the University of Louisville in Louisville, Kentucky. To be included the participants had to be either a full time employee of the University of Louisville who had or was breastfeeding and/or pumping

during their employment, or a member of the lactation working group (LWG). Exclusion criteria for the study included: students, men, persons under 18, non-English speaking participants, and part-time employees.

LIMITATIONS

There are limitations to this dissertation. It is a case study done in one upper south-midwestern state university. It may or may not be generalizable to other workplace settings, but may pertain to other similar university settings. The employees in the interview groups were highly motivated and knowledgeable individuals, this is not going to necessarily be representative of all breastfeeding or pumping mothers, both in this study or in general. This can bias the results of the study. The use of convenience and snowball sampling can also mean that these results may not be representative to the experience of the entire community of the University of Louisville.

This study will not be discussing students. The Break Time for Nursing Mothers law only covers faculty and staff. This leaves many students (11,540) technically without support for breastfeeding. Students, in general, are in an odd situation in that, due to the nature of full time study, a good portion of one's time is spent at the University or working on University related projects, and yet, since they are not paid employees of the University, they are not entitled to the benefits of the Break Time for Nursing Mothers provisions, though they are able to utilize the dedicated spaces.

Maternity leave and prenatal influence are also a large part of the discussion surrounding pumping, infant feeding, and maternal return or entrance into the workforce. This is a topic of heavy contention and one that has much data around it. They are, however, not within the scope of this case study.

The interview instruments were not previously used, nor validated. While the survey was designed with another instrument as a basis, that instrument is also not validated but simply suggested by the United States Office of Women's Health as a tool for self-evaluation. (Office of Women's Health 2014)

CHAPTER II

LITERATURE REVIEW

A literature review was completed using the U.S. National Library of Medicine's MEDLINE, PubMed, and other search sites. Citations were all in English, using the terms included: breastfeeding, breastfed, lactation, program, room, university, higher education, and the stems: employ and breast. Because of the small amount of available literature, searches were not confined to certain dates. Each article was reviewed for possible relevance and inclusion into the literature review.

BREASTFEEDING

One of the primary things that define human beings as mammals is the ability to feed our young species specific milk from our breasts. Breastfeeding has undergone a series of threats and transitions in the course of history for a variety of reasons; from maternal employment to social stigma against breastfeeding to the rise in viable breast milk alternatives. (Baumslag and Michels 2003) The revival of breastfeeding as a public health issue is not a new one, but it is one that has had new support in recent years. (Office of the Surgeon General 2011, American Academy of Pediatrics 2012, Eidelman 2012)

Breastfeeding in terms of its benefits for a human infant are often studied. The results of these studies are numerous showing the benefits for the human infant in a variety of ways from the immunologic to growth and development areas. In the last couple of decades there has also been quite a bit of research on the impact of breastfeeding on the health of the mother. The results were also positive there in the fact that breastfeeding has a positive impact on a mother's health both in the short and long term.

Oddly enough we have spent quite a bit of time researching the benefits of a biological process. We have been trying to prove the benefits that nature had set up as the default mechanism to serve the future generations. This has led researchers to have to look at the opposite, the risks of not breastfeeding infants in our culture. The results were a staggering sum of money lost every year to illnesses of the infant, death, and even productivity in the parents. (U.S. Department of Health and Human Services, Health Resources and Services Administration et al. 2008, Bartick and Reinhold 2010)

Current rates of breastfeeding have been identified by the Centers for Disease Control and Prevention (CDC). The most recent data is from 2011. That year we saw 79 percent of infants had initiated breastfeeding. (Centers for Disease Control 2014) Despite the recommendations from the AAP and WHO, only 49 percent received any breast milk at six months and only 27 percent received any breast milk at 12 months. When you look at Kentucky specific rates, there is a different story, with only 61.3 percent of babies starting with breastfeeding, 31.5 percent receiving any breast milk at six months and 22.8 percent getting any breast milk at 12 months. (Centers for Disease Control 2014) The World Health Organization (WHO) would like to see the global six months rate for

exclusive breastfeeding be 50 percent by 2025. (World Health Organization 2014)

Currently the United States has an exclusive breastfeeding rate at six months of only 18.8 percent, though in Kentucky, that number is only 14.2 percent, despite the calls from the WHO and the AAP. (AAP Section on Breastfeeding 2012)

PUMPING

Women have long sought a solution to remove milk from their breasts in order to separate themselves from their infants, either for work or pleasure. Manual removal, also called hand expression, was the most common method of removing breast milk until the advent of the modern breast pump.

The breast pump has a long history. The Abt pump was originally designed in the United States in the 1920s as a way to help infants who were born too early to effectively suckle. (Martucci 2013) The Abt pump became more popular in Europe. During World War II there was no way to ship replacement parts. So Einar Egnell designed a pump in Sweden that was more user friendly in how it worked.

The Abt pump was designed for use in the hospital and originally, was not thought of as something to use at home. However, the Egnell pump was marketed for use both in the home and in the hospital. In the 1960s, La Leche League International (LLLI) was made aware of the pump, and while they praised it, it was still meant only for medical circumstances. (Martucci 2013)

In 1996, Medela introduced the first breast pump designed specifically for home use, the Pump in Style. It was with the advent of the Pump in Style that women really started purchasing breast pumps. By 2005-6, the Infant Feeding Practices II study showed that 85 percent of all mothers had used a breast pump. (Centers for Disease Control 2014)

Generally, breast pump use is designed to allow mothers to be able to express breast milk for when they are away from their babies. One study showed that by the time an infant was one month old, 63 percent of mothers were already expressing breast milk. (Geraghty, Davidson et al. 2012) This study also showed that the most frequently cited reason for pumping was in preparation for the return to workforce.

At this point in time, 57.3 percent of mothers of infants are in the workforce in the United States.(Bureau of Labor Statistics 2014) With the recommendations to provide exclusive breast milk for a period of six months, a mother will typically have to figure out how to combine the needs of her infant and the needs of her household, as far as her return to work. (American Academy of Pediatrics 2012) In fact, regular pumping was positively associated with maternal employment. (Labiner-Wolfe, Fein et al. 2008)

While a breast pump is the first thing that many mothers think of when it comes to breast milk expression, it is certainly not the only manner of milk removal. Many mothers also use hand expression as a method of expressing their milk. A recent systematic review showed that using hand expression techniques were equally if not more effective than the use of a breast pump. (Becker, Smith et al. 2015) This study is in direct opposition to a study that showed that the use of a double pump/simultaneous pumping of both breasts yielded the most milk in the least amount of time. (Prime, Garbin et al. 2012)

What is apparent is that with the Affordable Care Act's provision for a free breast pump, through insurance, breast pumps are here to stay in the milk expression landscape. (United States Department of Labor 2013) We do know that when you are using a breast pump, not all pumps operate equally. This is one of the things that could be spelled out more clearly in the ACA. Many insurers are trying to use the least expensive pump, often

not a pump that allows for simultaneous use of pumping, often called a double pump for its ability to pump both breasts at the same time, thus reducing the amount of time it could take to pump milk. A pump that utilizes the suck pattern of a full term infant yields more breast milk than a simple vacuum suction pump, or pump with an alternative pattern. (Meier, Engstrom et al. 2012) This feature is not standard on all breast pumps.

Regardless of the pump that is used, there are ways to increase the breast milk yield. One of the biggest things is the prevention of pump related injuries by having a peer or lactation professional demonstrate how to use the pump, as opposed to a video or paper set of instructions. (Qi, Zhang et al. 2014) There is also some data that suggests that hands on pumping, the use of breast massage while using a pump, can also increase the amount of milk collected at a session. (Morton, Hall et al. 2009) This study was done with the mothers of preterm infants, but there is no data or reason to believe that the process would be different for mothers of full term infants, but it has not yet been specifically studied in this population. There is also the use of relaxation aids, and the warming of breast tissue as potential ways to increase the yield of breast milk. (Becker, Smith et al. 2015)

Something to consider is the experience of the mother while pumping. This is a topic that is rarely addressed. There is a tool that is being suggested, the Breast Milk Expression Experience Measure (BMEEM). (Flaherman, Gay et al. 2013)

Women need information on the pump and how to choose, if given a choice, the right breast pump for their circumstances. Often time practitioners do not understand the needs of the breastfeeding/pumping mother and do not have good information on the pumps available that they can readily share. This can lead to negative or erroneous

information being shared about pumps and pumping. (Chen, Johnson et al. 2012)

Research has already shown that pediatricians who have breastfed are more knowledgeable about breastfeeding and related issues than those who didn't. (Freed and Fraley 1992)

This means that women have to be educated about breastfeeding and pumping some how. Teaching lactation classes onsite can help increase the knowledge surrounding breastfeeding and work. (Mills 2009) This can also increase the knowledge of the available benefits to the women, such as where they will be able to pump. One study showed that the number of mothers who knew that they had an acceptable place to pump when they returned to work were more likely to plan to breastfeed. (Wallace and Chason 2007)

LACTATION SPACE

Where women express their milk is very important. A space must be and feel private and comfortable enough to allow for the physical let down of the milk. (U.S. Department of Health and Human Services, Health Resources and Services Administration et al. 2008) The Health Resources and Services Administration (HRSA) has produced a document called The Business Case for Breastfeeding designed to show employers many alternatives to what may be seen as a traditional lactation space. (U.S. Department of Health and Human Services, Health Resources and Services Administration et al. 2008) This is also a great resource for employers who do not have traditional desk or office based jobs. Here, HRSA outlines the costs involved with three types of lactation rooms, defined plans: Basic, Even Better, and State of the Art models.

THE BASIC PLAN

The Basic Plan is the simplest of the three plans. It works best for an employer with only a few breastfeeding employees at a time or as a stopgap measure as other plans are looked at for long-term success as a business transitions to a more permanent solution. This is where many employers start when looking at proposed plans to aid their breastfeeding employees.

The Basic Plan program's overhead costs are virtually nothing. The space required can be anything from an infrequently used room or office to a clean, small storage room. The room must have an electrical outlet, a lock on the door, a chair, and access to nearby running water to be deemed sufficient for the purposes of breastfeeding or pumping. Since the space is already owned or rented by the employer, it is free or relatively inexpensive. The employee is then responsible for bringing their own breast pump or using manual expression for milk removal. The employee is using preexisting breaks or taking unpaid time to pump.

The basic plan involves little to no education component. Though some companies do offer a lending library, brochures from local breastfeeding support professionals or groups, or other basic measures of information. This is considered the minimum to meet the ACA standards.

THE EVEN BETTER PLAN

For the Even Better Plan accommodations, the room could be the same as the basic level, or the employer could choose to invest in a dedicated breastfeeding space. This space may also be equipped with multiple pumping stations to allow multiple

employees to use the space at the same time. The cost would vary based on the employers' desires and needs.

In the Even Better program, the employers would also provide a multi user, double, electric breast pump, cooler for milk storage, and education and/or support resources. The bulk of the cost in the Even Better Plan comes from the purchase or rental of breast pumps and extra investment in loss of the room and the alterations to the room that would enable it to be ready for pumping. Employees would be expected to purchase the attachment kits for the multi-user pump. This may be covered under insurance benefits, or they may already have a kit that was potentially included with their personal breast pump.

THE STATE OF THE ART PLAN

This plan focuses more on amenities than anything else. The State of the Art Plan includes soft lighting in the room, a refrigerator for milk storage, and education benefits that extend to the partners of male employees as well. By having a more comfortable room, the goal is to enable the employees to be more productive when pumping.

When the employer supplies the breast pump, they can have control over the quality of breast pump being provided. Not all breast pumps operate equally and by supplying a quality pump, the employer can influence how quickly an employee is able to reach maximum milk expressed for the time away. This is why the multi-user pump (sometimes called a hospital grade) is the pump of choice.

The cost of a pump can vary depending on the type of pump provided and whether the employer chooses to buy or rent the pump and can range from \$850 a year to \$5000 a year (based on 20 employees pumping a year). (U.S. Department of Health and

Human Services, Health Resources and Services Administration et al. 2008) A multi-user pump can last for many years and service one person at a time, but multiple users over the course of a shift or day. The attachment kits are sterile kits used to attach to the pump. These can be purchased in bulk and resold to the employees or given as a part of the incentive. It should also be noted that the ACA now covers breast pumps under health insurance for free to the subscriber, though it does not mandate the type of pump. (2010) There is an offer of one breast pump per pregnancy.

Table 1: Pump Costs for Employer Purchased Pumps

Pump Option	Cost of Pump	Attachment Kit Cost	Total Annual Cost
Buy a multi-user hospital grade pump	\$1,125 (one time expense)	\$850 per year (\$42.50 x 20 kits)	\$1,975 first year, \$850 per year after
Rent a multi-user hospital grade pump	\$780 per year (\$65 per month)	\$850 per year (\$42.50 x 20 kits)	\$1,630 per year
Single user portable pumps	\$5,000 per year (\$250 x 20)	\$0 (attachment kit included)	\$5,000 per year

Source: U.S. Department of Health and Human Services, Health Resources and Services Administration and Every Mother Inc. The business case for breastfeeding. Rockville, Maryland: U.S. Department of Health and Human Services; 2008.

BENEFITS OF BREASTFEEDING FOR EMPLOYERS

Companies who have used corporate lactation policies have seen a return on investment. There are important financial and health ramifications when mothers and babies do not breastfeed or when the duration does not meet the AAP recommendations.

(Bartick and Reinhold 2010) Having a policy in place for supporting lactation among employees is one way to increase retention, increase productivity, and lower healthcare associated costs. (U.S. Department of Health and Human Services, Health Resources and Services Administration et al. 2008) Studies show that when breastfeeding policies are seen as an employee wellness issue, they are more effective. (Brown, Poag et al. 2001)

Companies with breastfeeding support programs have an 80 to 90 percent retention rate and report higher productivity and satisfaction. (Ortiz, McGilligan et al. 2004) The financial significance of employee retention is important since it is estimated to cost approximately the salary of an employee to replace that employee if they leave.

