

ABSTRACT

Zasova, Olga L., An Assessment of Formal Education in Breastfeeding or Human Lactation for Health Professionals in Texas. Master of Public Health (Community Health), December 2009, 100 pp., bibliography 45 titles.

Objectives: Determine if health professionals receive formal courses in human lactation or breastfeeding at institutions of higher education in Texas.

Methods: A website search was conducted for courses and competencies in human lactation or breastfeeding at degree-granting medical, physician assistants, public health, and nursing schools in Texas. In addition were searched in and out of state certificate-granting schools of midwifery, doula, and lactation consultants.

Results: Breastfeeding was not cited in any of the curricula of degree-granting institutions. Nursing schools did not list but imbedded breastfeeding in childbearing courses. All certificate-granting schools require it in their curricula.

Conclusion: It is difficult to foresee achievement of the breastfeeding goals for Healthy People 2010 when health professionals are not trained in them.

AN ASSESSMENT OF FORMAL EDUCATION IN BREASTFEEDING OR
HUMAN LACTATION FOR HEALTH PROFESSIONALS IN TEXAS

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AN ASSESSMENT OF FORMAL EDUCATION IN BREASTFEEDING OR
HUMAN LACTATION FOR HEALTH PROFESSIONALS IN TEXAS

PROFESSIONAL REPORT

Presented to the School of Public Health

University of North Texas

Health Science Center at Fort Worth

in Partial Fulfillment of the Requirements

for the Degree of

Master of Public Health

by

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Forth Worth, Texas

December 2009

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ACKNOWLEDGEMENTS

I wish to thank my employer Parkland Health & Hospital System for the financial assistance in my master's degree education. Special thanks go to Language Assistants supervisor Hugo A. Castellanos for permitting me extensive scheduling flexibility to study and attend classes through out the entire program and for having been my Professional Experience Project supervisor. I also wish to thank my three master's degree committee members starting with my academic advisor and professor of several classes, Dr. Claudia Coggin, followed by my professor also of several classes, Dr. Sue Lurie, and my Spanish-Speaking committee member, Dr. Carlos Reyes-Ortiz. All of them have been inspirational, given me academic support and assistance in many ways throughout my educational path.

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CHAPTER 1

INTRODUCTION

A bold statement made by Dr. Jack Newman (2003) in a long list of myths listed in *More and More Breastfeeding Myths* inspired this research project:

Physicians know a lot about breastfeeding. Not true! Obviously, there are exceptions. However, very few physicians trained in North America or Western Europe learned anything at all about breastfeeding in medical school. Even fewer learned about the *practical aspects* of helping mothers start breastfeeding and helping them maintain breastfeeding. After medical school, most of the information physicians get regarding infant feeding comes from formula company representatives or advertisements. Pediatricians, at least, know a lot about breastfeeding. Not true! Obviously, there are exceptions. However, in their post medical school training (residency), most pediatricians learned nothing formally about breastfeeding, and what they picked up in passing was often wrong. To many trainees in pediatrics, breastfeeding is seen as an "obstacle to the good medical care" of hospitalized babies. (Newman, p. 1)

The main goal of this professional report was to prove or disprove Dr. Newman's statement. The investigator attempted to verify if it is true that doctors and pediatricians do or do not receive any formal education in human lactation or breastfeeding at the colleges, schools, and programs in Texas. In addition to medical schools, the curricula in other Texas schools that train health professionals (physician assistants, nurses, public health professionals) were also verified. There are other health professionals who are graduates from certificate-granting schools and who deal with childbearing mothers in their professions. The search was further expanded to include these professionals (midwives, doulas, and lactation consultants).

Description of the Problem

Breastfeeding is a biocultural process - meaning it has two components, one is biological, and the other one is cultural. The biological component refers to the fact that all humans are mammals; the females of the species have mammary glands and suckle their young. The second component is cultural and is a determinant factor driven by cultural norms that change over time and may differ from other parts of the world (Stuart-Macadam & Dettwyler, 1995).

In the 1880s in the United States 95% of infants were breastfed exclusively and then weaned from two to four years of age. By the 1990s, 50% of infants were breastfed exclusively and 75% are then weaned at six months of age (Stuart-Macadam & Dettwyler, 1995). From another historical perspective, Dr. Naomi Baumslag (1995) in her book *Milk, Money, and Madness: The Culture and Politics of Breastfeeding*, comments: "It is an irony that this book needed to be written" (p. xxi); adding that until the 1930's, all babies were breastfed either by their mothers or by a wet nurse and that infant formula is not the living fluid called breast milk. Hormones alone do not bring on instinctually the process of breastfeeding and mothering, nurturing, and breastfeeding are learned. In many cultures, breastfeeding is or was considered a sacred duty; however often it runs in cycles of fashion. Wet nurses have been used since the beginning of time including to breastfeed the Pharaohs. For many years, the upper class women in Europe especially in France, did not breastfeed their babies and had wet nurses

hired to do so which were held in high esteem. In 18th century America, black slaves were used as breeders of more slaves and as wet nurses for the white master's children. (Baumslag, 1995)

In public health, a set of breastfeeding target goals was established for the United States. As stated in United States Department of Health and Human Services, *Healthy People 2010*, and based on the year 2000 data, the objectives are 16-19:

- 19a Increase the percentage of mothers who ever breastfeed from 71% to 75%.
 - 19b Increase the number of mothers who are breastfeeding their infants at six months of age from 34% to 50%.
 - 19c Increase the breastfeeding of infants at one year of age from 16% to 25%.
 - 19d Increase exclusively breastfeeding infants through three months of age from 30% to 40%.
 - 19e Increase exclusively breastfeeding infants through six months of age from 10% to 17%
- (United States Department of Health and Human Services, Centers for Disease Control and Prevention. 2008, pp. 1-3).

The year 2010 is fast approaching and these objectives have not been reached at the national level. Alaska, California, Idaho, Oregon, Utah, Vermont, and the state of Washington are the only seven states that have reached and even exceeded these objectives, while the rest of the states have partially met a few of them. Objective 19e, “..exclusively breastfeeding infants through six months of age,” is the least accomplished nationwide. In Texas, objective 19a has been attained and the remaining are lagging very far behind (United States Department of Health and Human Services, Centers for Disease Control and Prevention, 2008).

Stuart-Macadam and Dettwyler (1995) placed the responsibility of the artificially shortened period of breastfeeding on culture and primarily on the medical professionals who determine the duration of lactation rather than the initiation. “As with other normal physiological events (e.g., labor, delivery, and the newborn transition), breastfeeding, has undergone tremendous *medicalization* in the last 50 years” (p. x). These events rather than taking place at home are now occurring in hospitals, hence the term medicalization and care by medical professionals.

Task Force Chair Ned Calonge, MD, MPH, who is also Chief Medical Officer for the Colorado Department of Public Health and Environment, Denver, said:

We found that interventions that include both prenatal and postnatal components may be the most effective at increasing breastfeeding duration. Many successful programs include peer support, prenatal breastfeeding education, or both. . . . Simply telling mothers they should breastfeed or giving them pamphlets is not enough (American College of Physicians, 2008, p.1)

In essence, the Healthy People 2010 target goals of breastfeeding need more than lip service and negative impact advertising from infant-formula manufacturing companies. These target goals need effort and commitment from the entire United States health professional community. However as mentioned earlier by Dr. Newman, not everyone in the health professions has received during their professional education any specific instructions about human lactation in order to support the mother-infant dyad in their breastfeeding process.

After reading some of the biographies of the physicians, who have written books on breastfeeding, developed programs and became breastfeeding advocates dedicated to newborns and their mothers, one sees a common thread. These very dedicated individuals took it upon themselves to be self-taught about breastfeeding, either through personal experience or becoming interested in acquiring the knowledge and then set out to disseminate the breastfeeding education (Meet Dr. Ruth Lawrence [n.d.] and Meet Dr. Jane Morton [n.d.]).

From personal observation while working for several years with postpartum women at a major community hospital, I observed there was a great divide in the healthcare community about breastfeeding. There were those healthcare providers who held on to out-of-dated cultural myths and beliefs based on societal mores and who would not spend the time to self-educate in order to pass on to the mothers the scientific-based benefits of breastfeeding. Then there were those at the other end of the spectrum who operated from an up-to-date research-based scientific set of data and served the mother-infant dyad well. Lastly, there were those who became complacent and resorted to a bottle of infant-formula to quiet the infant's crying without investing the time in assisting the mother-infant dyad in the breastfeeding process.

Benefits of Breastfeeding.

There are benefits of breastfeeding to babies, mothers, society, and the environment. The benefits for babies are that they digest breast milk much easier, gain less unnecessary weight and tend to have leaner and firmer bodies. Exclusively breastfed babies have a lower risk of developing obesity in childhood and adolescence as well as a lower risk of onset of juvenile diabetes. As mentioned earlier, human milk contains hormones especially one that is wonderful, called CCK (cholecystokinin), which induces sleepiness in both the baby and the mother and is the easiest method to put babies to sleep. It also signals sedation and a feeling of satiation and well-being (Stuart-Macadam & Dettwyler, 1995).

It has been found that breastfed babies have fewer visits to the doctor's office, clinics, emergency rooms, and are less likely to have infections. They also have:

- Decreased number of otitis (ear infections).
- Lower risk of SIDS (Sudden Infant Death Syndrome).
- Protection from gastrointestinal inflammation diseases, such as Crohn's disease and ulcerative colitis.
- Protection from respiratory infections.
- Protection from developing allergies and eczema is rare among them.
- Protection from Hodgkin's disease and childhood leukemia.
- Fewer cavities and are less likely to wear braces and have malocclusion.

Breastfed babies tend to have higher IQs (intelligence quotients) and the suckling motion at the breast helps them to develop their lungs and maxillofacial or mastication muscles (Stuart-Macadam & Dettwyler, 1995).

For premature babies, in addition to all the already mentioned benefits, there are some additional benefits unique to their condition. When they receive breastmilk either by suckling at the breast or other means, they are protected from infectious diseases, from developing high blood pressure later in life and they have faster brain maturation. The physical contact with the mother makes them feel more secure, warm, and comfortable (Stuart-Macadam & Dettwyler, 1995).

Of the many benefits of breastfeeding for mothers who are exclusively breastfeeding (meaning absolute zero supplementing with infant-formula, water or teas) one is a delay of the return of ovulation and menstrual cycles. This delay can achieve a natural child spacing and allows for an optimal survival of the infant and an improved health of the mother. Breastfeeding helps the mother to loose the excess weight gained during the pregnancy. A great benefit for exclusively breastfeeding mothers is the saving of time and money, since there is no need to purchase any infant-formula, no measuring, no mixing, no preparing, or warming bottles during the day or night. The mother can give her baby immediate satisfaction by breastfeeding when her baby is hungry (Dermer, 2001).

The estimated cost of formulas per year per infant is from \$1,200.00 to \$4,000.00 in San Diego County, California, while breastfeeding is a mere increase of \$300.00 for the mother's higher food intake (Johnson, 2001).

