

Summer 2023



# Michigan Department of Health and Human Services Newborn Screening News

The Michigan Department of Health and Human Services (MDHHS) Newborn Screening (NBS) Follow-up Program works together with the State Newborn Screening Laboratory and coordinating centers to find and treat infants who need early medical care.



## NBS Quarterly Reports and Stellar Performance



During the first quarter of 2023, one hospital met all six of the NBS blood spot screening performance goals.

➤ St. Joseph Mercy Ann Arbor

### Performance Goals for NBS Blood Spot Quarterly Reports

1. Less than 1 percent of screens are collected more than 36 hours after birth.
2. Greater than 90 percent of screens arrive in the state laboratory by the appropriate day.
3. Less than 1 percent of screens are unsatisfactory.
4. Greater than 95 percent of electronic birth certificates have the NBS card number recorded.
5. Greater than 90 percent of specimens have a returned BioTrust for Health consent form that is completed appropriately.
6. Less than 2 percent of newborn screening specimens have errors in the demographic data.

We hope you can use this information in the quarterly reports to improve your part of the NBS system.  
If you have any questions, please call the NBS Follow-up Program at 517-335-4181.

### In this newsletter:

- ✓ NBS leadership announcement.
- ✓ Provider information.
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- ✓ CCHD and blood spot demographics.
- ✓ NBS awareness month.
- ✓ Metric changes.
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- ✓ NBS conference.
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During the first quarter of 2023, 34 hospitals met all three of the critical congenital heart disease (CCHD) screening performance goals. Five hospitals had 100 percent of CCHD results reported for newborns with a blood spot screen. Congratulations to the following hospitals on their impressive efforts:

- UP Health System Bell
- ProMedica Hickman Hospital
- MyMichigan Medical Center – Alma
- ProMedica Monroe Regional Hospital
- Munson Healthcare Otsego Memorial Hospital

### Performance Goals for CCHD Quarterly Reports

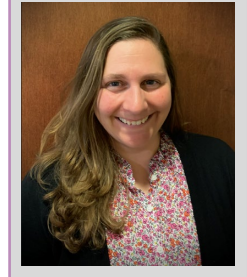
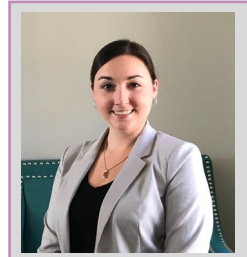
1. At least 90 percent of newborns with a blood spot screen have pulse oximetry screen results reported.
2. At least 90 percent of newborns with a blood spot screen have pulse oximetry screen results reported to the state less than 10 days after screen date.
3. At least 90 percent of newborns with a blood spot screen have pulse oximetry screen completed between 20 and 28 hours after birth.

### NBS leadership announcement

We are delighted to announce two leadership updates for the Newborn Screening Program.

- Shelby Heppe, MPH, has accepted the NBS Follow-up section manager position. Shelby brings considerable knowledge and experience with newborn screening, having served as the Genomics and NBS research coordinator in the Public Health Genomics Section for the past five years.
- Mary Kleyn, MSc, has accepted the position of director for the Lifecourse Epidemiology and Genomics Division, which includes oversight of the NBS Program. Mary joined the program in 2008 initially serving as an epidemiologist and becoming the NBS Follow-up section manager in 2017.

Congratulations to Shelby and Mary!



### Provider information: Why is it so important?

When the NBS Program identifies a strong positive NBS result, the primary care provider (PCP) is immediately notified by fax of the results, action required, and sub-specialist contact information. If a result is borderline or the specimen was collected early or is unsatisfactory, the PCP is immediately notified of the need for a repeat collection. Timeliness of notification is critical to ensure that infants receive rapid confirmatory testing, treatment, and intervention.

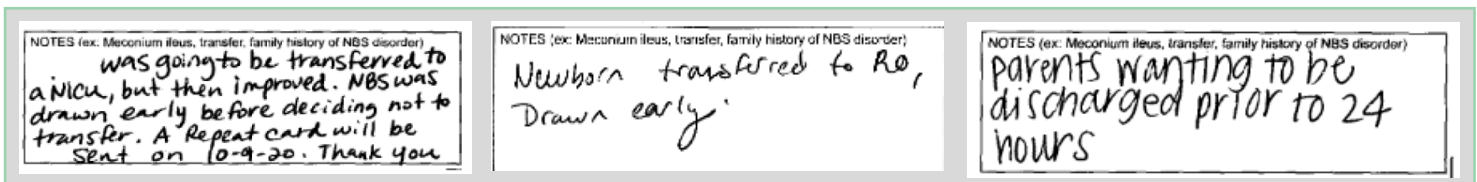
The NBS Program relies on the accuracy of the information provided by hospital staff when completing the NBS card. Please confirm with the parent which PCP they plan to take their new baby to for care. Do not assume that they will seek care in an associated hospital pediatric practice. Do not leave the provider fields blank. If the parent does not provide a PCP's name, the physician in charge of the newborn nursery should be listed on the NBS card.

