

Indiana Mothers' Milk Bank – All Grown UP!

2010 is a year for celebrations and new experiences for the Indiana Mothers' Milk Bank (IMMB). Located in Indianapolis, Indiana, the IMMB provides donor human milk throughout Indiana and the Midwest.

The IMMB took a giant step forward in early 2010 when it grew up enough to move out on its own. The IMMB separated from parent organization, Clarian Health Partners, as part of its planned progress as a community-supported milk bank. "Losing our Clarian safety net was very frightening, but the IMMB has grown to the point where it no longer needs the hospital support," reports Executive Director Janice O'Rourke. Clarian provided guidance and financial support until the IMMB was able to stand alone.

The IMMB had also outgrown its space and moved to a larger facility in April. The new facility contains a larger, enclosed pasteurization area along with separate space for receiving and packing milk, a freezer room, and storage and office space to meet our growing needs. An Administrative Assistant joined our staff to help with office duties and pasteurization.

The IMMB took part in the 7th Annual Walking for Dreams 5k Family and Pet Walk in May. Walking for Dreams was started in 2004 to help local non-profit organizations raise needed funds to enable them to do more of what they do so well – serve the



IMMB Walking for Dreams registration desk

youth and families of Indianapolis. Walking for Dreams pulls together local organizations to share in a joint fundraiser. Board members and their families, staff and milk bank supporters joined together to support the IMMB by raising pledges and participating in the walk.

August 11 marked the 5-year anniversary of the IMMB. The IMMB continues to grow and has distributed over 200,000 ounces of pasteurized donor human milk since 2005. This year we hope to increase our milk distribution by over 30,000 ounces above 2009. "We attribute our growth and success to the generous donations made by our donor mothers and families," reports Dane Nutty, Program Manager of IMMB. "Without them, we would not be able to provide these services to Indiana and beyond." The IMMB provides donor human milk to 17 hospital NICUs to use for premature and low birthweight babies.

This year, the IMMB is also celebrating five years of providing Lactation Stations at fairs, community events, and expos throughout Indiana. Debuted in 2006 at the Indiana State Fair, the Lactations Station's goal is to provide a comfortable, clean place for breastfeeding women to relax and gather information about a variety of health issues. Starting with one station in 2006, the IMMB now operates three stations throughout the fairgrounds and partners with organizations such as March of Dimes, Indiana WIC, and local hospitals to provide a wealth of



IMMB participates in Walking for Dreams

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Common Variable Immunodeficiency and Donor Human Milk

By Cindy Duff RNC, BSN, IBCLC, Bronson Mothers' Milk Bank, Kalamazoo, MI

Human milk's protective effects against infection have been documented as early as 1892. Relative to the immune deficits inherent in the newborn, there are several bioactive and immunomodulating factors in human milk capable of enhancing the development of the mucosal and systemic immune systems. Donor human milk also complements and stimulates immune system development. Significant amounts of IgA, IgG, lactoferrin, bifidus factor, and fat-soluble vitamins remain in the milk even after pasteurization. While human milk is used primarily for newborns, it has been found to be beneficial in children and adults as well. The following story emphasizes this concept:

Claralleyne was breastfed for the first five months of her life. At that time, her mother's milk supply became limited. Claralleyne started to experience ear infections, dark lines under her eyes, paleness, a nighttime cough, chronic swollen lymph nodes, postnasal discharge and decreased sleep. In her first year of life, she acquired 10 bacterial and 16 viral infections. Laboratory studies confirmed that she had IgA and total IgG deficiencies, with IgG1 and IgG4 subclass deficiencies. Her lab values confirmed the diagnosis of Common Variable Immunodeficiency (CVID). This relatively common form of immunodeficiency is characterized by low levels of serum immunoglobulins (antibodies) and increased susceptibility to infections. The genetic cause is not known in most cases. The degree and type of deficiency of serum immunoglobulins, and the clinical course, varies from patient to patient.



