Child Neurology FOUNDATION

2023 CHILD NEUROLOGY SOCIETY 52nd ANNUAL MEETING

Clinical Trials in Pediatric Neurology

Dilemmas after the Trial

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Agenda

8:00 am	**Welcome**
	The Family's Perspective
	The PI’s Perspective
	Break
	After FDA Approval
11:00 am	**Adjourn**

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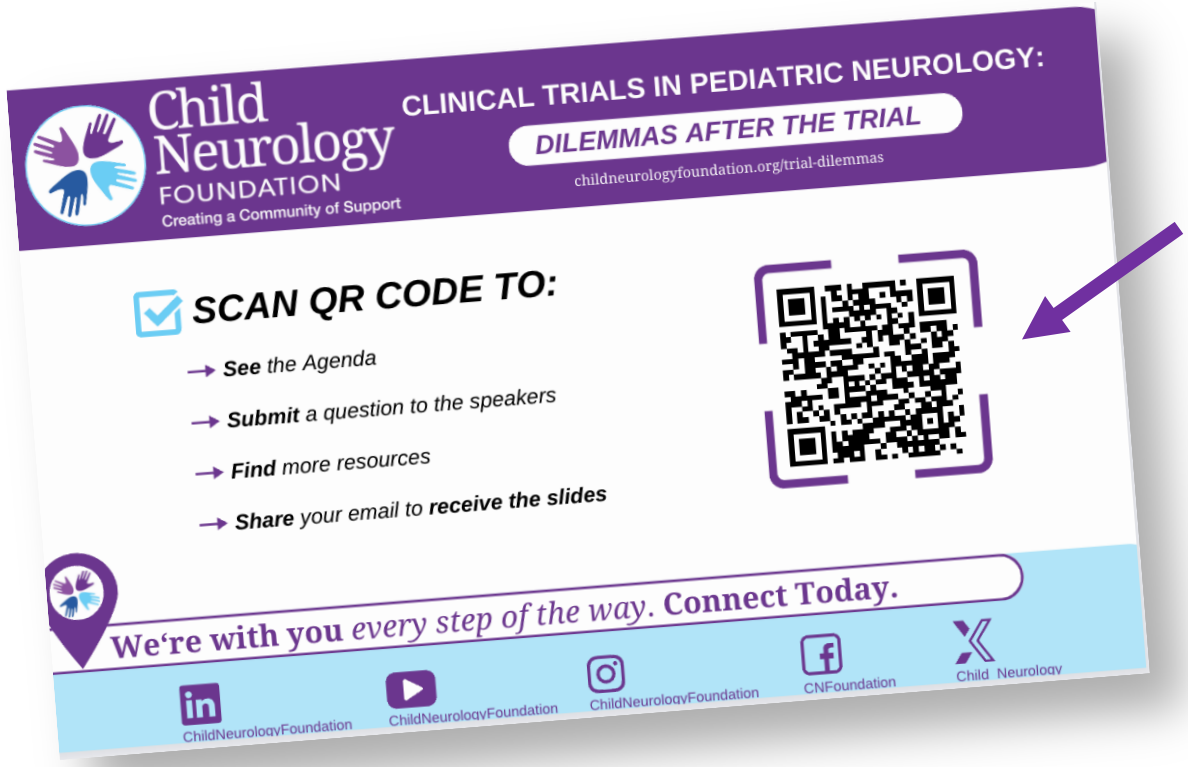

Scan the QR Code

- Submit questions or comments
- Check out the agenda & speakers
- Access resources and slides

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Welcome

Amy Brin, MSN, MA, PCNS-BC
Executive Director & CEO, Child Neurology Foundation

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Disclosures

Amy Brin, MSN, MA, PCNS-BC

- No disclosures

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Acknowledgements

Industry Partners

- Jazz Pharmaceuticals
- Neurocrine
- PTC Therapeutics

Advocacy Partners

- Epilepsy Foundation
- International Foundation for CDKLF Research
- Dravet Syndrome Foundation
- Phelan-McDermid Syndrome Foundation
- Epilepsy Alliance of America
- Pediatric Epilepsy Research Foundation

Navigating life with a neurologic disorder can be an **uncertain and isolating** journey.