Due to the unpredictable nature of each woman's best milk production, times and timing, the employee should be free to dictate when and how long she will need to pump or feed her baby. This may be altered at various times during her time of pumping, up to a year after the birth of the baby. Some various things that may alter her supply can include health of the baby, age of baby, starting solids, changes in work or home schedules and changes in her hormonal states, including the return of her menses. (United States Department of Labor 2013)

As a result of the improved health and attendance of the employees and their children it is estimated that with the Basic Plan level of support, studies show that employers will see a \$2 to \$1 return on investment, though this can be as much as a \$3 to \$1 return with the Even Better/State of the Art accommodations. (United States Breastfeeding Committee 2010)

BREASTFEEDING POLICY & BREAK TIME FOR NURSING MOTHERS

The truth is, there is no randomized control trial on workplace and breastfeeding interventions, though it is generally found that the workplace can have a positive impact on breastfeeding rates. (Abdulwadud and Snow 2007) However, the Break Time provisions serve as a map for employers who fall within the scope of the provisions based on the size of their operation. (United States Department of Labor 2013) Prior to the ACA, it is known that mothers, who were salaried, as opposed to hourly, were more likely to breastfeed and breastfeed for longer. (Ortiz, McGilligan et al. 2004) In fact, this same study showed that 98 percent of the mothers who returned to work and attempted to pump considered themselves successful.

As babies get older, the amount of time that it takes to pump and the number of pumping sessions per shift required drops. (Labiner-Wolfe, Fein et al. 2008) It is important to remember that, what works for one mom, may or may not work for another mom. This means that there needs to be flexibility built into the guidelines. (Fein, Mandal et al. 2008) It is also important to note that the ACA only covers employees for one year after the birth or adoption of their infant.

The ACA is also only a part of the landscape. In fact, the ACA explicitly says that if a state's laws are more comprehensive or provide an employee with better benefits, the state laws should be used in its place. The problem is that most states do not have a series of comprehensive laws. (Nguyen and Hawkins 2013) It is also important to note that some mothers are also covered under the federal Women, Infants, and Children (WIC) Program for free breast pump access. (Clark and Dellaport 2011)

BREASTFEEDING IN HIGHER EDUCATION

There is not a lot of information available on pumping in higher education. An older study looked at attitudes about breastfeeding on campus in a social context. (O'Keefe, Henly et al. 1998) This study included students, faculty, staff, and administrators. One thing the study asked was about personal breastfeeding experiences. These numbers were high with 97 percent (students) and 94 percent (faculty/staff/administrators) having had been breastfed, breastfed a baby, or seen a breastfed baby. When the study looked at attitudes towards breastfeeding most of those involved in the study felt it was fine in private spaces. The study did begin to identify some barriers to working and breastfeeding: namely changes in attitudes and behaviors to support women beyond saying, "breast is best."

A recent study was published that looked at a small number of students, staff, and faculty in a comparative qualitative analysis. (Dinour, Pope et al. 2015) It showed that students found space to pump to be a barrier, but faculty did not find that space was an issue. It also found that the ability to extend the length of breastfeeding was cited as a benefit of pumping while on campus. Though staff and faculty both found that scheduling the time to pump was an issue.

A recent book is a great example of successful practices around the United States when it comes to higher education. (Vancour and Griswold 2014) This is largely a book about the various techniques used at a variety of universities and colleges. Each one has a unique way to address similar problems.

As noted above, the ACA only covers employees. One of the things that make the university setting different is that, in addition to employees, there are students. The state

laws frequently do not cover the students, nor are they covered by the ACA. This means that students often have to take it upon themselves to find a place to pump on campus.

(Dinour and Beharie 2015)

CONCLUSION

This chapter looked at the benefits of breastfeeding. It also described the relationship between breastfeeding and pumping. The history of the breast pump and types of pumps were discussed, particularly in terms of what is provided by the ACA for mothers. Employer benefits were discussed in a variety of spaces from basic to State of the Art, including the decrease in turn over in employees, and fewer missed days of work for breastfeeding parents. It also looked at the ACA and how that applies to the higher education space. In the next chapter we will look at the methodology of this study.

CHAPTER III

PROJECT PURPOSE AND BACKGROUND

The passage of the Affordable Care Act (ACA) in 2010 made federal regulations for time away from work duties for breastfeeding employees to pump or express their milk. (2010) The ACA requires that employers with more than fifty employees provide a reasonable break time for female employees to express breast milk for up to a year after the child's birth, including adoption of a child. If an employer has fewer than fifty employees they are not subject to these provisions "if compliance with the provision would impose an undue hardship." Though small employers may choose to provide the time regardless.

It is important to note that the ACA does specify that employers are not required to compensate for breaks taken for pumping. This means that the employee will not be compensated for time away from their job duties if they are paid hourly. Assuming their duties are fulfilled, salaried employees are not affected. This means that there is not a monetary drain from the Break Time. At the University of Louisville, if the employee is salaried, they must use the ACA nursing break concurrent with normal breaks. (Vice President for Human Resources and University EEO Officer 2014) They do not required to be paid for these breaks.

In addition to providing time, the employer must provide a room, other than a bathroom, that is shielded from view to express milk or breastfeed their infant. If the state laws already provide greater protections, they are not preempted. The room provided does not have to be used for pumping alone; it can be a multi-purpose room, e.g., an office, boardroom, meeting room, etc. This room should be private during the time that an employee is expressing milk, but may have more than one employee at a time in the room, as long as they cannot see one another.

It is important to note that prior to the ACA, several leading agencies and documents have called on businesses to provide this type of service for employees voluntarily, with few heeding that call. (U.S. Department of Health and Human Services, Health Resources and Services Administration et al. 2008, Ogbuanu, Glover et al. 2011, Stratton and Henry 2011) Examples of requests have come from the Healthy People 2010, the American Academy of Pediatrics and the Department of Health and Human Services. Those who did implement programs were able to see better employee retention; more engaged employees, and financial benefits from these and other effects and served as the baseline for the ACA guidelines. (Munday 2008, Ogbuanu, Glover et al. 2011, Stratton and Henry 2011, Abdulloeva and Eyler 2013)

The purpose of this study is two fold. One purpose is to look at the implementation of the ACA guidelines at the University of Louisville. The other purpose is to gather the experiences of the employees who use this provision and to see what their experience is with it.

The population of this study is the full time female faculty and staff of the University of Louisville's campuses. There are a total of 4,478 faculty/staff members as

of Fall 2014, of which there are 2,653 female faculty/staff members. (University of Louisville 2014) There is also a Lactation Working Group that has twelve members, made up of staff and faculty, who were invited to participate in interviews. Students were not considered in this study as they are outside the scope of this study.

The University of Louisville Institutional Review Board approved this study in February 2015.

This study will contribute to the sparse literature available on how the implementation of the ACA's Break Time provisions are implemented at a university campus. (Vice President for Human Resources and University EEO Officer 2014) It will also add to the literature on women's experiences of working and breastfeeding. Ultimately this study could help the University of Louisville and other universities with implementation of similar programs.

RESEARCH QUESTIONS

1. With the implementation of the ACA's employer policy requiring time for breastfeeding or pumping, what are the barriers to successful breastfeeding for mothers who are full-time employees of the University of Louisville?

Hypothesis: Employee mothers who pump or feed on campus will identify their barriers as being time, space, and information.

2. What is the University of Louisville doing to facilitate successful breastfeeding?

Hypothesis: The University of Louisville has a policy and is working towards successfully enforcing it to varying degrees of success given the diverse nature of the workforce at UofL.

METHODOLOGY

This study utilized a mixed methods research design to assess barriers that full time female employees who plan to breastfeed face when pumping or feeding on campus. This was achieved through key informant interviews with the lactation working group, a survey with University of Louisville employees (who had breastfed while working full time at UofL since 2010), and semi-structured interviews of the employees (who had been breastfeeding while a full time employee at UofL).

For the key informant interviews, all members of the lactation working group were emailed with an invitation to participate (n=12). Four members responded positively to the invitation. In the end, interviews were conducted at UofL (Belknap and Health Sciences Campuses) with the individual members of the group privately.

The survey was deployed online. There were flyers posted in the three campus' buildings, female bathrooms, and lactation rooms, as well as information sent through the employee daily email: UofL Today. There were a total of 95 participants in the online survey from February-March 2015.

Participants were recruited for the employee interviews through community flyers and electronic newsletters within the university system (e.g., U of L Today). There were also snowball sampling and social media pushes on twitter and Facebook. The flyers were placed in the lactation rooms, and in female restrooms across all three campuses. These were appropriate sampling methods because they made the study available to as many participants as possible. The snowball sampling is a natural outgrowth of interest in the study.

To be considered for enrollment into the interviews, the following criteria must have been met:

1. Be over 18
2. Be employed by the University of Louisville full time
3. Have been pregnant and/or breastfeeding while employed at UofL
4. Be English speaking

Sampling for the interviews continued to the point of theoretical saturation and included 19 subjects. The interviews of the Lactation Working Group (LWG) contained three interviews with members of the group. The survey reached an additional 95 participants. There were a total of 117 subjects in this study. Using qualitative data was a method to gather the voices and stories in a way that two-dimensional survey data cannot produce. By using both a qualitative and quantitative design for the study the researcher was able to gather both types of data.

Originally the goal was to conduct focus groups with the employees who were pumping. Using a focus group can help spur conversation that might be missed when simply talking to a researcher. The implementation of a focus group became very difficult in terms of meeting times and lengths. It was easier for the employees to get away from work duties for shorter periods of time. This also enabled them to stay at work and the research interviewers went to their work area for the semi-structured interviews. These semi-structured interviews were conducted on three campuses: Belknap, Health Sciences Center, and ShelbyHurst Campus (Formerly Shelby Campus).

The majority of the employees scheduled interviews via SnapAppointments online appointment scheduling at convenient times for their schedule. Due to several

weather events, two of the interviewees were not able to reschedule their appointments and were not interviewed.

It was also decided to allow employees who had experienced breastfeeding on campus prior to the 2010 ACA to participate in the interviews for historical and comparative data.

DATA COLLECTION

Individual interview questions and format were developed based on the guidelines outlined by Krueger and Casey. (Krueger and Casey 2002) Questions centered on the experience of the mothers with breastfeeding and employment with rooting in theoretical constructs from Social Cognitive Theory (see attached Focus Group/Individual Interviews Guide, Appendix I). These interviews were held in a location that was private and convenient for the participants, for a duration of approximately 30 minutes, during the months of January-March 2015. Interviews were captured through audio recording and transcribed verbatim using Rev.com.

Key informant interview questions (Appendix II) were developed from the individual interview questions. They centered on the experience of implementing the ACA Break Time provisions as well as the history and mission of the Lactation Working Group (LWG).

A survey was developed with a Tailored Design Method to reach the intended audience by using the Lactation Feedback Form as an example. (Dillman and Groves 2011, Office of Women's Health 2014) This is a part of the Business Case for Breastfeeding and the new website companion, Employer Solutions. (U.S. Department of Health and Human Services, Health Resources and Services Administration et al. 2008,

Office of Women's Health 2014) After the questions were written, subject matter experts vetted the questions for appropriateness, jargon, and other problematic areas. Then a pilot test was done using women who were similar to the intended audience.

DATA ANALYSIS

Analysis of interview transcripts occurred throughout the duration of the study using the Grounded Theory methodology, as prescribed by Charmaz. (Charmaz 2006) Grounded Theory identifies patterns and themes, then builds concepts and connects them together into a theoretical explanation that accounts for the lived experiences of those studied. Initially, transcripts were analyzed line-by-line and coded for content. Looking at these codes together, patterns and themes emerged to share the story of the participants who were or had pumped or fed while on campus. The transcripts and codes were then reviewed again to ensure accuracy.

Rev.com was used to transcribe all of the interviews. The documents were then loaded in groups to NVivo software. NVivo software was used to analyze and code the interview documents for both the employees and the Lactation Working Group.

PROTECTION OF HUMAN SUBJECTS

DATA HANDLING

During the interviews, subjects did not use their names, so that when the interviews were transcribed, it was impossible to identify who was talking. No identifying information is located on the files or the transcripts. Data collected is continuously stored in either a locked filing cabinet or on a password-protected computer.

Only the PI and Co-Investigator have access to these materials. All data is kept confidential to the extent permitted by law. Should the data from this subject be published, all identifiers will continue to be protected. All current and future study personnel who consented subjects, collected data, or assisted in analyzing data are CITI certified and approved through an amendment to the IRB.

RISKS TO HUMAN SUBJECTS

There were no known risks to human subjects, except possible fatigue, boredom, embarrassment, stress, or frustration. To alleviate these risks, participation in the interviews/survey was voluntary. Subjects were free to not participate in the study or decline to answer any question or questions.

BENEFITS TO HUMAN SUBJECTS

There is no known benefit to subjects for participating in this research. This study may expand knowledge in the field of lactation support in a university environment.

CONSENT PROCESS

Before the interviews, the researchers went over the purpose and outlined rules and guidelines for all participants. Then the researchers distributed copies of the informed consent document and explained the form (Appendix III) and read key parts of the form. Subjects had time to review the consent document. The subjects were allowed to ask questions. Taking part in this study was voluntary.

Once all of the questions were answered, subjects signed two copies of the consent form and returned them to the researchers. The researchers signed both copies and returned one to the subject to keep for her records, incase they had follow up

questions or concerns. Subjects did not have to answer any questions. Subjects may have chosen not to participate at any time. If subjects decided not to be in this study, subjects did not lose any benefits for which they may have qualified. Before obtaining consent, subjects were be required to answer the following questions:

1. Can you tell me what will happen if you decide to be in this study?
2. Will being part of this study help you?
3. Can anything bad happen to you if you are part of this study?
4. Can you decide not to be a part of this study?

