TODD NOVAK

STATE REPRESENTATIVE • 51ST ASSEMBLY DISTRICT

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Rep.Novak@legis.wi.gov

P.O. Box 8953
Madison, WI 53708-8953

DATE: July 29, 2021

RE: Testimony on Assembly Bill 181

TO: The Assembly Committee on Health

FROM: State Representative Todd Novak

Thank you, Chairman Sanfelippo, and members of the Committee on Health for holding this public hearing on Assembly Bill 181 (AB181), which adds Krabbe disease testing as a required test during newborn screening.

Newborn children are screened for congenital and metabolic disorders. According to the state's Department of Health Services (DHS) there are 46 different disorders that are currently tested. Existing law requires healthcare workers to take the steps involved for testing newborns before an infant is discharged or within one week if the infant was born in a non-hospital setting. The Wisconsin State Laboratory of Hygiene conducts the lab work and results are then shared with the family and their physician. Newborn testing is paid for by a fee imposed by DHS. Current law also allows for those with religious or personal convictions an exception from newborn screening.

A family living in my legislative district had a child diagnosed with Krabbe disease. In their case screening was not conducted at birth and they only found out months later. When it comes to detection time is of the essence. In response, I introduced legislation in February of 2015 that would have provided for the testing of Krabbe disease at birth. That bill did not advance to become law. The issue remains as newborns are not being screened for this disease at birth.

AB181 would require globoid cell leukodystrophy, also known as Krabbe disease, to be tested for as a part of the newborn screening process. Currently, DHS has the ability to promulgate rules for the testing of additional congenital and metabolic disorders. In the case of Krabbe disease this has not been done. While Krabbe disease has no cure, early detection of the disease at birth enables parents to seek treatment for their children. As a result they are then able to live longer and fuller lives. This bill also requires DHS to review on a biennial basis the appropriateness of additional lysosomal storage disorders for screening. After this review, the Department will then be able to promulgate rules for the inclusion of additional newborn screening if appropriate.

To render this proposal cost neutral, Senator Testin and I have introduced an amendment to tie the enactment of the bill to the effective date of a rule which would add Pompe disease testing to the screening panel. DHS noted in their fiscal estimate that if Pompe disease testing were to be added to the panel then adding Krabbe disease testing to the panel could be done at no additional cost. The Department

is currently in rulemaking to add Pompe disease testing to the panel.

AB181 makes a simple change that I believe will positively impact children affected by this disorder. I want to thank you for your consideration of this proposal.

Wisconsin State Senate
24th Senate District

Serving Wood, Portage, Adams,
Waushara, Monroe, and Jackson

PATRICK TESTIN
STATE SENATOR

DATE: July 29th, 2021

RE: **Testimony on 2021 Assembly Bill 181**
TO: The Assembly Committee on Health

FROM: Senator Patrick Testin

Good morning. Thank you Chairman Sanfelippo and members of the committee for hearing my testimony on behalf of Collin Cushman's law (AB 181), which would add Globoid-cell Leukodystrophy to Wisconsin's newborn screening program.

Globoid-cell Leukodystrophy, better known as Krabbe disease, is a rare, inherited disorder that impacts the central and peripheral nervous systems. The disease does this by destroying the nerve cells' protective coating (myelin). By the time symptoms develop – typically a few months into the child's life – it is too late for meaningful corrective therapy. Children with Krabbe typically have a life expectancy of two years.

While there is no cure for Krabbe, early detection can lead to more positive outcomes. There are treatments available that extend the child's life expectancy and their quality of life. Unfortunately, many parents do not know to test for Krabbe unless they have already lost a child to the disease. We will hear testimony y later in this hearing that will address this point further.

Nine states have added Krabbe disease to their newborn screening - New York, Missouri, Kentucky, Tennessee, Illinois, New Jersey, Ohio, Pennsylvania, and Indiana. Three more have passed laws to add Krabbe, but are still in the process of implementation - New Mexico, Louisiana, and South Carolina. Currently, four states are joining Wisconsin in considering Krabbe's addition – Virginia, Oregon, Iowa, and Minnesota.

There have been a number of recent developments that make the addition of Krabbe to the newborn screening list both practical and affordable. This includes the Wisconsin Department of Health Services' (DHS) decision to add Pompe disease to the newborn screening list. Like Krabbe, Pompe impacts the body's lysosomal metabolism. According to the revised fiscal note prepared by DHS for AB 181, the addition of Pompe prior to Krabbe would render this legislation revenue neutral. The Department is still undergoing the rule-making process for Pompe, so we have drafted an amendment that ties the effective date of AB 181 to that process. Should an emergency rule be in place before the passage of this bill, we would be able to analyze whether it is necessary to tweak or drop the amendment. We are monitoring the Department's

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progress to determine the right course of action, but the bottom line is this legislation will not have a fiscal impact.

Scientific and medical advancements are offering hope to families impacted by Krabbe, but early detection remains key. That is why I am asking you to join me in support of AB 181.

State of Wisconsin
Department of Health Services
Tony Evers, Governor
Karen E. Timberlake, Secretary

TO: Members of the Assembly Committee on Health

FROM: Andrew Hoyer-Booth, Legislative Director

DATE: July 29, 2021

RE: AB 181, relating to: newborn screening for Krabbe disease and requiring evaluation of additional lysosomal storage disorders for mandatory screening

Thank you for the opportunity to submit written testimony for information only on Assembly Bill (AB) 181. AB 181 would require Krabbe Disease (KD) to be added to the list of conditions for which newborns are to be screened. It would also require the Department of Health Services (DHS) to evaluate on a biennial basis the appropriateness of mandatory newborn testing for lysosomal storage disorders in addition to Krabbe disease.

Newborn Screening has prevented death and disability for hundreds of Wisconsin residents since its inception in the mid-1960's. The Department of Health Services (DHS) oversees the state's Newborn Screening (NBS) Program and helps ensure success in screening, diagnosis, and treatment for Wisconsin newborns. The newborn screening currently tests for 49 disorders that are difficult to identify and are treatable if identified early. This includes testing for 47 blood disorders, a hearing screening, and screening for critical congenital heart disease. The NBS panel does not preclude families from seeking additional testing or genetic screens to identify a broader range of conditions. The program works very closely with the Wisconsin State Laboratory of Hygiene (WSLH), which is responsible for the blood screening laboratory testing.

Wisconsin has a formal process for evaluating proposals to add disorders to the NBS panel. The purpose of this process is to ensure that, before disorders are added, we can be sure that there will be an overall benefit to families and society, and to avoid negative or unintended impacts. It is a comprehensive, evidence-based approach which ensures that before a condition is added to the panel, there is an accurate test available, interventions are reasonably available, safe and effective, and the details of follow-up and management are delineated.

The process relies upon experts in the areas of: medicine and science; statistics and epidemiology; ethical, legal, social, and policy analysis; and laboratory medicine. It also includes representation from individuals with target conditions or their parents and incorporates testimony from patient advocacy groups.

There is a similar process in place at the federal level to evaluate conditions as to whether newborn screening is indicated. The Recommended Uniform Screening Panel is a list of disorders that the Secretary of the Department of Health and Human Services (HHS) recommends for states to screen as part of their state universal newborn screening programs. Krabbe Disease is not currently on the Recommended Uniform Screening Panel and the most recent review of the disease by HHS did not change this recommendation.

Krabbe Disease was recently nominated for addition to Wisconsin's NBS Program in 2020 and the nomination was considered through the Department's NBS process. It was concluded that Krabbe did not

meet two criteria of nine considered. Therefore, the difficult decision was made that Krabbe would not be added to the state's NBS panel at this time.

Significant challenges are present in regards to treatment of the condition. Children found to have the early infantile form of Krabbe Disease require expedient treatment that includes stem cell transplant with umbilical cord or bone marrow cells. This treatment likely needs to be done in the first month of life to be maximally effective. There are currently only a handful of transplant centers in the U.S. with significant experience in KD transplants and none are located in Wisconsin. The Department has had initial conversations with transplant doctors regarding providing treatment in-state and further discussion and coordination is necessary to ensure that adequate referral and treatment systems exist for providers coordinating care for children with Krabbe.

Additionally, if a family is fortunate enough to be in the position to receive a transplant, it is not without significant risk such as transplant associated morbidity. Therapies that can combat neurodegenerative diseases are still in their infancy, particularly for a rare condition such as Krabbe Disease.

