



# ESSENTIAL HOSPITALS' USE OF DONOR HUMAN MILK

*Report to the Human Milk Banking Association  
of North America*



ESSENTIAL  
HOSPITALS  
INSTITUTE

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## ABOUT AMERICA'S ESSENTIAL HOSPITALS

America's Essential Hospitals is the leading champion for hospitals and health systems dedicated to high-quality care for all. We support our more than 300 members with advocacy, policy development, research, and education. Communities depend on essential hospitals to provide specialized, lifesaving services; train the health care workforce; advance public health and health equity; and coordinate care. Essential hospitals innovate and adapt to lead the way to more effective and efficient care. Learn more at [essentialhospitals.org](https://essentialhospitals.org).

## ABOUT ESSENTIAL HOSPITALS INSTITUTE

Essential Hospitals Institute is the research, education, dissemination, and leadership development arm of America's Essential Hospitals. The Institute supports the nation's essential hospitals as they provide high-quality, equitable, and affordable care to their communities. Working with members of America's Essential Hospitals, we identify promising practices from the field, conduct research, disseminate innovative strategies, and help our members improve their organizational performance. We do all of this with an eye toward equity and improving individual and population health, especially for vulnerable people.

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## INTRODUCTION

With support from the Human Milk Banking Association of North America (HMBANA) and the W. K. Kellogg Foundation, Essential Hospitals Institute interviewed representatives from our member hospitals with level III or IV neonatal intensive care units (NICUs). The interviews sought to examine:

- how members use donor milk, if at all;
- facilitators of using donor milk;
- barriers to using donor milk; and
- lessons learned from donor milk programs.

The project aims to examine and better understand how essential hospitals use donor human milk.

### Background

The populations essential hospitals serve face disproportionate barriers to healthy births. More than 382,300 births occur in our member hospitals each year—one in 10 U.S. residents are born at an essential hospital. Medicaid covers more than half of live-birth deliveries at these hospitals.<sup>1,2</sup> Essential hospitals serve diverse populations. Almost one-quarter of essential hospital patients are Black or Hispanic compared with 12.4 percent and 18.7 percent of the U.S. population.<sup>2,3</sup> Three-quarters of essential hospitals' patients are uninsured or covered by Medicaid or Medicare; nearly 15 percent are eligible for both Medicaid and Medicare.

Black newborns die at a rate three times higher than white newborns if the doctor is white. If the doctor is Black, the Black newborn death rate is halved.<sup>4</sup> Our hospitals invest in programs to mitigate social risk factors and help pregnant patients, new parents, and infants beat these staggering odds.<sup>2</sup>

The American Academy of Pediatrics recommends breast milk as the primary source of nutrition for infants, particularly those who are born preterm or have other medical conditions. Breast milk supports the immune and gastrointestinal systems and reduces the risk of premature babies developing necrotizing enterocolitis (NEC), a gastrointestinal condition that could lead to death.<sup>5</sup>

The CDC reported a decline in the preterm birth rate in 2020; however, racial and ethnic disparities remain. In 2020, the rate of preterm births among Black women (14.4 percent) was 50 percent higher than that of white or Hispanic women (9.1 percent and 9.8 percent, respectively). In the United States, prematurity/low birth weight is the leading cause of infant death among Black infants in the first year of life.<sup>7,8</sup>