The Child Neurology Foundation is here to ensure that **no one has to go it alone.**

Our Community

14 million
children live with a neurologic condition (USA)

Thousands of rare and ultra-rare diagnoses
with neurologic components

<3,000
pediatric neurologists

*Source: Federal Interagency Forum on Child and Family Statistics, 2023

Shared Challenges

FAMILIES

Overwhelmed and isolated

Nearly 1/2 of caregivers are very or extremely stressed and report being in crisis daily.

9 in 10 caregivers go to work late, leave early, or take time off during the day to provide care.

Many families are coordinating care across 3-10 medical professionals.

50% of caregivers need 'some or significant' help with finances, treatments, and access to a neurologist.

PROVIDERS

Overworked and siloed

>1/2 of neurologists (56%) feel burned out at least once a week; 10% feel burned out every day

98% of neurologists say they do not get enough time with patients during appointments

7 in 10 neurologists report needing ***more*** continuing medical education (CME) than they're currently getting

Top 2 barriers preventing neurologists from providing the highest quality of care are:

1) Insurance/Reimbursement concerns
2) Lack of auxiliary support

Family and Individual Needs for Disability Supports (FINDS) Survey – Community Report 2017
CNF Annual Needs Assessment Survey (2021)

Armed with Compassion

Driven by data,
CNF acts from a
place of understanding.

Annual Needs Assessment Survey
of caregivers and neurologists

Stronger Together

We work with:

- **200+ patient organizations** and professional societies
- **Thousands of families** and **providers**

AES American Epilepsy Society

At the Forefront UChicago Medicine | Margaret Hackett Family Program

Child Neurology Society

Genentech — A Member of the Roche Group

Jazz Pharmaceuticals

NORD 40 Years — Rare. Strong. Together.