The final challenge with Krabbe Disease NBS is identification of children with other forms of the condition. The screen was developed to identify early onset Krabbe Disease (EOKD), which is the form treated with transplant. However, it may also identify later onset, milder forms for which there is no consensus currently on how to treat those children. New testing is slowly becoming available that is likely to help differentiate between the early onset and later onset forms, but that test is not yet widely available. The Department will continue to monitor the efficacy of testing and treatment of Krabbe Disease for future evaluation and consideration.

DHS understands why families who have had children diagnosed with Krabbe are eager to see its addition to the NBS panel. It is a tragic condition that steals children from their loving families. The Department is optimistic that the time will come to add Krabbe to the list of disorders for which Wisconsin screens. Although there are still challenges with the handling of later onset disease, the screening test itself is improving. Newer and hopefully better treatments are in development and there is reason to believe that these treatments will become available in the coming years. These developments provide optimism, but adding Krabbe to the list of disorders we screen for, at this time, would be premature.

I would like to thank the bill authors for drafting this legislation and look forward to their continued advocacy on this topic.

Randy Thoms speech on Assembly Bill 181 Krabbe's Disease and Newborn screening

I am here as a father and as an advocate for newborn babies. By adding Krabbe's Disease to the newborn screening panel, you can prevent the kind of misery our oldest son Alex went through. He died at the age of 13 months. It took nine doctors to get a diagnosis. You see, by the time you notice symptoms, it's already too late to do an effective treatment. That's why it's important to test at birth. That's why Jeremy is alive today, with the same disease. If we can prevent the misery and suffering a child with Krabbe's goes through, then it's worth it. Please, Do what's Right. Pass Assembly Bill 181 so that other children can live.

Testimony from Kevin and Judy Cushman

Dad's Testimony:

My name is Kevin Cushman and I am the father of Collin Cushman who passed from Krabbe.

I'd like to start by asking, "How many of you have children?"

How many of you remember where you were when you found out that you were going to be a parent for the first time?

Did you just get goose bumps?

What a happy and exciting time!

Now I'd like you to picture your child at 13 months of age....

Imagine yourself sitting on the floor holding your child as the phone rings....It's the Genetic Doctor calling....How do you think you'd feel hearing the doctor tell you that your son has a terminal disease. And that the life expectancy is 13 months to 2 years.

Collin was 13 months old when he was diagnosed. Did that mean that I only had a few months before losing him?

Krabbe affects each kiddo differently. Some parents have to make end of life decisions before their child reaches 2 years old. Decisions such as stopping feeds because their child was aspirating or taking them off oxygen because it was causing too much discomfort. And the result is watching their child slowly wither away until they pass.

But Collin beat the odds. He was a fighter and stronger than I could ever hope to be. He was 8 years and 18 days old when he passed. But it didn't come without difficult times.

It costs at least $700,000 a year to care for one affected child. Collin was diagnoses on January 6, 2012 and passed on January 6, 2019. That's 7 years. Thankfully Collin's medical expenses were covered by Medicaid.

Collin endured so much in is short life. Severe tone issues, vest treatments, nebulizer treatments, feeding tube replacements, an ambulance ride, at least a dozen hospital stays, irritability, being on oxygen or having to be suctioned frequently because he couldn't manage his own secretions. And this just a very small list of what he dealt with on a daily basis.

As a parent, imagine waking up every single day as I did, wondering if this was going to be the day that Krabbe was going to take your son's life.

Imagine caring for your child 24/7 for 8 years and 18 days and knowing more about his disease than you'll ever know about your son.

It's a horrible feeling knowing that as a parent there is nothing you can do for your child but to keep him as comfortable as possible as you wait for the disease to take his life.

But Collin took all that life gave and all that Krabbe took from him in stride. But he shouldn't have had to deal with all this. No child should.

Now I'd like you to imagine how you'd feel finding out that had Wisconsin been screening for Krabbe, that there was a treatment! A treatment that could have given not only a longer life but a better quality of life. A treatment that could give you chance to have a conversation with your son. A chance to know your son. There is a 10 year old boy right now (which is how old Collin would have been) living in Oregon that received the transplant and is disease free.

Wisconsin needs to be screening for Krabbe. Because there will be another Krabbe child born in Wisconsin and this treatment would give those parents two things that Judy and I never got. A choice and hope.

Shortly you'll hear from the Thoms family and they'll share with you exactly what this means. You'll also read more about the treatment in the testimony submitted by Dr. Kurtzberg.

It was too late for Collin. And we don't want another kiddo to have to go through what Collin went through or parents to have to go through what we went through and will be going through for the rest of our lives. That's why we are here.

You have a great opportunity in front of you today. A chance to be proactive because there will be more kiddos born in Wisconsin with Krabbe. We are asking that you vote in favor of Assembly Bill 181.

Thank you.
Kevin Cushman

Mom's Testimony:

Collin's life impacted my life, now it's time for him to impact yours, and impact babies being born in Wisconsin. He brought us here today to bring Krabbe to the forefront.

Let me give you an idea of what part of his day was like. Collin's schedule was very routine; varying it could cause many health issues that could put him in the hospital. He required 24/7 care. He couldn't take care of himself at all. He received medicines six times a day. He had five feeds.

Having a feeding pump continually on him caused spit ups. We found that pushing in his feeds by 15 ml every five minutes enabled him to tolerate it better. That means it took close to an hour for one feed. He was held a lot because of burps and suctioning. He was suctioned, on average, five times per hour. He had three vest and cough assist treatments and two nebulizer treatments. This allowed his secretions to be suctioned rather than staying in his lungs.

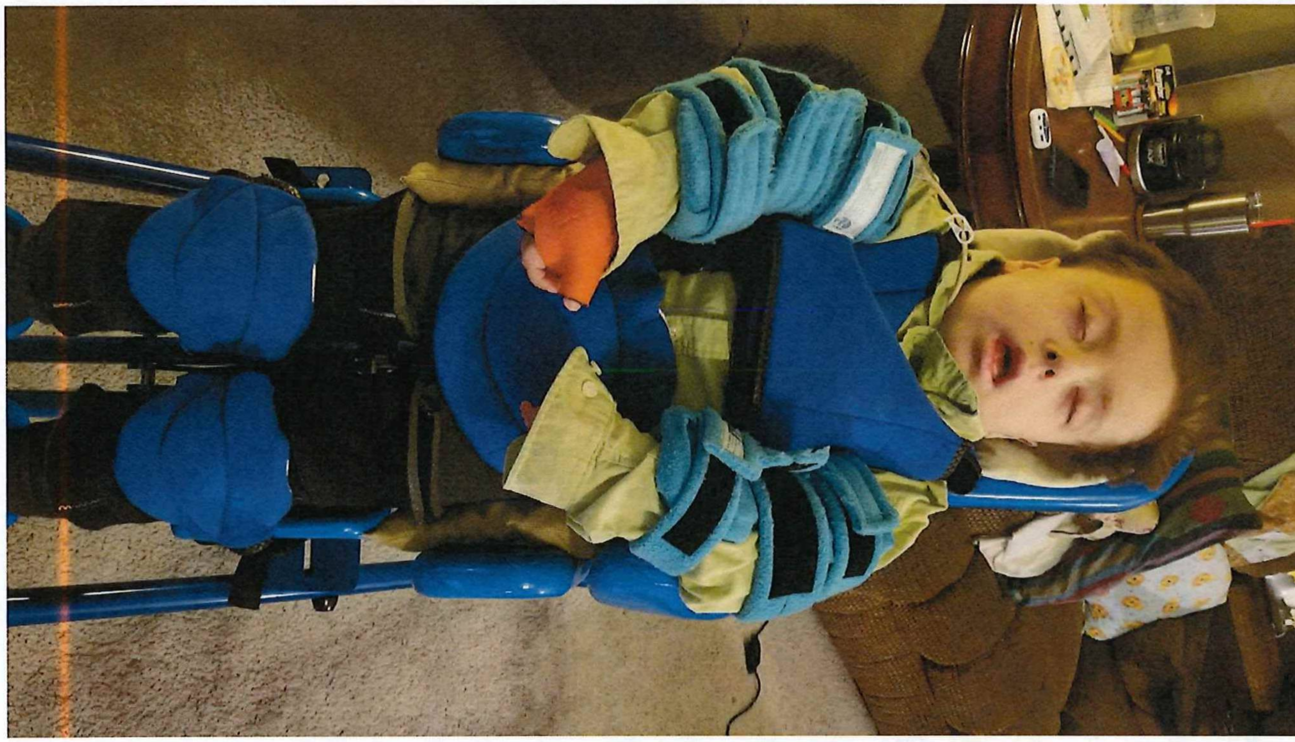
We did range of motion exercises with him. He didn't do any of this on his own. Afos and knee immobilizers had to be put into his stander. It was never easy to add anything to his day, because it all needed to be done every day and consistency was important.

