



## **NBS Advisory Committee Meeting MINUTES**

Thursday, November 17, 2022

1:00 p.m. – 4:00 p.m.

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## Attendees

### Voting Advisory Committee Members Present

<b>Voting Advisory Committee Members</b>	Position
Abdallah "Abe" Elias	Director of Medical Genetics and Clinical Geneticist, Shodair Children's Hospital
Allison Young	Pediatrician, Western Montana Clinic
Amanda Osborne	Licensed, Certified Professional Midwife, Helena Birth Studio
Jennifer Banna	Center Coordinator, Family to Family Parent of child with rare metabolic disorder
Kotie Dunmire	High School Business and Special Ed Teacher, Butte High School Parent of child with Cystic Fibrosis and PKU
Marion Rudek	Nurse Practitioner, Blackfeet Community Hospital
Sarah Sullivan	RN, Parent to two children with homocystinuria
Shelly Eagen	Nurse Practitioner, Pediatric Pulmonary, Billings Clinic

### Voting Advisory Committee Members Absent

<b>Voting Advisory Committee Members</b>	Position
Miranda Prevel	EPSDT Program Specialist, DPHHS

### Non-Voting Advisory Committee Members

<b>Non-Voting Advisory Committee Members</b>	Position
Amber Bell	Newborn Screening Coordinator, Children's Special Health Services, DPHHS
Crystal Fortune	NBS Follow Up Coordinator, Montana Public Health Laboratory, DPHHS
Debbie Gibson	Lab Services Bureau Chief, Montana Public Health Laboratory, DPHHS
Jacqueline Isaly	Family and Community Health Bureau Chief, DPHHS
Margaret Cook-Shimanek	Acting State Medical Officer, DPHHS

### Facilitators

<b>Facilitator Members</b>	Position
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Anna Schmitt	Co-founder, Yarrow
Krystal Bosenbark	Public Health Specialist, Yarrow

**Children's Special Health Services Support Staff**

<b>CSHS</b>	<b>Postion</b>
Katie Sheehy	Nurse consultant for CSHS
Leanna Schearer	Program assistant for CSHS

**Guests**

<b>Name</b>	<b>Postion</b>
Dr. Shawn McCandless	Professor and Section Head, Genetics and Metabolism, University of Colorado Anschutz Medical Campus Chair, Department of Genetics and Metabolism, Children's Hospital Colorado
Lesa Brackbill	Parent advocate of Krabbe disease, Krabbe Connect

**Public**

<b>Name</b>	<b>Postion</b>
Erin Hoch	Parent to child with Pompe disease
Amanda Marie Joost	Parent to child with Pompe disease
Alison Brightbarth	Parent to child with Krabbe disease

## Welcome & Roll Call

(Yarrow Facilitators, Voting & Non Voting Committee Members, Ground Rules)

- Yarrow welcomed the group and did roll call while leading introductions so each person could introduce themselves, providing their roles, organizations, and a description of themselves.
  - Note: physical description is requested during introductions for those that might be seeing impaired.
- Yarrow provided an overview of Agenda, Ground Rules, and Public Comment Period at the end of the meeting.
- Yarrow reviewed the number of members needed to reach quorum and hold a vote for reviewed documents. At the time of roll call, a quorum was established for this meeting.

## Unfinished Business Review

- **Bylaws Voting Results**
  - Yarrow read the results of the Bylaws voting survey
    - 9 out of 9 Committee members voted to adopt Bylaws
    - **Motion:** Members had agreed to adopt the Committee Bylaws
  - Yarrow reminded Committee members that on the last page of the bylaws document, there is a statement that everyone will have to read, sign, and return by December 1st
- **Selection Criteria Results and Vote**
  - Yarrow read the results of the selection criteria survey
    - There were not enough votes to eliminate any of the criterion, so the 11 current criteria were established
  - **Vote to adopt:** Yarrow led the vote to adopt the selection criteria via Google Forms
    - **Motion:** Move to adopt the selection criteria
- **Chair and Vice-Chair Nomination Results**
  - Yarrow reviewed the results of the Chair and Vice-Chair nomination
    - No members volunteered for either position
    - Those nominated for Chair included:
      - Dr. Abe Elias
      - Shelly Eagen
    - Those nominated for Vice-Chair included:
      - Shelly Eagen
      - Kotie Dunmire
      - Dr. Allison Young
      - Jennifer Banna
    - Shelly Eagen and Jenn Banna chose to endorse themselves
    - Dr. Abe Elias and Dr. Allison Young chose to decline their nomination
    - Kotie Dunmire was not available to comment on nomination
  - Chair and Vice-Chair positions elected based on remaining nominees
    - **Chair elect:** Shelly Eagen
    - **Vice-Chair elect:** Jennifer Banna
      - Elected Chair will be added to specific internal meeting calendar invitations
      - Elected Chair and Vice-Chair will decide how to delegate an alternate