Boston Children's Hospital Neurology

Ann & Robert H. Lurie Children's Hospital of Chicago

Community Congress — Powered by the Everylife Foundation — Member

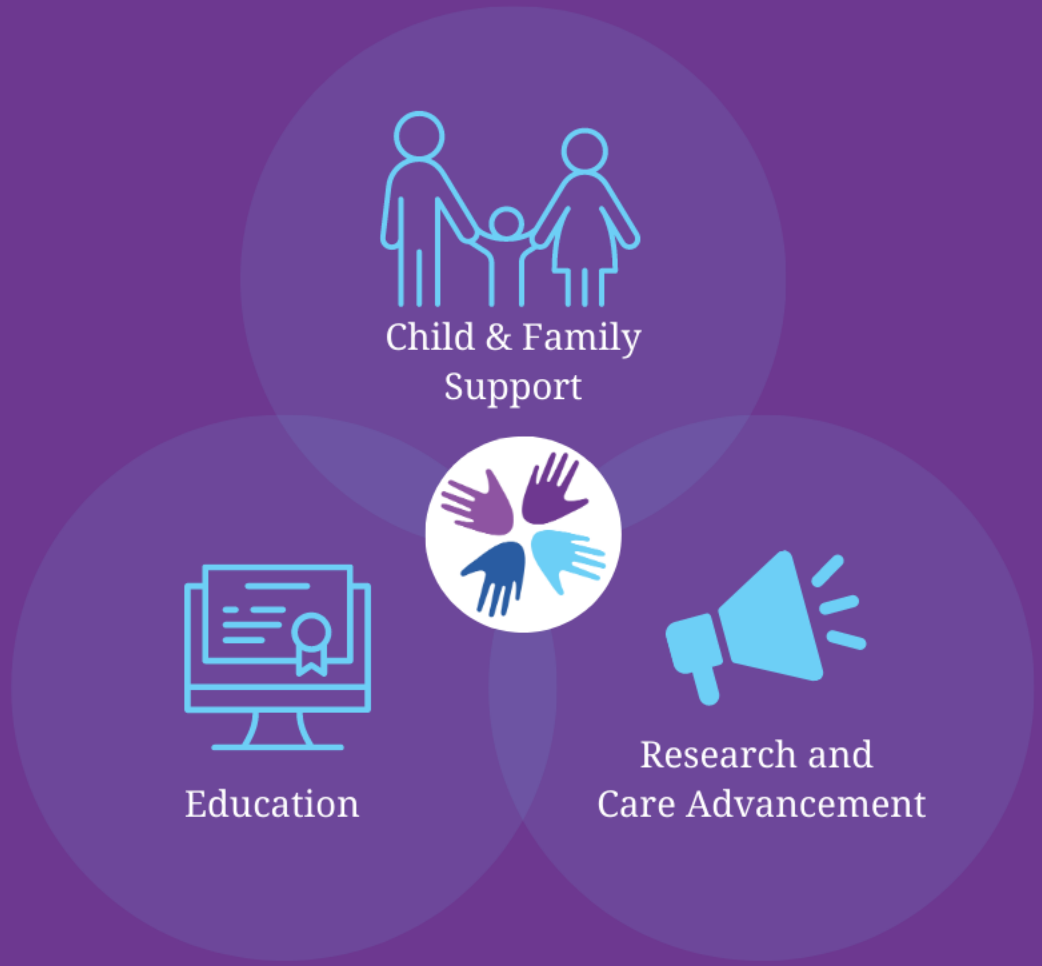
Global Genes — Allies in Rare Disease

National Coordinating Center for Epilepsy

Truist

* This is a small, representative sample of our extensive network of industry, individual, and nonprofit partners

Programs



CHILD & FAMILY SUPPORT

Focused on **improving the patient care experience** through direct engagement, social services, and partnership with care professionals

EDUCATION

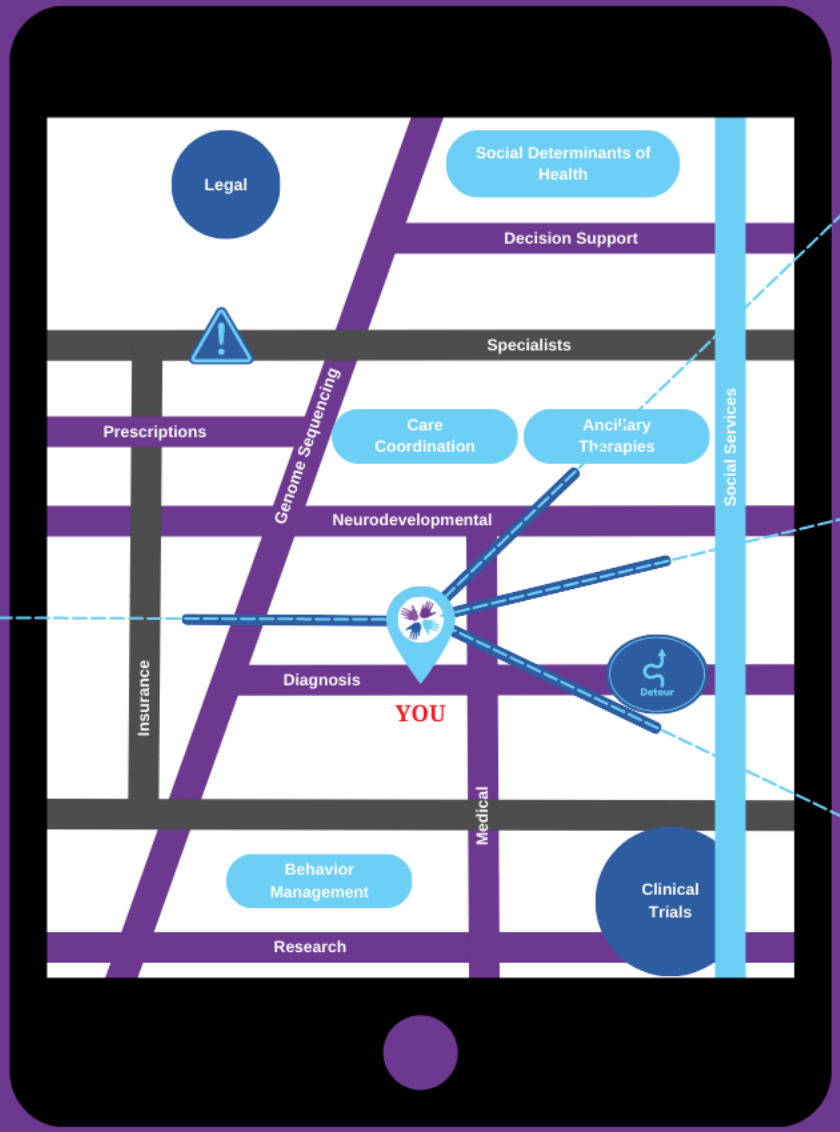
Focused on **creating clarity for families and providers** through the collection and dissemination of trustworthy information about managing diagnosis, care, and life with a neurologic condition