From the mother's health perspective, breastfeeding decreases the risks of:

- Having iron-deficiency anemia,
- Later in life having either breast cancer, uterine or ovarian cancer, since estrogen levels are lower during lactation it lowers development of cancer,
- Developing diabetes later in life, especially if the mother had gestational diabetes, because it lowers blood sugar,
- Developing osteoporosis after menopause, and
- Developing long-term obesity.

In addition, mothers who never breastfed can have a higher overall severity and mortality from rheumatoid arthritis (Stuart-Macadam & Dettwyler, 1995).

During breastfeeding, the mother produces two hormones related to lactation, oxytocin and prolactin. Oxytocin not only signals the breast to produce more milk, but it also produces uterine contractions, which prevents postpartum hemorrhage, reduces the uterus to pre-pregnancy size and allows for an overall quicker recovery after delivery. Prolactin promotes calmness in the mother and decreases reaction to adrenalin thereby reducing heart problems. While breastfeeding, the process itself requires the mother to take some quiet relaxed time for herself and her baby and further more allows her to increase her self-

confidence and have greater feelings of closeness and bonding with her baby (Stuart-Macadam & Dettwyler, 1995).

The greatest breastfeeding benefit to society is that the total medical care costs for the nation are lower for fully-breastfed infants, than for never-breastfed infants. Breastfed infants usually need fewer sick care visits, prescriptions, and hospitalizations and breastfed premature infants have a shorter hospital stay and reduced cost. Due to the lower number of visits of the infant to the doctor, mothers who breastfeed miss less workdays and this leads to overall lower medical costs and higher productivity for employers (United States Breastfeeding Committee, 2002)

Breastfeeding promotion leads to healthcare savings: For each baby breast-fed for six months, the United States government can save \$450-\$800 in welfare and health care costs. Disease attributable to artificial feeding in the United States costs \$291 million per year for infant diarrhea; \$225 million for RSV (respiratory syncytial virus); \$660 million for otitis media, and \$10-125 million for insulin dependent diabetes mellitus.(WABA, 1998, p. 1).

“Breastmilk is one of those foodstuffs that is packaged and delivered to the consumer without any pollution, unnecessary packaging or waste” (Baumslag, 1995, p xxix). The greatest environmental benefit of breastfeeding is less waste going into garbage dumps from tin cans, plastic or glass bottles, rubber nipples and paper and cardboard packaging used for infant-formulas. Additionally there is less use of electricity and/or fuel for formula preparation at manufacturing plants and at homes. In addition there are savings from not transporting formula from

plants to consumers (WABA, 1998). Clearly, there are great benefits derived from breastfeeding, if only more people were aware of them and become advocates for an overall healthier world.

Statement of the Purpose

The purpose of this Professional Report is to assess the curricula of institutions of higher education which educate health professionals in Texas and determine if human lactation or breastfeeding is part of their educational curricula or if it is cited in their competencies. This assessment will show if the health professional trained in Texas acquires the necessary knowledge in human lactation to enhance and support the benefits for babies, mothers, and society.

Research Questions

The research questions for this study are:

1. Is human lactation or breastfeeding being taught in institutions of formal education of health professionals such as at medical, physician assistant, public health, nursing, midwifery, and doula schools in Texas?
2. Are there competencies related to human lactation or breastfeeding in the curricula of institutions of formal education of health professionals such as at medical, physician assistants, public health, nursing, midwifery, and doula schools in Texas?

Definitions of Terms

Breastfeeding: The process by which a mother feeds or nurses her newborn or infant from the breast to meet the baby's nutritional needs. Other commonly used terms that mean the same are *nursing* or *suckle* (Venes and Thomas, 2001, p. 280).

Exclusive breastfeeding: Absolute zero supplementation of breast milk with any infant-formula, water, infusions, or teas (Dermer, 2001).

Doula: Comes from the ancient Greek meaning '*a woman who serves*' and is now used to refer to a trained and experienced professional who provides continuous physical, emotional and informational support to the mother before, during and just after birth; or who provides emotional and practical support during the postpartum period (DONA International, n. d.).

Birth Doula: A doula who offers emotional support, encouragement, and wisdom throughout labor and birth. A birth doula certified by DONA International is designated by the initials C.D.(DONA) (DONA International, n. d.).

Postpartum Doula: A doula who supports women and families through the transformation a new baby brings to a family. Offers education, companionship and nonjudgmental support during postpartum, the fourth trimester; assists with newborn care, family adjustment, meal preparation, and light household tidying. Offer evidence-based information on infant feeding, emotional and physical

recovery from birth, infant soothing, and coping skills for new parents and make appropriate referrals when necessary. A postpartum doula certified by DONA International is designated by the initials P.C.D.(DONA) (DONA International, n.d.).

Human Milk: “A unique, species-specific, complex nutritive fluid with immunologic and growth-promoting properties” (Wagner, Graham, & Hope, 2006, p. 3). This dynamic fluid contains the right amount of proteins, lipids, carbohydrates, water, antibodies, leukocytes, growth modulators, and hormones for the optimal growth of an infant; making it possible for the human infant to transition from in-utero to ex-utero. Human milk meets not only the growth but also the development needs of an infant by varying from the *first milk* produced until about day three, which is thin. First milk, also known as *immune milk* and *colostrum*, is heavy in proteins, minerals, and immunological components. Later the mature milk is thicker and heavier in fat. There is also variation within a single breastfeeding session from thinner first milk called *fore milk* and a thicker later milk called *hind milk* (Wagner, Graham, & Hope, 2006).

Madden (2008) found that human milk also contains stem cells.

Human Lactation: A combination of the concepts of human milk and lactation frequently used interchangeably in the medical field with breastfeeding. It refers to any feeding of human milk and not formula to an infant. The human milk source may be from the mother, a wet nurse, or a donor milk bank and be fed by means of a bottle, a cup, or even a feeding tube, if the infant is not able to nurse at the breast (Spatz, 2008). In the academic environment, the term *human lactation* is considered a *field* of study, and is often used as a name for classes, workshops, journals, articles, books, research studies, centers, clinics, etc. Examples are *Journal of Human Lactation*, the University of California-Davis Human Lactation Center, and the Report of the Surgeon General's Workshop on Breastfeeding and Human Lactation (Human Lactation, n.d.).

Lactation: The medical term for breastfeeding. It is the secretion and synthesis of milk by the mammary glands and the period of production of milk. The lactation process occurs in humans and in mammals (Venes & Thomas, 2001, p. 1136).

Lactation Consultant (LC): A trained health professional. LCs perform assessments of mother and child, assist in breastfeeding, develop and implement individualized feeding plans in consultation with the mother, provide evidence based information and support to the mother. Other duties can include protecting, promoting, and being a breastfeeding and human lactation advocate through education of women, families, health professionals, and the community. LCs may

also be called Lactation Specialists. Employers such as hospitals, clinics and others require that LCs be board certified. I.B.C.L.C. used by LCs after their name, designate that the LC has met rigorous professional requirements and has taken the international board-certification exam. The International Board of Consultants is located in Falls Church, Virginia (www.iblce.org).

Importance of the Research

The importance of the research is to determine where evidence-based scientific facts, concepts, and principles of human lactation or breastfeeding are being conveyed as part of the formal education to health professionals in the state of Texas. Why is this important? Because as a nation and a state we must know where we are before we can effectively move forward to where we need to be in order to reach the target goals set in Healthy People 2010, specifically in the area of human lactation or breastfeeding education of health professionals and mothers.

CHAPTER 2

REVIEW OF THE LITERATURE

This literature review was gathered from various sources of information dating from 1999 to 2009 using human lactation, breastfeeding, and education as keywords.

Montgomery (1999) reports, “In response to a need for skilled healthcare providers” (p. 145), a two-credit, one-semester elective breastfeeding course was developed and implemented at the School of Nursing of the Oakland University in Rochester, Michigan, for registered nurses pursuing a Bachelors of Science in Nursing (BSN) degree. The course was open not only to nursing students, but also to other participants from the community, was very basic, and was well received.

Hellings and Howe (2000) reported that they had conducted an assessment of all Family, Pediatrics, and Women’s Health Nurse Practitioners in the state of Oregon. They used a questionnaire and had a 60.4 % response rate. They said, “The purpose of the assessment was to replicate a national study of physician’s knowledge, experience, and attitudes about breastfeeding” (p. 264) which had been previously conducted in 1995. In conclusion it was found that although Nurse Practitioners had a better understanding, were more supportive of breastfeeding with a unanimous belief of “breast is best” than had been the report from physicians, there was still a continued need for breastfeeding content and experience in their educational curricula.

Riordan (2000) presented, developed, and implemented a web-based breastfeeding class at the School of Nursing of Wichita State University in Wichita, Kansas. The course was presented online at the same time and day of each week for a total of 15 weeks during one semester. Once posted on the web it remained open for the remainder of the semester. The class size was limited to only 15 students for better service by the professor. Of the participants, 80% were from the United States and the rest were from all over the world. There was a class requirement of either a paper or a project. All the tests were multiple-choice. Every two weeks the students took a short exam which they self-graded. At the end of the semester, there was a times final exam of 90 question that was scored and graded online before the student signed off. Despite the concern of copyright laws and rules on the internet, the author was of the sentiment that the internet holds a great potential for teaching lactation and breastfeeding.

Beal, Kulthau and Perrin (2000) completed a study in the United States and found that women were more likely to breastfeed if they were advised by healthcare providers to do so. They also found African American women were less likely to breastfeed than white women were and were less likely to be advised by healthcare providers to do so. The clear implication was that healthcare providers need more education in human lactation and breastfeeding.

Ogburn, Espey, Leeman and Alvarez (2005) state that “medical school and residency training programs, in which practice patterns are established, frequently lack formal education in breastfeeding in the United States”(p. 458). To address this lack of formal education, a program was developed at the University of New Mexico at Albuquerque for medical students, interns, and residents in Pediatrics, Obstetrics/Gynecology, and Family Medicine. The curriculum was based on the *Wellstart Lactation Curriculum Guide*, developed by Wellstart International at the University of California in San Diego, California, in 1994 and later revised in 1999. The implementation of the multidisciplinary approach to breastfeeding education was successful and the feedback from participating students, interns, residents, and faculty uniformly was positive.

The New York State Department of Health (2005) presented the idea that breastfeeding should be part of education in levels K through 12 and a packet was made available for teachers to include this type of material in their classes. The thinking behind this approach was that family, friends, and teachers shape cultural attitudes early in life and young minds needed to be exposed to the benefits of breastfeeding that contribute to the health and wellness of infants and mothers.

Spatz and Sternberg (2005) reported that since 1995, the Nursing School of the University of Pennsylvania in Philadelphia, Pennsylvania, had a course named *A Case Study in Breastfeeding and Human Lactation*, which was offered each year to undergraduate junior and senior nursing students. The course had 31

didactic hours and 14 hours of clinical experience and a two-fold focus; first on the use of current research and second on breastfeeding advocacy. Since the course had been implemented, there had been an impact on improved knowledge and a constructive influence beyond the Philadelphia region where advocacy programs were created and had positively affected thousands of men, women, and children.