- **Motion:** Motion moved by Dr. Abe Elias and seconded by Marion Rudek

## Introduction of Nomination Process

- **Overview of Procedures**
  - Yarrow led discussion on the nomination process procedures
    - Nomination packets will be reviewed in the order they are received
    - Nomination packets will be available on the Advisory Committee website starting December 1st (estimated)
    - Need to consider that there are conditions that have been considered for other State's NBS panels & the RUSP, should we review those before others?
      - Need to figure out how to prioritize conditions
      - The internal team may need to include in the decision brief that the condition is on the RUSP, etc to help impact DPHHS review process / decision making
    - Considered adding the statement: "if multiple conditions have been nominated, the committee will determine which conditions will be reviewed first" to the procedures
  - Yarrow reviewed condition voting options
    - Decision does not have to be a "yes" or "no"; members can decide that they "do not have enough information to make the decision at this time"
  - **Vote to adopt:** no voting occurred. We will update the nomination process procedures and hold a vote at a later date
    - **Motion:** n/a

## Condition Introduction: Clinical Background: SME

- **Krabbe clinical background presentation by SME Dr. Shawn McCandless**
  - Lysosomal storage disorder and leukodystrophy
  - Birth prevalence: about 1 / 100,000
  - About 80% of Krabbe cases present with symptoms in first year of life, but symptoms can present in neonates up to adults
    - The more severe the case, the earlier the symptoms present
  - Natural history
    - From a NBS perspective, it is a bad disease regardless of when symptoms start
  - Infantile Krabbe Disease
    - It's up to the committee when they want to target screening, but because of the severity of the disease, if the screening methods are available and there is a treatment available, it should be screened
  - Krabbe Disease: 2009 ACHDNC Review
    - Not recommended for the RUSP
    - Advances since 2009
      - Increased availability of molecular testing
      - Psychosine testing as a first or second-tier screening method

- Current Recommended Screening
  - Tier 1: dried-blood spot GALC enzyme activity - if low, most kids will not have Krabbe
  - Tier 2: dried-blood spot psychosine - would use this in a perfect world, but requires an expensive machine
    - Reduce false positives
    - Helps stratify risk
  - DNA analysis can be helpful
- There are states that are already testing for Krabbe
  - Over 1.3 million babies have been tested
    - The number of cases is low, and may depend on the method of screening
- Treatment
  - HSCT: bone marrow transplant - evidence suggests this should be done within first 30 days of life
    - Mortality rate of bone marrow transplants increases the younger the patient
- Screening in other States
  - New York: New York Krabbe Disease Newborn Screening Outcomes (2016)
- Krabbe disease
  - Data on benefit of HSCT are challenging to interpret due to lack of data, but data suggests there is improved survival with early HSCT and improved, but not great, neurologic outcomes
  - Potential harms:
    - Premature death secondary to early HSCT
    - Uncertainty / disruption for families without a clear diagnosis of infantile Krabbe
- Estimated annual projected outcomes for NBS for Krabbe in MT
  - Can expect 1 positive screen per year
- SME believes NBS tests are available and reasonable

### **Krabbe Family Story**

- **Family story presentation by Lesa Brackbill**
  - Has been an advocate for Krabbe disease and other congenital diseases since 2015
  - Daughter's diagnosis occurred after 6 weeks from when symptoms began, which is shorter than other leukodystrophy conditions
  - Took 5 years and 3 different bills to reform NBS panel
  - PA is now RUSP-aligned
  - PA is ninth state to screen for Krabbe, and 4 babies have been identified and have received life-saving treatment