Donor milk is critical to supporting newborns in level III

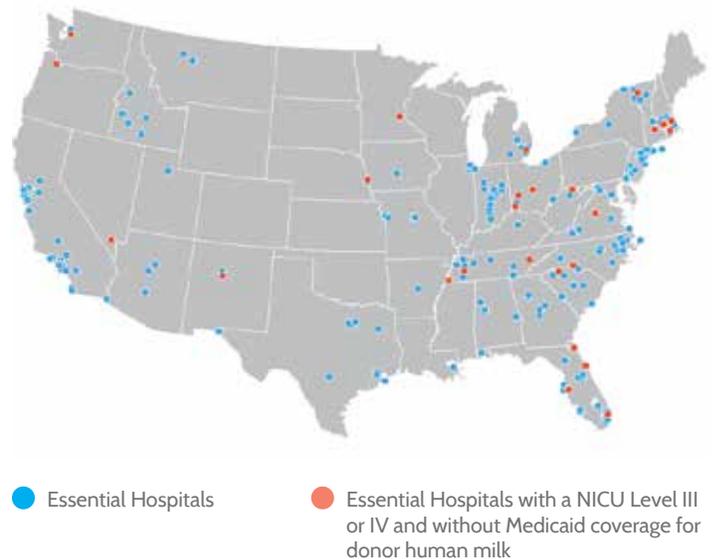
and level IV NICUs, which support premature babies or babies who might need surgery. As of July 2021, America's Essential Hospitals includes 62 member hospitals that have a designated level III NICU and seven member hospitals that have a level IV NICU. Figure 1 presents all members of America's Essential Hospitals; those with an orange dot are hospitals with a level III or level IV NICU where donor human milk is not covered by Medicaid.

## METHODS

Between June and August 2021, Institute staff scanned member hospitals' websites to identify hospitals and health systems to interview. Our team noted whether member hospitals had a level III or level IV NICU and excluded hospitals in states where Medicaid covers donor human milk. Finally, staff examined hospitals' donor milk status by reviewing whether the hospital mentioned donor human milk on its website and whether the partnering milk bank was operated by HMBANA. The recruitment goal was to interview representatives from three hospitals without a donor milk program and two hospitals with a donor milk program.

Based on the inclusion criteria, 26 member hospitals were identified as eligible for recruiting—21 hospitals with a level III NICU and five hospitals with a level IV NICU. HMBANA disclosed which hospitals were associated with HMBANA milk banks and which potentially lacked a milk bank partnership. Considering geography, bed size, and ownership status (nonprofit versus publicly owned), a final

**FIGURE 1. ESSENTIAL HOSPITALS WITH LEVEL III AND LEVEL IV NICUS WITHOUT MEDICAID COVERAGE FOR DONOR HUMAN MILK<sup>1</sup>**



eight hospitals were identified. However, all the hospitals identified had a donor milk program. With information about the hospitals and guidance from HMBANA and their local partners, six hospitals were selected, some of which had seemingly new programs or programs that were reducing their supply of donor milk. Of the six hospitals the Institute team contacted, five hospitals were interviewed to identify the facilitators, barriers, and lessons learned related to their donor milk program.

A team of two Institute researchers interviewed staff from five essential hospitals. With guidance from HMBANA, researchers drafted a semi-structured interview guide to facilitate discussions. Interviews were led by trained interviewers, recorded, and transcribed. Researchers examined the transcripts using thematic analysis.

## FINDINGS

### *Establishing And Creating Program Processes*

Hospital representatives initially were asked about the reasons for starting the donor human milk program; parent and guardian engagement and communication; processes; funding; monitoring; and measures of success at their hospital.

Of those interviewed, three donor human milk programs had been established for at least five years, with one of the three programs in place for eight years. Two hospitals began their donor human milk program within the past two years.

When asked about the origins of the donor milk program, three hospitals mentioned a specific premature baby in need was a catalyst for their program, which then expanded as best practice in the NICU for babies that met certain criteria. Two hospitals began their program through a quality improvement initiative to reduce infant mortality by addressing high rates of NEC, a serious gastrointestinal problem that mostly affects premature babies and can result in death. In addition, one hospital noted human milk is best for babies' health, based on research, and they felt PDHM should be an option for all parents.

All five participants cited the cohesive team effort necessary to ensure the program is successful. Teams across the spectrum shared similar qualities, comprising nurses, doctors, and providers. Additionally, all five hospitals have a team member focused on babies' diet—three hospital donor milk programs included dietitians and two included nutritionists. Three participants incorporate dedicated staff

working strictly with the milk on their teams, referred to as milk techs or diet techs; these employees are responsible for processing and preparing the milk for each patient.