PAYMENT OF HUMAN SUBJECTS

Participants were not paid for their participation in this study.

ADVERSE EVENT REPORTING AND DATA MONITORING

The research team closely monitored data collection and assured confidentiality at every point during this study. The participants were also monitored for signs of distress or frustration during the study. The IRB would have been notified immediately of any adverse events, whether expected or unexpected.

CHAPTER IV

RESULTS

This study was a mixed methods look to determine the potential barriers women experienced to successful breastfeeding while under the employ of the University of Louisville. Here are the research questions the study set out to answer:

- Research Question 1: With the implementation of the ACA's employer policy requiring time for breastfeeding or pumping, what are the barriers to successful breastfeeding for mothers who are full-time employees of the University of Louisville?

Hypothesis: Employee mothers who pump or feed on campus will identify their barriers as being time, space, and information.

- Research Question 2: What is the University of Louisville doing to facilitate successful breastfeeding?

Hypothesis: The University of Louisville has a policy and is working towards successfully enforcing it to varying degrees of success given the diverse nature of the workforce at UofL.

The study design was detailed in Chapter III. This chapter discusses the results of the study and each of the three portions. Chapter V will include a discussion of the findings.

LACTATION WORKING GROUP: KEY INFORMANT INTERVIEWS

Invitations were sent via email to all twelve of the participants of the Lactation Working Group (LWG). Four people initially responded that they would be willing to be interviewed. One participant changed her mind before the interview day and she chose not to reschedule. The three interviewees were Caucasian women with college degrees, two with master degrees. One of the participants was faculty (instructor), one was staff, and one was a graduate student who joined the group to help with institutional research. Two of these women had previously been nursing mothers; one of these women had breastfed within the last year and had utilized the University of Louisville's guidelines on lactation. The third participant was not a parent.

There were several themes that emerged from the key informant interviews with the Lactation Working Group members. These themes are broken down and discussed further in the discussion, but from the NVivo software, here are the counts that emerged from the three interviews.

Table 2: Lactation Working Group Codes

Themes	Sources	References
UofL Benefits	1	6
Room Scheduling	2	2
Supervisors	2	8
LWG Survey	3	5
ACA	3	7
Co-workers	3	8
Dedicated Rooms	3	11
Understanding Needs	3	8
Meeting Schedule	3	5
Structure	3	6
Volunteers	3	6

LACTATION WORKING GROUP DYNAMICS: STRUCTURE, SCHEDULE, VOLUNTEERS

The Lactation Working Group (LWG) dynamics came up in each of the interviews. The three things that were discussed by each member included: the meeting schedule, volunteers, and the structure of the group. There was agreement that the group is made up entirely of volunteers who have an interest in supporting lactation needs of the UofL community. There were no term limits or requirements to join. Many of the members volunteered after seeing requests come from various other groups including the

Great Places to Work, Get Healthy Now, and the Work/Life Balance committees of the University of Louisville.

There is no real structure to the committee. The leader of the group is the person who was willing to take on the role of leadership and do the duties of convening the group and setting the agendas. This member is seen as the leader by the whole group, and self-identifies in this manner.

The LWG meetings are scheduled once per month. They last about an hour and are held just off the main portion of Belknap Campus at the Humana Gym. All the group members noted that meetings were frequently canceled for various reasons, or that some members would miss for a variety of reasons, including maternity leave. Though it was also noted that this group was still very functional, often working between meetings via email.

The one student LWG member explains, “My perception is that they’re doing a really good job about fostering a good place to talk about the issue and to really get things ... They are getting things done, I think. That's the best proof that it's a good committee. I've enjoyed working on it and that's all.”

UNDERSTANDING EMPLOYEE NEEDS

Another theme that emerged was that of employee needs. Within this theme, there are many different sub-themes. A crucial part of the theme is information for the employees. There is a need for the employee to understand their rights under the ACA, and the UofL Guidelines, but also to be informed about the benefits that are provided for lactating women who are a part of the UofL health insurance plan for each pregnancy.

When asked specifically how employees would have heard about the lactation guidelines, there were a couple of thoughts, with the main argument being that they were available on the website for Human Resources (HR). They are not specifically mentioned at orientation. The belief is that it was the job of HR to put the guidelines out to the supervisors and on the website. It was the employee's job to find that information.

One participant from the Lactation Working Group says, "There is a certain amount of accountability for the employees to be aware of the benefits that exist at the university, whether it be lactation guidelines, how much time they can take for whether it's parental leave or vacation leave or sick leave or FMLA¹; all of those components."

Support was also a crucial theme. This included both support from supervisors, but also co-workers. Supervisors were discussed in terms of needing to know about the guidelines and how to implement them. They were also discussed in terms of how do you find space and who needs how much space. Support also included the sharing of the knowledge of how to manage the day-to-day lifestyle of how to pump.

She goes on to say, "The other side of that is as we disseminate information through those channels, if an employee comes to me and says, 'I'm expecting. I'm going to be out in this time frame,' then that is my job, as a supervisor, to say, 'Okay, well we need to make sure you do this FMLA paperwork and that I document how much time you're going to be out. I want to make sure that you understand that these are some of the resources that are accessible to you.'"

One of the issues that arise is trying to figure out how many employees will be utilizing the guidelines at any given time. The quantification of individuals who are in

¹ Family Medical Leave Act (FMLA)

need is a very difficult task. This is not data that is collected by anyone. The participant quoted above works in Human Resources and was well versed with the dilemmas of trying to find a number to be able to allot the right number of resources. The LWG has not solved this dilemma either.

The LWG has been working on a survey to try to answer some of the questions that they have about the needs of the employee. While there was a survey planned, it has been postponed for the time being. This is what the LWG has spent much time working on the past six months. Their survey will be distributed through HR to everyone who has taken parental leave or FMLA in a specified time frame, which was not shared with the researcher. The LWG understands that not all of these people will be able to participate based on their chosen parameters for the survey, but they feel like the ones who are eligible will be willing to participate.

FACILITIES

One of the big concerns from all of the key informants was that of facilities. The facilities at the university vary widely. One thing that seemed beyond their reach at this point was understanding the needs of the employees who pumped or fed at work. Understanding these needs is key to the group's focus. When setting the agendas or trying to decide on what issues they should be focusing, the desire to know what the needs of those utilizing the policy are important. This is one thing that is on their minds as they worked towards the LWG survey.

The category of needs falls into two sub-themes. One of these is the knowledge and understanding about the breastfeeding guidelines at the university as it falls within the scope of the ACA. Currently there is nothing in place to discuss these guidelines with

an employee, other than what is available on the HR website under UofL policies and guidelines in general.

The second major sub-theme under needs was dedicated rooms. In this context, the LWG mean a room dedicated solely to pumping, feeding, or storing breast milk. Ideally, they would love to identify multiple rooms on campus and have them dedicated solely to this purpose. Some of the factors mentioned in discussions included a lack of space all over the university, the costs associated with this type of room, and whether there is really a need for dedicated rooms. This question of need is one of the reasons that quantification of use is important for the university. (Currently, neither the university, nor the LWG, have any ability to quantify the number of women who will utilize the breastfeeding guidelines.)

One LWG member expounded on the topic of space in a way that seemed contrary to the stated purpose of dedicated rooms, “Here in (name of department) we don't have a specific room that is identified as the lactation room; however, we have had a few individuals that have had the need to express milk. Myself included. I use my office and that was my personal preference because it's private; I can pull the shades, I can lock the door. I have the outlet. I can sit and still work on my computer. It was very conducive to the needs of expressing milk and to the needs of ... As a director with a high-demanding job, continuing to function and not feel as though I was away from work for too long. We have another individual here in the office who works at a cubicle. Obviously, she's not going to be expressing milk there. She would go into one of the conference rooms, close and lock the door, pull the shades.”

While the issue of dedicated room space is a tough issue, one thing that 100 percent of the interviewed members of the LWG seemed very excited about was the idea of having people being able to schedule dedicated rooms via email. This is something that is not yet in place for a variety of reasons, including a lack of space. This is something that they hope to solve and implement in the future to ease what they perceive is a need for the pumping mother.

SURVEY OF EMPLOYEES

This survey (Appendix IV) was launched online at <http://breastfeedingsurvey.com> using a combination of Survey Monkey and WordPress. It was able to block multiple attempts from the same computer in filling out the survey. There were ninety-five (95) women who started the survey with a completion rate of 82 percent. All the data that was entered was used.

The age range for employees taking the survey was 23-44 years. The mean age was 34.57 years old, with the median age being 35. The sample's mode was 36, with ten participants. The standard deviation was 4.21 years.

Included in the survey were 38 percent of the women were currently nursing a child one year of age or under or were pregnant. Of those who answered this question, there were 61 percent of mothers who had a child who was age 1 and 1 day to five years of age.

Table 3: Age of the youngest child of survey participant

Age of the Child	Number of Respondents
Less than or equal to 3 months	11 percent (n=9)
3 months 1 day to 6 months	10 percent (n=8)
6 months 1 day to 1 year	17 percent (n=14)
1 year 1 day to 2 years	29 percent (n=24)
2 years 1 day to 4 years	21 percent (n=18)
4 years 1 day and up	12 percent (n=10)
Currently trying to conceive	1 percent (n=1)

Of the participants that answered the question about their relationship (n=88), 94 percent of the women were either married or partnered. Another 4 percent of the participants were single, and 2 percent were divorced or separated.

It was important to look at the break down of faculty and staff for this analysis, as this designation may influence what barriers the employee faces. Of those responding, 66 percent were staff, and 34 percent were faculty (n=87).

Of the employees surveyed, 94 percent pumped in some fashion while on campus, while a mere 6 percent breastfed their baby on campus (n=78). This included mothers who went to the Early Learning Campus daycare facility, as well as mothers who had their children brought to them to feed. It does not include women who left campus (e.g., went home or went to a daycare facility further away) to feed their baby.

Asking if the participant was aware of a policy that protected a mother's right to breastfeed or express milk for her child at the University of Louisville 54 percent

responded yes, they were aware of such a policy. This left about two fifths of the population who were unsure (10 percent) or did not know (36 percent) about a policy (n=83).

“I think the rights of the nursing employee should be easily located and in addition to being available to new mothers, I believe all supervisors should be informed. Many supervisors really are unaware of the policies or unsympathetic. Additionally, I would love for there to be a link on the website for new mothers with all pertinent information, which would include a list of pumping locations in each building and the amenities of each. I was always concerned when I returned to work where I was going to pump, and sometimes it took a week to figure it out or create a space, since there were none provided. Having this information in advance and knowing where to go would be very helpful. If a friend asked me today where she might go, I would not know,” explains one first time mother/staff employee who pumped in a utility closet.

The survey also asked where the employees had heard about the policy, if they aware of it. The majority (44 percent) listed a University of Louisville colleague as where they had heard about the policy. The next most frequent answer was a University of Louisville Document/Website/Official (41 percent), while the rest listed other.

When asked if they knew with whom they should speak regarding the policy, the majority (76 percent) did not to whom they should turn. A mere 14 percent said yes, they knew where to go, and 10 percent were unsure.

SPACE

In looking at the distance traveled to pump or feed, 45 percent said that they were able to pump or feed in their own space. Another question looked at pumping relative to

their work area, 35 percent said that they were able to pump or feed within five minutes of their work area, and 20 percent were able to pump or feed in the immediate work area, but not their office.

One 36 year old faculty said, “I had the best possible scenario for pumping...I didn’t have to go anywhere special, I just closed my office door.”

When asked if they felt that their space was private, 84 percent agreed that their space was private; while 16 percent disagreed that their space was private. While 63 percent said that they did not share a space, but 37 percent admitted that they were in a shared space.

Space and privacy created hardships, including some like this faculty member having her first baby explains, “I only felt completely comfortable nursing/feeding in my home. I fed my child a couple of times while I visited campus while on maternity leave, and I knew most of my options for nursing or pumping (my own office, that there should be designated spaces but other than the ELC I am unaware of any other designated space on campus). A SIGNIFICANT contributing factor to the reason I chose to stop nursing at 4 months was because I was returning to work. Even though there are plenty of closed spaces and the day care has a nice space, I could not see it (pumping or feeding while working) really working. I pumped and fed (mostly at home) during maternity leave. I feared the pump would be too loud even in my private office. Even with a small fridge and freezer, I could not see juggling work, pumping every 2 hours, freezing the milk, transporting it, or driving to feed my infant every 2 hours.” (Emphasis belongs to the employee.)

While that example is extreme, many employees felt uncomfortable and still pumped, like this 43-year-old staff member, “No, I felt extremely uncomfortable as I could hear people talking in the hallway and passing by. The pump was not exactly quiet and I felt that others could hear it as well.”

When asked about the amenities in the space, 99 percent agreed that they had electricity and a place to sit within the space that they used. About 24 percent of the respondents also had a sink in which to use to wash their pump parts or hands in the same room or very close proximity.

Respondents were also asked to talk about milk storage space. When asked if there was a place provided to store breast milk, 64 percent said yes, while 22 percent said there was not a space for milk storage for them. An additional 14 percent were unsure about the question of availability of milk storage.

WORKING WHILE PUMPING OR FEEDINGS

Nearly everyone (95 percent) surveyed said that they answered email for work purposes while pumping. The majority, 89 percent, said that they fulfilled other job duties while pumping. An additional 55 percent were able to talk on the phone for work related business, including 24 percent who participated in conference calls while pumping or feeding.

BREAST PUMP

The vast majority of mothers (74 percent) used a self-purchased, plug powered breast pump. A mere 16 percent used a breast pump that was battery operated that they purchased. When looking at multi-user pumps, 4 percent had access to a multi-user pump

supplied by their employer or within a dedicated space and 4 percent personally purchased a multi-user pump.