If the PCP selection changes after the card has been sent to the state lab, please notify the NBS Program by faxing the "Hospital Discharge Form". Visit [Michigan.gov/NewbornScreening](http://Michigan.gov/NewbornScreening) and click on the "Resources for Hospitals and Health Professionals section" to located the form. [Click here for a direct link.](#)

### True early collections and using the notes field

State Laboratory and Newborn Screening follow-up staff call hospitals daily to verify birth dates/times and collection dates/times regarding specimens that appear to have been collected prior to 24 hours of age. Legitimate reasons to collect an early specimen include newborn transfer, impending red blood cell transfusion, and parental desire for early discharge. Please include this information in the notes field of the NBS card. NBS Follow-up staff will contact the NICU, SCN, receiving hospital or primary care provider to arrange for a repeat specimen.

Examples of appropriate early collection notations:



### Filling out the blood spot card: Why does it matter for critical congenital heart disease screening?

Understanding the flow of data is important when reporting critical congenital heart disease (CCHD) screening results to the NBS Program. The collection of data starts with the completion of the demographic fields on the blood spot card. The CCHD screen is conducted at the hospital, recorded in the patient’s electronic medical record, and reported to the NBS MDHHS Program. The reported results are then linked to the Michigan Department of Health and Human Services NBS Laboratory Information Management System. Finally, the NBS Program conducts follow-up on failed screens, screens reported as missed, and infants with no reported results.

The image shows a newborn screening card form with several sections:
 

- BABY:** Fields for last name, first name, sex (male/female/ambiguous), birth date, birth time, birth weight, gestation, single/multiple birth, birth order (A, B, C, D), antibiotics, meconium ileus, collection date, collection time, collected by (NICU or special care), any RBC transfusions, transfusion date, and trans. start time.
- MOTHER:** Fields for last name, first name, medical record #, type of collection (heel stick, venipuncture, line draw), ethnicity (Hispanic/Non-Hispanic), race (White, American Indian, Black, Asian/Pacific Islander, Middle Eastern Descent, Multiracial), other feeding (breast, milk-based, soy, none), and TPN/amino acids.
- PROVIDER:** Fields for last name, first name, phone, fax, and address.
- SUBMITTER:** Fields for last name, first name, medical record #, birth date, hospital code, and address.
- HEPATITIS B SURFACE ANTIGEN (HBsAg):** Test date and result (positive/negative).
- ADDITIONAL INFO:** Birth hospital (if different from submitter), notes (e.g., transfer, family history), and a barcode.

 The form includes a 'DON'T USE RED INK' warning and 'DHHS USE ONLY' markings.

Errors made when completing the NBS card can have downstream consequences in the CCHD linking process. When filling out the demographic information on the blood spot card, be sure to:

- Leave out dashes, hyphens, and spaces.
- Spell names accurately.
- Provide accurate birth date and medical record number.
- Use full legal name of mother.

Following the recommendations listed above will decrease the number of email notifications received for babies with no reported results. Quality assurance checks are also a useful method of decreasing errors. For more information about NBS card completion, please see the Michigan NBS Hospital Guide and the Completing the Newborn Screening Card infographic at [Michigan.gov/NewbornScreening](http://Michigan.gov/NewbornScreening) under “Resources for Hospitals and Health Professionals”.

### September is Newborn Screening awareness month!

Thank you for your hard work ensuring that all babies in Michigan get their newborn screen. Because of you more than 100,000 babies received a newborn screen in 2022.



Each year, approximately 300 Michigan babies are identified with a disorder on the NBS panel and given the opportunity for better health outcomes.

To learn more about the difference newborn screening can make, read family experiences at Baby’s First Test. Click here for a direct link: [Family Experiences | Baby's First Test | Newborn Screening | Baby Health \(babysfirsttest.org\)](http://Family Experiences | Baby's First Test | Newborn Screening | Baby Health (babysfirsttest.org))

### Recent metric changes

Metrics are an important tool for monitoring hospital performance in obtaining quality newborn screens. Metrics help to recognize when quality improvement activities are needed and are used to highlight stellar performers amongst birthing hospitals across the state.