Bunik, Gao, and Moore (2006) found that “Pediatricians in training are underexposed to breastfeeding issues and as a result are not fully prepared to promote breastfeeding and support the breastfeeding mother”(p. 195). They reported that a program using a field-trip model approach was implemented at Children’s Hospital Oakland in Oakland, California. A pilot breastfeeding curriculum for residents was created as a field-trip rotation of four half-days at a community based breastfeeding site during their ambulatory clinic month. The residents were shown a video prior to the start and during the rotation and they received a packet of articles and handouts. At the clinics, they observed the interaction and teaching of LCs with the mother-infant dyad. After the pre and post-training evaluation of this field-trip model for the instruction of residents, it proved to be an effective curriculum, especially when it was compared to a control group.

Spear (2006) conducted a survey of 80 junior and senior baccalaureate nursing students after they successfully completed their nursing course in obstetrics at the private School of Nursing of Liberty University in Lynchburg, Virginia. The findings were (1) most (85%) of the students did not know that breastfeeding is “recommended for the first year of an infant’s life”(p.332); (2) that well over one third (41.3%) opposed breastfeeding in public, and (3) only five participants (6.25%) knew the proper management for mastitis. The survey’s conclusion was that the Nurse Educators needed to take a proactive role in the education of nurses about breastfeeding in order to prepare them to meet the support and educational needs of the childbearing women.

Philipp, McMahon, Davies, Santos, and Jean-Marie (2007) conducted a review of six maternal-child nursing textbooks, all published between 1999 and 2006. One pediatrician, one nurse, two LCs, and one research assistant did the reviews. The books were readily available at the bookstore of the Boston University School of Medicine in Boston, Massachusetts, which was very popular among nursing students and staff. The reviewers found out-of-date information, erroneous advice, and “4 of the 6 texts failed to clearly define breastfeeding as the healthiest choice” (p. 264). They found that all text did discuss the vital role of nurses in education and support of breastfeeding and concluded “nurses are the key players in lactation management and support.... For the mother, what the

nurse says counts” (p. 350). The reviewers recommend that all information in all textbooks be accurate, up-to-date, and evidence-based.

There is a lack of comprehensive curricula in human lactation or breastfeeding in the nursing schools of the United States at the baccalaureate level (Spatz, Pugh, et al. 2007). Since breastfeeding is such a critical part of the maternal postpartum care and nurses are the first ones to address the breastfeeding process as educators for the mother-infant dyad, it becomes very important and very critical that nurses be well trained in this area. There is a significant need to bridge the gap between the knowledge that nurses have acquired in their schools and the comprehensive research that exist on human milk, breastfeeding benefits, and the positive effects, that exclusive breastfeeding has on reducing morbidity and mortality in maternal and child health (Spatz, Pugh, et al. 2007).

Murray, Rickets, and Dellaport (2007) in their research found that long-term breastfeeding success is dependent upon the mother-infant dyad receiving the necessary support as early as possible in their breastfeeding process and while still in the hospital during postpartum. The findings include five main practices that provide that support:

- (1) Initiating breastfeeding within one hour of delivery,
- (2) Keeping infants in the mother’s hospital room,
- (3) Feeding infants only breast milk in the hospital with no supplementation of water or infant-formula,
- (4) Prohibiting pacifier use in the hospital, and
- (5) Providing a telephone number to call for breastfeeding help after hospital discharge (p. 210).

They also found that two-thirds of the mothers who followed these practices were still breastfeeding at 16 weeks compared with one-half of those who did not. Regrettably, very few hospitals follow all of these practices and most only do some of them. The burden to implement all of these practices is placed on the healthcare providers who need to work in unison at the hospital and have one uniform consistent voice in educational policy towards the breastfeeding practice of the mother-infant dyad (Murray, Rickets, & Dellaport, 2007).

Spatz (2008) emphasizes in her PowerPoint presentation, *Perspectives from a Non-Birthing Hospital Breastfeeding Resource Model*, that education of the entire healthcare provider staff involved with the mother-infant dyad is essential for the long-term success of breastfeeding. Not only is education essential but also it needs a consistent and coherent policy as well as the involvement of all those who attend to the care of the mother-infant dyad. Foremost there is a need to change the entire institutional culture towards breastfeeding. It must be data driven with evidence based management, using “fact based decision making and avoid basing decisions on untested beliefs” (slide 15). It must always include the critical role of the bedside nurse.

Meier (2008) in her PowerPoint presentation about the *Rush Mother's Milk Club* at Rush Children's Hospital in Chicago, Illinois, described how mothers of infants who are in the Neo-natal Intensive Care Unit (NICU) receive tremendous and necessary support from each other by attending meetings and

become empowered “through sharing the science about lactation and human milk” (slide 3). Again, education is emphasized for the entire staff in order to support and empower the parents at every step of the breastfeeding practice.

White (2007) confirmed in an interview with Dr. Jane Morton, Director of Breastfeeding Medicine at Lucile Packard Children’s Hospital and Clinical Professor at Stanford University School of Medicine, that breastfeeding is not being taught in most medical schools.

When I told her that I was interested in looking at the fact that breastfeeding instruction is lacking in medical schools across the country, she [Morton] replied: I couldn’t agree more and the American Academy of Pediatrics agrees completely. That’s why the American Academy of Pediatrics and the Health Resources and Services Administration’s Maternal and Child Health federal bureau have put together a multispecialty breastfeeding curriculum that is in its first pilot year at seven pilot sites and seven control sites across the country. The seven pilot sites are Duke University Medical Center, Harbor-UCLA Medical Center, Jacobi Medical Center in NY, Medical University of South Carolina, MetroHealth Medical Center in Ohio and Texas Tech University Health Sciences Center at Amarillo. Out of 70 applicants, we chose ones that had a good number of residents in both obstetrics and pediatrics and in family practice and also were located in underserved communities. There are over 400 different residents participating....They never had a ‘see one, do one, teach one’ in breastfeeding. That is where you watch a procedure, have someone watch you, and teach someone else how to do it.... It’s all part of taking breastfeeding out of the closet and making it a norm and making it a comfortable process to ask for help (White, 2007, p. 1).

In Breastfeeding Initiatives (n.d.) was a confirmation of the pilot pediatric residency program mentioned in the interview above and it stated that the inclusion of breastfeeding in the residency programs began in July 2006 and

would be included at the pilot sites mentioned in the interview in the winter of 2008/2009.

Dr. Ruth Lawrence implemented breastfeeding education at the Medical School of the University of Rochester in Rochester, New York after the mid 1990's (Meet Dr. Ruth Lawrence, n.d.). She believes that the students are not even aware of human lactation or breastfeeding being included in the curriculum, because her approach to teaching breastfeeding is to combine it with other courses. The school also offers an elective in breastfeeding to fourth year medical students if they wish to learn more about it.

In summary, it is very clear that many researchers agree that there is an urgent need to have comprehensive human lactation and breastfeeding education included in the curricula of the health professionals across the United States. They also had concerns that practices be evidence based and that educational materials need revision to reflect the latest research findings in the field.

CHAPTER 3

METHODOLOGY

Data Collection

A search was conducted of the websites of all institutions of formal education of health professionals within the state of Texas. The websites were searched for any information on human lactation or breastfeeding to determine if these subjects are in the curricula, if they are mentioned in the course descriptions and/or are part of the schools' objectives or competencies (see Appendix A). Due to the complete information available on these sites, a survey questionnaire prepared to be sent out to those schools without the information available on their website was not needed or used.

An assessment of pediatric residency programs in Texas was beyond the scope of this research project and report and was not conducted.

The websites of the following types of degree-granting schools in Texas were searched: Allopathic medicine (seven schools), Osteopathic medicine (one school), Physician Assistants (seven), and Public Health (five). There are 62 institutions in Texas which grant an Associate Degree in Nursing. In view of the fact that the same national board accredits all these schools, the curricula of the three schools with the highest enrollments were searched as a sample for this report (see Appendix B). There are 31 baccalaureate degree or above Nursing schools in Texas. All 31 websites were searched (see Appendix B). Additionally

seven certificate-granting schools websites were searched (three for Midwifery in Texas, one for Doula with workshops in Texas, and three for LCs). The names and locations of these schools are listed in Appendix C.

Included are a list of degree names (see Appendix D) and a list of certificate names (see Appendix E) with their corresponding initials. Health professionals in the United States at the end of their name use these initials as credentials to show the level of attained education. These initials are listed in the tables of collected data in Appendices F thru M.

Data Analysis.

The data were collected from the curricula of degree-granting colleges, schools, and programs of higher education for health professionals in Texas at allopathic and osteopathic medical schools, physician assistants programs, public health schools, and nursing schools. Further data were collected from the curricula of certificate-granting schools in Texas for midwives and LCs schools outside of Texas. Data for doulas were collected from DONA International which is headquartered in Indiana and gives workshops in Texas. The collected data did not require any statistical analysis. A detailed description of the results is in Chapter Four.

CHAPTER 4

RESULTS

The results of the collected data are listed in a separate Appendix for each type of school that was searched. In each Appendix, the data are set up as a table for easy reading. Each table has in its heading the name of the institution, the city in which it is located in Texas. Below that is the name of the college, school, or program that grants the degree. Following are all the websites that were searched for each degree. At the end of the section for each institution is the date when the websites were retrieved. In the second column next to each website are listed the corresponding degrees. The last two columns cited the answers to questions # 1 and question # 2 from Appendix A. Below is a list of schools and the corresponding appendices containing the results of this research project:

- Seven Allopathic and one Osteopathic Medical Schools - Appendix F.
- Seven Physician Assistants Schools - Appendix G.
- Five Schools of Public Health - Appendix H.
- Three Nursing schools (Associate Degree) - Appendix I.
- Thirty-one Nursing Schools (Baccalaureate Degree and above) - Appendix J.
- Three Midwifery Schools - Appendix K.
- One Doula School - Appendix L.
- Two Lactation Consultants schools - Appendix M.

To summarize, the websites of a total of 60 colleges, schools, or programs were searched for courses, course descriptions, or competencies in human lactation or breastfeeding. Of these 60 schools, 54 schools are degree-granting schools. Not one of the degree granting schools had human lactation or breastfeeding cited anywhere on their websites. The remaining six schools were certificate-granting and each one had human lactation or breastfeeding listed as a requirement in their curricula.

In personal conversations about these findings with nursing colleagues who were certified in midwifery, it was brought to my attention that these colleagues believed everyone with a degree from a nursing school has had some training in human lactation or breastfeeding. This training may not have been extensive as it would be for a LC, but the students were trained. These conversations prompted a search for information by a different method. I called several places to verify these comments and to inquire where these competencies may be mentioned or described.

A spokesperson for the National League for Nursing Accrediting Commission, Inc. (NLNAC), in Atlanta, Georgia, reported that NLNAC does not have any information on the content of the courses in the curricula and these are set by each individual school (J. Gruenbaum, personal communication, July 10, 2009).