TIMING/SCHEDULING OF PUMPING/FEEDING

When asked about how many breaks they took to pump during an average workday, the majority (51 percent) pumped twice, 30 percent remarked that they pumped three times per shift, and 15 percent pumped only once. An additional 4 percent selected zero. It is not specified whether they were feeding their babies at work or at childcare, or if they were using reverse cycling² to negate the need for a pumping session in the working hours.

Time spent preparing to pump, pumping, and cleaning up, and scheduling this time is a complex issue as this staff member explains, “I once had to use a space provided in a building about 2 blocks away. It was a first come first serve, which meant sometimes I would wait for someone to finish. It kept me away from the lab too long, and I had to work extra to make up for the time lost. It was inconvenient to walk there and wait, but the space was fantastically set up for nursing mothers with multiple private booths and a sink in the facility. It even had extra sterile containers in case you ran out. I have also used a room that needed to be scheduled and that was even worse for my schedule as I was not able to predict when I would have time in my day to duck out away from my experiments.”

Pumping is a source of food for these infants, for many it was the sole source, as one 35 year old staff member and mother of two, talks about how it becomes a priority, “I

² Process by which an infant does not eat while the mother is away, but gathers all nutrition from nursing while the mother is home.

tried to prioritize my pumping by blocking time on my calendar and moving around the blocks as needed. At times I would have to miss a meeting/training/event or leave early/go late in order to pump.”

Some employees found flexibility to be the key to their success. This 38-year-old faculty member explains, “I pump around my schedule, rather than follow a rigid pumping schedule. This means I am not always able to pump at regular intervals and pump at different intervals on different days.”

As for how long a typical pumping/feeding session would last from start to finish, 31 percent responded that they were pumping/feeding for 21-25 minutes. 24 percent were engaged for 16-20 minutes, 20 percent only needed 10-15 minutes, 17 percent were using 26-30 minutes and only 8 percent required 31+ minutes. The amount of time that it requires to pump is tied to many factors, including the age of the infant, health factors of the employee, the type of expression method, etc.

SUPPORT FROM COLLEAGUES

Half of the mothers in the survey did not know another person at UofL who was currently, or had in the past, utilized the breastfeeding policy. Another 21 percent responded that they knew one mother, 14 percent said that they knew 4 or more mothers, 8 percent knew 2 mothers, and 7 percent knew of three who had utilized the policy at some point.

When asked about comments from their co-workers, there were a variety of responses. Positive comments were heard by 71 percent of the respondents, while 53 percent had been asked questions about the process or policy. Only 24 percent had heard negative comments, with 4 percent stating that they had been subject to harassment.

Asking about what educational or support opportunities should be provided by UofL, a total of 67 respondents answers. They were allowed to choose more than one reply. When asked about access to lactation support, 82 percent replied that they wanted to see this offered. Another 42 percent said that classes or workshops would interest them. Other items that came up included: dedicated space, flexible working arrangements, work from home options, among others.

This perceived lack of support was noted, as this 41-year-old staff member shows, “Reflecting back, I feel amazed that I was able to pump as long as I did. This was more due to my own determination than to support I received from the university. My 4 year old is healthy and thriving and rarely ill. I know I did the right thing for her.”

Education and support from the supervisors was also found to be important. This 36 year old staff member explains why, “More intentional education for supervisors regarding the needs if someone pumping/expressing at work. My supervisor did not realize the frequency at which I had to pump when I first returned to work after parental leave. I adjusted my work schedule fairly regularly to accommodate work demands, which caused physical discomfort and most likely a decrease in my milk production. Even though I was able to use my office to pump/express, I was often interrupted by coworkers including my supervisor. I was uncomfortable putting a sign outside my office indicating I was pumping/expressing so people continued to interrupt me which was stressful.”

REPORTING PROBLEMS

When asked if they knew to whom they should report problems or ask questions about the policy, 70 percent replied no. That left 13 percent responding that yes, they knew to whom they would address questions. And 17 percent were unsure of the right place to go for help.

INTERVIEWS OF EMPLOYEES

Employees were recruited for interviews in a variety of ways. Initially the call went through UofL today, Twitter, and Facebook was for Focus Group Interviews. Due to the increased amount of time, scheduling conflicts, and potential travel necessary for these types of meetings, the turn out was low. The decision was made to switch to individual interviews.

Interviews were scheduled online using SnapAppointments scheduling software. The employees were able to pick a time and location that fit into their schedule and the interviews were conducted at their campus location. Interviews included all three campuses.

In addition to the above methods, additional interviewees were found by using snowball sampling and word of mouth. There was also a second round of requests for interviewees placed in the UofL Today communication. Flyers were posted in the lactation rooms, and female restrooms through out all three campuses in buildings that were accessible via key card by the researchers.

There were 19 employees in total that were interviewed. These employees experienced 25 pregnancies, and had given birth to 24 babies that were breastfed. One

employee was still pregnant with her second baby at the time of her interview. Five of these babies were born prior to the ACA, leaving 19 babies who were breastfed during the period of time that the ACA was in place.

Interviews were done to the point of theoretical saturation. The data was then transcribed verbatim by a professional transcription service. Each interview transcript was then read to assess accuracy of the transcription and to refresh the researcher's memory. In the next reading of the transcript the data were coded line by line. NVivo Software was used for coding and collecting the codes. The codes and interviews were then reviewed again. As the themes emerged axial and selective coding were used to code even further and the theories emerged.

Table 4: Coded Themes from Employee Interviews in NVivo

Themes	Sources	References
ACA	11	16
Law	13	17
UofL Policy	18	44
Lack of Support	13	32
Organized Support	17	34
Unorganized Support	18	59
Childcare	12	27
Supply	16	41
Equipment	19	61
Privacy	19	64
Scheduling	19	74
Space	19	80
Time	19	49
Goal	19	33

AFFORDABLE CARE ACT (ACA)

The vast majority of the participants were unable to name the Affordable Care Act or Break Time for Nursing Mothers by provision. No one was able to name either as a source of protection, even if they had some sense that there was protection for their

right to breastfeed or pump. A typical belief was like this first time mother and staff member: “I didn't know very many specific laws, but I did know that I was entitled to a comfortable place to pump. I knew that it would not suffice to go into the bathroom or some cramped closet to pump. I knew working at the university; they would be good about adhering to that. Like, ‘Okay, she needs a decent place to go.’ That's really generally what I knew about it.”

Even when given a specific provision like the free breast pump, many did not know what the source was for this benefit, even when they knew it existed. Like this staff member from Health Sciences Campus: “I didn't know affordable care act gave breastfeeding pump.” The few employees, who did know that there was an available pump, did not like the pump offered or did not find it useful, typically because of the brand or usage of the pump. This caused many people to distrust the pump, like this staff member and mother of two who went on to hand express: “It wasn't hospital-grade, you know? It was just kind of a run-of-the-mill, average pump. It was a double pump. I actually took it into the lactation consultant to have it tested...”

LAW

More employees were able to discuss what their rights were in regards to the law, like this staff interviewee and first time mother, “Yeah, I did know that there were laws stating, I believe at the time that I was allowed to take some time at work to pump at work.” The two employees who were able to articulate something very specific still didn't know many details, like this staff member and mother of two: “Now initially, my boss' suggested, you know like, one of the bathrooms. I did know as much that that wasn't going to work, you know. I didn't have to pump in a bathroom, I needed a better space

and that it should be provided. So I felt comfortable and confident that that would happen.”

Another staff employee and first time mother from Health Sciences Campus added: “I didn't know a whole lot. I remember hearing something about when the organization has x amount of employees they're required to have a certain area for breastfeeding moms. That's about all I knew. I just knew that it was required, I'm not sure what moms did when it was a smaller organization, wasn't sure how that worked for them.”

Even though 54 percent said that they knew something about a policy, most of them had a sense of not knowing like this staff member and mother of two: “I don't really know (to) what I'm entitled ...”

UNIVERSITY OF LOUISVILLE POLICY

Most employees were unaware of the benefits offered at the University of Louisville specifically or what they meant for their situation as this staff member explains: “Do I have to do this on my break? Do I have to go in there when I need to? Can I go as often as I would like to?”

Some employees knew of benefits but still had doubts like this first time mother and staff employee at Belknap Campus: There ”...are great resources at UofL but I think maybe most people ... Either they don't know about them or I think some people are just afraid to utilize them.”

Or they had heard rumors and couldn't figure out how to get more information, like this faculty member from Belknap Campus: “I know now, 4 years later, that there are

supposedly some mothers' rooms somewhere on campus, but I don't know where. They're certainly not advertised.”

Those who knew about the benefits had to seek them out on their own. This produced varying results. One staff employee from Belknap Campus explains, “I did start to learn a little bit more about UofL, and I did learn that we had designated lactation rooms on campus. But I also heard that they're hard to come by and you have to schedule ahead and, you know ... The nicer one are booked up in advance of course, so...”

One staff employee from Belknap and first time mother said, “HR didn't provide me with anything as far as that benefit.” Though she had an idea for how to help prevent that from happening in the future: “I think when a mother notifies HR and takes maternity leave, they should be counseled what options there are, what's available.”

LACK OF SUPPORT

The absence of support falls into two main categories, the lack of support at work and the lack of support outside of work. Due to the focus of this study, we will only be addressed the lack of support at work.

Sometimes the lack of work support was simply a lack of understanding, like this Belknap Staff employee shares, “As supportive as we may try be, or our supervisors try to be, I think still unless you're doing it or you've gone through it, it's kind of hard to really give the amount of support which this needed.”

This staff member and mother of three from Health Sciences Campus expressed frustration at the lack of support, “I think UofL ... I think there are some good ways they could do some stuff but I think again they're the ostrich with their head stuck in the sand. They don't offer anything for breastfeeding. I definitely wouldn't want to breastfeed in

our bathroom. There are big cockroaches in our bathroom. There was one in the sink yesterday.”

The real problem is that a lack of support on any front can really lead to problems. The lack of support at work is in many ways more difficult to overcome. These two mothers shared their views on the lack of workplace support, one faculty member from Belknap says after her first baby: ”... then when I ran into problems, I was totally defeated.” Or the same phrased differently from a first time mother and staff employee at Health Sciences Campus: “If there was any obstacle- if there was any obstacle, it would have been sufficient excuse to not do it.

ORGANIZED SUPPORT

Organized support was defined as support from an institution, business, group or professional. 90 percent of the women interviewed reported reaching out to one or more areas for organized support. These employees took classes from professionals, usually within the hospital setting, prior to giving birth. Some of these classes were specific to returning to work and breastfeeding, but the content and focus varied widely. Of the classes mentioned, professionals taught 100 percent of these classes.

In the confines of the place of birth, all of the mothers received lactation support within the hospital. This support was voiced as being important by many of those interviewed, like this first time mother working as staff at Belknap Campus: “My lactation counselor said, ‘You just breastfeed forever if you can!’ ... I was thinking one, that was my goal. That (weaning at one) didn't happen because I'm still nursing because she won't drink regular milk, but at least I did reach my goal.”

Some employees continued to look to their lactation consultant for support, even beyond the first weeks, like this first time mother from Health Sciences Campus and staff member: “I still have my lactation consultant. I don't know, I've never officially terminated that relationship.”

UNORGANIZED SUPPORT

Unorganized support was defined as support from family, friends, and co-workers. The relationship to other co-workers who had had a positive experience was very influential for 95 percent mothers. This first time mother and staff member at Belknap Campus explained how it worked for her, “I had a friend of mine who works right down the hall. We basically work in the same department. She had her son three months after I had my daughter and she was nursing too about the same time I did. She was always very supportive. We share breastfeeding stories and woes and all that.”

This staff employee from Health Sciences Campus talks about how she found other employees for support, “Yes, there were some employees in my department, which isn't the department I work in now, but that had babies and nursed. We actually all used the same room, we shared the room.”

Office culture plays a part according to this staff employee and mother of two at Belknap Campus, “At U of L, I was fortunate that my director, when I started work, was on maternity leave, so when she came back she was pumping, and then another coworker, almost around the same time, had a baby, and she was pumping, and then I was the third one, then, to follow suit in terms of, this is what we do in our office. It was just part of our office culture. I know that that's not most people's experience, but it was nice that that

was set up in such a way that I didn't feel like I had to ask permission to build it into my life or schedule.”

CHILDCARE

Childcare settings were also noted in 63 percent of the interviews, despite not being asked about. Some employees had really great experiences with care givers bringing them the children to feed, though one person would go home at lunch to nurse and the childcare provider was not understanding why the employee did that when the childcare provider could have just given the baby a bottle.

While the scheduling was often problematic, directly feeding the baby did occur with 16 percent of the women who were interviewed. Most mothers who tried this, really liked the contact with their babies during the day, like this faculty member from Belknap Campus: “... because I just tried really hard to set my world up so that I could like take a lunch break and go home and breastfeed her, or have somebody bring her to me. I did all kinds of crazy things.”

One staff employee and first time mom walked to the Early Learning Campus (ELC) from the north side of Belknap campus, “It's not that far. It's probably five, seven minutes. I would just take my lunch break and go over there and feed her and then come back.

There was s staff member and first time mom at Belknap who had a nice set up, but had some surprises when it came to childcare: “...sent her to daycare she was sick and sick and sick, for like three or four weeks straight. Then I'm taking all this time off that I didn't have anymore because I took the three months. That would've been good to know. I'm a new mom, I have no idea. This is my first child, this is my first time.”

SUPPLY ISSUES

Out of the employees interviewed, 84 percent of them mentioned supply of breast milk as an issue when it came to working and pumping. This was either a huge fear or a reality for them. One staff member from Belknap Campus and first time mother explained, “Keeping up my milk supply. That was my biggest fear. Working and breastfeeding. I'm not going to be able to keep up my supply, I'm going to be like my friend and get too busy and forget to pump or not pump or not have time to pump. I would drop everything and go pump.”