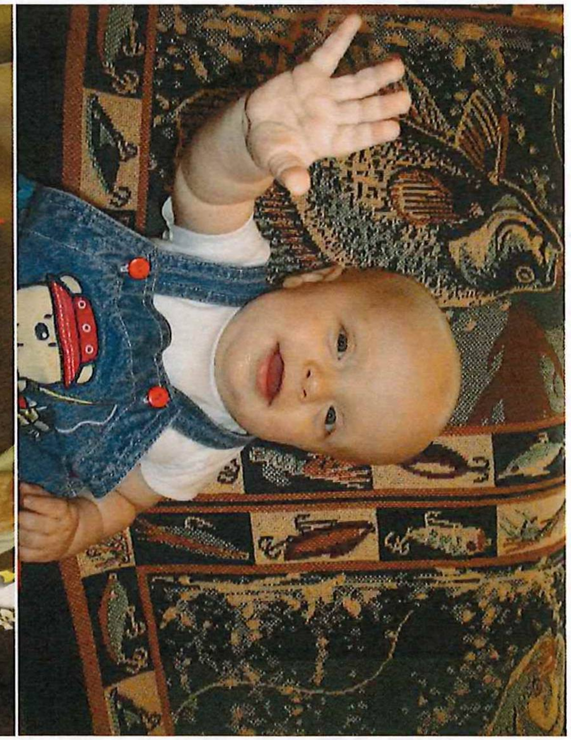
Whenever we traveled, we brought a van full of equipment. We needed to plan it very carefully to make sure he would be comfortable in his car seat. His schedule dictated when we would travel.

If Collin could have communicated with us, it would have helped us to provide him a better quality of life. Instead, it would take days for us to figure out what would help him. Life with Collin was hard on us all. Being his advocate, nurse, and parent – which came with his diagnosis – forced us into roles that we never thought possible.

We continue this fight because when a life, a child, a family is saved from the devastation of this disease, Collin's suffering will be providing hope to those important families. Assembly Bill 181 needs to be implemented to allow all Wisconsin babies a chance at life.

Sincerely,
Judy Cushman





Collin's Day

15ml pediasure every 5 mins.
10ml water flushes

6AM 4.4ml Baclofen
7AM 1.8 ml Gabapentin
8AM 4½ oz VPS mix w/ 2 tsp Miralax
11AM Vest/Neb (1 albuterol + 1 Budesonide)
Cough Assist 3-4-3
Swab/Brush Teeth
Eyedrops - 1 drop/eye - warm compress (microwave 8 seconds place on eyes 2 mins/eye

12PM 3½ oz VPS + ½ oz H_2O
2PM 4.4ml Baclofen + 1ml Multi-Vitamin
3PM 1.8ml Gabapentin
4PM Vest / CA
4:30PM Stander
5PM 4oz VPS
8PM Vest/Neb/CA/teeth/eyes (Refer to 11AM)
9PM 4oz VPS
10PM 4.4ml Baclofen 5ml Cetirizine .6ml Gas Relief
10:45PM 9½ oz Pedialyte
11PM 1.8ml Gabapentin
.6ml gas relief - PRN

School - Tues + Wed 12:15 1- Reading Partners 1:35 Music
Bath - Mon + Fri
OT - Thurs

Testimony in Support of Assembly Bill 181

Ray Cross

July 29, 2021

Assembly Bill 181

Relating to: newborn screening for Krabbe disease and requiring evaluation of additional lysosomal storage disorders for mandatory screening.

By Representatives Novak, Tranel, Dittrich, Kitchens, Rozar, Shankland, Skowronski, Spiros, Swearingen, Tauchen, Tusler, Vorpagel and Subeck; cosponsored by Senators Testin, Marklein, Darling, L. Taylor and Bernier

Good Morning. It is good to see so many old friends. Let me begin by thanking those of you that were so gracious to me during the many hours we worked together during my tenure as the UW System President. Thank you!!

As most of you know, I am not a medical expert and certainly not an expert on rare genetic diseases ------ *I didn't even stay at a Holiday Inn Express last night.*

I will try to let others speak to the technical, financial, and medical questions surrounding the addition of testing for Krabbe Disease to the Wisconsin Newborn Screening Panel. Further, while I would like to speak to the rational and moral arguments surrounding newborn screening for Krabbe Disease, I believe Dr. Baker and the experts advising and working at the Wisconsin Newborn Screening Laboratory as well as the national experts working on this disease are better qualified to discuss those arguments with this committee.

However, the medical, rational, and ethical or moral arguments for and against newborn screening for this disease are only part of the story. You see, I am the grandfather of nine grandchildren, two of which were diagnosed with Krabbe Disease. Joshua, my oldest grandson, died before he was three years old twenty-six years ago. Laura, a second grandchild who was diagnosed with the disease,

turns twenty-two tomorrow. My remarks will focus on the difference in their two lives.

Joshua, my oldest grandson, was born in 1992. He was a beautiful baby. Initially, he certainly seemed to be in good health – a very normal baby. When he was about three months old, he started to exhibit the traditional symptoms of the disease. He became more irritable. He cried a lot. He was difficult to feed. He increasingly became less flexible and more stiff. At first, Doctors were baffled. Multitudes of tests were ordered. Finally, when he was about six months old, it was determined that he had Krabbe Disease. We knew nothing about the disease but as we studied it, we came to realize that Joshua would probably not live beyond two years of age. We were devastated. My son and daughter-in-law were told to take him home and **try to make him comfortable.** That was impossible. He was never comfortable. He seemed to cry constantly. When I tried to hold him all I could do was cry. So much for making him comfortable. His short life was a constant struggle. He seemed to continuously be in pain. Like so many other Krabbe parents and family members, we never got to know our oldest grandson.

Around 5:30 in the morning on February 20, 1995, while I was driving to a meeting in Thief River Falls, Minnesota I received the dreaded call from my son. Joshua had passed away in his arms just a few minutes earlier. I pulled the car over unable to see through the tears while convulsing with grief. Yes, Joshua was no longer in pain or suffering, but we were. Even though we all knew it was coming the grief was almost unbearable.

In contrast, his sister Laura tested positive for the disease and when she was ten days old, she began chemotherapy and subsequently received a bone marrow transplant from cord blood when she was 19 days old. She was the 3rd person in the world to receive this treatment back in 1999. With guidance and encouragement from Dr. Joanne Kurtzberg at Duke University, the bone marrow transplant effort was performed at a hospital in St. Louis, Missouri. Incredibly, I am happy to say, tomorrow Laura will be twenty-two years old and continues to live a happy and interesting life. She is a character. She and her mother have written a book together. She started a nonprofit sports program for individuals with disabilities. She, along with her parents, have travelled throughout Italy and were recently given an audience with the Pope. She thinks she is an expert on cats and likes to flaunt that expertise around me because, well, I hate cats! She is an amazing young woman and yes, I am a proud grandfather. Live with it!!

At this point, there is no cure for this rare genetic disease but there are treatments that reduce the pain and suffering while offering the opportunity to live a happy and longer life. But those treatments must be made within thirty days. Hence, the need for Krabbe Disease to be added to the newborn screening panel like it is already in at least eight other states.

Exciting new research seems to indicate that a cure might be possible. Just recently, a third pharmaceutical company was granted FDA approval for a gene therapy drug that may help address the myelin deterioration caused by the disease. The work with CRISPR gene editing and the kind of research taking place right here at UW-Madison with Dr. Ian Duncan related to enzyme replacement therapy also holds great promise. There are several UW researchers working with

related gene editing and gene therapy efforts. Dr. Jennifer Kwon, a member of the UW Medical staff, is an internationally recognized Child Neurologist who has done significant research related to rare diseases like Krabbe Disease. She works closely with newborn screening programs around the country including the Wisconsin Laboratory. I encourage you to talk with her and with Dr. Joanne Kurtzberg, who established and heads the internationally known children transplant program at Duke University. She has done research on this disease for over thirty years.

Finally, I encourage the committee to work closely with Dr. Baker and the Wisconsin Newborn Screening Lab to determine if additional equipment is needed and what additional protocols would be necessary if this test were to be added to the state's newborn screening panel. Of course, they can also help determine the true cost of adding this test to the current panel when combined with tests for other rare diseases like Pompe and MPS1.

These research efforts provide HOPE to existing and future families impacted by this rare and horrible disease. You can help alleviate the pain and suffering of future babies born with this disease. You can help to give future Krabbe babies a longer and happier life. I ask you to pass this bill.

Thank you.