RESEARCH & CARE ADVANCEMENT

Focused on **supporting providers and institutions** who care for children with neurologic conditions by building bridges across the neurologic care community

Navigation

Like a GPS system, CNF meets community members where they are and helps them get to where they want to go.



No matter where you are.

CNF will recognize your position.

And empower you for where YOU need to go!

Each of us can make a difference.

Together we make change.

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2022

Supporting families before and during the clinical trial

- The importance of trials to patients
- Strategies to overcome barriers to accessing clinical trials for patients
- Ethical considerations in clinical trials and possible patient participation

Today

Supporting families after the clinical trial ends

- Patient barriers at the end of a trial
- Best practices to engage and support patients
- How to discuss the impacts of trials and the FDA approval process

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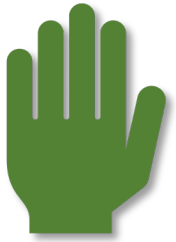
Who's In the Room?



Clinicians

Newer Clinicians

Family

Academics

Investigators

Industry

Advocates

Government

Something else…

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Paired Discussion

What are one or two key issues or questions you'd like to know more about?

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Pediatric Clinical Trials

Perspectives from the HIE Community

Betsy Pilon

Parent and Executive Director

Hope for HIE

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Disclosures

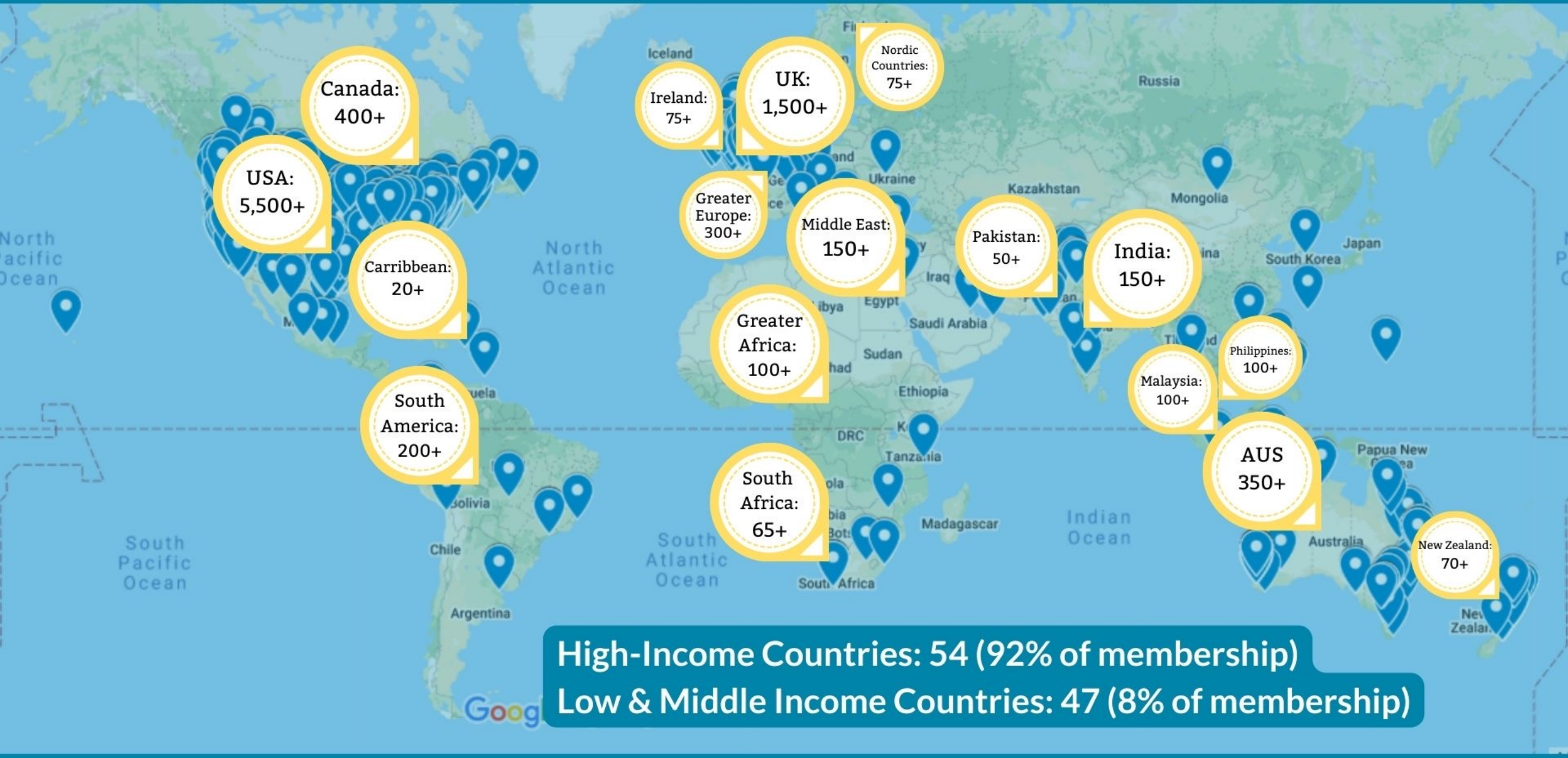
Betsy Pilon

- No disclosures

HOPE for HIE

awareness • education • support

Connecting, supporting and advocating for families, worldwide, since 2010 - over 8,500+ from 100+ countries today!



High-Income Countries: 54 (92% of membership)

Low & Middle Income Countries: 47 (8% of membership)

NEONATAL HIE NICU JOURNEY

BIRTH

A baby is born - they may have experienced HIE before or during the birth process. Assessments of APGAR scores, cord blood gases, and a baby's situation are done to confirm suspected HIE and to see if a child qualifies for therapeutic hypothermia.

COOLING PROCESS