All but one hospital seeks to facilitate prebirth discussions about the use of donor human milk with parents when possible. The remaining hospital mentioned only discussing the option of donor human milk with parents at birth if the baby fits the hospital's criteria. Participants from two hospitals noted lactation consultants primarily deliver information on donor human milk for continuity of care. Three hospitals emphasized the importance of creating guidelines for these conversations, ensuring all staff uses the same messages to deliver neutral, objective information when discussing donor human milk with parents and guardians; this ensures parents receive the same information without bias. Of the three hospitals, one created a handout to guide staff in the conversation and serve as an informational reference sheet for parents to keep. All the hospitals established a consent process when offering donor milk to parents of premature babies. Three hospitals require written consent and the other two require verbal

consent or acknowledgment before staff could provide a baby with donor human milk. However, one of the latter hospitals is transitioning to written consent per recommendation by their legal department.

All five respondents reported it was rare, but not unheard of, for parents to refuse donor human milk. Three hospitals mentioned refusals are rare after a conversation outlining the benefits to the baby's health; two hospitals specifically said early

and clear communication of information with parents helps combat the refusal rate.

All participants noted the donor human milk program was funded through operating costs—usually the NICU's operational funds. Participants noted leadership buy-in was useful in ensuring the budget is approved each year. Participants from three hospitals examined whether Medicaid or other insurers could pay for donor human milk, but it was not possible. One person stated, "At one point, maybe a year after we started [the donor milk program, someone] tried to introduce a bill to legislature to have health insurance companies pay for [donor milk], but that wasn't successful because insurance companies argued that the daily amounts covered it."

When asked about monitoring and benchmarking, all hospitals expressed the importance of good record keeping. All hospitals monitor the amount of donor milk needed and



used to determine how much to order, although the types of staff responsible for this activity varied. It is important to be precise on order needs to ensure limited waste. In two cases, hospitals had a special room for processing the milk. One hospital identified a specific software to track donor milk but, in general, participants reported that staff tracked and monitored donor human milk needs and amounts in the patient file.

For benchmarking and measuring success, all five hospitals sought to lower rates of NEC in premature infants. Reducing the NEC rates decreased long-term morbidity and mortality as a result of the gastrointestinal disease. Breast milk, including donor human milk, prevents NEC. One interview noted, “We looked at our NEC rates and saw that we still have NEC even in babies that are greater than 32 weeks, so we decided to provide it for babies up to 34 weeks, which is now our stopping point for donor milk, because that timing coincides with our huge reduction in our NEC rates.”

In addition, one interviewee stated they reported data to the Vermont Oxford Network (VON), which serves as a neutral, independent party in analyzing and providing benchmarking data to identify local opportunities to improve neonatal care. After reviewing VON’s membership, four of five hospitals interviewed participated in the network. One hospital stated their measurement of success includes tracking the birthing patient’s production of breast milk at discharge rather than amount of donor human milk used at discharge.

All hospitals provided donor human milk in their NICUs and had not yet expanded hospitalwide. In one case, a hospital representative stated their desire to expand their donor human milk program into the well-newborn nursery. One reason to expand donor human milk is to facilitate obtaining a Baby-Friendly Hospital designation by Baby Friendly USA. A more pressing reason is to support infants with hypoglycemia and infants of birthing patients whose milk has not come in; formula does not support a hypoglycemic infant as well as human milk. In some cases, infants with hypoglycemia must go to the NICU and separate from their parents or guardians; when an infant is separated from their birth parent, the birthing parent’s milk supply might be disrupted. Thus, using donor human milk with these infants prevents them from going to the NICU and helps them stay with their parents or guardians. One participant noted that raising awareness with staff in the labor and delivery unit and nursery, and among community physicians, is crucial because donor human milk typically is not used in the well-newborn nursery. That participant’s hospital is planning to hold a conference with hospital physicians, community physicians, and pediatricians to apprise them of the value and use of donor human milk. In addition, the hospital is planning to disseminate pamphlets

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*–Interviewee*

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for obstetricians and other busy clinicians who might not attend a conference.