Often times, the employees were struggling to keep up with their supply to feed their baby the next day. There were many reports like this one from a first time mom and staff member at Belknap, “Right now on a daily basis I'm just making enough to get through for the next day.”

Though some people were able to eek by with their milk supply like this first time mother and Belknap Campus staffer, “We haven't been in a situation like that so I think maybe it's not necessarily having a huge stockpile at this point but just having enough to get through each day successfully and not having to worry about having to use formula.”

EQUIPMENT

Every single employee was able to name at least one piece of equipment that she used to make her pumping experience more productive or easier. This frequently included a breast pump (100 percent); hands free pumping equipment (84 percent), cooler bags, a personal fridge, etc. One person even had to purchase a heater because the room was too cold to be in, let alone pump in.

PRIVACY

Privacy was a huge concern for every interviewee. This included visual privacy, knowledge of the act of pumping, as well as the sound that the pump made. Some of the privacy concerns were also about the space, like this faculty member and first time mother at Belknap Campus, “I can close the door anytime. But the other problem is, my students didn't know. So they would come by and say, ‘I knocked on your door.’ Well, yeah. I heard you. I just didn't open it.”

Having a private space was helpful in allowing the employees to take ownership of their space and gave them the feeling of permission to do what they needed to do, like this third time mother who is staff at Belknap Campus, “I just shut my door and my staff knew that there were certain times throughout the day that if my door was shut you'd see me in fifteen minutes, twenty minutes tops.”

Though there were certainly issues with the lack of privacy, like this staff at Belknap as a first time mother, “None of us know if the (name) Department has a place that's private for pumping other than the women's bathroom.” This often led to creative solutions on the part of the employee, like pumping in cars, or storage closets, or borrowing offices.

SCHEDULING

Scheduling was about the intended times that they would need to use their pump. This was handled in a variety of ways. Some employees knew that their work scheduled would be hectic and that was just the lay of the land, like first time mother and staffer at Belknap Campus, “Every day is just a new, exciting journey so you never know who's

going to pop by. Or I may plan on having a time to pump and something comes up and I'm rushing.”

Often times, pumping or feeding would interrupt work flow if not planned accordingly. This led to frustration for some of the employees, like this first time mom and staffer at Belknap Campus, “I think there were frustrating times when I was in the middle of something and I needed to stop and go pump, then I needed to leave to go get my daughter.”

And some people just went with the flow of the day like this first time mother and staff at Health Science Campus, “I did not really schedule. I just probably every three to four hours when we had some down time, I would just get away and go pump, but I didn't schedule it per say.”

SPACE

Space is at a premium all over the University of Louisville. This is not a problem that is specific to nursing or pumping employees. The nature of feeding or pumping does require a separate need for space that other employees may not have. This can lead to issues both during the average day and in the special situations while performing work duties, like this staff member at Belknap, talking about her return to work after having her first baby, “There was a bit of scrambling around right before I got back from leave to find me a place to pump in this building. She worked with some people and they were able to find me a space on the fourth floor, which was more steps to climb, but hey, it helped me shed the baby weight! At first, I'm like, ‘Wow, I got to go up and down these stairs and walk over ELC. Oh my gosh. Am I going to get any work done?’”

There were also solutions offered by fellow co-workers, like this first time mother and staff at ShelbyHurst Campus, "My co-worker told me, 'This is always a place you can come and pump.' Sometimes it's the figuring out a space where it's available, but luckily, she was out for a few months and that's where I would go."

Or this staffer's solution when she worked on Belknap, "I didn't have an office, I was in an outer suite, and, thankfully, my boss was on sabbatical so I could use his office. I do not know what I would have done if he was not on sabbatical."

One faculty member, who is also married to another faculty member who was trying to help a co-worker in his department, "He asked her, 'Hey, do you need a place to pump?' So he helped set up a nursing room for her via the (name of) department because the answer that we were given for her by facilities was, 'If she needs a place to pump in (name of department), she can go to the third floor unisex bathroom.'"

And then there was the issue as it related to traveling both in town and out of town, as this staff employee from Health Sciences points out, "Not really finding a place I think the biggest problem I have with finding places is when I travel. While UofL can't necessarily help find a place in every situation like traveling or conferences in town, they can provide the knowledge and skills for the employee to help them negotiate that for themselves when in unique situations."

TIME

The provisions for time to pump are not specified by the ACA because of the differences in anatomy, biology and the employee's health history. This did not prevent people from being concerned, like this faculty member from Health Sciences Campus, "I was worried, that I would have enough time to pump, like enough time throughout the

day and that my milk would dry up, but I never experienced that problem. That was my biggest fear, that I wouldn't be able to pump enough time, and that I would eventually stop producing as much.”

Time was also a factor in the amount of work they missed while pumping or feeding. Some mothers, like this faculty member at Belknap Campus, were able to work during their pumping time when in a private space, “Sometimes I close the door just to work on an article that's due. They didn't really necessarily know what I was doing in there all the time, and I never had to explain myself to anybody.”

Other employees did not find working while pumping to be conducive to milk production, like this staff member at Belknap Campus: “So I thought, if I just focus on one thing and pump, you know, it's better for the productivity, it's better for me, and hopefully I can get through this a little bit faster than I would if I was dividing my focus on, you know, not ... I don't know. Maybe not relaxed and able to pump like I need to.”

The provision of Break Time for Nursing Mothers say that the breaks to pump are not paid, except as other similarly covered breaks for other employees might be covered. This means, at the University of Louisville, that employees who are salaried do not have as much of an issue with this part of the provision. Only one employee in the interviewee group was an hourly employee. Her pump time was exclusively during her lunch break and she only pumped once per day. This meant that she was not forced to make time up for this purpose. It is important to note that she fell short of her goal and the AAP recommendations because of milk supply issues, which may have been caused by too infrequent pumping.

GOAL

When asked about their goals for breastfeeding, 95 percent of the employees had a goal of breastfeeding for one year. This matches the recommendations of the American Academy of Pediatrics. 21 percent of the women became exclusive pumpers for a variety of reasons including, one preterm baby who never learned to latch, and three who wound up exclusively pumping after returning to work due to the baby's preference for the bottle.

The employees were all very dedicated to their personal goal with sentiments like this staff employee from Belknap Campus, "I was pretty determined to shoot for a year, although the last part of that involved mostly just pumping ... You know, definitely at least the last month of it was just exclusively pumping. But I just wanted to at least be able to do that for a year."

COMPARATIVE ANALYSIS

Within the interviews were fourteen women who breastfed since 2010 law, and five women who had their babies prior to the enactment of the Break Time provisions of the ACA. A comparative analysis was done to look at the differences in the hypothesized barriers, as well as whether or not they met their personal goals.

When it comes to space, 100% had issues with space prior to the enactment of the ACA. 40% of these employees pumped in their own office. The employees who were interviewed and had pumped since the enactment of the ACA, 53% reported issues with space. 30% of these reports were minor in nature. Since 2010, the interviewees saw 50% pumping in their own office, 11% using a dedicated space (100% of these on Health Sciences Campus), and 39% used another office or space.

Time was another barrier that was looked at in the interviews. Prior to the ACA, 60% of the employees reported no problems with time. This number dropped to 37% post-ACA. This was not explored further. Flash-forward to post-ACA and 16% had a good working knowledge of their rights, 63% had a vague knowledge of their rights, 10.5% knew they were entitled to a clean space, not a bathroom, and 10.5% had no knowledge to what they were entitled.

Information about the rights of a breastfeeding employee has been an important topic. Prior to 2010, 60% of the employees had no knowledge of their rights. 40% of the women had a vague knowledge of their rights.

On the issue of goals, prior to the ACA only 20% of the women achieved their goals in breastfeeding duration. Since the enactment of Break Time for Nursing Mothers 60% of the employees report meeting their breastfeeding goals. Considering that 95% of the interviewees had a goal of one full year of breastfeeding, in line with the AAP recommendations, this is important.

CONCLUSION

There were many themes that emerged from all three data sets. Chapter V will discuss the conclusions that the researchers have drawn from these themes and the data. There will also be recommendations made for action and future research.

CHAPTER V

DISCUSSION

This study used a mixed methods design to address the following research questions:

1. With the implementation of the ACA's employer policy requiring time for breastfeeding or pumping, what are the barriers to successful breastfeeding for mothers who are full-time employees of the University of Louisville?

Hypothesis: Employee mothers who pump or feed on campus will identify their barriers as being time, space, and information.

2. What is the University of Louisville doing to facilitate successful breastfeeding?

Hypothesis: The University of Louisville has a policy and is working towards successfully enforcing it to varying degrees of success given the diverse nature of the workforce at UofL.

STUDY RESULTS

Chapter V will look at the findings and what the implications are for the University of Louisville. It will also address the limitations of the study and a look at what future research might look towards.

RESEARCH QUESTION ONE FINDINGS

TIME

While the amount of time it requires to pump for an adequate supply to feed a baby will depend on the age of the infant, the pump used, the baseline supply of the mother, and other biological factors that vary from woman to woman, 51 percent of the mothers in the survey pumped twice a day, while 29 percent pumped three times per day.

As far as how long it would take to pump, which included gathering supplies, moving to and/or setting up location, pumping, clean up, storage of milk, and return to work there were 32 percent survey respondents who used 21-25 minutes per session; 24 percent used 16-20 minutes, 19 percent took only 10-15 minutes, 16 percent used between 26-30 minutes and 9 percent used 31+ minutes.

While typically you would consider this time away from work 94 percent of the mothers used their pump time to answer work related email; 89 percent fulfilled other job duties; 53 percent were able to talk on the phone, including 25 percent who would participated in conference calls.

This shows that the time is not simply down time for the majority of the women surveyed. They are trying to combine work and breastfeeding, even at a time when this is not necessary.

SPACE

In looking at the distance traveled to pump or feed, 46 percent said that they were able to pump or feed in their own space. 34 percent said that they were able to pump or

feed within five minutes of their work area, and 20 percent were able to pump or feed in the immediate work area, but not their office.

In addition to simply the distance traveled to space, a number of other issues were brought that were interfering with the employees' ability to pump or to relax to get an adequate let down for milk expression. These included: concern over the noise of the pump (both in terms of disturbing co-workers as well as concern about other employees "knowing" what they were doing) and privacy in the space.

To truly support employees, these issues all must be addressed. This is where the support of the supervisor and co-workers can be very beneficial. This should become the culture to strive for in order to fulfill both the ACA legal requirements and the recommendations on recommended length of breastfeeding for infants.

INFORMATION

In the survey, 44 percent of the employees did not know or were unsure of the fact that there was a policy and what it specifically covered. Only 15 percent of women in the survey were able to say that they would have an idea of where to report problems or have questions answered.

Lack of information by the women or their supervisors was frustrating. Employees often knew that being asked to pump in a bathroom was not the right answer, but many did not know where to turn after a statement like that, so they developed their own solution or turned to someone else at the University of Louisville, often other breastfeeding employees.

About half of the women knew someone else who was breastfeeding at the University of Louisville. Many responded that this was very helpful in finding out

information or merely trading stories. Knowing other women who are breastfeeding was something that 63 percent of the employees interviewed said that they would like to have access to at the university.

CONCLUSION RESEARCH QUESTION 1

Time is worrisome to the participants for a variety of reasons. This includes both the time away from work, but also the starting and stopping in the middle of the workday. This causes anxiety for the employees, both in terms of how they are doing their job, and what their supervisor is thinking about their time away. This is not currently noted as an issue from the LWG, or from the perspective of the Break Time provisions, which state that there is an allowance for a “reasonable” amount of time. (Though, the UofL guidelines go as far as to say this, many employees, including supervisors, may not be aware of these guidelines.)

Space is an issue for many employees, both in terms of where the feeding activity occurs, as well as the privacy of that space. All three groups within the research discussed space. Space is about not only the physical space, but the contents of that space for pumping (e.g. seating, electricity, etc.), as well as the privacy of that space. When employees felt they had private space that had met their needs, they were able to breastfeed more comfortably, and felt this helped them meet their goals.

Lack of information about the policy was a huge piece for all of the employees, both in the survey and the interviews. While members of the lactation working group felt that employees knew about the guidelines, this was not found to be the case when talking to or surveying the employees. If the employees do not know about their rights, they

cannot exercise them. This also left many of the employees feeling like they had to fight for the right to pump, even when no one was challenging them.

RESEARCH QUESTION TWO FINDINGS

The University of Louisville has a Lactation Working Group (LWG) that provides informational support to the university. This group is comprised of volunteers from a variety of standpoints including committees like Great Places to Work, and Get Healthy Now; there are also members from a variety of backgrounds including workplace (e.g. School of Nursing, Institutional Research, Human Resources, etc.); there are also members who have been breastfeeding mothers while working, some at the University of Louisville.

Human Resources (HR) has the Lactation Guidelines (Appendix V) available on their website. These have been vetted by the LWG and sent through the various committees per university protocol. Currently, HR is in the process of having the guidelines revised in a name change to be called a policy. The representative from HR believes that a wording change will change the tone of how the guidelines are perceived.

The LWG and HR are engaged in finding new and creative spaces for employees to pump while at work. Their main focus appears to be on spaces that are solely dedicated to breastfeeding; multi-user rooms spread around campus. They are also very interested in being able to schedule these rooms via email or other electronic formats to make it easy for mothers to reserve time to pump.

While this is certainly something that can be helpful, the vast majority (90 percent) of employees in the interviews are not using dedicated rooms that are already

available. In the survey 63 percent of the employees said that they did not share a space, though this may mean that they have another location that is not their office, nor a dedicated space, such as the office of a supervisor or co-worker. The lack of reported use of the dedicated spaces may be because they are unable to readily find them, or because of other factors like distance. Though if these employees have to go to another location to pump or express breast milk, they will cease to be able to perform job duties during their pumping time. This will also increase the amount of time spent away from the job in general.