If a baby meets the criteria to be cooled, they will be placed either on a cooling blanket, wrap, or head cooling cap for 72 hours at around 91ºF. This is to slow the body down and focus the body's healing on the brain. If you are unable to hold your baby during cooling, talk to your team about other ways to make memories, bond and care for your baby during this part of the journey.

FIRST HOLDS

While some hospitals have made it possible to hold your baby during cooling, if they are cooled, many babies are not stable enough. The first hold is a keystone moment for families, and may happen right after cooling, or the following few days or week, depending on the medical stability and touch tolerance of each baby.

NICU DISCHARGE

At last, it is time to discharge from the NICU. Each NICU has its own criteria, and discharge procedures. Babies typically have to be able to get safe and consistent nutrition whether by breast, bottle or tube, and meet other medical milestones. Most families are required to take infant CPR classes, and families should be connected to follow up primary and specialist care appointments, early intervention services, social/emotional support for the family to process this time, and learn about the signs of seizures or other difficulties HIE babies are at risk for.

NICU ARRIVAL

Whether it is within the birth hospital, or through ambulance or helicopter, the baby is transported to the NICU for further assessment and, if appropriate, to begin the therapeutic hypothermic cooling process. Many babies need multiple interventions such as breathing and blood pressure support, an IV in the belly button to administer medications, and will receive neurological diagnostic testing such as EEG, as neonatal seizures are very common in HIE. Medications may be used to control seizures, and keep babies stable and comfortable during cooling. Many hospitals have access to mental health resources in the NICU for families, so be sure the social

MRI DAY

After a child is rewarmed, or if they did not go through cooling, a MRI is typically done around day 5, although it may be done earlier or later, depending on the circumstances. MRIs can show the NICU team where the brain may have experienced injury or damage. MRIs do have limitations, and it is our recommendation that they are not taken as a "set in stone" use of prognosis. As they are a picture in time, and due to how babies brains develop, they may not show all impact. HIE has a wide range of outcomes.