Dr. Mary Ann Faucher, Assistant Professor at Baylor University's Louise Herrington School of Nursing at Dallas reported breastfeeding is imbedded throughout all nursing programs starting from the Associate Degree program level on to the doctoral level. It is part of childbearing and maternity courses. She further shared that she had been a professor for many years and as an educator who had taught at various levels of nursing in her career, she knows from personal experience that this subject is taught at all levels. She also commented that these courses were not listed separately because they do not have the depth and scope required for a LC (M. A. Faucher, personal communication, July 7, 2009). Joan Becker, Director of Nursing at El Centro College in Dallas, which grants Associate Degrees in Nursing and has the second highest student enrollment in Texas, explained that their nursing program teaches a small amount of breastfeeding imbedded in the postpartum section of Obstetrics education. The information may be a couple of chapters from the text and a few hours of clinical rotation where a student may observe a LC help a nursing mother-infant dyad (J. Becker, personal communication, July 10, 2009).

In conclusion, the results from these two nursing schools are they do not cite human lactation or breastfeeding in their curricula, but may have the subject matter imbedded in their childbearing courses.

On the website of the University of Texas Medical Branch in Galveston, School of Medicine (see Appendix F) was an extensive list of rotation electives in all the specialties from which fourth year medical students choose their 4-week rotation of their interest. One of the specialties of interest for this project search was Pediatrics and two of the rotation choices that were most likely to have human lactation or breastfeeding, mentioned were *PEDU-4013* and *PEDU-4045*. *PEDU-4013*, rotation elective's name was *Pediatric Gastroenterology and Nutrition*, and it states within the competencies, "Know constituents of common infant formulas and their uses in nutritional management" (see Appendix F). *PEDU-4045*, rotation elective's name was *Pediatric Gastroenterology and Nutrition at Dell Children's Medical Center of Central*, and it states within the competencies, "Know the constituents of common infant formulas and the rationale for the use of non-standard formulas" (see Appendix F). Neither of the rotations mentioned above cited any competency requirements in human milk, human lactation, or breastfeeding.

In summary, the results of this project were as follows:

- 100% of allopathic and osteopathic medical, physician assistants, and public health schools do not have any formal courses or competencies in human lactation or breastfeeding cited in their curricula.
- 100% of the nursing schools do not mention human lactation or breastfeeding in their curricula, but every degree level and type may have this subject imbedded in the childbearing related courses of their curricula.
- 100% of certificate-granting schools have human lactation and breastfeeding as requirements listed in their curricula.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Discussion

As mentioned in the introduction, this research was conducted to either prove or disprove Newman's statement about doctors not being trained in human lactation or breastfeeding. Unfortunately, the results confirm his statement since human lactation or breastfeeding are not cited as a comprehensive program in the curricula of any medical school in Texas. In fact, this researcher found one medical school required its students to know about infant formula, but not about human milk or breastfeeding. As stated previously pediatricians and their pediatric residency programs were beyond the scope of this research project.

The research included several other schools for health professionals as a comparison to find out if and where human lactation was being taught. The research findings further established that many health professionals receiving degrees in Texas were not given any formal courses in human lactation or breastfeeding either. Physician Assistants were included because of their direct contact with patient care at multiple specialties and they did not receive any formal courses in this field either. Public Health professionals, who often became educators, did not have any electives in this field. Nursing schools did not mention this field in any courses, course descriptions, or competencies. However, according to interviews with Dr. Faucher and with Ms. Becker, nursing schools

provided a small amount of exposure imbedded in courses, but not enough to warrant a separate course in the curricula. The schools that mentioned and teach human lactation or breastfeeding in Texas were certificate-granting schools including all the Midwifery and Doula schools. Lactation Consultant schools were included in the search to verify that there are health professionals who receive extensive training in this field. As is described in the definition of terms, LC may be employed as educators or in direct patient contact as specialists and must be certified by the International Board of Lactation Consultants.

Conclusions

In conclusion, from the results and the review of the literature, it seems it will be very difficult to attain the Healthy People 2010 objectives in breastfeeding or human lactation any time soon and certainly not before 2010. The attainment of these objectives is dependent upon the mothers knowledge and practice of breastfeeding and also on the health professionals education and support of the mother-infant dyad. Texas and the nation need to have trained professionals in order to support these mothers in the medicalized breastfeeding environment, especially at hospitals. It is very difficult to see an immediate improvement in this arena without greater support from the entire community and a cultural shift. Health professionals are one of the major key components in the change for the betterment needing to take place for the childbearing women nationwide.

There appears to be hope and more visibility of the importance of breastfeeding at the national level. On November 30, 2008, the United States Breastfeeding Committee (USBC) drafted a Breastfeeding Petition addressed to President-Elect Barrack H. Obama to make Breastfeeding a high priority in the upcoming administration. By 10:30 PM on December 14, 2008, there were 6,890 electronic signatures collected from all over the United States (White, 2008) and on January 21, 2009, one day after Obama was sworn in as President, the number had risen up to 11,357 (White, 2009). The rise in numbers through the 52 days mentioned reflects the support that the breastfeeding issue has from the population of the United States. Further support appeared 193 days later when:

On June 11, 2009, Representative Carolyn B. Maloney (NY) and Senator Jeff Merkley (OR) introduced the Breastfeeding Promotion Act in both houses of Congress, to provide a unified national policy to keep mothers, their children, and their communities healthy. This is the first time the bill has been introduced in the Senate. The Breastfeeding Promotion Act (H.R. 2819, S. 1244) includes five provisions:

1. Amends the Civil Rights Act of 1964 to protect breastfeeding women from being fired or discriminated against in the workplace.
2. Provides tax incentives for businesses that establish private lactation areas in the workplace, or provide breastfeeding equipment or consultation services to their employees.
3. Provides for a performance standard to ensure breast pumps are safe and effective.
4. Allows breastfeeding equipment and consultation services to be tax deductible for families (amends Internal Revenue Code definition of "medical care").
5. Protects the privacy of breastfeeding mothers by ensuring they have break time and a private place to pump (applies to employers with 50 or more employees, see text of legislation for details). (USBC, 2009)

The United States Breastfeeding Committee Petition and the introduction of the bills in the House of Representatives and the Senate are an evidence of a grassroots movement that lends support to a raised public awareness, concern, and growing interest about the issues of breastfeeding and gives hope for a future positive impact on babies, mothers, and society.

Recommendations

My personal recommendation is that all institutions of formal education for medical, physician assistants, and nursing not just in Texas, but also in the entire nation, require at least a one-semester, three-credit course about breastfeeding or human lactation for all their students. Such a course already is being offered at the University of Pennsylvania in Philadelphia School of Nursing. I also recommend that such a course be offered as an elective at schools of public health for those wishing to become public health educators.

I further recommend that human lactation or breastfeeding educational issues become part of the initiative of H. R. 2819, S. 1244. These suggested recommendations may bring Texas and the nation up to par with other nations that have more biologically compatible and culturally friendlier attitudes towards the human nutritional needs of newborns and are more supportive of mothers in the breastfeeding process.

In reference to pediatricians, I recommend that pediatric residency programs in Texas and the nation be researched beyond the seven mentioned in the review of literature which are conducting a pilot program in breastfeeding or human lactation education since the winter of 2008-2009.

A final thought for humanity. To summarize the importance of human lactation is a quote from Stuart-Macadam and Dettwyler's *Breastfeeding Biocultural Perspectives* (1995) that speaks of the mother-infant dyad breastfeeding relationship as "the choreography of mother and infant that has been performed through the ages and is vital for the optimum health and well being of both mother and child" (p. 29).

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APPENDIX A

DATA TO BE OBTAINED FROM THE WEBSITES OF INSTITUTIONS

LISTED IN APPENDICES B AND C

APPENDIX A

DATA TO BE OBTAINED FROM THE WEBSITES OF INSTITUTIONS

Name of Institution and City _____

Type of School: _____

Websites addresses: _____

Date Websites were retrieved: _____

1. Is there a course titled Human Lactation or Breastfeeding in the curriculum?

Yes ___

No ___

2. Are the terms: "Human Lactation of Breastfeeding", found in the competencies of the program?

Yes ___

No ___

If yes to either question above, then continue:

1. Is it a required course?

Yes ___

No ___

2. Is it an elective course?

Yes ___

No ___

3. Is there a clinical rotation required in Human Lactation or Breastfeeding?

Yes ___

No ___

If yes, how long is the clinical rotation? _____

APPENDIX B

LIST OF DEGREE GRANTING INSTITUTIONS OF HIGHER EDUCATION

FOR HEALTH PROFESSIONALS IN TEXAS.

APPENDIX B

LIST OF DEGREE GRANTING INSTITUTIONS OF HIGHER EDUCATION FOR HEALTH PROFESSIONALS IN TEXAS.

1. Allopathic Medical Schools (Seven Schools in Texas)

List from Angelo State University (2007) and from
Medical Professions Institute (2008)

Baylor, Houston
College of Medicine
www.bcm.edu

Texas A & M University Health Science Center, College Station
College of Medicine
www.tamhsc.edu

Texas Tech University Health Sciences Center, Lubbock and with
campuses in Amarillo, El Paso, Odessa
School of Medicine
www.ttuhsc.edu

The University of Texas Health Science Center, Houston
Medical School
www.med.uth.tmc.edu

The University of Texas Health Science Center, San Antonio
Medical School

www.uthscsa.edu

The University of Texas Medical Branch, Galveston
School of Medicine

www.utmb.edu

The University of Texas Southwestern Medical Center, Dallas
Southwestern Medical School

www.utsouthwestern.edu

2. Osteopathic Medical Schools (One School in Texas)

List from American Osteopathic Association, Colleges of
Osteopathic Medicine, Texas (n.d)

University of North Texas Health Science Center, Fort Worth
Texas College of Osteopathic Medicine (TCOM)

www.hsc.unt.edu

3. Physician Assistants (Seven schools in Texas)

List from Texas Academy of Physician Assistants (2008)

Baylor College of Medicine, Houston

School of Allied Health Sciences, Physician Assistant Program

www.bcm.tmc.edu

Texas Tech University Health Sciences Center, Midland
School of Allied Health, Physician Assistant Program
www.ttuhsc.edu

The University of Texas - Pan American, Edinburg
College of Health Sciences & Human Services
Physician Assistant Studies Program
www.panam.edu

The University of Texas Health Science Center, San Antonio
School of Health Professions, Physician Assistant Studies
www.uthscsa.edu

The University of Texas Medical Branch, Galveston
School of Health Professions, Physician Assistant Studies
www.sahs.utmb.edu

The University of Texas Southwestern Medical Center, Dallas
School of Health Professions, Physician Assistant Studies
www.utsouthwestern.edu

University of North Texas Health Science Center, Fort Worth
Physician Assistant Studies Program
www.hsc.unt.edu

4. Schools of Public Health (Five schools in Texas)

List from GradSchools.com (2008)

Texas A & M Health Science Center, College Station
School of Rural Public Health
www.stc.tamhsc.edu

Texas A & M Health Science Center, McAllen
South Texas Center, School of Rural Public Health
www.stc.tamhsc.edu

The University of Texas Health Science Center, Houston, Austin,
Brownsville, Dallas, El Paso, and San Antonio
School of Public Health
www.sph.uth.tmc.edu

The University of Texas Medical Branch, Galveston
Preventive Medicine & Community Health
www.utmb.edu

University of North Texas Health Science Center, Fort Worth
School of Public Health
www.hsc.unt.edu

5. Nursing Schools

a) Associate Degree Nursing Schools

(62 schools in Texas and three were searched for this report)

List from www.AssociateDegreeNursing.com (n.d.)