It is highly unlikely that enough space would be found to be able to accommodate the entire set of campuses. The university should look into alternative arrangements, like the Mamava portable lactation space. (Mamava 2015) The Delphi Center on ShelbyHurst Campus would be a great place to use this as a trial.

They have a need for a dedicated space because the majority of people who are there are there for trainings and do not have private offices or a working knowledge of the campus. It would also solve some of the dilemmas faced by UofL employees who attend meetings at the Delphi Center and are away from their normal pumping space for these trainings. The Mamava may also be beneficial if the university ever decides to open their spaces to lactating students.

SUPPORT

When it came to support we looked at both organized (professional) support as well as social support. In the survey, 50% of the employees knew at least one other mother who was employed at UofL and pumping or had pumped. And 95 percent of the respondents in the survey had positive experiences as well. There was also support from co-workers, which was largely seen in both survey and interview participants. Even when the co-worker was asking questions about breastfeeding or pumping, the lactating employees largely felt that was a positive interaction.

Nearly all of the participants had sought or been given help from a professional, such as a lactation consultant at birth, a La Leche League meeting, or new mothers group. Having support, particularly in the first few weeks can help ensure that breastfeeding initiation goes smoothly, which paves the way for lactation during employment.

CONCLUSION RESEARCH QUESTION 2

The university does have a policy (called guidelines), but poor knowledge about the existence of the policy is shown in employees. This means that there is a delay or complication for implementation of the guidelines. The LWG is a dedicated group of employees, who foster true support of the guidelines. It appears that their guidance comes less from research that shows what the UofL community needs, and more from their well-intentioned perceptions of the needs. The survey that the LWG had planned has been delayed, this will help them focus their energies.

COMPARATIVE ANALYSIS

The comparative analysis of the interviewees shows a drastic improvement in many of the areas including time, information, and goals. The information about space

stayed relatively the same. This is a huge difference within just five to seven years. 60 percent of the employees are now meeting their goals, which align, 95 percent of the time, with the recommendations from the American Academy of Pediatrics.

Looking at the knowledge of their rights alone, none of the women knew anything about breastfeeding rights prior to the ACA. While there were no ACA or university guidelines, there was a Commonwealth of Kentucky statute providing some protections. Now 16 percent of the employees knew about the policies and rights in a complete sense and 73.5 percent had at least a vague understanding of their rights, leaving only 10.5 percent not knowing their rights at all. In the interviewees in the prior to ACA segment, 60 percent did not know anything about their rights.

The interview data mesh well with the survey data, which was all post ACA employees and a larger sample size. Here they noted that 54 percent did have knowledge of a policy and their rights. And 10 percent knew that there were some rights afforded to them, even if they did not know what they were or what the source was of those rights.

This shows that the University of Louisville is moving in the intended direction and that the ACA provisions are helping increase breastfeeding duration, which is needed to reap the benefits to the employee, the infant, and the university community.

QUANTIFYING UofL EMPLOYEES WHO ARE ELIGIBLE FOR ACA BENEFITS ON CAMPUS

One of the problems has been that it is nearly impossible to quantify the number of women who would need to utilize the services and facilities as a part of the Affordable Care Act's Break Time for Nursing Mothers law. This is because the university does not

track breastfeeding. In fact, pregnancies of employees are not exactly tracked either. While human resources can look at how many people have taken parental leave, this number includes all mothers on maternity leave, regardless of breastfeeding status, mothers who are taking time off to care for a sick child, or an adopted child; as well as fathers who are choosing to take paternity leave.

When any planning is put into place, one of the first questions is often, how many people will be affected? What resources will we need? How much will it cost? These are all dependent on the number of people utilizing the policy. This policy is no different. Therefore, in an effort to provide some guidance on the number of employees at the University of Louisville who would potential utilize the Break Time provisions, the following calculation has been developed in an attempt to find a range of potential usage from employees at UofL.

Table 5: Number of employees per year and fertility rates.

Year	Number of FT Female Employees Ages 18-44 (Office of Academic Planning & Accountability 2015)	National Fertility Rate	Anticipated Number of Pregnancies at UofL
2010	1548	64.1 (Martin, Hamilton et al. 2012)	99
2011	1597	63.2 (Martin JA 2013)	101
2012	1525	63 (Martin JA 2013)	96
2013	1517	62.5 (Martin JA 2015)	95
2014	1538	63.2 ³	97

Taking the actual number of full time, female employees for the years 2010-2014, the years that the ACA was in place and multiplying that by that year's national fertility

³ The fertility rate for the year 2014 was averaged from the previous four years because it is not available.

rate will give us a number of anticipated pregnancies in the population. (2014 data was estimated using previous year's data due to the lack of data for that year.) The number of pregnancies will be larger than the number of breastfeeding employees because not all mothers choose to breastfeed for a variety of reasons and a very small number of women will adopt a child and choose to breastfeed, as supported by the AAP. (Johnston 2012)

Table 6: National Breastfeeding Rates by Year at the Cut Points Listed⁴

Breastfeeding (US)			
Year	Ever	6 months	12 months
2010 (Centers for Disease Control 2013)	76.5	49.0	27.0
2011 (Centers for Disease Control 2014)	79.2	49.4	26.7

⁴ More recent data is not available.

Using national data, we can take the figures for the number of 79.2 percent “any breastfeeding” which is assigned during hospital stays; as well as the “any breast milk at 6 months” and “any breast milk at 12 months” data. Using this data for each year in our data set will give you a range of anticipated breastfeeding mothers from high to low. (Breastfeeding data is not collected on birth certificate data, therefore we only had final numbers for 2010 and 2011.)

The range was also calculated with the same anticipated pregnancy data, but this time using data from the Infant Feeding Practices Survey (IFPS), that includes a break down of infants who were feed any expressed or pumped breast milk within the last seven days by month. (Centers for Disease Control 2014)

Table 7: Percentage of babies fed expressed or pumped breast milk in the past 7 days by age (Centers for Disease Control 2014)

Age	Neonate	6 Months	12 Months
Percentage	48.5	43.7	16.4

While both ranges are far from perfect, they are the only number that we can even begin to contemplate when dealing with the question of: How many employees use this policy?

Table 8: Range of Anticipated Breastfeeding Women Each Year Calculated from Data from Breastfeeding Report Cards from NCHS/CDC

	High/Ever Breastfed	Middle/Any at 6 Months	Low/Any at 12 Months
2010	74	43	22
2011	75	45	24
2012	74	45	25
2013	73	46	26
2014	77	48	26

The above chart shows that you could reasonably expect an average high of 76 breastfeeding employees and an average low of 25 employees, in an year. Again, this data reflects breastfeeding infants, not infants who are being fed expressed or pumped breast milk. Therefore, these numbers include both breastfeeding and breast milk feeding infants.

Table 9: Range of Anticipated Breastfeeding Women Each Year Calculated from IFPS (Centers for Disease Control 2014)

	Neonate	6 Months	12 Months
2010	48	43	16
2011	50	44	17
2012	47	42	16
2013	46	41	16
2014	47	42	16

This data shows us a tighter average range from 16 to 48 employees who would be utilizing the Breastfeeding & Lactation Guidelines at UofL in a given year. This data is specifically based on infants who were receiving pumped or expressed milk in the immediate seven days prior to the survey at each age group. This data is more likely to be reflective of what UofL will find in its employee population. (During the five years in question, 2010-2014, the range for the number of infants breastfed, not necessarily the number of total women would likely be 81-238, this would include multiple pregnancies, as it does not specifically count women, but infants.)

There are limitations to these calculations in addition to those noted above. One thing that these numbers do not take into consideration is that each of the numbers is representative of a pregnancy. This study looked at mothers, not specifically the number of pregnancies. So in a span of five years, you would have a certain number of women who would appear in this data multiple times. There were mothers in the survey and in the interviews who had multiple children over the course of the five-year window that this study looked at specifically.

The numbers listed in the High/Ever Breastfed category are assuredly not going to be the number of employees that we see utilizing the policy in a given year as new cases. This is because the number of women who quit nursing drops precipitously in the first few weeks and months after birth. (Grummer-Strawn, Scanlon et al. 2008, Centers for Disease Control 2014) This is typically the first six weeks and the first three months. Since UofL offers employees six weeks of paid leave, many will still be on maternity

leave the first six weeks, with some still at home in the second six weeks of their infant's life using FMLA.

Given that pumping breast milk is not necessarily considered a pleasurable experience and often comes with the loss of time and flexibility, many mothers are anxious to drop pumping, even while they are still breastfeeding. So, the numbers at the Low/Any at 12 Months may be falsely inflated in terms of who is still pumping. This is where the second calculation of the expressed breast milk comes in as more accurate. Therefore, from this study a recommendation that the data used in the Infant Feeding Practices II be used to calculate the anticipated number of employees that may utilize the Breastfeeding & Lactation Guidelines as set forth by the University of Louisville. (Centers for Disease Control 2014, Vice President for Human Resources and University EEO Officer 2014)

It is also important to note that while each year is talking about new cases, there will be employees who are included from the previous year who still have a child in the under one year of age category that is protected by the ACA and will still be expressing/pumping.

RECCOMENDATIONS FOR CONSIDERATION AT THE UNIVERSITY OF LOUISVILLE

After careful analysis of the quantitative and qualitative information from the university employees, as well as a review of the literature, there are a few recommendations that would increase the knowledge of the benefits afforded by the university to employees, minimize disruption, and increase breastfeeding length for the

benefit of the university as a whole while addressing the barriers that have been identified. These include:

1. Better dissemination of information regarding benefits at UofL
2. Access to professional lactation support
3. Education for all parties, both employees, partners and employer
4. Encouragement of a system of discussion between current, future, and past breastfeeding mothers on campus
5. Elevate the Lactation Working Group's status at UofL

BETTER DISSEMINATION OF INFORMATION REGARDING BENEFITS AT THE UNIVERSITY OF LOUISVILLE

The University has a robust package of benefits for pregnancy and lactation. The problem was that more people did not know about these benefits or understand how to make them work in their favor. One suggestion from an employee was, "I think when a mother notifies HR and takes maternity leave, they should be counseled what options there are, what's available." This is certainly one way to notify prospective breastfeeding mothers about the benefits available for lactation support.

This information should include both information about the lactation guidelines at the University of Louisville, but also information regarding the availability of the breast pump benefit. This benefit is currently only available to those who have health insurance through the university. Though, UofL could also counsel those who have health insurance through a different location on the basics of how to apply for, and receive, a pump.

Holding quarterly classes on returning to work while breastfeeding, lead by a lactation consultant, and hosting a panel of employees who have been successful with pumping while at the university, would be a great addition. It would allow employees to get information about the available benefits in a timely manner, to understand what their rights and responsibilities are as a breastfeeding employee, and to meet other mothers who will be utilizing similar skills around the same time.

Breastfeeding education increases the knowledge surrounding not only the basics of breastfeeding, but also of common challenges when returning to work, milk supply, and pumps. Returning to work, the concerns that go along with it, the perceived and real milk supply issues, and a lack of support are the main reasons that employees who return to work discontinue breastfeeding/expressing sooner than originally intended. (Jones, Kogan et al. 2011, Johns, Forster et al. 2013, Neifert and Bunik 2013, Odom, Li et al. 2013)

ACCESS TO PROFESSIONAL LACTATION SUPPORT

There is a benefit currently in place for the support of breastfeeding employees and female dependents from a lactation consultant (IBCLC)⁵ through the employee health benefit insurance system. This benefit does not extend to those who do not have insurance through the University of Louisville. There are also funds available through healthcare savings accounts (HSA) and flexible spending accounts (FSA). Though many people are unaware of this benefit. This would be something that could be added to the information on the benefits provided by UofL.

⁵ An International Board Certified Lactation Consultant (IBCLC).

There are plenty of lactation consultants available within the community, including those engaged by hospitals at no or low cost. This is in addition to the private lactation support available for a fee. All of the birthing hospitals in the surrounding Jefferson County and Southern Indiana hospitals have access to support from an IBCLC at the time of birth as a part of the hospital service. In fact, 58 percent of the employees surveyed specifically mentioned using the lactation consultant at the hospital.

In the interview portion of this study, 89.5 percent of the employees used the services of a lactation consultant at some point. This would be something that may be beneficial beyond the initiation of breastfeeding, but 68 percent of the interviewed employees felt a lack of support from work. At the university, consideration may be given to employ a lactation consultant for those employees who breastfeed as a way to increase the breastfeeding duration to help them meet their personal goals. This could be on a case-by-case basis, or the IBCLC could be paid a retainer for the services and charge the university when the service is utilized. It may also be possible to arrange for a group discount with a service that provides lactation consultations.

EDUCATION FOR ALL PARTIES

Lack of knowledge was apparent in many of the interviewees on some of the basics of pumping. It was also reported that they did not feel that their supervisor, facilities manager, etc. understood the needs of a lactating employee. This may be, not only a barrier to successful implementation of the program, but may also be held out as a potential liability in the future.

To help educate the supervisors and facilities managers, there should be a set of documents drafted with discussion of some of the most commonly asked questions. This

should include information about Break Time for Nursing Mothers, the guidelines at the university, the basic biology of breastfeeding and pumping, but also a look at common barriers, and solutions to barriers to successful lactation. This might be something that the Lactation Working Group (LWG) might be very skilled at tackling.

In addition, when looking at the State of the Art Plan, it would behoove the university to extend educational benefits to the partners of women who work on campus, as well as the pregnant partners of employees who do not work on campus. This could be made available via the Internet and at an in-person class.