NICU DURATION

Depending on the baby and their clinical course, they will be working hard to recover from the initial trauma of HIE. Families should be encouraged to attend daily rounds with the team. Some babies may be able to feed at the breast or using a bottle, and some may need a feeding tube placed through the nose to the stomach. If a baby's suck/swallow/gag reflexes are absent or weak, a g-tube can be surgically placed in the abdomen, and allow the baby to safely transition home. Many babies will need supplemental oxygen for a period of time, and work on decreasing their need over time.

POST-NICU SUPPORT

Connecting with peer-to-peer support, ideally in the NICU, or after the baby goes home can improve mental health and the parenting experience. Connecting with other families who have gone through the unique HIE NICU experience can empower parents to further understand, process, and accept the situation they have been through. In-person NICU support groups through hospitals are also very helpful. And, through early intervention, many parent groups can be helpful to understand risk factors and other nuances to this journey.

LONG TERM IMPACTS OF HIE

- ***HIE is a catalyst diagnosis***, causing a variety of subsequent diagnoses across a range of severity - from mildly affected through loss of life.

CEREBRAL PALSY

Cerebral Palsy is the most common motor disability in children. Although HIE only accounts for 10-15% of all cases.

CP can affect any muscle in the body, potentially affecting movement, speech, and muscle tone. Depending on the study, CP affects roughly 40% of all children with HIE, across varying degrees.

Timeline of Diagnosis: Cerebral palsy is typically diagnosed within the first two years, with more mild CP diagnosed up until age 10.

EPILEPSY

Epilepsy is a grouping of various seizure disorders. Epilepsy affects upwards of 50-60% of all HIE cases, across all HIE "levels". HIE is a leading cause of neonatal seizures and several rare epilepsies.

There are several different types of seizures, and medical and surgical options to control them. Neonatal seizures are common with HIE, and may or may not turn into epilepsy.

Timeline of Diagnosis: Epilepsy can appear at anytime, but tends to either persist from neonatal seizures, or pop up during key developmental spurts around ages 4, 6, 8 and in puberty.

SECONDARY MICROCEPHALY

Many children with HIE get diagnosed with secondary microcephaly. This is not the same as congenital microcephaly and simply means "smaller head", due to the damage that restricts brain growth.

It has no bearing on cognition like primary, congenital microcephaly.

Timeline of Diagnosis: Secondary microcephaly is typically diagnosed within the first year, as brain growth is heavily tracked and measured post-injury.

LEARNING & ATTENTION ISSUES

Learning disabilities and differences, executive functioning, processing and attention issues such as ADHD, dyslexia, dysgraphia, dyscalculia, and others are common in children with HIE., with greater incidence than the general population.

Many children who do not have physical impacts end up with learning and attention issues. There are many strategies and accommodations to help students learn how their brains work best.

Timeline of Diagnosis: Learning and attention issues can show up early between the ages of 3-5, but most are diagnosed between the ages of 5-8.

AUTISM

Autism has been noted to be more prevalent in children with HIE. It is difficult to tell if there are autistic-like traits/symptoms that lead to a diagnosis, or truly an autism diagnosis.

Timeline of Diagnosis: Depending on the severity, autism with HIE can be diagnosed between 18 months and 5 years old, with some diagnoses coming later into the early teen years..

BEHAVIORAL CHALLENGES

Brain injuries are known to exacerbate enhanced behavioral responses. Sometimes this is related to frontal lobe damage, sometimes it is due to sensory processing difficulties.

Timeline of Diagnosis: It is hard to tease out what may be typical behavior early on. Many behavioral and sensory issues due to HIE are diagnosed between the ages of 2-5, and sometimes again between 7-10, due to frontal lobe development.

HEARING ISSUES

Sensorineural hearing loss, progressive hearing loss, auditory processing differences and disabilities, and other hearing-related issues are common with HIE.

Some children may benefit from hearing aids, cochlear implants, or auditory amplification devices in school.

Timeline of Diagnosis: Some babies will not pass their initial hearing test in the NICU and hospital. Others will be diagnosed within the first two years, usually through ordered hearing tests.