El Centro College, Dallas

Associate Degree Nursing (231 students)

www.elcentrocollege.edu

San Antonio College, San Antonio

Department of Nursing Education (248 students)

www.alamo.edu

Tarrant County College District, Tarrant County

Associate in Science in Nursing (150 students)

www.tccd.edu

b) Baccalaureate Degree and Above Nursing schools

(31 schools in Texas)

List from Petersen's Guide (n.d.) and Yahoo Directory (n.d.)

Abilene Consortium of Three Universities, Abilene

Abilene Christian University

Hardin-Simmons University

McMurry University

Patty Hanks Shelton School of Nursing

www.phssn.edu

Angelo State University, San Angelo
Department of Nursing
www.angelo.edu

Baylor University, Waco
Louise Herrington School of Nursing of Baylor at Dallas
www.baylor.edu

East Texas Baptist University, Marshall
Department of Nursing
www.etbu.edu/

Houston Baptist University, Houston
School of Nursing & Allied Health
www.hbu.edu

Lubbock Christian University, Lubbock,
Department of Nursing
www.lcu.edu

Midwestern State University, Wichita Falls
Nursing Program
www.hs2.mwsu.edu

Prairie View A & M University, Houston
College of Nursing
www.pvamu.edu

Southwestern Adventist University, Keene
Department of Nursing
www.swau.edu/

Southwestern Assemblies of God University, Waxahachie
School of Nursing
www.sagu.edu

Stephen F. Austin State University, Nacogdoches
College of Sciences and Mathematics
Richard and Lucille DeWitt School of Nursing
www.sfasu.edu

Tarleton State University, Stephenville
Department of Nursing
www.tarleton.edu

Texas Tech University Health Science Center, College Station
College of Nursing
www.nursing.tamsce.edu

Texas A & M International University, Laredo
Dr. F. M. Canseco School of Nursing
www.my.tamhsc.edu

Texas A & M University - The Island University, Corpus Christi.
College of Nursing and Health Sciences
www.conhs.tamucc.edu

Texas A & M University, Texarkana
College of Health and Behavioral Sciences, Department of Nursing
www.tamut.edu

Texas Christian University, Fort Worth
Harris College of Nursing & Health Sciences
www.nursing.tcu.edu
Texas Christian University, Fort Worth
Harris College of Nursing & Health Sciences
www.nursing.tcu.edu

Texas Tech University Health Science Center, Lubbock
Anita Thigpen Perry School of Nursing
www.ttuhsc.edu

Texas Woman's University, Denton, Dallas, Houston
College of Nursing
www.twu.edu/nursing

The University of Texas, Arlington
School of Nursing
www.uta.edu/nursing

The University of Texas, Austin
School of Nursing
www.utexas.edu/nursing

The University of Texas at Brownsville, Brownsville
School of Health Sciences, Department of Nursing
www.blue.utb.edu

The University of Texas at El Paso, El Paso
School of Nursing
www.utep.edu

The University of Texas at Tyler, Tyler
College of Nursing and Health Sciences
www.uttyler.edu

The University of Texas Health Science Center, Houston
School of Nursing
www.son.uth.tmc.edu

The University of Texas Health Science Center, San Antonio
School of Nursing
www.nursing.uthscsa.edu

The University of Texas Medical Branch, Galveston
School of Nursing
www.son.utmb.edu

The University of Texas–Pan American, Edinburg
College of Health Sciences and Human Services
Nursing Department
www.utpa.edu

University of the Incarnate Word, San Antonio
School of Nursing & Health Professions
www.uiw.edu

University of Mary Hardin-Baylor, Belton
Scott & White College of Nursing
www.umhb.edu/nursing

West Texas A & M University, Canyon
College of Nursing and Health Sciences
www.wtamu.edu

APPENDIX C

LIST OF CERTIFICATE GRANTING SCHOOLS IN AND OUTSIDE OF TEXAS

APPENDIX C

LIST OF CERTIFICATE GRANTING SCHOOLS

IN AND OUTSIDE OF TEXAS.

1. Midwifery Schools (Three schools in Texas)

List from Texas Department of State Health Services (2007)

Association of Texas Midwives, Midland

Midwifery Training Program

www.texasmidwives.com

Maternidad La Luz, El Paso.

Birth Center and Midwifery School.

www.maternidadlaluz.com

Medical Training Institute of America, Dallas

Midwifery Program

www.ati.iblp.org/ati/students/opportunities/midwifery

2. Doula

(One school with headquarters in Indiana and workshops in Texas)

From DONA International (n.d.)

DONA International, Jasper, Indiana

Pos-partum doulas

www.dona.org

3. Lactation Consultants Schools (Two schools outside of Texas)
List from International Board of Lactations Consultants in the
Americas (I.B.L.C.E., n.d.)

Breastfeeding Support Consultants, Villa Park, Illinois
Center for Lactation Education
www.bsccenter.org

University of California at San Diego Extension, La Jolla, California
Perinatal Health Programs - Lactation Courses
www.breastfeeding-education.com/contact.html

APPENDIX D

LIST OF DEGREE NAMES WITH THEIR CORRESPONDING INITIALS

USED BY HEALTH PROFESSIONALS IN THE UNITED STATES

AS CREDENTIALS.

APPENDIX D

LIST OF DEGREE NAMES WITH THEIR CORRESPONDING INITIALS USED BY HEALTH PROFESSIONALS IN THE UNITED STATES AS CREDENTIALS.

Name of Professional Degree	Degree Initials
Medical Degree	
Medical Doctor	M.D.
Medical joint Degrees	
Doctor of Medicine / Masters in Public Health	M.D./ M.P.H.
Doctor of Medicine / Master in Business Administration	M.D./ M.B.A.
Doctor of Medicine / Doctor of Philosophy	M.D./ Ph.D.
Doctor of Medicine / Doctor in Jurisprudence	J.D./ M.D.
Doctor of Medicine / Oral & Maxillofacial Surgeon	M.D./ O.M.S.
Osteopathic Degree	
Doctor of Osteopathy	D.O.
Osteopathic joint Degrees	
Doctor of Osteopathy / Masters of Public Health	D.O./ M.P.H.
Physician Assistants Degrees	
Physician Assistant	P.A.
Bachelors of Science in Physician Assistant	B.S.P.A.
Masters of Physician Assistant	M.P.A.
Masters of Physician Assistant Studies	M.P.A.S.
Masters of Science in Physician Assistant	M.S.P.A.
Masters in Health Science	M.H.S.
Masters in Medical Science	M.M.Sc.
Public Health Degrees	
Bachelors of Science in Public Health	B.S.P.H.
Masters of Science in Public Health	M.S.P.H.
Masters of Public Health	M.P.H.
Doctorate in Philosophy in Public Health	Ph.D.P.H.
Doctor of Public Health	Dr.P.H

LIST OF DEGREES (continued)

Name of Professional Degree	Degree Initials
Nursing Degrees	
Registered Nurse	R.N.
Associate Degree Nurse	A.D.N.
Associate of Applied Science in Nursing	A.A.S.N.
Bachelors of Science in Nursing	B.S.N.
Acute Care Nurse Practitioner	A.C.N.P.
Acute Care Pediatric Nurse Practitioner	A.C.P.N.P.
Adult Health Clinical Nurse Specialist	A.H.C.N.S.
Adult Nurse Practitioner	A.N.P.
Advance Practice Nurses (Nurse Practitioner)	A.P.N.
Clinical Nurse Specialist	C.N.S.
Family Nurse Practitioner	F.N.P.
Family Psychiatric Mental Health Nurse Practitioner	F.P.M.H.N.P.
Gerontology Nurse Practitioner	G.N.P.
Masters in Nursing	M.N.
Masters in Science in Nursing	M.S.N.
Masters in Science in Nursing with Public Health	M.S.N.P.H.
Masters of Art in Nursing	M.A.S.
Neonatal Nurse Practitioner	N.N.P.
Pediatric Nurse Practitioner	P.N.P.
Psychiatric Mental Health Nurse Practitioner	P.M.H.N.P.
Women's Health Care Nurse Practitioner	W.H.C.N.P.
Doctor in Nursing Practice	D.N.P.
Doctor in Nursing Science	D.N.Sc. or D.N.S.
Doctor of Philosophy in Nursing	Ph.D. - Nursing
Nurse Midwife - Doctor in Nursing Practice	N.M.- D.N.P.

APPENDIX E

LIST OF CERTIFICATE NAMES WITH THEIR CORRESPONDING
INITIALS USED BY HEALTH PROFESSIONALS IN
THE UNITED STATES AS CREDENTIALS.

APPENDIX E

LIST OF CERTIFICATE NAMES WITH THEIR CORRESPONDING INITIALS USED BY HEALTH PROFESSIONALS IN THE UNITED STATES AS CREDENTIALS.

Name of Professional Certificates	Certificate Initials
Midwives Certification	
Certified Midwife	C.M.
Certified Professional Midwife	C.P.M.
Certified Nurse Midwife	C.N.M.
Certified Registered Nurse Midwife	C.R.N.M.
Doula Certification by DONA International	
Certified Birth Doula (DONA)	C.D.(DONA)
Certified Postpartum Doula (DONA)	P.C.D.(DONA)
Lactation Consultants Certification	
Lactation Consultant	L.C.
International Board Certified Lactation Consultant	I.B.C.L.C.

APPENDIX F

DATA COLLECTED FROM ALLOPATHIC AND OSTEOPATHIC

MEDICAL SCHOOLS IN TEXAS

APPENDIX F

DATA COLLECTED FROM ALLOPATHIC AND OSTEOPATHIC

MEDICAL SCHOOLS IN TEXAS

1. Allopathic Medical Schools

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
1	Baylor College of Medicine, Houston Medical School			
	Pre-clinical http://www.bcm.edu/osa/handbook/?PMID=5608	M.D.	No	No
	Clinical http://www.bcm.edu/osa/handbook/?PMID=7463		No	No
	Ethics track http://www.bcm.edu/ethics/?PMID=3827	M.D. with Ethics	No	No
	Special track http://www.bcm.edu/medschool/tracks.html#eth	M.D. with Special	No	No
	Retrieved June 14, 2009			
2	Texas A & M University Health Science Center, College Station College of Medicine			
	http://tamhsc.edu/education/catalog/com/curriculum.html	M.D.	No	No
	http://medicine.tamhsc.edu/education/graduate-studies/curriculum.html	M.D./Ph.D.	No	No
	Retrieved June 11, 2009			
3	Texas Tech University Health Sciences Center, Lubbock with more campuses in Amarillo, El Paso, and Odessa School of Medicine			
	Catalogue for all four program http://www.ttuhschool.edu/som/admissions/files/SOMCatalog0910.pdf	M.D.	No	No
		M.D./M.B.A.	No	No
		M.D./ Ph.D.	No	No
		J.D./ M.D.	No	No
	Retrieved June 24, 2009			