ENCOURAGEMENT OF A SYSTEM OF SOCIAL SUPPORT

When asked, 95 percent of the employees turned to other mothers for support in breastfeeding. Many of these women found help from university colleagues. Trying to find a way to formalize this network would benefit employees who felt isolated. At one point, two women were interviewed who worked several doors down from one another; they had breastfed around the same time. Neither knew about the other, and both had wondered if knowing someone else would have been helpful. Support is very helpful at increasing the duration of breastfeeding or expressing breast milk. (Kosmala-Anderson and Wallace 2006, Marinelli, Moren et al. 2013)

This network could be as informal as an online forum run outside of the university. It could also be more formal, by allowing someone from the University of Louisville's Lactation Working Group to help moderate, but allowing the women to ask questions and share stories. Just hearing the stories and solutions of other mothers can be beneficial.

There are a number of ways in which this could be implemented. It could be a series of seminars held as “brown bag” discussions. It could be an online forum through something like Blackboard. It could even be an email listserv run through the university.

ELEVATE THE LACTATION WORKING GROUP’S STATUS AT UofL

Currently the Lactation Working Group does not have any resources, power, or authority. The members do not even count the hours of service towards their official duties of the university. By providing this group with more resources and authority, the culture within UofL would change more quickly.

CULTURE CHANGE

Using Rogers’ Diffusion of Innovation theory to look at how this change can diffuse through the system is a window into how this process will work.(Rogers 2003) Rogers allows for the definition of innovation to include a practice or an idea, such as the acceptance and support of a breastfeeding/lactation guideline. In the university setting, originally the adopters are individuals within departments, but as the innovation diffuses, it becomes the norm for that department; or wait until then the individual departments or units within the university become the adopters.

There are some communication channels open at the university, though knowledge of these channels would help decrease the time to achieving diffusion. This can happen in a variety of ways, as referenced in the recommendations to the university. These channels and recommendations also address the social system from Rogers. The university and individuals within the university are the thought leaders, disseminating information.

To look at the adopter categories: innovators, early adopters, early majority, late majority, and laggards. Since the time to diffusion relies on critical mass, the more people that begin the process of adoption, the sooner critical mass is reached. That said, the university departments or units can also act like silos, preventing the diffusion, which is why it is imperative for the university to reach out to employees who want to return to work and breastfeed.

Currently, UofL has a handful of champions, the LWG. This is often how initiatives start, though there is also the pressure of the fact that Break Time is a law. It is important that the initiative is sustained to the point where it is self-sufficient in terms of diffusion.(Backer and Rogers 1998)

The goal of the university should be to connect the innovators, and early adopters so that they can speak to the benefits from the perspective of the employee. This allows the employees to help one another in finding workplace solutions that are best done at the individual level, leaving HR, the LWG, and other stakeholders to fulfill bigger initiatives surrounding the lactation guidelines.

LIMITATIONS

There were limitations to this research. It was conducted at one university in the Upper South-Midwest, where breastfeeding rates are not as high as in other parts of the country. Though, in a university setting, you will have a potential to skew the numbers by having a higher educated workforce, which has been positively correlated with both higher breastfeeding initiation and duration.

The survey did not include demographic data to be able to make any conclusions about the employees beyond their breastfeeding information. It is known throughout the

United States that breastfeeding rates are lower in certain populations, including African American women. This study is not able to speak to this information. Though 16 percent of the interviewees identified as African American. At UofL the average percentage of African American full time female employees ages 18-44 was 12 percent for the years 2010-2014. (Patterson 2015)

This study also did not look at the manager's knowledge or their attitudes towards breastfeeding. Therefore there are no conclusions drawn about their attitudes or support levels. Employees in a position of management or supervisory roles play a crucial part in making any lactation policy or guideline effective. (Stewart-Glenn 2008, U.S. Department of Health and Human Services, Health Resources and Services Administration et al. 2008, Chow, Smithey Fulmer et al. 2011) There is even a specific instrument designed to measure the attitude of the managers towards breastfeeding/pumping in the workplace. (Chow, Wolfe et al. 2012)

FURTHER RESEARCH

It would be great to further this research by asking the breastfeeding women of the University what they would like to see. While more pump rooms that are schedulable online might be nice, many women were able to come up with other solutions that may be more affordable for the University. This would be, at least, a potential stopgap or temporary measure until space and funds were more available for future plans.

A survey of the knowledge and attitudes of the managers, facilities personnel, and co-workers may also be something that might be considered at the University of

Louisville in the future. (Chow, Wolfe et al. 2012) This might be something that the LWG would be interested in administering through the university.

CONCLUSIONS

The University of Louisville has a Breastfeeding & Lactation Guideline in place. There is a lack of knowledge about the specifics for employees, supervisors, and facility managers. To address this lack of knowledge, a consideration should be made by the university to educate employees at all levels about, not only the offered benefits, but about pumping/expressing milk in general, returning to work while breastfeeding, and how to overcome common barriers returning employees face.

Access to lactation support is a key to success in increasing the duration of breastfeeding. This includes both organized support (professional or group) and unorganized, or social support. This can be facilitated by both the classes offered on campus, which should include a panel of breastfeeding employees who are open to questions from the audience; as well as some sort of social support measure to connect employees who are utilizing the guidelines at the university or those who are motivated and just want to reach out to others in similar situations.

Space is a frequently cited issue from both employees and the LWG. While space is something that will continue to be a problem for the foreseeable future, there are a few stopgap measures that can be considered to help alleviate some of these issues. This can include space sharing, such as borrowing offices or conference rooms, the use of dedicated space by multiple employees, or even temporary dedicated spaces, like the Mamava portable breastfeeding units. It would also be beneficial for unit business

managers and facility managers to know where to find the official space requirements to ensure that recommendations they make to employees are in legal compliance with the ACA.

The ACA details that the employee is allowed to take the number of breaks needed to maintain supply within reason. This statement also covers the length of this break to pump. The vast majority of employees had concerns about issues surrounding time. Greater knowledge of the ACA policy and the University of Louisville guidelines would also encourage better utilization of time and reduce employee concerns over the use of the time. When breastfeeding employees are able to pump to meet their needs, they are able to reap the full benefits of lactation for themselves, their infants, and the UofL community.

Although certainly substantial progress has been made to educate and encourage breastfeeding in the workplace at the University of Louisville, the work is not complete. In order to better comply with the legal mandate and employer obligations a wide array of further actions could be considered.

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Appendix I

FOCUS GROUP GUIDE/ INDIVIDUAL INTERVIEWS

Focus Group Guide - Break Time for Employee Nursing Mothers

Version – January 22, 2015

Hello and thanks for coming today. My name is Robin and I am from the University of Louisville School of Public Health and Information Sciences. This is XXX, and she is my assistant.

We are conducting a study about the experiences of the University of Louisville employees and pumping or breastfeeding and work. Today, we want to talk with you to learn more about you and your experiences about implementing the Affordable Care Act's (ACA) Break Time for Nursing Mothers at the University of Louisville, working with and for breastfeeding, pregnant, and new mothers, and these women who are returning to work.

Before we start, we need to go over a couple guidelines and go over the consent.

This will be an informal discussion. You don't have to wait to be called on to respond, but do avoid speaking over one another. You are also encouraged to respond to the comments other mothers make. Please remember that there are no wrong or right answers, but that it is important to be respectful of one another.

If you don't understand something I've said, please ask and I will restate my comment or question.

Sometimes I will call on someone directly to answer or respond. I'm doing this to ensure that everyone has a chance to talk, so that I get everyone's perspective. The more you talk, the better I can hope to understand and provide a quality study. I will respect your right not to answer any specific question, even if I call on you. Just tell me that you're choosing not to answer that question.

During this session XXX and I will be taking notes and recording the conversation. We will be using the nicknames that you chose when you signed in for the focus group; this prevents us from using real names. Please remember to use your nickname when appropriate.

After this session, the recording may be transcribed to help me ensure I captured everything accurately. These recordings transcriptions will be kept on a password-protected computer or in a locked file cabinet in the School of Public Health and Information Sciences (SPHIS).

Are there any questions about the discussion before we get started today?

Before we begin the conversation, everyone signed a consent form. Let's go over it again.

Does everyone understand?

Are there any further questions? You will need to ask specific questions to make sure they understand, such as "Are you required to answer all questions?" "What are the consequences for leaving early?"

I'm going to start by talking to you about some general experiences in breastfeeding and working, experiences working with breastfeeding mothers, the ACA's implementation at U of L, the lactation working group, and then we will move into conversation about barriers to implementation.

Let's start with introductions. Please introduce yourself using your nickname and tell us one thing you've learned about breastfeeding in the course of your work with the Lactation Working Group.

Questions About Break Time for Nursing Mothers

1. Do you know any one who has breastfed while working?
2. How did you prepare for breastfeeding and working?
3. What do you know about your rights as a nursing mother? (Prompt: Do you know about any state or federal laws that talk about breastfeeding?)

Questions About Your Breastfeeding Experiences

1. Tell me a bit about your personal breastfeeding goals. (Prompt: How long did you plan to breastfeed? What does successful breastfeeding look like to you?)
2. From whom did you feel that you had support? What did that support look like? (Prompt: were there family members who were helpful, support groups, friends, lactation professionals?)

Questions About Pumping/Feeding During Work Hours

1. Will you describe where you pump or feed? (Prompt: How far away is it from your office? Is it private? Can your pump be heard by others?)
2. How do you save or store your breast milk? (Prompt: Is it in a public fridge?)
3. Has any one made comments positively or negatively about seeing your milk? (Prompt: Do you have to walk past others with your milk? Do they see it in the fridge?)
4. How do you go about scheduling the time you need to pump? Is it a part of your regular breaks? Have others said something to you about this time away from your work? (Prompt: Do you have to make up the time beyond your regular breaks?)
5. Do you ever work and pump/feed? (Prompt: Answer email, write papers, read mail, answer phones, etc.)
6. Do you know your department's policy regarding pumping?
7. Do you know to whom you should address questions about space to pump or time?
8. Tell me about the general attitude at your workplace towards you when you need to pump or feed.

Questions About Barriers to Accessing the ACA Provisions

1. What has been the most surprising barrier to pumping or feeding at work?
2. What did you anticipate to be a problem, that wasn't?
3. Where do you feel that you have the most support, from an employment standard, for continuing to pump or feed? The most push back? (PROMPT: Mothers, female employees, unit heads, administration)

Anything else that you want to tell me?

If you have any questions, please feel free to contact me at the venues I provided earlier.

Thank you for participating in this focus group.

Appendix II

KEY INFORMANT INTERVIEW – BREAK TIME FOR EMPLOYEE NURSING MOTHERS GUIDE

Version – January 22, 2015

1. Can you give me some history on the lactation working group? (Prompt: When did it start? How were people chosen for the group? (Volunteers? Elected? Selected by whom? Terms of service? What is the group's charge/mission?)
2. Tell me a bit about your involvement with the lactation working group at the university.
3. Are there specific requirements for individuals involved with the group? (Prompt: For example, do they need to be or have been breastfeeding mothers? Are they required to be certified in lactation?)
4. What is the university's commitment to the group? And what is the group's commitment to the university? What support does the group get? (Does this count on Annual Work Plans? Do they get meals in exchange for service, etc.)

5. How does the group interact with the ACA provisions? (Prompt: Is the group the body charged with ensuring compliance? Do you advise the university regarding the law?) To whom does the group report? How (e.g. A report?)?
6. Are you aware of any barriers encountered to implementing the law? Tell me about them. (Prompt: Such as lack of space, resistance from any departments, etc.)
7. Is there a complaint or grievance process for employees of the university who feel that their needs aren't being met under the law? If so, can you tell what the process involves?
8. Do you know of any complaints that have been filed? If so, can you tell me about them or are they available for viewing in any way?
9. What are the requirements of each of the units in terms of reporting to the university? (Prompt: For example, do they need to have a designated space on file with either your group or HR?)
10. How were departments and units informed of this law? Email? Chairs meetings?
Etc.
11. Have you been a breastfeeding mother or pumping mother since the implementation of the ACA? Can you tell me a bit about your experience, if so, as it pertains to work?
12. Is there anything else you'd like to tell me?

Appendix III

SUBJECT INFORMED CONSENT DOCUMENT

Implementation of Break Time for Employed Nursing Mothers at the University of
Louisville: A Case Study

Investigator(s) name & address:

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Site(s) where study is to be conducted:

The study will take place at a location chosen by research subjects.

Phone number for subjects to call for questions:

502-233-1018

Introduction and background Information:

You are invited to participate in a research study. The study is being conducted by Barry Wainscott, MD, MPH and Robin Elise Weiss, PhDc, MPH, CLC. The study is sponsored by the University of Louisville, Department of Health Management and Systems Science. The study will take place in the United States at locations chosen by research subjects. Approximately 200 subjects will be invited to participate.

Purpose

The purpose of this study is to foster understanding of the experiences of mothers who were pregnant and/or breastfeeding while working full time at the University of Louisville from 3/23/10 to present as it relates to decisions regarding breastfeeding, and pumping/expressing breast milk or breastfeeding during working hours.

Procedures

In this study, you will be asked to participate in an in-depth interview or a focus group and to answer questions about your experiences before, during, and/or after your time pumping/feeding. You may refuse to answer any questions that make you uncomfortable. Both the interviews and focus groups will be audio recorded and transcribed.

Potential Risks

There are no foreseeable risks, although they may be unforeseen risks.

Benefits

The possible benefits of this study include a better understanding of the experiences of women who work at the University of Louisville and choose to breastfeed, particularly in terms of how they are able to incorporate feeding or pumping/expressing into their work day and the barriers that they may face. The information collected may not benefit you directly. The information learned in this study may be helpful to others.

Confidentiality

Total privacy cannot be guaranteed. Your privacy will be protected to the extent permitted by law. If the results from this study are published, your name will not be made public. Interviews will be coded using a number sequence. Information about participants will be obtained from participants directly. Voice recorded interviews, will be in physical possession of the researcher at all times. Following transcription, recorded interviews will be destroyed. Transcribed interviews will be protected in a password-protected computer. If the results from this study are published, your name will not be made public. While unlikely, the following may look at the study records:

The University of Louisville Institutional review Board, Human Subject Protection Program Office, and Privacy Office.