B.Strong for Bryce
Kyle & Jenna Heckendorf
805 Erik Street
Spring Green, WI 53588

Assembly Bill 181: Relating to: newborn screening for Krabbe disease and requiring evaluation of additional lysosomal storage disorders for mandatory screening
Submitted Written Testimony of Kyle & Jenna Heckendorf
Senate Committee on Health with Assembly Committee on Health
July 29, 2021

Thank you, Chairman Sanfelippo, Ranking Member Subeck and committee members, for your time in holding a public hearing and taking testimony on this bill as it is very personal to us because we lost our first child, Bryce Thomas, to Krabbe disease at just 18 months old. Thank you for giving us this opportunity to tell you about our son and the importance of including Krabbe Leukodystrophy on the mandatory newborn screening panel here in Wisconsin.

On May 6th, 2013, we welcomed Bryce into the world. Life was perfect. Our beautiful, healthy little boy was here and as first time parents, we were already looking forward to all of life's special moments ahead. Bryce was a very content and happy baby. We adored his smiles, giggles, play time and watching him develop his little personality. Developmentally, Bryce met every milestone for the first five months. At around five and a half months, however, we started noticing some changes: his neck seemed weaker, he absolutely hated tummy time, his body seemed more stiff and rigid, his appetite decreased, and it seemed as if he didn't move his arms and legs as much. These beginning symptoms continued to become more alarming and we knew something wasn't right. For the next couple weeks, Bryce was in and out of clinics and hospitals in Dodgeville and Madison as doctors tried to figure out what was wrong. Bryce underwent all kinds of testing, and we continued to hold onto hope as doctors ruled out many different possibilities. On November 19th, 2013, a blood test finally confirmed Bryce had Krabbe disease and he would probably not live to see his second birthday. Our world was flipped upside down. Everything we were looking forward to — hearing Bryce say his first words, watching him take his first steps, helping him catch his first fish, playing catch in the backyard, simply watching him grow up — were not going to happen and that news was absolutely devastating.

"Your son is going to die." These are the most heartbreaking words any parent can hear. The doctors and genetic counselors offered no hope. They said it was too late to do anything. Once symptoms of Krabbe disease are present, it's too late. There was no way to prevent Bryce from dying. No treatment was offered that might slow the disease from

progressing. Doctors told us that the only thing they could do for Bryce was to keep him comfortable as he would slowly lose his ability to move his arms and legs, smile, eat, swallow, see, hear, and eventually breathe. Bryce's battle with Krabbe was anything but comfortable. He screamed in pain for hours on end as the disease progressed and his nerves became exposed. He vomited after nearly every meal until surgery was required to prevent this from happening. He clenched his hands so tight that we had to put sponges in them to offer some sort of relief. He endured many hospital stays and surgeries. When Bryce no longer could swallow, he required suctioning around the clock. Near the end of his life, he was hooked up to an oxygen machine continuously. Bryce lost his torturous battle with Krabbe at 18 months old on November 26, 2014.

By putting Krabbe Leukodystrophy on the mandatory newborn screening panel, no parent in Wisconsin, from here on out, will be left without hope. Detecting this horrific disease at birth is essential and will give every child born with Krabbe a fighting chance. *Every* child deserves that chance — the chance that our amazing little boy did not get.

Through our journey with Krabbe disease, we have met many amazing families and have seen first hand the hope a transplant can bring. For example, Michael Wilson, from Oregon, was diagnosed at birth with Krabbe. He received a transplant and is now a thriving 10 year old with no signs of the disease. For Michael and many others, Krabbe was not a death sentence. Those children and their families are so fortunate to have been given a fighting chance. We would have given anything to have had that chance with Bryce. Krabbe will remain a death sentence for every child born in Wisconsin with this disease if it is not screened for at birth. You, as a committee, have the opportunity to save future babies born in our state and give hope to their families.

We'd like to thank everyone who has put so much time and effort into the pursuit of giving children in Wisconsin born with Krabbe Leukodystrophy a chance to receive a life-saving treatment. Thank you for reading our story and please reach out if you have any questions (jheckendorf@rvschools.org). We would greatly appreciate your support of Assembly Bill 181.

Sincerely,

Kyle & Jenna Heckendorf

Why Must Krabbe Disease Be Added to Wisconsin's Newborn Screening Panel?

Meet Jeremy. He's a 20-year old young man who likes Legos, X-box, YouTube, and movies. He also likes singing and puns. We know this because he's alive.

He's alive because he received a stem cell transplant when he was a month old. We knew he needed the transplant because we had him tested for Krabbe Disease when he was born. We knew to test him because his older brother Alex had the disease and died when he was 13 months old.

Currently, families who have the potential for Krabbe Disease only find out about it when they have a child, who, at birth, seems healthy and happy; his parents have plans and dreams for the future. Only a few weeks or months later, after noticing that "something is wrong" and after many, many doctor appointments, tests, monitoring, some mis-diagnoses, do they find out that their beloved child has Krabbe Disease. A disease that robs that loved child of the ability to swallow, move, hear, see, and eventually to live. A disease that robs his parents of that child's hugs, smiles, laughs, and future.

No child should ever have to endure the pain and suffering that occur with Krabbe Disease. The technology is available to test at birth. Other states have already adopted this technology and are saving children's lives. Wisconsin needs to be another one of those states. We, ourselves, know of at least 5 families in Wisconsin who have lost children from this horrible disease. They could have been treated and their lives saved had they known it was lurking behind the scenes.

Jeremy likes to quote movies. One of his favorite quotes (while it makes me shudder) is from Batman The Dark Knight movie.

"Do you want to know how I got these scars?" He says it because he's quoting Joker and to be funny. His dad and I *know* how he got those scars. He got those scars from the central lines he had during the stem cell transplant. We are HAPPY he has those scars. Those scars saved his life.

But.... He only has those scars because we knew to test him for Krabbe Disease. And it shouldn't take the death of an older sibling to know to do that.

Please add Krabbe Disease to the Wisconsin Newborn Screening Panel.

It's the difference between life and death. And as Jeremy likes to quote from one of his favorite Star Wars characters. "Do it!"

Wisconsin Medical Society

TO: Assembly Committee on Health
Representative Joe Sanfelippo, Chair

FROM: Mark Grapentine, JD – Chief Policy and Advocacy Officer

DATE: July 29, 2021

RE: **Opposition** to 2021 Assembly Bill 181

On behalf of more than 10,000 physician members statewide, thank you for this opportunity to share our opinion on 2021 Assembly Bill 181, which would add testing for Krabbe disease to the list of other congenital and metabolic disorders currently included as part of mandatory newborn screening.

The Society believes that the current system in place for adding tests or disorders, as determined by an expert panel through the Department of Health Services Secretary's Advisory Committee on Newborn Screening, is a model structure in the country, and therefore we oppose the bill. The current process helps ensure newborn testing can provide accurate results that can be acted upon efficaciously. This Advisory Committee includes an impressive cross-section of medical experts and public member advocates:

Division of Public Health Representative
Wisconsin State Laboratory of Hygiene Representative
Wisconsin Hospital Association Representative
Advocacy Organization Representative (March of Dimes)
American Academy of Pediatrics Wisconsin Chapter Representative
American Congress of Obstetricians and Gynecologists Representative
Ethics Representative
Local Public Health Representative
Consumer Representative
Metabolic, Endocrine, and Hemoglobinopathy Subcommittee Chairs
Molecular Cystic Fibrosis Subcommittee Chair
ImmunoDeficiency Subcommittee Chair
Hearing Subcommittee Chair
Education Subcommittee Chair

Wisconsin also has a process where the public can nominate a condition to be included in mandatory screening.[1] This involves expert screening subcommittees providing comments to the overall advisory committee, using nine different criteria to ensure that any additions would be in the best interests of the baby, parents and screening process. The Society believes this committee works well for our citizens.

Thank you again for this opportunity to provide the Society's feedback on Assembly Bill 181. Please feel free to contact the Society with any questions on this or other health care issues.

[1] https://www.dhs.wisconsin.gov/newbornscreening/process-additions.htm

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PEDIATRIC BLOOD & MARROW TRANSPLANT PROGRAM
STEM CELL TRANSPLANT LABORATORY

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Testimony on 2021 Assembly Bill 181
To: The Assembly Committee on Health:
From: Joanne Kurtzberg, MD
Director Marcus Center for Cellular Cures
Director, Pediatric Transplant and Cell Therapy Program
Director, Carolinas Cord Blood Bank

July 20, 2021

To the members of the committee:

Hello everyone and thank you for allowing me to testify in strong support of adding Krabbe disease to the Wisconsin State NB screening panel.