VISION ISSUES

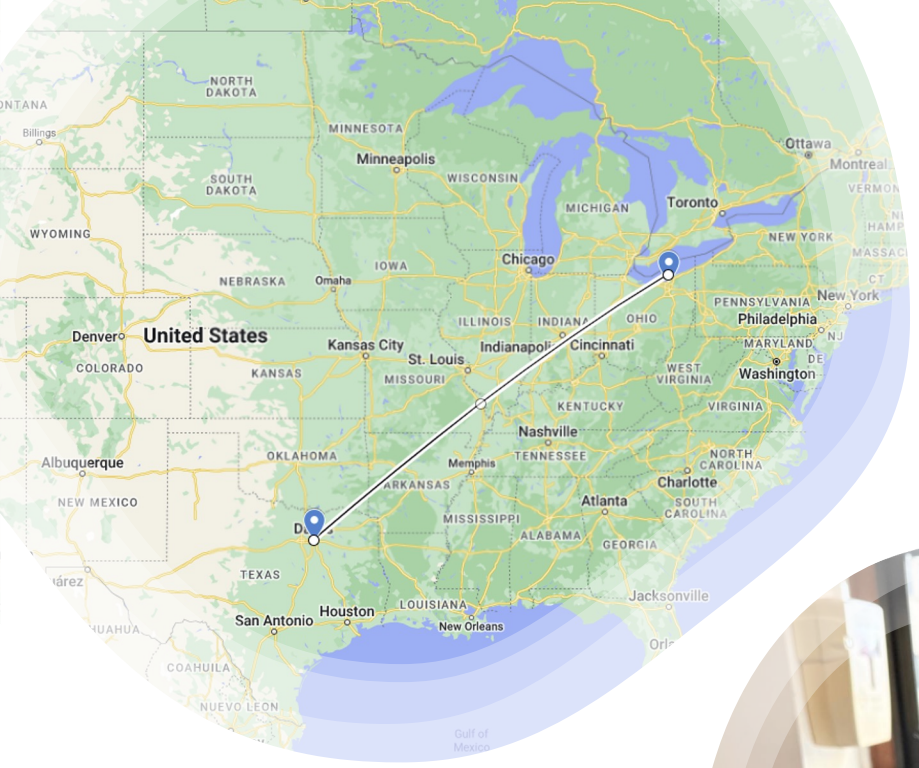
HIE can cause certain vision challenges such as delayed visual maturation, cortical vision impairment, various types of strabismus are all very common.

Early identification of vision issues can help develop more functional vision, ideally with a multidisciplanary team of pediatric ophthalmology, optometry, and low vision specialists in schools.

Timeline of Diagnosis: Early vision assessments within the first few months and upwards of two years typically identify the majority of vision issues.

Patient-Family Perspectives of Participating in Clinical Trials

- Lucy (pictured age 6 in Cleveland Clinic article on ESES, now age 9!)
- Dosed with IVIG, no improvement
- Enrolled in ESES clinical trial
- Minimal improvements in EEG
- Unblinded, placebo given
- Compassionate access given
- Significant improvements in both EEG & skill development
- What's Next?



Barriers for Patient-Families

- Equity in Access
- SDOH
- Feasibility for families to travel
- Access after trial is closed
- Support
- Communication about enrollment, during participation & after
- Coordination with home medical team

HEAL
HIGH-DOSE EPO FOR ASPHYXIA AND ENCEPHALOPATHY

Lessons Learned

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Overview

Enrolled 501 babies with HIE

SOC plus adjuctive – Erythropoietin (EPO)

Negative study

Considered one of the most successfully-run trials in HIE

https://www.nejm.org/doi/full/10.1056/Nejmoa2119660

Issues

- Education about condition
- Follow up completion
- Communication with families
- Attrition

We…stopped after two years. We couldn't keep up with the appointments with us both working full time, therapy and being pregnant with number 2

