

Human Milk Banking: A Public Health Initiative In Arkansas

The Arkansas Breast Milk Bank

Partnerships – Support Around the State

- Oklahoma and North Texas Milk Banks
- Support and commitment to use products
 - UAMS and Arkansas Children's Hospital
 - Baptist Medical Center
 - Conway Regional Medical Center
 - St. Bernard's Jonesboro
 - Willow Creek Women's Center and Washington Regional Medical Center
 - Mercy Rogers
 - Arkansas Chapter American Academy of Pediatrics

What a Milk Bank Adds for Arkansas's Babies and Mothers

Donor Human Milk

- Used for sick and premature infants
- Reduces risk of premature death and morbidity
- Safer than formula

Helping Mom Meet Her Goals

- Exclusive human milk diets
- Provides safe feedings until mother's milk supply improves

State Wide Benefit

- Used in ALL of Arkansas' Level 2, 3 and 4 Nurseries and NICUs
- Currently milk is obtained from many other states: Texas, Michigan, Illinois, Oklahoma
- Over 1 million dollars every year gets paid out of state to bring human milk to Arkansas' babies

Donating mothers

- Many mothers in Arkansas have milk they donate to milk banks
- Sending milk out of state – it stays out of state
- Each states prioritizes ITS OWN needs over other state's needs

Mother's Own Milk

- Supporting mothers breastfeeding around the state
- Analysis of mother's milk for her preterm infant to optimize growth and nutrition
- Tailored nutrition programs for Arkansas' tiniest residents

Innovative Breast Milk Research

- Partnering with Arkansas Children's Nutrition Center
- Research on composition of milk and variations
- Drug and medication safety research
- Impact of maternal characteristics
- Microbiomics investigation

Why is Breast Milk So Important

Fewer Mothers Die

- Lactation following pregnancy and delivery reverses some of the harmful metabolic changes that occur during pregnancy
- Reducing risk of diabetes, heart attack, coronary artery disease and stroke
- NOT lactating after pregnancy increases risk of death from heart disease by 2.86 times

Lower Rates of Cancer

- Lactation following pregnancy changes women's hormonal stimulus to develop some cancers
- Breast cancer – 26% risk reduction
- Ovarian cancer – 24-37% risk reduction
- Uterine cancer – 11% risk reduction

In Arkansas

- Death from cancer, heart attack, stroke and diabetes top the leading causes of death in women under age 65 in Arkansas
- Black women have substantially higher rates of death from these causes
- Lactation after pregnancy reduces a Black Woman's risk of dying from stroke by 56%

Fewer Children Die

- Breast milk as the sole source of nutrition reduces risk of
 - Sudden Infant Death
 - Childhood cancers
 - Hospitalization from pneumonia and gastrointestinal problems
 - Chronic Inflammatory bowel disease
 - Sick visits for asthma, allergies, ear infections and viral illnesses

HOT off the PRESS – Lancet Regional

- US National Data collaboration with CDC – 3.2 million infants
- EVER breastfeeding reduces infant death in the first year of life by 40% for all infants
- Death from infection 19% risk reduction
- Death from SUIDS 15% risk reduction
- Death from necrotizing enterocolitis 33% risk reduction (premature infants)

Saving Lives, Saving Money

- IF breastfeeding in the US improved to 90% of mothers and babies
- EVERY YEAR over 900 lives would be saved
- 13 billion healthcare dollars in neonatal/infant care
- 17 billion healthcare dollars in women's health

Breastfeeding saves women's lives

- 4981 fewer cases of breast cancer
- 53,847 fewer cases of high blood pressure
- 13,946 fewer cases of heart attack
- Healthier workforce

How a Milk Bank Helps

Human Milk for Human Babies

- Keeps Arkansas's donated milk in Arkansas
 - Genetic variations that benefit Arkansas' babies
 - Immunophenotypes specific to Arkansas' babies

Public Health Priority

- Support from hospitals and from legislature create imperative
- Enable state wide support network
- Generate social acceptance and initiatives driven at local levels

Local Support

- State wide support team of lactation specialist
 - Information for healthcare providers
 - Telelactation
 - Local donation centers

Specialized Services

Medically Fragile Care

- ONLY CENTER IN Southern USA to deliver this
- Patient need centered product delivery
- Options for higher calorie, higher protein, specific fat content
- Preterm mother's milk

Outpatient Availability

- Human Milk Allocation Centers
- For families whose baby needs human milk but not in the hospital
 - High risk/sick infants
 - Bereaved infants
 - Adoption

Drop Off Depot

- Available around the state
- Goal is within 30 minutes of anywhere in the state within 5 years

Natural State Lactation Center

- Lactation support in person or by telemedicine
- On site store
 - Lactation supplies
 - Human milk allocation center
 - Walk-in and appointments for lactation help
 - Donation drop off

Bereavement Center Support

- Infant loss is a time of intense pain and grieving
- Donating mother's milk helps some families cope
- Honoring this donation and the life the family lost helps give closure and peace
- Memorial wall to honor these gifts in the Lactation Center

Education Opportunities

- Research partnerships through ACH and UAMS
- Teaching tours and lactation education
 - Importance of human milk to societal health
 - Students: grade schools and graduate level schools
 - Community organizations

Business Plan

Space

- Identified space – West Monroe Building
 - Initial renovation cost to accommodate Arkansas Breast Milk Bank but no lease or monthly rent
 - 4360 square feet of dedicated space
- Existing large freezer and laboratory spaces
- Receiving dock and lift gate existing
- Emergency generators in place – prevents product losses

Start Up Cost

- Renovation of Building- \$1,200,000
- Equipment - \$340,000
- Software and licensure - \$50,000 plus \$5,000 annual
- Material and supply - \$200,000 annually
- Labor - \$340,000
- Benefits - \$85,000
- Initial investment \$1,590,000
- Payback period on investment- 3 years

Current state expenditure

- Purchase of milk from out of state
- \$1,292,000 per year paid to out of state milk banks for donor milk

Product and Income

- Estimated 300,000 ounces of milk prepared per annum
- Cost \$4.50/ounce standard milk & \$5.00/ounce specialty milk
- Annual sale \$1.35 million annually
- Revenue \$681,000 per year

Product benefits

- Full nutritional analysis on each product
- Specialized calorie and nutrient content
- Shipping frozen direct to facility
- Overnight availability

Summary

- Supporting breastfeeding women in Arkansas improves health of mothers and babies
- Donor milk from Arkansas' mothers directly benefits Arkansas' smallest residents
- An Arkansas Milk Bank keeps revenue in Arkansas
- Education for providers, learners and communities

Breastfeeding is nutritionally, immunologically, neurologically, endocrinologically, economically, and ecologically superior to formula...

-The Lancet 2016 McFadden et. Al.



Thank you for your time and support