My name is Dr. Joanne Kurtzberg, and I am the Director of the Marcus Center for Cellular Cures at Duke. I trained in pediatric hematology oncology and started the pediatric blood and marrow transplant program at the Duke University School of Medicine in 1990. In that center, my team and I have transplanted over 360 infants and children with leukodystrophies, including 60 patients with Krabbe Disease, over the last 27 years. In recent years, we have developed adjuvant cellular therapies in an attempt to improve outcomes of transplantation in these patients. Today my research and clinical teams continue to focus on developing and optimizing treatments for Krabbe disease.

In the first years of transplantation of babies with infantile Krabbe disease, we learned that transplantation of babies who already had clinical symptoms of disease was not effective. While transplant extended the lifespan of these babies, it did not improve their function and it did not enable them to regain any neurologic or developmental milestones after transplantation. Most importantly, we also learned and published in the New England Journal of Medicine (NEJM) in 2005, that transplant was most effective in prolonging life and improving neurologic function and quality of life if it was performed before clinical symptoms were evident. For babies with the most aggressive form of KD, the infantile form, the transplant had to be performed in the first 3-6 weeks of life to derive maximum benefit. Based on this work, hematopoietic stem cell transplantation for Krabbe Disease has become standard of care for newborns with this terrible disease. Additional outcomes, documented in recently diagnosed patients, confirm the results published in the NEJM in 2005.

While transplant is not a cure, it is a highly effective treatment that transforms the lives of these children and their families. I have personally witnessed the difference transplant can make.

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Untreated babies suffer extensively and so do their families. These babies are extremely irritable, do not sleep, and cannot be comforted. They might smile for a brief period of time, but never coo, sit, walk, talk or effectively interact with their environments. They require g-tube feedings, help with their secretions and develop severe spasticity, seizures and blindness in their first year of life. Most die by 2-3 years of age. In contrast, transplanted children smile, coo, talk, sit, stand, walk (albeit sometimes with assisted devices), experience and interact with the world around them, communicate, feel and express emotions, watch TV, use an ipad, go to school, enjoy their families, have friends etc. I care for several of these individuals who are 5-20 years post-transplant and are doing well.

As you have heard, the vast majority of families who conceive a baby with KD do not know that they are at risk. They learn, when their sick and symptomatic baby is finally diagnosed after months of going from doctor to doctor to find out what is wrong. At this point, it is too late to help their baby.

Newborn screening is the only way to identify these babies at a time when treatment can make a difference. While this is true for transplant today, it will also be true for gene therapy and other innovative therapies that are expected to be available within the next few years.

I know that there have been many criticisms of the pilot studies of NBS for KD in NY State. In my view, NY State deserves immense credit for taking the first steps and for informing the NBS process over the last decade. We have learned so much over the past 15 years. We now have second tier testing using psychosine which can definitively identify the rare babies with the most aggressive form of infantile Krabbe disease who need urgent referral for transplant. Psychosine can be performed and resulted in 1-2 days enabling confirmation of diagnosis and early referral for treatment. We also know that these babies have active disease with evidence on imaging and physiologic testing insuring that only babies with active disease are subjected to the risks of transplantation therapy. Finally, we can also identify the very small group of babies at risk for later onset KD. These babies can be referred for further testing, including genetic testing, in the first few months of life and can be followed clinically after their full risk profile is assessed.

Finally, a direct statement about WI. You have a wonderful pediatric transplant program in Milwaukee at the Medical College of Wisconsin, led by Dr. Julie-An Talano. One of my trainees and colleagues, Dr. Kristin Page, who has extensive experience transplanting babies with KD is also joining the Milwaukee program this year. If WI implements NBS for KD and if a baby is identified with the aggressive infantile form or who is at risk for developing later onset KD, you have the experts in your state to assess and deliver appropriate care, including transplant, of the highest quality to these babies

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Please add Krabbe Disease to the Wisconsin Newborn Screening panel and support Assembly Bill 181.

Thank you for your attention.
Sincerely,

Joanne Kurtzberg, MD
Jerome Harris Distinguished Professor of Pediatrics
Professor of Pathology
Director, Marcus Center for Cellular Cures
Director, Pediatric Blood and Marrow Transplant Program
Director, Carolinas Cord Blood Bank at Duke
Co-Director, Duke Hospital Stem Cell Transplant Laboratory

WISCONSIN HOSPITAL ASSOCIATION

ADVOCATE. ADVANCE. LEAD.

5510 Research Park Drive
P.O. Box 259038
Madison, WI 53725-9038
608.274.1820 | FAX 608.274.8554 | www.wha.org

July 29, 2021

To: **Members, Wisconsin Assembly Committee on Health**

From: **Ann Zenk, Senior Vice President Workforce & Clinical Practice**
WHA Representative to the Wisconsin Newborn Screening Program Umbrella Committee

Subject: **WHA Opposition to Assembly Bill 181 – Adding Krabbe to Newborn Screening Program**

A moving case can be made for many conditions that could be added to the Wisconsin Newborn Screening Program (NBS), like Krabbe disease, and WHA is sympathetic to those cases. WHA, however, believes it is because so many cases could be compelling that the NBS program must evaluate each proposed addition based on defined standards. If the condition meets the standards, the Wisconsin Department of Health Services (DHS) has the authority to promulgate administrative rules, subject to legislative review and oversight, to add the condition to the program's screening panel. Like other groups, including the Wisconsin Chapter of the American Academy of Pediatrics, WHA does not support adding or deleting conditions through legislation rather than this established, evidence-based process. Any new information related to Krabbe Disease can and should be presented to the committee in a renewed application.

The physicians, nurses, dieticians, genetic counselors, parents, and other experts who support the NBS program evaluated Krabbe disease in 2016 and in 2020, applying the program criteria, and recommended against adding Krabbe disease to the NBS panel. In testimony to the Senate Committee on Health on AB 181's Senate companion bill Dr. Norm Faust, Chair of the state's advisory committee on newborn screening, said the state's newborn screening advisory committee "concluded that screening for Krabbe Disease at this time would result in serious harm to some children, and uncertain benefits." This is the same conclusion reached at the federal level by the U.S. Department of Health and Human Services, which has not included Krabbe Disease in the screening panel it recommends to states.

While it may seem to legislators that the process only works when a condition is added, it's important for the committee to remember that the process works both when a condition is added and when it is not. As recently as March 2020, the newborn screening umbrella committee has recommended the addition of an inherited genetic condition called Pompe to the newborn screening panel and the DHS Secretary has subsequently moved forward on promulgating a rule to add the condition. DHS recently submitted its Proposed Rule to the Legislative Council Clearinghouse, which submitted its report back to DHS earlier this month. By approving the condition, the committee of medical experts and ethicists found sufficient evidence that testing is accurate and treatment modalities are effective and accessible to approve conducting broad-based testing for the condition. The process has not stalled out, it has worked when a test has met specific criteria.

WHA is a supporter of much of the good work of the NBS program. The Wisconsin Statutes, in general, require every infant born in Wisconsin to be screened for certain congenital disorders that are identified in administrative rule. According to the DHS website, infants are currently screened for 47 disorders. The screening typically is accomplished through blood obtained from the newborn while in the hospital and sent on a blood collection card by the hospital to the Wisconsin State Laboratory of Hygiene (WSLH). Wisconsin hospitals purchase the blood collection cards from WSLH for $109 per card. DHS and WSLH use revenue from the cards to pay for the program,

including lab costs, certain services for those identified with conditions such as subsidizing the cost of nutritional supplements, and other administrative costs. If one assumes about 64,000 births in Wisconsin each year, the card fees generate nearly $7 million in revenue annually for the program.

The fee for the blood collection card paid by hospitals is established in the NBS administrative rule chapter, DHS 115. DHS 115 also includes criteria for adding conditions to the NBS screening panel. On the NBS webpage, DHS lists its criteria for the evaluation of proposals to add conditions:

> Criterion 1: Mandated testing should be limited to conditions that cause serious health risks in childhood that are unlikely to be detected and prevented in the absence of newborn screening.
>
> Criterion 2: For each condition, there should be information about the incidence, morbidity and mortality, and the natural history of the disorder.
>
> Criterion 3: Conditions identified by newborn screening should be linked with interventions that have been shown in well-designed studies to be safe and effective in preventing serious health consequences.
>
> Criterion 4: The interventions should be reasonably available to affected newborns.
>
> Criterion 5: Appropriate follow-up should be available for newborns that have a false positive newborn screen.
>
> Criterion 6: The characteristics of mandated tests in the newborn population should be known, including specificity, sensitivity, and predictive value.
>
> Criterion 7: If a new sample collection system is needed to add a disorder, reliability and timeliness of sample collection must be demonstrated.
>
> Criterion 8: Before a test is added to the panel, the details of reporting, follow-up, and management must be completely delineated, including development of standard instructions, identification of consultants, and identification of appropriate referral centers throughout the state/region.
>
> Criterion 9: Recommendations and decisions should include consideration of the costs of the screening test, confirmatory testing, accompanying treatment, counseling, and the consequences of false positives. The mechanism of funding those costs should be identified. Expertise in economic factors should be available to those responsible for recommendations and decisions.