Effective quarter two, 2023 the following metric changes were implemented to the quarterly reports:

- **Late Screen** metric goal changed to less than 1 percent of screens should be collected greater than 36 hours after birth. This goal was previously less than 2 percent. (Blood spot metric)
- **NBS Cards with Incorrect Demographic Data** metric goal changed to less than 2 percent of NBS cards should arrive with errors in the demographic fields. The previous goal was less than 1 percent. (Blood spot metric)
- **Timely Screen After Birth** is now calculated as all newborns with a right hand and foot pulse oximetry screen completed between 20 and 28 hours after birth divided by the total number of pulse oximetry screens reported. This was previously divided by the total number of newborns with a bloodspot screen. The metric goal is still 90 percent. (CCHD metric)

If you have any questions or concerns about these changes, [please click here to email the NBS Program](mailto:NewbornScreening@michigan.gov) (NewbornScreening@michigan.gov).

### Important reminders for the BioTrust consent process: Patient label placement

Recently, MDHHS has identified an increase in the number of BioTrust consent forms returned with patient labels over important parts of the document.

**Patient labels should not be placed in a way that cover critical areas of the BioTrust consent form. They should not be placed in a way that covers the kit number, barcode, yes/no boxes or the signature line.** When these areas are obstructed, MDHHS is unable to connect the consent decision to the family's record.

If using patient labels to track form completion in the hospital, MDHHS recommends placing the label on the back side of the BioTrust consent document.

Below are resources to help staff members who may have questions on how to collect the BioTrust consent decision from families:

- [Staff instruction sheet](#)
- [The NBS educational online tutorial \(contains information on the BioTrust consent process\)](#)

For any questions related to the BioTrust consent process, please contact Shelby Heppe at 517-335-6497 or at [BioTrust@michigan.gov](mailto:BioTrust@michigan.gov).

### Newborn Screening conference 2023

The Newborn Screening Program hosted two virtual newborn screening conferences in May for hospital staff and home birth attendants. The conference covered a variety of topics including: a cystic fibrosis highlight, tips to understand and improve quality metrics, strategies for communicating with reluctant parents, and more!

A total of 123 attendees, representing 50 birth hospitals across Michigan, participated in these conferences. Please visit the Resources for Hospitals and Health Professionals tab on the MDHHS Newborn Screening website (Michigan.gov/NewbornScreening) to view the speaker slides. Click [here](#) for the direct link.

## NICU corner: Congenital Hypothyroidism update

After careful review of screening data for congenital hypothyroidism, the MDHHS NBS Program has determined that the reference range for thyroid stimulation hormone (TSH) should be updated to improve detection of cases. Effective May 3, 2023, the TSH cutoff value for a borderline positive result was increased from 27 to 30  $\mu\text{U}/\text{mL}$  (serum). These changes to the reference range are anticipated to result in fewer infants with borderline positive congenital hypothyroidism screening results.

Age	TSH value	Determination
<b>TSH Reference Ranges <math>\mu\text{U}/\text{mL}</math> (serum)</b>		
<b>24-36 hours</b>	<30	Negative
	30-44	Borderline Positive
	$\geq 45$	Strong Positive

## Upcoming holiday courier schedule

### Lower Peninsula hospitals:

Monday, September 04 – Holiday/Sunday schedule

### Upper Peninsula hospitals:

Monday, September 04– UPS will be closed



## Technical assistance

- Angela Aldrich, NBS nurse consultant, is available to work with staff in any hospital that requests help with specimen collection. [Click here to reach her by email](mailto:AldrichA1@Michigan.gov) (AldrichA1@Michigan.gov).
- Kristen Thompson, NBS coordinator, is available to work with hospitals on CCHD pulse oximetry screening and reporting. [Click here to reach Kristen by email](mailto:ThompsonK23@Michigan.gov) (ThompsonK23@Michigan.gov).
- Shelby Heppes (formerly Atkinson), Genomics and NBS research coordinator, is available to assist with questions related to BioTrust for Health. [Click here to reach Shelby by email](mailto:Heppes@michigan.gov) (Heppes@michigan.gov).

**Together we can achieve our goal that all children diagnosed through newborn screening receive prompt and careful treatment in order to live the healthiest lives possible.**

**Please remember to share the quarterly newsletter with staff!**

If you have questions, please contact the NBS Follow-up Program at 517-335-4181 or [NewbornScreening@Michigan.gov](mailto:NewbornScreening@Michigan.gov) or [visit our website at Michigan.gov/NewbornScreening](https://www.michigan.gov/NewbornScreening).