Claralleyne with her family: Kristin, Mike, Lance, Kayleigh

At the age of three, Claralleyne was started on Intravenous Immunoglobulin (IVIG) treatments every three to four weeks. During this time, she continued to have frequent infections that required stronger antibiotics. She also still showed the same chronic signs and symptoms seen prior to the IVIG treatments.

Claralleyne's family started to investigate other treatment options for her. When she was four years old, she started drinking 20 ounces of donor human milk per day. Her symptoms stopped and the infections decreased five fold. After six months of drinking the donor human milk, her immunologist stopped ordering it. The symptoms returned. She began suffering from swollen lymph nodes, coughing, post-nasal drainage, and congestion. The infections and viruses that had decreased so dramatically, once again became prevalent.

Claralleyne started drinking 16 ounces of donor human milk again when she was five years and five months old; her symptoms subsided. When she was six, her physician weaned her off of her asthma and allergy medications; her symptoms did not return. She continued to drink donor human milk until she was eight. During this time, she no longer showed chronic respiratory symptoms. She was able to be around large crowds during family vacations without acquiring infections. Her laboratory levels of IgG and IgA increased. Today, she is symptom-free and no longer requires donor human milk.

Frequently Asked Questions

By Frances Jones, RN, MSN, IBCLC, coordinator BC Women's Milk Bank, Vancouver, BC

Q A mother on our postpartum unit has just has twins. She wants her sister to provide some of her breast-milk and nurse the babies as they are losing weight. Should the hospital allow this practice?

A Wet nursing or cross nursing is a practice that is common in many communities. Depending on the health of the person "donating" the milk, the milk provided by a relative or friend may or may not present risks to the newborn. Human milk that has been purchased from a stranger (not processed through a milk bank) probably presents the highest risk. Bacteria and viruses can be transmitted through unprocessed milk. In addition, if the milk has been stored, good food hygiene practices will be important to ensure a safe product. The hospital needs to provide information to the mother and document

that the information was provided and the choice made by the mother for her children. Depending on the hospital, some agencies will decide that documentation in the nursing or physician notes is sufficient whereas others will want a consent form completed and signed by the mother to be placed in the chart. In some hospital settings, mothers will bring milk to the NICU or other settings and it is unclear about the source of the milk. Policies that forbid unprocessed donor milk can place babies at higher risk than settings where mother's informed choice is supported and information provided.

Q At what temperature should our milk storage freezer in the NICU be kept?

A Freezer temperatures are an ongoing challenge particularly in places like NICUs as the freezer door may be opened



and closed several times an hour. The recommendation is that milk be stored in a freezer that keeps milk at -20C. Lower temperatures are not a problem (-22C or -26C). Higher temperatures like those that occur when the freezer door is opened are probably not a problem for short periods. Therefore a swing of +2degreesC is fine. Encouraging people to open the freezer for the shortest possible length of time is prudent in order to reduce the "warming" of milk. HMBANA's Best Practice for Expressing, Storage and Handling Human milk in Hospitals, Homes and Child Care Settings 3rd Edition will be available January 2011 with the specifics about storage of milk revised and expanded!

From the Journals

By Kim Updegrave, RN, CNM, MSN, MPH, Chief Clinical and Operating Officer, Mothers' Milk Bank at Austin

Landers S, Updegrave K. Bacteriological screening of donor human milk before and after Holder pasteurization. Breastfeeding Medicine 2010; 5: 117-21.

Researchers conducted microbiological testing on raw milk donated to the Mothers' Milk Bank at Austin, and pooled milk from the same donors after pasteurization in order to ascertain the types and colony counts of contaminants before and after heat processing.

Milk samples from 303 pools and 810 individual mothers' deposits of donor milk were cultured by an independent laboratory and incubated for 48 hours. Forty-four pools represented milk pumped in the first four weeks postpartum after a birth of less than 36 weeks gestation ("preterm milk").