Allopathic Medical Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
4	The University of Texas Health Science Center, Houston Medical School			
	http://med.uth.tmc.edu/catalogs/catalog-2007-09/md_curriculum.htm	M.D.	No	No
	http://med.uth.tmc.edu/catalogs/catalog-2007-09/md_curriculum-goals-and-objectives.htm			
	http://www.uth.tmc.edu/gsbs/programs/mdphd/index.html	M.D./Ph.D.	No	No
	http://med.uth.tmc.edu/administration/admissions/MDMPH.html	M.D./ M.P.H.	No	No
	http://www.db.uth.tmc.edu/studentaffairs/advanced_education.htm#oms	M.D./ O.M.S.	No	No
	Retrieved June 26, 2009			
5	The University of Texas Health Science Center, San Antonio School of Medicine			
	http://studentservices.uthscsa.edu/pdf/Catalog2007-09.pdf (pages 220-236)	M.D.	No	No
	http://som.uthscsa.edu/Admissions/MDPhD.asp	M.D./ Ph.D.	No	No
	http://som.uthscsa.edu/Admissions/MDMPH.asp	M.D./ M.P.H.	No	No
	http://som.uthscsa.edu/Research/MDDistinctionResearch.asp	M.D. with Research	No	No
	http://som.uthscsa.edu/AcademicEnhancement/mddistinctionmedical.asp	M.D. with Medical Education	No	No
	Retrieved June 26, 2009			
6	The University of Texas Medical Branch, Galveston School of Medicine			
	http://www.utmb.edu/imo/CourseDescriptions/Year1/index.htm			
	http://www.utmb.edu/cms_world/groups/external/@external/@026imo/documents/web_content/imo_095126.pdf			
	Fourth Year Pediatric 4-weeks Elective: PEDU 4013 http://ar.utmb.edu/04-05review/bdisplay.asp?rec=139	M.D.	No	No
	Fourth Year Pediatric 4-weeks Elective: PEDO-4045 http://ar.utmb.edu/04-05review/bdisplay.asp?rec=112			
	http://www.utmb.edu/mdphd/curriculum/CourseDescription.html	M.D./ Ph.D.	No	No
	Retrieved June 26, 2009			

Allopathic Medical Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
7	The University of Texas Southwestern Medical Center, Dallas Southwestern Medical School			
	Overview of MD curriculum http://www8.utsouthwestern.edu/utsw/cda/dept137886/files/139341.html	M.D.	No	No
	Objectives of MD program http://www.utsouthwestern.edu/vgn/images/portal/cit_56417/48/26/490343utobjectives.pdf			
	Retrieved June 24, 2009			

2. Osteopathic Medical School

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
1	University of North Texas Health Science Center, Fort Worth Texas College of Osteopathic Medicine (TCOM)			
	http://www.hsc.unt.edu/education/tcom/documents/TCOMCatalog07_08.pdf	D.O.	No	No
	http://www.hsc.unt.edu/education/tcom/documents/TCOMCatalog07_08.pdf	D.O. / M.P.H.	No	No
	Retrieved June 10, 2009			

APPENDIX G
DATA COLLECTED FROM PHYSICIAN ASSISTANTS SCHOOLS
IN TEXAS

APPENDIX G

DATA COLLECTED FROM PHYSICIAN ASSISTANTS SCHOOLS

IN TEXAS

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
1	Baylor College of Medicine, Houston School of Allied Health Sciences, Physician Assistant Program			
	http://www.bcm.edu/pap/?PMID=10827	M.P.A.S.	No	No
	Retrieved June 24, 2009			
2	Texas Tech University Health Sciences Center, Midland School of Allied Health, Physician Assistant Program			
	http://www.ttuhsc.edu/sah/mpa/curriculum.aspx	M.P.A.	No	No
	Retrieved June 24, 2009			
3	The University of Texas - Pan American, Edinburg College of Health Sciences & Human Services Physician Assistant Studies Program			
	https://portal.utpa.edu/portal/page/portal/utpa_main/daa_home/hshs_home/pasp_home/imagesfiles/PASP%20Professional%20Curriculum%20(BS).pdf	M.P.A.S.	No	No
	https://portal.utpa.edu/portal/page/portal/utpa_main/daa_home/hshs_home/pasp_home/imagesfiles/Master%27s%20Course%20Descriptions%20(master)%20revised%20by%20Frank%202.pdf			
	Retrieved June 24, 2009			
4	The University of Texas Health Science Center, San Antonio School of Health Professions, Physician Assistant Studies			
	http://shpwelcome.uthscsa.edu/pa/pa_curriculum.asp	M.P.A.S.	No	No
	Retrieved June 24, 2009			
5	The University of Texas Medical Branch, Galveston School of Health Professions, Physician Assistant Studies			
	http://sahs.utmb.edu/pas/Prospective_Students/mastersinfo09.pdf	M.P.A.S.	No	No
	Retrieved June 24, 2009			

Physician Assistants Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
6	The University of Texas Southwestern Medical Center, Dallas School of Health Professions, Physician Assistant Studies			
	http://www8.utsouthwestern.edu/utsw/cda/dept48950/files/54112.html	M.P.A.S.	No	No
	Retrieved June 24, 2009			
7	University of North Texas Health Science Center, Fort Worth Physician Assistant Studies Program			
	http://www.hsc.unt.edu/education/tcom/documents/TCOMCatalog07_08.pdf	M.P.A.S.	No	No
	Retrieved June 10, 2009			

APPENDIX H

DATA COLLECTED FROM SCHOOLS OF PUBLIC HEALTH IN TEXAS

APPENDIX H

DATA COLLECTED FROM SCHOOLS OF PUBLIC HEALTH IN TEXAS

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
1	Texas A & M Health Science Center, College Station School of Rural Public Health			
	http://www.stc.tamhsc.edu/education/mph.html	M.P.H.	No	No
	http://www.srph.tamhsc.edu/degrees-offered/master-of-science-public-health.html	M.S.P.H.	No	No
	http://www.srph.tamhsc.edu/degrees-offered/dr-public-health.html	Dr.P.H.	No	No
	Retrieved June 11, 2009			
2	Texas A & M Health Science Center, McAllen South Texas Center, School of Rural Public Health			
	http://stc.tamhsc.edu/education/mph.html	M.P.H.	No	No
	Retrieved June 11, 2009			
3	The University of Texas Health Science Center, Houston, Austin, Brownsville, Dallas, El Paso, San Antonio School of Public Health			
	http://www.sph.uth.tmc.edu/sservices/prospective.aspx?id=5205	M.P.H.	No	No
	http://www.sph.uth.tmc.edu/sservices/prospective.aspx?id=5207	M.S.P.H.	No	No
	http://www.sph.uth.tmc.edu/sservices/prospective.aspx?id=5206	Dr.P.H.	No	No
	http://www.sph.uth.tmc.edu/sservices/prospective.aspx?id=5208	Ph.D.P.H.	No	No
	Retrieved June 24, 2009			
4	The University of Texas Medical Branch, Galveston Preventive Medicine & Community Health			
	http://www.utmb.edu/pmch/mph/curr.htm	M.P.H.	No	No
	Retrieved June 24, 2009			
5	University of North Texas Health Science Center, Fort Worth School of Public Health			
	http://www.hsc.unt.edu/education/sph/sph_catalog.cfm	M.P.H. Dr.P.H	No	No
	Retrieved June 10, 2009			

APPENDIX I
DATA COLLECTED FROM ASSOCIATE DEGREE
NURSING SCHOOLS IN TEXAS

APPENDIX I

DATA COLLECTED FROM ASSOCIATE DEGREE

NURSING SCHOOLS IN TEXAS

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
1	El Centro College, Dallas Associate Degree Nursing			
	http://www.elcentrocollege.edu/Program/Health/_docs/packet/ADN%2009.pdf	A.D.N.	No	No
	Retrieved June 30, 2009			
2	San Antonio College, San Antonio Department of Nursing Education			
	http://www.alamo.edu/sac/nursing/dnepol/N0p_gnrc.htm http://www.alamo.edu/sac/nursing/course.htm	A.D.N.	No	No
	Retrieved June 30, 2009			
3	Tarrant County College District, Tarrant County Associate in Science in Nursing			
	https://waj.tccd.edu/TCC/WebAdvisor3/viewDA?selectProg=NURS.D003.UG&SUBMIT=SUBMIT	A.D.N.	No	No
	Retrieved June 30, 2009			