With hospitals already bearing the burden of funding non-hospital services, such as the nutrition support funded by newborn screening card fees, funding sources should be identified before unbudgeted costs are be added to the NBS program. WHA believes the NBS program is an important public health program that, as such, should be funded with public dollars, rather than fees on our state's hospitals, and subject to the oversight expected of public programs.

Wisconsin wisely formed the Newborn Screening Umbrella Committee to advise the Secretary of the Department of Health Services on the addition and deletion of conditions to the newborn screening panel. This committee utilizes a consistent and thoughtful process that balances the investment necessary with the required and desired positive family and societal goals of improved outcomes for newborns if conditions are detected and treated soon after birth. WHA opposes bypassing this important process, as is being done in Assembly Bill 181.

KrabbeConnect
CONNECTING PATIENTS & RESEARCH

July 28th, 2021

Re: Assembly Bill 181/Collin Cushman's Law

To Whom It May Concern:

It is with greatest pleasure to write this letter encouraging Bill 181, mandating newborn screening for Krabbe disease, and requiring evaluation of additional lysosomal storage disorders in the state of Wisconsin, to be passed. At this time, 10 states have implemented newborn screening for this deadly neurological disease, a disease that is most prevalent in patients under the age of one. This disease imposes havoc on an infant's brain causing many debilitating symptoms. Some of these symptoms are difficult to clinically manage and bring the child and parents immense stress in finding comforting solutions until death. Some of these symptoms include severe muscle rigidity, inability to regulate body temperature, seizures, neurogenic bladder, and an irregular heartbeat.

Yet, today, patients with this disease can have a chance at a much better life through early identification. If this disease is identified through newborn screening, patients can undergo a stem cell transplant. This transplant is not a cure however, it offers tremendous quality of life to the patient diagnosed with Krabbe disease. Patients who undergo a stem cell transplant can often eat on their own, communicate, are cognitively age appropriate, go to school, participate in adaptive sports, and so much more!

In addition to the stem cell transplant, 3 pharmaceutical companies have dedicated efforts to bring new therapies to the bedside of patients. One of these pharmaceutical companies is currently accepting patients utilizes a combination therapy of stem cell transplant and gene therapy. There's a caveat. The stem cell transplant and clinical trials are only available to patients identified through newborn screening. Can you imagine if your child was not a candidate for a stem cell transplant or a clinical trial because your child was born in a state that did not screen for Krabbe disease?

The cost to implement add this test to the newborn screening panel is minimal and often can be coupled with testing for other types of lysosomal storage disorders. So, let's give patients a chance at life and mandate screening for Krabbe disease. In the end, it could be your son, daughter, granddaughter, niece, nephew, or some other relations you gave a lifeline too!

Sincerely,

Stacy L. Pike-Langenfeld
President, KrabbeConnect

Hunter's Hope Foundation

Krabbe ~ Leukodystrophies ~ Newborn Screening

July 28, 2021

Assembly Committee on Health Chair Joe Sanfelippo
Room 314 North
State Capitol
PO Box 8953
Madison, WI 53708

RE: AB 181

Dear Chairman Sanfelippo and Distinguished Committee Members:

On behalf of the Hunter's Hope Foundation, I am writing to request your full support of Collin Cushman's Law to add Krabbe Disease to the Wisconsin Newborn Screening panel.

Hunter's Hope was established in 1998 by NFL Hall of Fame Quarterback Jim Kelly and his wife Jill when their son Hunter (2/14/97-8/5/05) was diagnosed with Krabbe Leukodystrophy. If left untreated, Krabbe is a devastating and fatal disease. The only available treatment must be administered prior to the onset of symptoms, making newborn screening (NBS) for Krabbe *crucial* to giving affected children a fair chance at life.

For nearly twenty years Hunter's Hope has partnered with the world's leading disease and NBS experts to make newborn screening for Krabbe a successful and viable option for every state. The experts agree that Krabbe NBS is ready for widespread implementation and have submitted our nomination for Krabbe to be added to the Recommended Uniform Screening Panel or RUSP. However, each state still must determine what diseases to screen for and it can take years to fully implement new disorders. Tragically, any delay in implementing Krabbe NBS in WI can lead to additional children in this state needlessly suffering and dying from a treatable disease.

The Hunter's Hope Foundation has had the privilege to work alongside the Cushman family over the past several years as they have tirelessly advocated for Krabbe newborn screening to be added in Wisconsin. The Cushmans have followed the tedious path laid out by the state's health department to no avail.

We urge the members of this committee to make a stand for future WI children to have the opportunity for lifesaving treatment by mandating the addition of Krabbe Disease to the state's newborn screening panel.

Hunter's Hope Foundation

Krabbe ~ Leukodystrophies ~ Newborn Screening

Hunter's Hope has a system in place to support states with Krabbe NBS through our Annual Scientific and Medical Symposium, and our Krabbe NBS Council which has monthly webinars. These efforts gather all stakeholders and experts to ensure the best possible outcomes for children identified through Krabbe NBS.

If New York, Missouri, Kentucky, Ohio, Tennessee, Illinois, New Jersey, Indiana, and Pennsylvania can successfully screen for Krabbe at birth, so can Wisconsin.

Please support this effort and save future children like Collin…

With hope,
Anna Grantham

Anna Grantham
NBS Director
Hunter's Hope Foundation

Testimony on 2021 Assembly Bill 181
To: The Assembly Committee on Health
From: Kristin Page, MD, MHS, MEd

July 27, 2021

To the members of the committee,

I would like to thank the committee for the invitation to testify regarding Assembly Bill 181 which seeks to add Krabbe Disease to the Wisconsin State Newborn Screening (NBS) panel.

My name is Dr. Kristin Page. I am a pediatric hematologist oncologist with expertise in hematopoietic stem cell transplant (commonly called "bone marrow transplant") and I have recently moved to Wisconsin. Most recently, I was an Assistant Professor of Pediatrics at Duke University in the School of Medicine (2008-2021) located in Durham, NC. The Pediatric Transplant Program at Duke is recognized internationally for its expertise in transplanting children with rare diseases, and to the best of my knowledge, has performed the most transplants for Krabbe Disease in the world. During my tenure at Duke, I developed expertise in caring for children with Krabbe Disease and I have published extensively in this area. In January 2021, I accepted a faculty position as an Associate Professor of Pediatrics and Medicine at the Medical College of Wisconsin. In my new role, my clinical time is spent at Children's Wisconsin as an attending physician in the Division of Pediatric Hematology, Oncology and Transplant.

Please note that my current employer is aware that I am providing this testimony, but I am not speaking on behalf of Children's Wisconsin or the Medical College of Wisconsin. I am providing my expertise as a Wisconsin physician and resident.

Krabbe Disease is an inherited neurologic disease with several subtypes based on age of symptom onset. The most common and severe form occurs in infancy, and without treatment, is devastating. Infants appear healthy, but within the first few months of life, become very irritable, have trouble sleeping, and cannot be easily consoled. Over weeks to months, they develop severe spasticity, seizures and blindness that is irreversible. They lose developmental milestones, require feeding tubes and cannot interact with their environment. Most die before their third birthday. It often takes weeks to months to diagnose, and prior to that point, most families have never heard of the disease. I have had countless heartbreaking conversations with the families of newly diagnosed, symptomatic infants from all over the world. Sadly, transplant can prolong life of symptomatic infants but does not improve neurologic function or prevent further progression.

The role of transplant. Transplant can only be helpful if performed in the first 3-6 weeks of life, before infants develop clinical symptoms. This was shown by Escolar *et al* in a group of infants diagnosed with Krabbe at birth due to a family history and transplanted prior to symptoms[1]. All survived transplant, but two have since died (1 unrelated, 1 disease-related). Now teenagers (all treated at Duke), the rest attend school at (or nearly at) their age-appropriate grade level, have varying degrees of motor disabilities ranging from ankle braces to needing wheelchairs, and generally have a good quality of life[2-4].