Prior to pasteurization, 62% (182) of the pools grew at least one lactose-fermenting gram negative rod, and 19%

(58) grew a second lactose-fermenting GNR. Forty-four percent grew a non-lactose-fermenting GNR, and 20% grew an oxidase-positive GNR. The majority (87%) were colonized with *Staphylococcus* pre-pasteurization. Other gram-positive organisms included *Enterococcus* (16%), α -*Streptococcus* (8%), and *S. aureus* (4%). One pool was positive for methicillin-resistant *S. aureus*. Twenty-two percent of milk deposits from mothers did not grow detectable bacteria on routine cultures. Bacteriologic cultures of preterm milk did not differ from those of mothers delivering at term. After Holder pasteurization of donor milk, 93% of milk samples showed no growth on routine bacterial cultures.

A number of lessons can be gained from this research, including that human milk donated to milk banks contains a wide variety of bacterial contaminants, and donated milk samples are contaminated with normal skin flora, as well as patho-

genic organisms. Critically important is the conclusion that Holder pasteurization, the pasteurization process required for all non-profit milk banks under the umbrella organization, the Human Milk Banking Association of North America, is an effective method of eradicating most bacteria.

Bartick M, Reinhold A. The burden of suboptimal breastfeeding in the United States: a pediatric cost analysis. Pediatrics. 2010;5:59-66.

Researchers conducted this study to compute cost savings if 80% to 90% of US families would comply with recommendations to exclusively breastfeed for 6 months. Using data on risk ratios of specific diseases in relation to breastfeeding from the Agency for Healthcare Research and Quality (necrotizing enterocolitis, otitis media, gastroenteritis, hospitaliza-

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Mothers' Milk Bank of Ohio, Rachel's Story

By Rachel Esselburn

As a nurse, I have always felt quite conscious of both my health and the health of those around me. I find both the topics of nutrition and obstetrics very intriguing, especially when it comes to the issues of womanhood, fertility, and childbearing.

I remember as a young high school student, the first opportunity I had to provide for the health of others in need, was the community blood bank. Though I felt it very important, the somewhat invasive nature (the needle) of the donation scared me away. Then just one year later, when it was time to get my driver's license I found out about the wonderful opportunity to register as an organ donor – which I did. A few years after that, when my long hair was cut to a new shorter style, I had the opportunity to donate to Locks-of-Love (who provides human hair wigs to those overcoming cancer).

So, it was only natural that when I found out from Jackie Jeffers, OB Nurse Manager and later on Michelle Biddlestone, O'Bleness Lactation Consultant, that the Mothers' Milk Bank of Ohio, a service of Grant Medical Center was in need of breast milk (in which several premature and sick newborns could benefit), I thought it the right thing to do. I was already breastfeeding my two month old and felt the nutritional and immunological properties that breast milk held were superior – and the emotional bonding aspect a pleasant bonus. Why not share what I easily had to offer. Five years later, and one preemie later, I still love not only the “womanly art of breastfeeding”, but also of sharing with others something as precious as life-sustaining nutritional milk and time, which really cost me little more than 15 minutes of my time and concern for others.

To begin the process (in 2005), I first drove to Columbus to research, for myself, the legitimacy of the Mothers' Milk Bank. I was warmly greeted by Georgia Morrow, Coordinator of the milk bank in the hospital parking lot. She then openly gave me a full tour of the facility and of the many scrap-

books of donors and recipients who had left behind their stories and poems as an imprint of their love and gifts. I was very pleased with what I saw. Both nutritional and medical personnel help to staff and run the Milk Bank. They receive support from both Grant Medical Center and the Ohio Health Foundation as well.