## Family Story and SME Q & A

- Within states currently screening for Krabbe, are there protocols that these states use? Are there in-state centers, or do they send samples out of state?
  - States need to be prepared with what to do when they do get abnormal results
  - Most of the states have been able to get their cases started with bone marrow transplant within 40 days
  - Only Billings Clinic does bone marrow transplant in MT, but they do not do it on children - samples would have to be sent out of state
    - There are advocacy groups that are willing to support treatment financially
- How many states have algorithms and sequencing?
  - Ohio and NJ are only states not doing Tier 2 testing
  - Opinion of SME and Lesa that States must do Tier 2 testing to rule out false positives
    - Recommends that Montana do Tier 2 testing, and do it before notifying family of positive screen
      - Tier 2 testing requires an area for a “second punch” on the blood spot card

## Laboratory Background

- **Montana Public Health Laboratory Screening Methods by Crystal Fortune**
  - Montana PHL has a staffing shortage, with currently 4 open positions
  - Would need to purchase a tandem mass spectrometry and would need to train staff on how to use, run and interpret results, as well as troubleshoot
  - States that are currently testing for Krabbe have greater populations than MT, and would have a higher number of potential false positive screens
  - No Tier 2 testing currently available in the lab, so parents would be notified after Tier 1

## Discussion Period

- Yarrow opened the floor for questions and discussion
- Family Story
  - Several late-onset families said that they were grateful to have their “at risk” kids monitored
  - Wishes that family was able to do carrier testing so that they would have known risk ahead of time
    - As carrier screening becomes more available, more people will volunteer for it and it will become a normal way of life
- Clinical Background
  - The patients who would most benefit from NBS are the 80% of Krabbe cases who present with early symptoms
  - False positives with Tier 2 testing (psychosine) for Krabbe are very low, but there aren't many reports that share this information

- False negatives - in the states that are currently screening for Krabbe, there have not been any missed cases reported
- Wisconsin does screen for Pompe, so samples from Montana could potentially be sent there
- Most states use a psychosine level of 2 or above to recommend for transplant
  - Children who do not quite have 2 will be monitored closely
- Probably requires good communication between sequencing lab and public health lab
  - Every state may have a unique blend in how they perform Tier 1 and 2 testing
- Carrier screening is the way to go for the future
- For a state to add a condition, the state lab will have to re-validate the entire panel
  - It could be either more or less expensive than expected
  - MT should follow up with Wisconsin to see what it would cost for them to add Krabbe to their panel
- Psychosine testing is about \$50-\$60 per test
  - Krabbe can be added to the NBS panel with minimal additional cost once Pompe and MPS-1 are added
- Treatment
  - Even though treatment may not be beneficial from a public health standpoint, from the parents' perspectives, the treatment is very worthwhile
  - Newer data is better than older data
  - Bone marrow treatment is usually performed on more severe cases
- Data should be available in February 2023 regarding the value of adding Krabbe to the RUSP panel
  - Would be worth hearing the perspective of families with children who have frequent check ups, who have children who died from bone marrow transplant, etc.
  - Gene therapy data should be interesting once more reports are published
  - Recommended papers for the AC members would be beneficial
- Laboratory Background
  - Cost would include an increase of \$15 per screen, which is already at \$136
    - Higher than other states, most likely because MT doesn't get the amount of support that other, larger states receive
  - MT Public Health Laboratory will need to update cost analysis with information needed to support Tier 2
  - Realistically, the 30 day target may be exceeded most of the time b/c of the ruralness of MT

## **Newborn Screening Advisory Committee Next Steps, Comment Period, & Wrap Up**

### **Next Steps**

- Finalization of the following documents:



- Nomination Process Procedures
- Selection Criteria

### **Public Comment Period**

- Alison Brightbarth: mom of infant with Krabbe, lives in Indiana - child receives weekly infusion, and you wouldn't know he has Krabbe by looking at him
- Erin Hoch: mother of infant with Pompe who is now 8 - they are the only family with infantile Pompe in MT that they know of
- Amanda Marie Joost: mom of child with early onset Pompe disease - NBS was invaluable, and child was able to start treatment immediately, would be nice to see Krabbe and Pompe added together

### **Next Meeting**

- December 21st: Committee will vote to add Krabbe to the MT NBS panel

### **Thanks and Next Steps**

- Follow up email will be sent soon and will include:
  - Meeting minutes
  - Recording
  - Transcription
  - Presentation slides
  - Shared resources on Krabbe
  - Finalized Selection Criteria and Nomination Process Procedures
- Signed and returned Bylaws Statement from Members by December 1st
- Please email if you have questions, comments, or need anything

**This meeting was concluded by Anna Schmitt at 4:00 pm on November 17, 2022, via Zoom.**