APPENDIX J

DATA COLLECTED FROM BACCALAUREATE DEGREE AND ABOVE
NURSING SCHOOLS IN TEXAS

APPENDIX J

DATA COLLECTED FROM BACCALAUREATE DEGREE AND ABOVE

NURSING SCHOOLS IN TEXAS

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
1	Abilene Consortium of Three Universities, Abilene Abilene Christian University, Hardin-Simmons University, McMurry University Patty Hanks Shelton School of Nursing			
	Abilene Christian University http://www.phssn.edu/acudegreeplan.html	B.S.N.	No	No
	Hardin-Simmons University http://www.phssn.edu/hsudegreeplan.htm	B.S.N.	No	No
	McMurry University http://www.phssn.edu/mcmdegreeplan.htm	B.S.N.	No	No
	Abilene Christian University, Hardin-Simmons University, http://www.phssn.edu/fnpdegree.htm	M.S.N. F.N.P.	No	No
	Retrieved June 14, 2009			
2	Angelo State University, San Angelo Department of Nursing			
	http://www.angelo.edu/dept/nursing/documents/BSNCourseDescriptions.pdf http://www.angelo.edu/dept/nursing/forms/2nd%20Degree%20Program%20Advising%20Plan%20F-09.pdf	B.S.N.	No	No
	http://www.angelo.edu/dept/nursing/documents/MSNProgramInfo.pdf http://www.angelo.edu/dept/nursing/documents/MSN.pdf	M.S.N. C.N.S.	No	No
	Retrieved June 27, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
3	Baylor University, Waco Louise Herrington School of Nursing of Baylor, Dallas			
	http://www.baylor.edu/nursing_undergrad/index.php?id=28708	B.S.N.	No	No
	http://www.baylor.edu/nursing_grad/index.php?id=27050 http://www.baylor.edu/nursing_grad/index.php?id=27615	N.N.P.	No	No
	http://www.baylor.edu/nursing_grad/index.php?id=27052 http://www.baylor.edu/nursing_grad/index.php?id=27054	F.N.P.	No	No
	http://www.baylor.edu/nursing_grad/index.php?id=56683 http://www.baylor.edu/nursing_grad/index.php?id=56776	N.M.- D.N.P.	No	No
	Retrieved June 14, 2009			
4	East Texas Baptist University, Marshall School of Nursing			
	http://www.etbu.edu/academic_programs/School_of_Nursing/Nursing_Bootcamp.htm Click on "Advising Form Worksheet"; an excel spreadsheet has the Nursing curriculum	B.S.N.	No	No
	Retrieved June 14, 2009			
5	Houston Baptist University, Houston School of Nursing & Allied Health			
	http://www.hbu.edu/images/hbu/publications/CONursing/BSNdegreeworksheet.pdf	B.S.N.	No	No
	Retrieved June 14, 2009			
6	Lubbock Christian University, Lubbock Department of Nursing			
	http://www.lcu.edu/LCU/academics/nursing/	B.S.N.	No	No
	http://www.lcu.edu/LCU/academics/GradNursing/degreeplan.htm	M.S.N.	No	No
	Retrieved June 14, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
7	Midwestern State University, Wichita Falls Health Science and Human Services John and Nevils Wilson School of Nursing			
	http://hs2.mwsu.edu/nursing/gareq.asp http://hs2.mwsu.edu/nursing/courses-rn_bsn.asp	B.S.N.	No	No
	http://hs2.mwsu.edu/nursing/courses_des-msn.asp	M.S.N.	No	No
	http://hs2.mwsu.edu/nursing/fpmh-description.asp	F.P.M.H.N.P.	No	No
	Retrieved June 27, 2009			
8	Prairie View A & M University, Houston College of Nursing			
	http://www.pvamu.edu/pages/1017.asp	B.S.N.	No	No
	http://www.pvamu.edu/pages/1013.asp	M.S.N / F.N.P.	No	No
	Retrieved June 11, 2009			
9	Southwestern Adventist University, Keene Nursing Department			
	https://register.swau.edu/index/registration-admin-classschedule-action	B.S.N.	No	No
	Retrieved June 14, 2009			
10	Southwestern Assemblies of God University, Waxahachie Nursing Program			
	http://www.sagu.edu/academics/catalogs/undergrad/0809/programs/rn-to-bsn.pdf	B.S.N.	No	No
	Retrieved June 14, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
11	Stephen F. Austin State University, Nacogdoches College of Sciences and Mathematics Richard and Lucille DeWitt School of Nursing			
	http://sfaonline.sfasu.edu/nursing/ http://sfaonline.sfasu.edu/nursing/#progression_procedure http://www.fp.sfasu.edu/nursing/courses.htm http://www.fp.sfasu.edu/nursing/courses2.htm http://www.fp.sfasu.edu/nursing/courses3.htm http://www.fp.sfasu.edu/nursing/courses4.htm	B.S.N.	No	No
	Retrieved June 27, 2009			
12	Tarleton State University, Stephenville Department of Nursing			
	http://www.tarleton.edu/~nursing/docs/BSN4YearTypicalSequence.pdf http://www.tarleton.edu/catalog/2008-2009/CourseListings/N.pdf	B.S.N.	No	No
	Retrieved June 11, 2009			
13	Texas A & M Health Science Center, College Station College of Nursing			
	http://nursing.tamhsc.edu/descriptions.html	B.S.N.	No	No
	Retrieved June 11, 2009			
14	Texas A & M International University, Laredo Dr. F. M. Canseco School of Nursing			
	https://my.tamhsc.edu/cp/home/loginf	B.S.N.	No	No
	http://www.tamtu.edu/catalog/current/ms-nurse-pract.shtml	M.S.N./ F.N.P.	No	No
	Retrieved June 11, 2009			
15	Texas A & M University - The Island University, Corpus Christi College of Nursing and Health Sciences			
	http://conhs.tamucc.edu/undergraduate/GenericDegreePlan2008_09.pdf	B.S.N.	No	No
	Retrieved June 11, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
16	Texas A & M University, Texarkana College of Health and Behavioral Sciences, Department of Nursing			
	http://www.tamut.edu/academicerv/academicervnewforms/BSn-%20Nursing%20Fall%202008.pdf	B.S.N.	No	No
	http://www.tamut.edu/nursing/MSNTentative%20WorksheetProgPlanfa08.pdf	M.S.N.	No	No
	Retrieved June 11, 2009			
17	Texas Christian University, Fort Worth Harris College of Nursing & Health Sciences			
	http://www.nursing.tcu.edu/docs/ABTForms/ABT%20BSN%20CourseDescripts%20R2-2008.pdf	B.S.N.	No	No
	http://www.nursing.tcu.edu/bsnmsn.asp	C.N.S.	No	No
	http://www.harriscollege.tcu.edu/dnp.asp	D.N.P.	No	No
	Retrieved June 14, 2009			
18	Texas Tech University Health Science Center, Lubbock Anita Thigpen Perry School of Nursing			
	http://www.ttuhsc.edu/son/undergrad/bsn_degreeplan.aspx http://www.ttuhsc.edu/son/undergrad/secWbsn_degreeplan.aspx http://www.ttuhsc.edu/son/undergrad/rnToBsn_degreeplan.aspx	B.S.N.	No	No
	http://www.ttuhsc.edu/son/gradprograms/rnToMsn_degreeplan.aspx	M.S.N.	No	No
	http://www.ttuhsc.edu/son/gradprograms/acutecare_degreeplan.aspx	A.C.N.P.	No	No
	http://www.ttuhsc.edu/son/gradprograms/family_degreeplan.aspx	F.N.P.	No	No
	http://www.ttuhsc.edu/son/gradprograms/geriatric_degreeplan.aspx	G.N.P.	No	No
	http://www.ttuhsc.edu/son/gradprograms/pediatric_degreeplan.aspx	P.N.P.	No	No
	http://www.ttuhsc.edu/son/doctorate/ http://www.ttuhsc.edu/son/doctorate/annualCalendar2008-2010.pdf	D.N.P.	No	No
	See Texas Women's University for joint Ph.D. in Nursing program	Ph.D.	No	No
	Retrieved June 17, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
19	Texas Woman's University, Denton, Dallas, Houston College of Nursing			
	http://www.twu.edu/nursing/first_degree_nursing_plan_fall_2007.pdf	B.S.N	No	No
	http://www.twu.edu/nursing/second_degree_nursing_plan_0707.pdf			
	https://www.twu.edu/nursing/clinical-nurse.asp	C.N.S.	No	No
	https://www.twu.edu/nursing/nurse-practitioners.asp	M.S.N. / N.P.	No	No
	http://www.twu.edu/nursing/Final_001-416.pdf https://www.twu.edu/nursing/Final_001-416.pdf	Ph.D. - Nursing	No	No
	http://www.twu.edu/nursing/dnp_sample-plan.asp	D.N.P.	No	No
	Retrieved June 11, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
20	The University of Texas , Arlington School of Nursing			
	http://www.uta.edu/nursing/BSN/courses.php	B.S.N.	No	No
	http://www.uta.edu/nursing/MSN/Educator.pdf	M.S.N.	No	No
	http://www.uta.edu/nursing/MSN/degree_plan/ACNP.htm	A.C.N.P.	No	No
	http://www.uta.edu/nursing/MSN/degree_plan/ACPNP.htm	A.C.P.N.P.	No	No
	http://www.uta.edu/nursing/MSN/degree_plan/ANP.htm	A.N.P.	No	No
	http://www.uta.edu/nursing/MSN/degree_plan/FNP.htm	F.N.P.	No	No
	http://www.uta.edu/nursing/MSN/degree_plan/GNP.htm	G.N.P.	No	No
	http://www.uta.edu/nursing/MSN/NNPdegreeplan.pdf	N.N.P.	No	No
	http://www.uta.edu/nursing/MSN/degree_plan/PNP.htm	P.N.P.	No	No
	http://www.uta.edu/nursing/MSN/degree_plan/APMHNP-FPMHNP.htm	P.M.H.N.P.	No	No
	http://www.uta.edu/nursing/MSN/degree_plan/MSN_MPH_UNT_DegreePlan.pdf	M.S.N./ M.P.H.	No	No
	http://www.uta.edu/nursing/DNP/courses.php http://www.uta.edu/nursing/DNP/coursedescriptions.php	D.N.P.	No	No
	http://www.uta.edu/nursing/PhD/course_descriptions.php http://www.uta.edu/nursing/PhD/curriculum.php	Ph.D. - Nursing	No	No
	Retrieved June 16, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
21	The University of Texas, Austin School of Nursing			
	http://www.utexas.edu/nursing/docs/bsn_degree_plan_06.pdf http://www.utexas.edu/nursing/docs/adn_bsn_degreeplan.pdf	B.S.N.	No	No
	http://www.utexas.edu/nursing/docs/academics/MSNPNP_ADV.pdf	M.S.N. / P.N.P.	No	No
	Entry from other than an RN degree, directly into a Holistic CNS. http://www.utexas.edu/nursing/docs/academics/AEMSNAHCNS_ADV.pdf	A.H.C.N.S.	No	No
	http://www.utexas.edu/nursing/docs/academics/MSNAHCNS_ADV.pdf	M.S.N. A.H.C.N.S.	No	No
	http://www.utexas.edu/nursing/docs/academics/MSNPH_ADV.pdf	M.S.N.P.H.	No	No
	Entry from other than an RN degree, directly into a MSN/MPH http://www.utexas.edu/nursing/docs/academics/AEMSNMPH_ADV.pdf	M.S.N./ M.P.H.	No	No
	http://www.utexas.edu/nursing/docs/academics/MSNFPN_ADV.pdf http://www.utexas.edu/nursing/docs/academics/PMSNFPN_ADV.pdf	F.N.P.	No	No
	http://www.utexas.edu/nursing/docs/academics/MSNPNP_ADV.pdf http://www.utexas.edu/nursing/docs/academics/PMSNPNP_ADV.pdf	P.N.P.	No	No
	http://www.utexas.edu/nursing/docs/academics/MSNPNP_ADV.pdf http://www.utexas.edu/nursing/docs/academics/PMSNPNP_ADV.pdf	N.N.P.	No	No
	From an MSN to Ph.D. in Nursing http://www.utexas.edu/nursing/docs/academics/PHD_ADV.pdf	Ph.D. - Nursing	No	No
	From an BSN to Ph.D. in Nursing http://www.utexas.edu/nursing/docs/academics/BSNtoPHD_ADV.pdf			
	Alternate entry to Ph.D. in Nursing http://www.utexas.edu/nursing/docs/academics/AEPHD_ADV.pdf			
	Retrieved June 16, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
22	The University of Texas at Brownsville, Brownsville School of Health Sciences, Department of Nursing			
	http://blue.utb.edu/shs/	B.S.N.	No	No
	https://gemini.utb.edu/gnp/courses.html	M.S.N.	No	No
	Retrieved June 27, 2009			
23	The University of Texas at El Paso, El Paso School of Nursing			
	http://nursing.utep.edu/academicprograms.shtml http://www.utep.edu/catalogs/2006/2006-2008UG.pdf#page=360#Admission (p. 358 - 376)	B.S.N.	No	No
	http://nursing.utep.edu/graduateprogram.shtml	M.S.N.	No	No
	http://nursing.utep.edu/fnpp.shtml	F.N.P.	No	No
	http://nursing.utep.edu/pnp.shtml	P.N.P.	No	No
	http://nursing.utep.edu/acnp.shtml	A.C.N.P.	No	No
	Retrieved June 27, 2009			
24	The University of Texas at Tyler, Tyler College of Nursing and Health Sciences			
	http://www.uttyler.edu/nursing/undergrad/core.html http://www.uttyler.edu/catalog/06-08/catalog_0608_uttyler.pdf (p. 223-243)	B.S.N.	No	No
	http://www.uttyler.edu/nursing/GradNursCoursDesc040704.pdf	M.S.N.	No	No
	Joint degree with UTSW, http://www.uttyler.edu/nursing/graduate/UTSWNPPProgram.html	W.H.C.N.P.	No	No
	http://www.uttyler.edu/nursing/graduate/MSNMBAB.html	M.S.N. / M.B.A.	No	No
	Joint degree with Texas Tech University Health Services, School of Nursing, Lubbock http://www.uttyler.edu/nursing/graduate/MSN-NP.html	C.N.S.	No	No
	http://www.uttyler.edu/nursing/phd/Curriculum.htm	Ph.D. - Nursing	No	No
	Retrieved June 27, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
25	The University of Texas Health Science Center, Houston School of Nursing			
	http://son.uth.tmc.edu/prospstudent/bsn/tradbsn/bsn-curriculum.htm http://son.uth.tmc.edu/prospstudent/applresources/documents/catalog.pdf	B.S.N.	No	No
	http://son.uth.tmc.edu/prospstudent/msn-postmasters/acute/msn-curriculum.htm http://son.uth.tmc.edu/prospstudent/msn-postmasters/acute/post-curriculum.htm	M.S.N. A.C.N.P.	No	No
	http://son.uth.tmc.edu/prospstudent/applresources/documents/precceptor-guide.pdf	C.N.S.	No	No
	http://son.uth.tmc.edu/prospstudent/msn-postmasters/pediatrics/msn-curriculum.htm http://son.uth.tmc.edu/prospstudent/msn-postmasters/pediatrics/post-curriculum.htm	P.N.P.	No	No
	http://son.uth.tmc.edu/prospstudent/msn-postmasters/family/msn-curriculum.htm http://son.uth.tmc.edu/prospstudent/msn-postmasters/family/post-curriculum.htm	F.N.P.	No	No
	http://son.uth.tmc.edu/prospstudent/msn-postmasters/gero/msn-curriculum.htm http://son.uth.tmc.edu/prospstudent/msn-postmasters/gero/post-curriculum.htm	G.N.P.	No	No
	http://son.uth.tmc.edu/prospstudent/msn-postmasters/pmh/msn-curriculum.htm http://son.uth.tmc.edu/prospstudent/msn-postmasters/pmh/post-curriculum.htm	P.M.H.N.P.	No	No
	http://son.uth.tmc.edu/prospstudent/msn-postmasters/womenshlth/msn-curriculum.htm http://son.uth.tmc.edu/prospstudent/msn-postmasters/womenshlth/post-curriculum.htm	W.H.C.N.P.	No	No
	http://son.uth.tmc.edu/prospstudent/msn-postmasters/msnmph/msnchp-curriculum.htm http://son.uth.tmc.edu/prospstudent/msn-postmasters/msnmph/msnhso-curriculum.htm http://son.uth.tmc.edu/prospstudent/msn-postmasters/msnmph/msnohn-curriculum.htm	M.S.N. / M.P.H.	No	No
	http://son.uth.tmc.edu/prospstudent/dnp/curriculum.htm	D.N.P.	No	No
	http://son.uth.tmc.edu/prospstudent/phd/curriculum.htm	Ph.D. - Nursing	No	No
	Retrieved June 27, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
26	The University of Texas Health Science Center, San Antonio School of Nursing			
	http://studentservices.uthscsa.edu/pdf/CertDegreesBrochure08.pdf http://studentservices.uthscsa.edu/pdf/Viewbooks/Nursing%20BSN%20Insert-Web.pdf	B.S.N.	No	No
	http://nursing.uthscsa.edu/grad/gcourses.aspx Minors in Nursing administration, education, gerontology, informatics, women's health http://nursing.uthscsa.edu/grad/minor.aspx	M.S.N.	No	No
	http://nursing.uthscsa.edu/grad/acnp.aspx	A.C.N.P.	No	No
	http://nursing.uthscsa.edu/grad/apmhnp.aspx	A.P.M.H.N.P	No	No
	http://nursing.uthscsa.edu/grad/ccn.aspx	C.N.S.	No	No
	http://nursing.uthscsa.edu/grad/fnp.aspx	F.N.P.	No	No
	http://nursing.uthscsa.edu/grad/fpmhnp.aspx	F.P.M.H.N.P	No	No
	http://nursing.uthscsa.edu/grad/pnp.aspx	P.N.P.	No	No
	http://nursing.uthscsa.edu/grad/recruitment.aspx http://nursing.uthscsa.edu/grad/phd.aspx	Ph.D. - Nursing	No	No
	Retrieved June 28, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
27	The University of Texas Medical Branch, Galveston School of Nursing			
	http://www.son.utmb.edu/studentaffairs/programs/baccalaureate/BSN_Program_Curriculum.html http://www.son.utmb.edu/studentaffairs/programs/baccalaureate/BaccalaureateCourseDescriptions.html	B.S.N.	No	No
	http://www.son.utmb.edu/studentaffairs/programs/masters/NurseEducatorProgram.html http://www.son.utmb.edu/studentaffairs/programs/masters/documents/NEP%20FT%20Program%20Plan.pdf	M.S.N.	No	No
	http://www.son.utmb.edu/studentaffairs/programs/masters/AcuteCareNursePractitionerProgram.html http://www.son.utmb.edu/studentaffairs/programs/masters/documents/ACNP%20FTprogram%20plan.pdf	A.C.N.P.	No	No
	http://www.son.utmb.edu/studentaffairs/programs/masters/NeonatalNursePractitionerProgram.html	N.N.P.	No	No
	http://www.son.utmb.edu/studentaffairs/programs/masters/PrimaryCareNursePractitionerMajorGerontologicalProgram.html	G.N.P.	No	No
	http://www.son.utmb.edu/studentaffairs/programs/masters/PrimaryCareNursePractitionerMajorFamilyProgram.html	F.N.P.	No	No
	http://www.son.utmb.edu/studentaffairs/programs/masters/PrimaryCareNursePractitionerProgramPediatricProgram.html	P.N.P.	No	No
	http://www.son.utmb.edu/studentaffairs/programs/doctoral/programobjectives.html http://www.son.utmb.edu/studentaffairs/programs/doctoral/curriculumoverview.html	Ph.D. - Nursing	No	No
	Retrieved June 28, 2009			