I was glad to see great care being used in the milk pasteurization process and bacteriological testing phases, which in turn provides the safest sample of milk possible. They then pooled the milk, as needed, to create the perfect content of both calories and fat composition. Strict guidelines from the Human Milk Bank Association of North America are followed throughout the entire process. On a more personal level, the Milk Bank offered a unique connection between both mother and child. It is something that is done



Rachel and her children Leah and Cayde and Michele Biddlestone, IBCLC who coordinates our O'Bleness Hospital collection site.

together with your child (both sacrificing a small amount of time and milk) to help other mothers and their babies who have come into a less fortunate situation. Not only are donors providing much needed nutrition, they are offering hope in what may often seem a hopeless situation or time. Many of these mothers are breastfeeding mothers who simply could not keep up with the physical demand, or formula feeding mothers who after their child had become sick wished they could breastfeed (often very sick infants do not tolerate or thrive from formula feeds). My third child, being born more than 6 weeks early, showed great advances in the NICU himself; on breastmilk he was able to be

released home in just five short days after birth!

It's been a very easy process. The

Milk Bank provides all the storage bottles needed. Just pump (as normal, if milk is stored for babysitters or if long shifts are worked) and then place the bottle cap back on the bottle and put it in the freezer. It can be stored there for up to three months. Taking up freezer space at home is no longer an issue. The O'Bleness Hospital Women's Guild purchased a deep freezer to store breast milk in, until the Columbus courier service can pick it up. It costs absolutely nothing but a small amount of time. A few interview ques-

tions regarding health history, a simple blood draw (provided free at O'Bleness), two signed medical releases (one from an obstetrician/midwife and one from a pediatrician/family practice physician, and the time to express milk; which is different for everyone, but can take as little as 10 minutes once or twice a week. Just fifty 4 oz. bottles meet the requirement of the initial 200 oz. minimum donation (which is very easy to express, since often mothers have an overabundance of milk the first

week or so of engorgement). After that, donations are accepted in amounts of just 60oz or greater a time. Since breast milk comes in by “supply and demand” it is very easy to provide for the needs of the donor's child and still have volumes left over to share.

Five years and 1,500 oz. later, with my third child just turning one year old, our days of donating are ending with HMBANA (the Milk Bank only accepts donations through the child's first year of life) so we are now “passing the torch” for others to carry on. Please consider this endeavor as one of your own. It is a very worthwhile cause and a very fulfilling way to give to others.



Leah and Cayde

From the President

By Pauline Sakamoto, RN, MS

HMBANA's "Brand" stands the test of time

"Milk Bank, what art thou?" Lately I see many companies and organizations advertize using the term "milk bank." Some of these so called "milk banks" are hospitals that have a freezer in their NICU for mother's own milk and/or collect human milk. Other organizations collect and screen the milk for potential use by another organization. There are also small units in hospitals that fortify human milk for the infants within the hospital and call the unit "the milk bank." Some hospital based processing units that collect and process milk for their own unique hospital patients often call themselves "milk banks." Organizations that educate others regarding milk banking but do not process human milk may be called a "milk bank" as well. Surprisingly in one case the term "milk bank" refers to a milk storage container sold commercially to mothers storing their own milk for their infant. Do we wonder why donors and others are so confused about the term "milk bank?"

How can we distinguish HMBANA milk banks from others who use the words "human", "milk", and "bank?" In Boston, at the last HMBANA International Conference, Martha Illege, MD, presented the issue of how to separate HMBANA member Mothers' Milk Banks from other organizations that may use the same words. The term "branding" and "symbolism" come to mind. Historically, North America has had a rich century of "milk banking." The process has matured in those 100 years but the practice continues to remain the same: collect, screen, process and distribute human milk, typically for infant use.

In the Guidelines for the Establishment and Operation of a Donor Human Milk Bank, 2009, HMBANA defines a donor human milk bank as "a service established for the purpose of recruiting and collecting milk from donors, and the processing, screening, storing and distributing donated milk to meet the specific needs of individuals for whom human milk is prescribed by healthcare providers who are licensed to prescribe." This definition dis-

tinguishes 501 c (3), non-profit organizations that follow the mandatory guidelines and requirements of HMBANA membership. As HMBANA member milk banks we share research and work to ensure we provide the safest and optimum service at the lowest cost. Non-profit HMBANA member milk banks strive as a group to provide service to as many families as possible. (Locations of HMBANA banks can be found at www.hmbana.org).