#### *Facilitators Of Hospital Donor Human Milk Programs*

Institute staff asked participants about facilitators of their hospital’s donor milk program, including main, community, clinical, organizational, and financial leads. None of the interviewees identified financial facilitators.

All five hospitals referenced the comprehensive team effort that plays into success. Participants from three hospitals specifically mentioned leadership support as an integral part of the team’s achievements, in addition to the lactation consultants’ and nurses’ support on day-to-day success. Processes to prevent error and waste are critical to the continuation of human donor milk programs, as noted by two participants. This was essential to stay in budget and reduce the amount of unused milk.

All five hospitals referenced a relationship with their donor milk bank when asked about community supports and facilitators. They outlined the milk bank’s support in providing education for patients and staff; ensuring they have the necessary milk in stock; troubleshooting deliveries; and, in some cases, fronting or entirely covering the costs of donor human milk for some patients. No supplementary community supports were mentioned due to the nature of the donor milk program, which is designed as a vastly inpatient NICU initiative for specific babies and families in need.

Four hospitals stated they needed additional materials for a clinically and financially optimal donor milk program. Of the four hospitals, two created a centralized breast milk storage and prep room and one required additional freezer storage space. The remaining hospital required a breast milk analyzer to test the donor milk for nutritional properties and caloric makeup to ensure the baby receives the appropriate amount. The hospital was able to add fortifiers when the donor human milk was not as nutritionally dense as the patient needed. All participants

cited these additions as minimal in cost.

All hospitals referenced leadership support and buy-in as their top organizational facilitator. Participants mentioned leadership support is crucial to establishing and maintaining the program, especially with financial buy-in. In three cases, the chief nursing officer was the lead advocate who organized the donor milk program and, in some cases, approved the funding. All five of the donor human milk programs' costs are absorbed by the NICU's operational budget, showing the case for return on investment was imperative to leadership buy-in. One hospital claimed, "Nursing leadership is an advocate for donor milk. She is in charge of the budget and approves that each year." Another hospital mentioned an employee had "been trying to get leadership to buy into donor human milk for a long time. Then she became an executive and made it much easier for us to get it approved for funding."

Respondents were less engaged in federal and state policies on access to and funding for donor human milk. Participants from three hospitals reported examining their communities' political landscape in partnership with their HMBANA milk bank.

### *Challenges Of Hospital Donor Human Milk Programs*

Interviewers asked about the main barrier to donor human milk program, as well as community, clinical, organizational, and financial challenges. When asked about the main barrier, no theme was identified across the interviews, but answers tended to fall into the other specific challenges. When asked if there were challenges from the community or organization, no participants identified any such challenge.

Donor human milk is critical for premature infants' growth and prevents NEC. At the same time, one clinical challenge identified was that some infants receiving donor milk experience a slow or reduced growth rate compared with those who received milk from their birth parent. Participants recognized the value of donor milk and noted that a fortifier might need to be added for some premature infants with growth challenges.

In two cases, respondents noted funding for the human donor milk program was a challenge, with one interviewee calling it the main challenge, stating, "Putting a program

in place, [a leader] needs to have a good business plan. For any leadership team to buy anything, while they want what's best for the patients, it also must be fiscally responsible, so you have to have a good business plan in place to introduce it to the hospital." However, two interviewees described

donor milk programs as cost-effective, due to the significant reduction in NEC and improved quality of life for premature infants.

All hospitals identified challenging aspects of monitoring and tracking milk to ensure there is enough in stock and, at the same time, there is no waste. Two hospitals identified ensuring babies get the proper amount of donor milk as a challenge. For example, one participant noted, "Preventing waste is a challenge. Staff prepare milk once a day, and staff need to account for each baby's needs." Two hospital interviewees identified weather conditions as a problem—in one case, extreme cold and rainy weather delayed access to donor milk, and in the other case, hot weather defrosted the donor milk, which is kept in a deep freeze.