The role of NBS. To help identify infants while transplant is still an option, New York State added Krabbe Disease to their NBS panel over 15 years ago. The lessons learned from their experiences have greatly informed the NBS process in NY and elsewhere. Currently, eight states have joined New York in testing newborns for Krabbe Disease (MO, KY, OH, TN, NJ, IL, PA, and IN) and others will be implementing soon (GA, SC, LA).

Criticisms of NBS for Krabbe Disease. Concerns have been raised and these have been echoed by the Wisconsin Department of Health Services (DHS) in response to prior nominations.

1. "This problem is compounded by difficulty in distinguishing true positive cases from false positives with subsequent molecular or enzymatic testing." (Linda Seemeyer, Secretary, State of Wisconsin, DHS, August 30, 2016)

It is true that enzyme testing has issues with false positives. To initially address this, infants born in NY who screened positive (i.e., low enzyme level) were then tested for mutations known to cause severe Krabbe Disease. This approach correctly screened the 5 infants with true infantile Krabbe Disease. Extensive testing (gene analysis, physiologic testing and MRI) is used to definitively diagnose infantile forms prior to transplant. However, this approach also identified a group of infants with low enzyme but unknown or no mutation, and these children required close monitoring early on. Some have since been diagnosed with later onset forms and others remain healthy children. While these healthy children qualify as false positives, measures were in place to ensure only infants with confirmed infantile form were transplanted and no diagnosis of infantile Krabbe Disease were missed. The knowledge gained from these children has informed recently published guidelines that (1) better refined criteria for following these children and (2) decreased the testing required over time[5]. The likelihood of false positive screening has decreased dramatically since psychosine has been adopted for second-tier testing. Psychosine can differentiate infants with infantile (very high levels) or later onset forms of Krabbe Disease (elevated levels) from otherwise healthy children using the same NBS blood spot.

While the addition of psychosine will dramatically decrease the risk of a false positive test, families of the healthy children still experienced unneeded stress and worry. A recent study explored this and concluded that "parents saw value in Krabbe NBS, despite many disclosing emotional distress and uncertainty throughout the NBS process"[6]. The study also identified that some of the undue stress could have been mitigated by improving communication and education of medical providers not familiar with Krabbe Disease when interacting with the families through the process.

2. "Furthermore since the evidence review there has been no further published studies demonstrating that HCST provides an improvement in quantity or quality of life over supportive care." (Quoted by Linda Seemeyer, Secretary, State of Wisconsin, from the DHS response, August 30, 2016)

Eight additional states test for Krabbe Disease, and collectively, an additional six infants have been diagnosed with the infantile form. The transplant centers treating these children are collaborating on an observational study and all of the families have consented to participate. The manuscript describing the outcomes of these children is completed and will hopefully be accepted for publication soon. As the primary author, I can share that the children, ranging in age from 2 to-5-years-old, are all alive. They are all growing and developing although slower than their peers. Their motor skills are the most delayed: several use wheelchairs and most need ankle braces. Like other children, they all use iPads better than many adults, enjoy playing and being around other children, and love their families. I recently saw photos of two children, each coincidentally driving around in their motorized toy cars. I have no doubt that these children all have gained improved quantity and quality of life. Conversely, without transplant, it is likely that only 1 of these children would still be alive, unable to interact and with poor quality of life.

There are a few points that I would like to emphasize. Transplantation is not a cure, and it is not without risk. An estimated 10-15% of children will die in the first year after transplant due to complications. Other treatment options, such as gene therapy, are actively being developed, but are not ready now. These treatment options will not change the need for NBS since the pace of the disease will require any

treatment to be done very early in life. Finally, screening for Krabbe Disease does require considerable upfront planning and coordination. The children in the study I described were from four different states and treated at four different transplant centers, thereby demonstrating that this is feasible. If Wisconsin decides to add Krabbe Disease to the NBS panel, it would be important to collaborate with and learn from other state programs. I would be happy to participate in that process and lend my expertise to caring for these children.

Thank you for your attention,

Sincerely,

Kristin Page MD

Kristin Page, MD, MHS, MEd

References:

[1]Escolar, et al. New England Journal of Medicine, 2005; [2]Allewelt, et al, Biology of Blood and Marrow Transplantation, 2016; [3]Wright, et al, Neurology, 2017; [4]Langan, et al. JIMD Reports, 2019; [5]Thompson-Stone, et al, Molecular Genetics and Metabolism, 2021; [6]Peterson, et al. Journal of Genetic Counseling, 2021

2021 Senate Bill 194
Newborn Screening for Krabbe Disease
Testimony of Norman Fost MD MPH

Submitted in writing to Senate Committee on Health Clerk, Heather Smith, Heather.Smith@legis.wisconsin.gov

Copy to Sen. Patrick Testin, Sen.Testin@legis.wo.gov
Copy to Sen. Kelda Roys, Sen.Roys@legis.wisconsin.gov

Summary

I am Professor Emeritus of Pediatrics and Medical History and Bioethics at the University of Wisconsin School of Medicine and Public Health, and Chair of the Wisconsin DHS Secretary's Advisory Committee on Newborn Screening. I have served on numerous federal committees related to newborn screening since 1975 and authored numerous articles on ethical, legal policy issues in newborn screening.

Newborn screening has saved innumerable lives and prevented serious disability in millions of children world wide. It is one of the great advances in public health in the past 100 years.

Premature introduction of newborn screening, without adequate review by experts in science, ethics, and law has killed or caused severe brain damage in thousands of infants in Wisconsin and throughout the United States. Examples are provided in the attached article, xxxxx

Because of these problems, I was asked by the Walker Administration to re-organize Wisconsin's process for adding tests or disorders to the newborn screening program. I did so, and Wisconsin now has a model process for review of proposals to add tests to the screening program, including leading experts in relevant disciplines, representatives from hospitals and the physician community, and parents of children with disabilities.

Screening for Krabbe Disease has been extensively reviewed by our Committee twice in the last five years, most recently in November 2020 (see attached report to Secretary Designee Andrew Palm). We concluded that screening for Krabbe Disease at this time would result in serious harm to some children, and uncertain benefits. We look forward to reviewing continuing advances in this field, and re-visiting the proposal as new information becomes available.

In addition, I am very concerned that adding Krabbe screening through the legislative process will cause permanent damage to Wisconsin's outstanding review process, as concerned parents will correctly foresee that they can find the response they want through the legislature. I am certain this will result in substantial harm to many children, with uncertain benefits.

To: Wisconsin Assembly Committee on Health
From: Jeffrey W. Britton, MD, FAAP
Pediatrician, Sheboygan, Wisconsin

Re: Written testimony regarding AB181

July 19, 2021

Thank you for the opportunity to submit written testimony against Assembly Bill 181, which would require all newborns in Wisconsin to be tested for Krabbe disease.

I currently serve on the DHS Secretary's Advisory Committee for Newborn Screening. This committee was created several years ago, under the Walker administration, for the purpose of carefully reviewing additions and deletions to the newborn screening panel. There was concern, at the time of the committee's creation, that a newborn screening test could be added without fully vetting all the issues related to screening for a particular disease.

Our committee reviewed a request for Krabbe disease screening in 2020. We did not proceed with a recommendation to start screening because some very import details still need to be worked out. The treatment for Krabbe disease detected by newborn screening is a bone marrow transplant in the first 1-2 weeks of life. Currently this treatment is not available in Wisconsin; in fact, it was (at the time of our meeting) only available at Duke University and Children's Hospital of Philadelphia. So, any baby detected by Krabbe screening would need to be immediately transferred to one of these centers. To date no process for making this immediate transfer has been built in our state. We would need agreements with medical transport aircraft, as well as assurance from insurance companies including Medicaid that such transfer and subsequent out-of-state care would be covered. Alternatively, a program for Krabbe treatment would need to be built at a Children's Hospital in Wisconsin. Because this process was not in place, we could not in good conscience advise the addition of this test to the panel.

As a general pediatrician I have, on many occasions throughout my career, been on the receiving end of a phone call from the State Lab of Hygiene telling me that a baby I care for has an abnormal test on newborn screen. When that happens it is essential that all the details about "what to do next" have been fully worked out, so that I can proceed as quickly as possible to get the baby the help needed. Legislation such as AB181 carries the risk of causing unexpected consequences, such as detection of a baby with a disorder without having the "what to do next" process worked out.

For these reasons I urge you to vote against this legislation, and to support the ongoing work of the Secretary's Advisory Committee as it carefully reviews all proposed addition and deletion requests for the Newborn Screening Panel.

I am happy to answer any questions you may have by phone (920-459-1454) or email (jeffrey.w.britton@aah.org).