What is a "milk depot?" Many of the HMBANA member milk banks have depots, also called milk drop-off or collection locations. These depot sites are located in agencies (i.e. hospitals, WIC office, health units or any other facility that has the required equipment to support a depot) that are the local regional support teams to assist the milk bank in sustaining the level of processing needed to meet the demand for milk. HMBANA milk banks depots identify themselves as connected to a specific HMBANA bank educate new mothers and others about the milk bank and may also assist in the collection of the donor milk. The depot's role is to support the associated HMBANA member milk bank and not to process and dispense milk.

There are also distribution sites. A HMBANA developing milk bank member may function as a distribution site during the development stage. They have met some of the requirements to become a member milk bank of HMBANA and are working toward becoming an operating milk bank. Often times, in order for the developing milk bank to build need in the area, they will distribute donor milk locally that they have obtained from an operating milk bank. This step has helped several milk banks establish and build resources to operate independently.

This system of non-profit milk banks supported by depots and in turn supporting the development of new banks has a long history of success. In 2009, HMBANA milk banks distributed in excess of 1.5 million ounces. Approximately 50% of donor human milk is distributed to inpatient infants, most commonly in the NICU, and approximately 50% is distributed to outpatient recipients.

Who are the outpatient recipients? Typical outpatient recipients are infants with gastrointestinal illnesses, chronic diseases such as SMA, and severe allergies resulting in hospitalization and/or substantial growth retardation. There are often mothers who cannot breastfeed for surgical or medical reasons. Somehow, these families and their health care providers find us.

Just as one recognizes the Red Cross as an agency that supports those in an emergency, HMBANA is recognized as the organization providing donor human milk to medically fragile infants. We must continue to support research that defines the benefits of donor milk and continue to educate the health care community regarding the benefits of donor human milk. As a membership organization we have learned to depend on each of our strengths and knowledge to ensure that our practices are safe and the distribution of milk is ethical. As evidence regarding the use of human milk continues to grow, the demand will in turn grow. HMBANA will be in the forefront with safe practices, legitimate uses of donor milk, supporting developing milk banks and will continue to strongly advocate breastfeeding. Our "brand" has been there all along ...

From the Journals

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tion for lower respiratory tract infections, atopic dermatitis, sudden infant death syndrome, childhood asthma, childhood leukemia, type 1 diabetes mellitus, and childhood obesity), rates of these diseases published by the Centers for Disease Control and Prevention in 2005, and 2007 cost data, researchers built a mathematical model showing a US savings of \$13 billion per year and a prevention of 911 excess deaths if we reach full compliance.

This research updates earlier analyses that had similar conclusions – suboptimal breastfeeding rates in the US result in significant excess costs and preventable infant deaths.

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Indiana Mothers' Milk Bank - All Grown UP!

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information. IMMB and partnering organizations support Indiana law, which allows a woman to breastfeed her child anywhere the law allows her to be, whether she is in public or private. During the hot August weather, the Lactation Station provides rocking chairs (generously donated by Cracker Barrel), cold water (donated by local grocery stores) and fans to give breastfeeding moms a chance to relax and nurse in comfort. Volunteers from all over Indiana come to help staff the locations, making sure moms and families are comfortable and help promote breastfeeding and milk banking. Over 1100 moms used the Lactation Station at the State Fair this year. Lactation Stations have also been provided at Indiana Black Expo Black & Minority Health Fair, Fiesta Indianapolis, local County Fairs, and baby fairs throughout the Midwest.

With the first five years behind us, the next five years stretch out in front of us filled with opportunities and challenges. Just as on that August day in 2005, potential will be brought to life and plans will grow into progress as the Indiana Mothers' Milk Bank continues sharing the gift of mothers' milk for years to come.



IMMB's Lactation Station at the State Fair