### *Lessons learned*

Interviewees identified three areas hospitals should be aware of when beginning or expanding a donor human milk program:

- establishing and maintaining specific and clear guidelines and processes for the use of donor human milk;
- training staff on processes; and
- clear messaging for parents or guardians regarding donor human milk.

Thus, respondents cited the need to treat the donor human milk program as a quality improvement project—starting small, evaluating for improvement, and then growing the program. Another interviewee described the need for specific and carefully considered guidelines to initiate and taper donor milk with all hospitals treating donor human milk as a bridge to mother's own milk or formula. "Look at the process. You need to know the logistics of your hospital and the education [involved]. You need to know who's going to process the milk, who's going to take care of it and how's that going to be done. You need to figure out who you want to do it, is it going to be your nurse or an aide? Who will aliquot the milk? Is there the space? What equipment is necessary in terms of the freezer and breastmilk warmers?"

These are all important parts of a business plan to a hospital.”

Educating staff and raising awareness with parents or guardians was identified as important for a successful program. For staff, it is vital they understand all processes and procedures and interact with parents or guardians using the same method for clarity and continuity. For parents or guardians, interviewees noted the value of discussing donor milk early, explaining how donor milk is used as a bridge to a parent’s milk, and reviewing regulations involved in donor milk—one person expressly noted the value of HMBANA’s educational literature and how patients like to know donor human milk is regulated.

### Limitations

This study has limitations. We were unable to interview three hospitals without a donor milk program. It was thought that by interviewing these hospitals the researchers would be able to identify the challenges to adopting a program. To address this, we set out to interview a newly established donor human milk program and a program in which milk supply requests were declining. We were able to interview two hospitals with new programs and one hospital we thought was reducing its use of donor human milk in favor of another product—the parent’s own milk.

The findings might be influenced by who we interviewed. First, we interviewed representatives from five hospitals, for a total of seven participants. In some cases, we interviewed staff who oversaw the program, and in other cases, participants were involved in the day-to-day operations of donor human milk. The sample’s gender distribution (with only one male participant) might reflect the workforce but also might have influenced the findings.

## CONCLUSIONS AND RECOMMENDATIONS

The findings from this project identified four key recommendations to support hospitals regarding the use of donor human milk:

1. **Obtain leadership buy-in.** To obtain buy-in, provide a business plan for its use and describe the value for the hospital. Specifically, the plan should describe the costs of a donor human milk program, such as for donor human milk, training, additional staffing time, and resources needed. The plan also should describe the related savings, such as substantial costs for providing care to infants with NEC. The plan should describe how donor human milk reduces NEC rates, including the potential for lives saved. For hospitals considering using donor human milk in the nursery for hypoglycemic infants, describe improvements for quality of life for both infants and parents and

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*–Interviewee*

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guardians, and the cost of care to move a hypoglycemic infant from the nursery to the NICU. When considering which staff to engage, the chief nursing officer has proved key to adopting many donor human milk programs. This position is important for initiating a program, as well as obtaining additional leadership support from the C-suite if necessary;

2. **Start small to gain early successes.** Begin a donor human milk program as a quality improvement initiative by starting small, evaluating, and improving. Involving multiple people to outline the process, steps, and criteria increases uptake. These guidelines help staff understand which infants can receive donor human milk, the amount and duration of use, and how often feedings should occur. Guidelines prevent the waste of donor human milk;
3. **Train staff.** Two types of education are necessary: one training regarding the value of donor human milk and the roles and responsibilities of each staff member and another training to ensure all staff interacts with parents and guardians using the same messaging. Birth is a joyful and stressful time, thus ensuring everyone understands their role, responsibilities, and how to interact with parents and guardians is critical; and
4. **Raise awareness and obtain consent from parents or guardians.** Donor human milk, formula, and fortifiers might be new concepts for parents and guardians, and a successful program would include information about the nutritional value and the likely prevention of NEC from the use of donor human milk. Using donor milk as a bridge can reduce the stress on the patient seeking to nurse. In addition, successful donor human milk programs obtain consent from parents or guardians before giving any product to infants.

## Notes

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