Nursing Schools (continued)

#	Name of Institution, City in Texas Name of College, School or Program Websites retrieved for each degree Date websites were retrieved	Degrees	Answer Q # 1	Answer Q # 2
28	The University of Texas–Pan American, Edinburg College of Health Sciences and Human Services Nursing Department			
	http://www.utpa.edu/catalog/pdf/2007-2009/ug/0709CatalogUG.pdf http://portal.utpa.edu/portal/page/portal/utpa_main/daa_home/hshs_home/hshs_nursing/nursing_nc https://portal.utpa.edu/portal/page/portal/utpa_main/daa_home/hshs_home/hshs_images_files/UTPA_Nursing_Courses.pdf	B.S.N.	No	No
	http://www.utpa.edu/catalog/pdf/2007-2009/ug/HSHS.pdf	M.S.N.	No	No
	http://www.utpa.edu/catalog/pdf/2007-2009/grad/0709CatalogGR.pdf http://www.utpa.edu/catalog/pdf/2007-2009/grad/CourseDesc.pdf	F.N.P. P.N.P.	No No	No No
	Retrieved June 28, 2009			
29	University of the Incarnate Word, San Antonio School of Nursing & Health Professions			
	http://www.uiw.edu/nursing/nprospects.html#nursingcurric	B.S.N.	No	No
	http://www.uiw.edu/msn/msncourses.html	M.S.N.	No	No
	Retrieved June 14, 2009			
30	University of Mary Hardin-Baylor, Belton Scott & White College of Nursing			
	http://www.umhb.edu/nursing/programs.html	B.S.N.	No	No
	http://graduate.umhb.edu/nursing/program/course_descriptions	M.S.N.	No	No
	Retrieved June 14, 2009			
31	West Texas A & M University, Canyon College of Nursing and Health Sciences			
	https://www.wtamu.edu/webres/File/Student%20Support/Advising/2009-2010%20Degree%20Checklists/NHS/Nursing/nurs_basic_bsn_0910_f_052209.pdf	B.S.N.	No	No
	http://www.wtamu.edu/webres/File/Academics/Catalog/2008-2009/Cat.p.225-229_GS-NHS.pdf	M.S.N.	No	No
	http://www.wtamu.edu/webres/File/Academics/Catalog/2008-2009/Cat.p.225-229_GS-NHS.pdf	F.N.P.	No	No
	Retrieved June 11, 2009			

APPENDIX K

DATA COLLECTED FROM MIDWIFERY SCHOOLS IN TEXAS

APPENDIX K

DATA COLLECTED FROM MIDWIFERY SCHOOLS IN TEXAS

#	Name of Institution, City in Texas Name of School or Program Websites retrieved for each certificate Date websites were retrieved	Certificate	Answer Q # 1	Answer Q # 2
1	Association of Texas Midwives, Midland Midwifery Training Program			
	http://www.texasmidwives.com/education/workshopschedule.asp http://www.texasmidwives.com/education/booklist.asp	C.P.M. / C.N.M.	Yes	Yes
	Retrieved June 15, 2009			
2	Maternidad La Luz, El Paso Birth Center and Midwifery School			
	http://www.maternidadlaluz.com/pdf/2009-2010_Catalog.pdf	C.P.M.	Yes	Yes
	Retrieved June 15, 2009			
3	Medical Training Institute of America, Dallas Midwifery Program			
	http://ati.iblp.org/ati/students/opportunities/midwifery/documents/midwiferyinformation.pdf?show=true http://ati.iblp.org/ati/about/curriculum/	C.P.M.	Yes	Yes
	Retrieved June 15, 2009			

APPENDIX L

DATA COLLECTED FROM DOULA SCHOOL WITH HEADQUARTERS IN
INDIANA AND WORKSHOPS IN TEXAS

APPENDIX L

DATA COLLECTED FROM DOULA SCHOOL WITH HEADQUARTERS IN INDIANA AND WORKSHOPS IN TEXAS

#	Name of Institution, City, State Name of School Websites retrieved for each certificate Date websites were retrieved	Certificate	Answer Q # 1	Answer Q # 2
1	DONA International, Jasper, Indiana Professional Development			
	Birth Doula Program http://www.dona.org	C.D.(DONA)	Yes	Yes
	Postpartum Doula Program http://www.dona.org	P.C.D.(DONA)	Yes	Yes
	Retrieved on June 12, 2009			

APPENDIX M

DATA COLLECTED FROM LACTATION CONSULTANTS SCHOOLS

OUTSIDE OF TEXAS

APPENDIX M

DATA COLLECTED FROM LACTATION CONSULTANTS SCHOOLS

OUTSIDE OF TEXAS

#	Name of Institution, City, State Name of School Websites retrieved for each certificate Date websites were retrieved	Certificate	Answer Q # 1	Answer Q # 2
1	Breastfeeding Support Consultants, Villa Park, Illinois Center for Lactation Education			
	http://www.bsccenter.org/	L.C.	Yes	No
	Retrieved June 19, 2009			
2	University of California at San Diego Extension, La Jolla, California Perinatal Health Programs - Lactation Courses			
	http://extension.ucsd.edu/programs/index.cfm?vAction=certDetail&vCertificateID=104&vStudyAreaID=12	L.C.	Yes	Yes
	Retrieved June 19, 2009			

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