Voluntary Participation

Taking part in this study is voluntary. You may choose not to take part at all. If you decide to be in this study or if you stop taking part at any time, you will not lose any benefits for which you may qualify. You will be told about any changes that may affect your decision to continue in the study.

Research Subject's Rights, Questions, Concerns, and Complaints

If you have any concerns or complaints about the study or the study staff, you have three options.

You may contact the principal investigator at 502-852-3286 (office) or the study coordinator 502-233-1018 (office).

If you have any questions about your rights as a study subject, questions, concerns or complaints, you may call the Human Subject Protection Program Office (HSPPPO) (502) 852-5188. You may discuss any question about your rights as a subject, in secret, with a member of the Institutional Review Board (IRB) or the HSPPPO staff. The IRB is an independent committee composed of members of University community, staff of the institutions, as well as lay members of community not connected with these institutions. The IRB has reviewed this study.

If you want to speak to a person outside the University, you may call 1-877-852-1167. You will be given the chance to talk about any questions, concerns or complaints in secret. This is a 24-hour hot line answered by people who do not work at University of Louisville.

This paper tells you what will happen during the study if you chose to take part. Your signature means that this study has been discussed with you, that your questions have been answered, and that you will take part in the study. This informed consent document is not a contract. You are not giving up any legal rights by signing this informed consent document. You will be given a signed copy of this paper to keep for your records.

Signature of Subject/Legal Representative

Date Signed

Signature of Investigator

Date Signed

List of Investigator's Phone Numbers

Barry Wainscott, MD, MPH 502-852-3286

Robin Elise Weiss, PhDc, MPH, CLC 502-233-1018

Appendix IV

SURVEY WITH CONSENT

Implementation of Break Time for Employed Nursing Mothers at the University of Louisville: A Case Study

January 28, 2015

Dear Survey Participant:

You are being invited to participate in a research study by answering the attached survey about *your experiences as a breastfeeding mother while being a fulltime employee at the University of Louisville*. There are no known risks for your participation in this research study. The information collected may not benefit you directly. The information learned in this study may be helpful to others. The information you provide will *to assess the experiences of breastfeeding employees at the University of Louisville*. Your completed survey will be stored on a password-protected computer. The survey will take approximately *20 minutes* to complete.

Individuals from the Department of *Health Management and Information Sciences* the Institutional Review Board (IRB), the Human Subjects Protection Program Office (HSPPO), and other regulatory agencies may inspect these records. In all other respects,

however, the data will be held in confidence to the extent permitted by law. Should the data be published, your identity will not be disclosed.

Taking part in this study is voluntary. By completing this survey you agree to take part in this research study. You do not have to answer any questions that make you uncomfortable. You may choose not to take part at all. If you decide to be in this study you may stop taking part at any time. If you decide not to be in this study or if you stop taking part at any time, you will not lose any benefits for which you may qualify.

If you have any questions, concerns, or complaints about the research study, please contact: *Robin Weiss (502) 233-1013*

If you have any questions about your rights as a research subject, you may call the Human Subjects Protection Program Office at (502) 852-5188. You can discuss any questions about your rights as a research subject, in private, with a member of the Institutional Review Board (IRB). You may also call this number if you have other questions about the research, and you cannot reach the research staff, or want to talk to someone else. The IRB is an independent committee made up of people from the University community, staff of the institutions, as well as people from the community not connected with these institutions. The IRB has reviewed this research study.

If you have concerns or complaints about the research or research staff and you do not wish to give your name, you may call 1-877-852-1167. This is a 24 hour hot line answered by people who do not work at the University of Louisville.

Sincerely,

Barry Wainscott, MD, MPH

Robin Weiss, PhDc, MPH, CLC

Demographic Info

Sex:

- Male (Thank, but end survey)
- Female

Are you:

- Currently pregnant
- Currently nursing a child one year or under
- Parent of a child under 5 who was breastfed
- Parent of a child under 5 who was not breastfed
- None of the above (Thank, but end survey)

Age

Relationship Status:

- Single
- Married
- Partnered
- Widowed
- Divorced/Separated

Employment Category

- Faculty
- Staff

Age of Youngest Child:

- Less than or equal to 3 months
- 3 months 1 day to 6 months
- 6 months 1 day to 1 year
- 1 year, 1 day – 2 years
- 2 years, 1 day to 4 years
- 4 years, 1 day and up
- Currently trying to conceive (check box option)

Current Policy

Are you aware of a policy protecting a mother's right to breastfeed or express milk for her child up to age one at the University?

- Yes
- No
- Unsure

If you were aware of it, where did you hear about it:

- University official
- Official University document (Redbook, or other employee handouts)
- Official University publication (newspaper, newsletter, website, etc.)
- A colleague from the University
- Other

Do you know with whom to speak about utilizing the provisions of this policy?

Do you or did you:

- Hand express milk at work.
Pump at work.
- Feed your baby on site.

Facilities for Expressing Milk

What distance do you travel to express your milk or feed your baby:

- Express/feed in my own space
- Express/feed within my immediate work area
- Express/feed within 5 minutes of my work area
- Express/feed within 6-20 minutes of my work area
- Express/feed 21+ minutes away from my work area

Is your space private:

- Yes
- No

If so, how is it private?

Does your expressing/pumping/feeding area have ready access to: (Check all that apply)

- electricity
- place to sit
- sink

Describe your space:

Do you feel your space is private enough for your comfort?

Do you share a space? With how many?

- Yes
- No

If yes, with how many?

If you are not in a private space, how is scheduling the space handled?

Describe how conflicts with schedules are handled?

Work Duties

When you are expressing do you ever:

- Answer email for work purposes
- Answer or talk on the phone for work purposes
- Participate in work conference calls for work purposes
- Other work related business for work purposes

Milk Expression & Breast Pumps

My breast pump comes from:

- home (hand operated)
- home (battery operated)
- home (plug)
- personally purchased or group purchased multi-user pump
- employer purchased multi-user pump
- I do not use a pump, I hand express.

The following things are in the space I use to express/pump that are provided by my employer for me or my co-workers:

How many times in a shift do you normally take a break to express milk:

- 0
- 1
- 2
- 3
- 4+

How long do your breaks for expressing typically take, from start to finish (when you leave your work to when you return):

- 10-15 minutes
- 16-20 minutes
- 21-25 minutes
- 26-30 minutes
- 31+ minutes

Storage of Breast Milk

Is there a place to store your breast milk provided?

- Yes
- No
- Unsure

If yes, what type of storage?

Do you feel that your milk is safe? If not, why?

Do you feel comfortable with your milk in storage? If not, why?

Co-Workers

Are you aware of any other colleagues (faculty or staff) utilizing the policy?

How many other colleagues are you aware of that are utilizing the policy?

- 0
- 1
- 2
- 3
- 4+

Have you experienced any of the following with your co-workers:

- Comments, positive
- Comments, negative
- Questions
- Harassment
- Other

Have any of your co-workers mentioned the milk storage? In what regard? Have you experienced jokes or harassment about milk storage?

Community Resources

Do you know of any community breastfeeding support resources?

- Yes If so, what?
- No
- Unsure

Does U of L provide you with education or support about lactation?

- Yes If so, in what form?
- No
- Unsure

What would you like to see U of L provide by way of educational opportunities or support opportunities?

- Classes/workshops
- Access to lactation support
- Other (fill in)

Do you know to whom you should report problems or to ask questions about the policy?

- Yes
- No
- Unsure

Describe what you feel works BEST about the arrangement/policy.

Please describe what may NOT be working well with the current arrangement/policy.

Do you have other ideas to improve the experience of women who are expressing milk at the University of Louisville?

Is there anything else that you would like to tell us about your experience with breastfeeding while employed at the University of Louisville?

Thank you for taking the time to do this survey.

Appendix V

UNIVERSITY OF LOUISVILLE BREASTFEEDING & LACTATION GUIDELINES

Breastfeeding & Lactation Guidelines

Purpose. The purpose in publishing these guidelines is to (1) help ensure that UofL is a welcoming and friendly environment for women who are breastfeeding; (2) foster consistency in supervisory and management responses to employees who need time during the work day to express breast milk; and (3) advertise the location of public lactation stations and the workplace accommodations the University will make to support women who are breastfeeding.

Federal & State Statutory Provisions Related to Breastfeeding and Lactation.

(1) Breastfeeding. Section 211-755 of Kentucky Revised Statutes provides that a woman may breastfeed her child or express breast milk in any location, public or private, where the mother is otherwise authorized to be. In accordance with this provision, the University of Louisville will not restrict any member of the University community from breastfeeding or expressing breast milk in any location where the individual is authorized to be, regardless of any presumed sensitivity of other members of the University community toward this activity.

(2) Lactation Support. Section 4207 of the Affordable Care Act requires employers to provide reasonable break times and private sanitary space for nursing mothers to express breast milk. In accordance with this provision, the University of Louisville will afford faculty and staff appropriate workplace accommodations to support a mother's decision to breastfeed her child.

Background Information. When the ACA was originally adopted, the UofL Women's Center, with the support of the Commission on the Status of Women, asked unit administrators to set aside space in their respective units, if possible, where nursing mothers could express breast milk during working hours, if suitable space was not available in the employee's immediate work area. This early inventory is listed below, together with contact information for each room.

Benefits. The University of Louisville recognizes that breastfeeding has health benefits for both children and their mothers. Creating a breastfeeding-friendly work environment reduces the risk of long-term health problems for women and children; decreases employee absenteeism; reduces health claims to employers; and increases retention of female employees.

Eligibility.

Any nursing mother may request private space and reasonable time away from work to express breast milk. Nursing employees are encouraged to discuss with their supervisors their anticipated frequency and timing of breaks to express milk, as they plan their return to work following the birth of a child.

In similar fashion, supervisors are encouraged to discuss with nursing employees the location and availability of space for expressing milk and the time that will be required for expressing milk.

No supervisor or manager shall discriminate in any way against an employee who chooses to express breast milk in the workplace.

CURRICULUM VITA

NAME: Robin Elise Weiss

ADDRESS: School of Public Health and Information Sciences
485 Gray Street
Louisville, KY 40202

DOB: Louisville, KY - June 13, 1971

EDUCATION

& TRAINING: B.A., Liberal Studies, Minor in Communications
University of Louisville
1994-2001

M.P.H., Public Health, Health Promotion & Health Behavior
University of Louisville
2009-2012

Ph.D., Public Health Sciences, Health Management & Systems Science
University of Louisville
2012-2015 (Anticipated)

AWARDS: Graduate Dean's Citation Award
University of Louisville
2015

School of Public Health and Information Sciences Service Award
University of Louisville
2015

Graduate Dean's Citation Award
University of Louisville
2012

Omicron Delta Kappa Leadership Honors Society
University of Louisville
2011

Golden Key International Honour Society
University of Louisville
2010

President's Award
Lamaze International
2008

Coalition for Improving Maternity Services Forum Award
Coalition for Improving Maternity Services
2008

Elisabeth Bing Award
Lamaze International
2005

**CERTIFICATIONS &
TRAININGS:**

Certification in Public Health
National Board of Public Health Examiners
April 2012

Volunteer Leadership Institute
March of Dimes
2011

Certified Prenatal Fitness Educator
International Childbirth Education Assoc.
2010

Certified Lactation Counselor
Healthy Children Project
Certified 2004

Lamaze Certified Childbirth Educator
Lamaze International
2002

ICEA Certified Postpartum Educator
International Childbirth Education Assoc.
1999

DONA Certified Doula Trainer
DONA International

1996

ICEA Certified Childbirth Educator
International Childbirth Education Association
1994

DONA Certified Doula
DONA International
1994

PROFESSIONAL
SOCIETIES:

Lamaze International
DONA International

NATIONAL
MEETING

PRESENTATIONS: Social Media in Public Health Campaigns
Southern Obesity Summit Conference
2014

Measuring Key Message Density
Kentucky Public Health Association Conference Poster
2012

Social Media and Birth, Keynote Address
Future of Birth: ICEA/Lamaze International Conf.
2010

Mistakes Childbirth Educators Make Online
Future of Birth: ICEA/Lamaze International Conf.
2010

Group Dynamics
Lamaze International Conference
2009

From Texting to Talking
Lamaze International Conference
2008

Using Technology in the Classroom
Lamaze International Conference
2007, 2002

Teaching Positive Multiple Pregnancy Classes
Int. Childbirth Ed. Assoc. Conference
Lamaze International Conference
2007, 2005, 2004

Celebrity Babies: News You can Use
Lamaze International Conference
Int. Childbirth Ed. Assoc. Conference
2007, 2006

Birth Plans: Positive Communication Tools
Lamaze International Conference
2005

Building a Birth Network from the Ground Up
Lamaze International Conference
2003

**BOOKS AND
SYMPOSIA:**

The Better Way to Breastfeed
Fairwinds Press
June 2010

The Better Way to Care for Your Baby
Fairwinds Press
May 2010

150 Tips and Tricks for New Moms
Adams Media Corp.
March 2009

The Complete Illustrated Pregnancy Companion
Fairwinds Press
February 2009

The Everything Parents Guide to Raising an Adolescent Boy
About.com and Adams Media Corp.
January 2008

Pregnancy & Childbirth Tips - Contributor
Innovative Publishing
September 2007

The About.com Guide to Baby Care
About.com and Adams Media Corp.
July 2007

Guarantee the Sex of Your Baby
Ulysses Press
December 2006

The About.com Guide to Having a Baby
About.com and Adams Media Corp.
October 2006

The "I Have a Life" Guide to Pregnancy - Contributor
About.com and Adams Media Corp.
June 2006

The Everything Mother's First Year
Adams Media Corp.
November 2005

The Everything Getting Pregnant
Adams Media Corp.
April 2004

The Everything Pregnancy Fitness
Adams Media Corp.
January 2004