WIAAP Policy Statement

Addition and Deletion of Tests from the Wisconsin Newborn Screening Program

Author: Jeffrey Britton, MD, FAAP

Reviewed date: 3/12/2021
Revised date(s): 2/27/2015; 3/12/2021

Contact: Kia Kjensrud. Executive Director KKjensrud@wiaap.org

Background:

Over 65,000 babies undergo newborn blood spot screening in Wisconsin each year. Around 1 in 500 of these children have a serious condition identified by the newborn screening (NBS) program that leads to beneficial early intervention. Advances in testing have made it possible to identify many additional disorders beyond those currently screened for in Wisconsin. Evolving technology will make it possible to test for thousands of disorders from blood spots, creating unprecedented challenges in deciding when, whether, and how to incorporate this information into the NBS program. Many disorders have a constituency, including: families; professional and consumer organizations; health care providers; corporations that make testing equipment and reagents; drug, formula, and food companies; researchers; and others who vigorously advocate for the early identification of their disorder. Some of these groups turn to legislators to get a condition added to a state NBS panel.

There is concern that without a well-designed framework for considering the addition and deletion of disorders, tests may be added without regard to the complex medical, ethical, legal, economic, and social issues balancing (1) benefit to the children with conditions detected by screening, (2) risks of false positives in children without these conditions, (3) cost, and (4) availability of treatment and follow-up.

In late 2012 the Wisconsin Secretary of Health Services formed a task force charged with proposing a framework for making decisions regarding the addition and deletion of tests from the state NBS panel that would allow for scientific weighing of evidence and removal of bias. This task force made reported its recommendations to the Secretary in June 2013, and these recommendations have now become policy. The Task Force made the following recommendations:

1. The Task Force recommends the formation of a new committee to advise the Secretary on additions and deletions.

    a. This body should make final recommendations to the Secretary of the Department of Health Services, who has decision-making authority.

    b. This body should be constituted of individuals whose areas of expertise and experience include medicine and science; statistics and epidemiology; ethical, legal, social, and policy analysis; laboratory medicine; and should include representation from practicing physicians, the NBS program, and individuals with target conditions or their parents.

   c. This advisory committee would hear testimony from the Umbrella Committee, subcommittees, and other individuals with relevant information or who can speak for important constituencies.

2. Mandated testing should be limited to conditions that cause serious health risks in childhood that are unlikely to be detected and prevented in the absence of newborn screening.

3. For each condition, there should be information about the incidence, morbidity and mortality, and the natural history of the disorder.

4. Conditions identified by newborn screening should be linked with interventions that have been shown in well-designed studies to be safe and effective in preventing serious health consequences.

5. The interventions should be reasonably available to affected newborns.

6. Appropriate follow-up should be available for newborns that have a false positive screen.

7. The characteristics of mandated tests in the newborn population should be known, including specificity, sensitivity, and predictive value.

8. Disorders on the testing panel should be reviewed at appropriate specified intervals. A new test might require review more frequently than a long-established test.

9. If a new sample collection system is needed to add a disorder, reliability and timeliness of sample collection must be demonstrated.

10. Before a test is added to the panel, the details of reporting, follow-up, and management must be completely delineated, including development of standard instructions, identification of consultants, and identification of appropriate referral centers throughout the state/region.

11. Adding point-of-care testing to the congenital disorders statute would allow point- of-care newborn screening to be reviewed under the criteria set forth by the administrative rule and not require legislation for each disorder. (The law allowing this was passed and signed in March 2014).

12. Recommendations and decisions should include consideration of the costs of the screening test, confirmatory testing, accompanying treatment, counseling, and the consequences of false positives. The mechanism of funding those costs should be identified. Expertise in economic factors should be available to those responsible for recommendations and decisions.

13. Reporting of test results should be subjected to the same criteria, regardless of whether it is a requested or targeted test, or an unintended or unavoidable byproduct of the testing technology.

14. Research to advance knowledge about the incidence or natural history of poorly understood disorders, or for the purpose of identifying potential subjects for clinical trials, should be conducted in compliance with existing ethical and legal guidelines, including review by an institutional review board (IRB).

15. The Task Force believes that all children should be screened. However, parents should maintain the opportunity to opt out of newborn screening, after receiving appropriate information about the testing program on the basis of personal conviction (and not just for religious reasons). Information should be presented in the prenatal period, to allow time for questions and counseling with medical advisors.

16. There should be high standards for consent of tests which are of unproven value, or tests linked to treatments of unproven value. Such tests and treatments should be instituted on a research basis, with review by an IRB, and in general, with traditional opt-in consent. Some studies might qualify for exempt status, not requiring IORB oversight, or meet criteria for waiver of informed consent.

Following the adoption of the Task Force recommendations in 2013, the Secretary of Health Services appointed an Advisory Committee for the purposes of advising the Secretary on the addition and deletion of tests to the newborn screening panel, using the above recommendations. This committee later reviewed pulse oximetry screening for cyanotic congenital heart disease, subsequently recommending that this testing be added to the panel.

Position:

The Wisconsin Chapter of the American Academy of Pediatrics (WIAAP) endorses the recommendations of the Newborn Screening Task Force as outlined in this document above.

Because the Secretary's Advisory Committee has now been created, with demonstrated success already with CCHD screening, all addition and deletion matters should be run through this committee for final recommendation to the Secretary of Health Services.

WIAAP opposes the addition and deletion of tests to the NBS panel through direct legislative action.

Wisconsin Chapter

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

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July 27, 2021

Testimony via email to Assembly Committee on Health Clerk, Joshua Hoisington

Rep. Sanfelippo, Chair
Rep. Summerfield, Vice-Chair

Rep. Andersen
Rep. Cabral-Guevara
Rep. Dittrich
Rep. Magnafici
Rep. Moses
Rep. Murphy
Rep. Riemer
Rep. S. Rodriguez
Rep. Rozar
Rep. Skowronski
Rep. Subeck
Rep. VanderMeer
Rep. Vining
Rep. Wichgers

Honorable Chairs Sanfelippo and Vice-Chair Summerfield, and members of the Assembly Committee on Health:

On behalf of the Wisconsin Chapter of the American Academy of Pediatrics (WIAAP), representing nearly 1,000 pediatricians, primary care providers, residents and medical students, we write to express our opposition to AB 181, relating to newborn screening for Krabbe disease and requiring evaluation of additional lysosomal storage disorders for mandatory screening.

Wisconsin has led public health advances in newborn screening, which can prevent disabilities and save lives. Unfortunately, there can be devastating consequences when the introduction of newborn screening does not come from a thorough review by experts in science, ethics, and law. Lack of careful and rigorous oversight in the process has been responsible for the harm and even deaths of infants in our state and beyond. It has also led to widespread confusion among parents due to false positive tests.

WIAAP's attached policy statement, "**Addition and Deletion of Tests from the Wisconsin Newborn Screening Program,**" provides details on the background of the issue of the decision-making process in place at the Wisconsin Department of Health Services' (DHS) Advisory Committee for Newborn Screening, created during the administration of Governor Scott Walker, which provides a careful cross-sector, thorough and informed process through which any change to the existing screening panel may be made, with the approval of the DHS Secretary. Outlined in the statement are the considerations and framework of the consideration and processes around administration of the screening panel.

The Secretary's Advisory Committee on Newborn Screening currently counts among its expert members, three of whom are members of our chapter:

- Pediatric ethics and bioethics experts from UW-Madison and the Medical College of Wisconsin
- A pediatric neonatologist
- A parent representative and director of the National PKU Alliance
- A health informaticist
- A geneticist
- A genetic counselor

The last time a request for the addition of Krabbe disease screening was reviewed, in 2020, it was not recommended because there are critical details and logistics that remain unclear. To respond to a positive screen for Krabbe means there must be a bone marrow transplant in the first 1-2 weeks of life, and these procedures are not available in Wisconsin, which would mean the need for an immediate transfer of the child to one of the two centers (in either Pennsylvania or North Carolina) currently available nationally. There is no assurance for medical transport aircraft, or private or Medicaid payment for these services. Ultimately, there must be considerations on the impact of screening, both positive and negative.

All decisions about additions and deletions to Wisconsin's newborn screening panel belong in the hands of the DHS Advisory Committee, which is specifically structured to consider the many diverse issues and challenges to the process. Mandating screening based on legislative action circumvents that successful process, ensuring every recommendation goes through the same rigorous process by experts in numerous fields.

Thank you for your dedication to the health of all of Wisconsin's children.

Sincerely,

AMERICAN ACADEMY OF PEDIATRICS
Wisconsin Chapter

Sarah Campbell, MD, FAAP
President