HEAL
HIGH-DOSE EPO FOR ASPHYXIA AND ENCEPHALOPATHY

Family Perspectives

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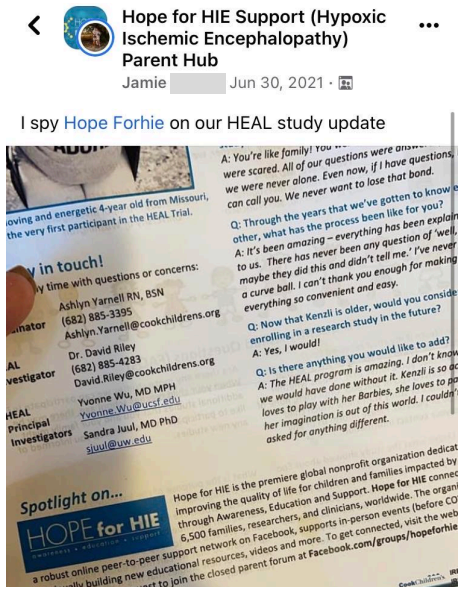
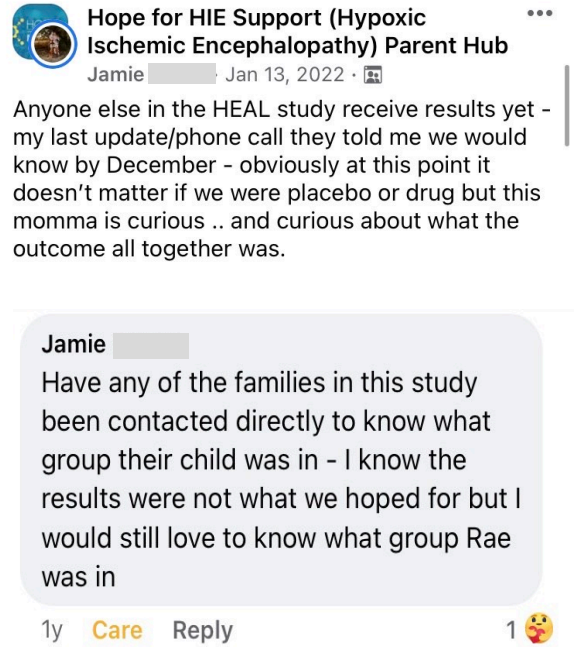
Jamie & Rae

- Enrolled at Cook Children's
- Parents had no idea Rae was diagnosed with HIE (found out in a fetal-maternal hemorrhage group, referred to Hope for HIE)
- Rae is 5 now!





Solutions: Patient-Family Clinical Trial Participation

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Partner with Patient Advocacy Organizations to leverage & coordinate support resources – experts in patient-family engagement

Strategic communication and planning for phases of research and clinical trials

Education for families about clinical trials, post-trial care & regulatory processes

HOPE for HIE

HIE COMMUNITY INVOLVEMENT IN RESEARCH

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WAYS WE PARTNER:

- Surveys & Data Collection Methodology
- Hypothesis Testing
- Research & Advocacy Projects
- Patient-centered Clinical Trial models: Academic & Industry
- Addressing Gap Areas

CURRENT & RECENT ANNOUNCED CLINICAL TRIAL WORK/PARTNERSHIPS:

NSR NEONATAL SEIZURE REGISTRY

HEAL

ReAlta LIFE SCIENCES

COOL PRIME

ARGENICA THERAPEUTICS

GLOBAL, LONGITUDINAL PERSPECTIVES:

- Over 8,500+ families, worldwide, from over 60 countries
- Families began connecting in 2010 via social media groups
- 12+ years of anecdotal information share, across age bands ranging from neonatal through adulthood, across outcomes and impacts.
- History of family participation in clinical trials: from early cooling cap and whole body trials (Shankaran, TOBY, etc.) through HEAL -- and everything in between and forward

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HOPE for HIE
awareness • education • support

HALO OF SUPPORT©

Model for Patient-Family Centered Clinical Trials

PARTNERSHIP IN CLINICAL TRIALS: FAMILY SUPPORT

HOPE for HIE

1	**DEDICATED SUPPORT**	Established comprehensive support programs and services for families, including a dedicated space & communication channels created for study participants, & peer support services.
2	**SOCIAL WORKER**	Access to all social worker programs and services through the Patient Support Organization, closing gaps of inconsistency between offerings of site locations
3	**CHILD LIFE SERVICES**	Access to all child life programs and services through the Patient Support Organization, closing gaps of inconsistency between offerings of site locations
4	**WHOLE-FAMILY SERVICES**	Access to parent, sibling, and extended family support services and programs.
5	**BEREAVEMENT & LOSS**	Dedicated support for any families facing loss, and any back end needs for the study.

PARTNERSHIP IN CLINICAL TRIALS: STUDY SUPPORT

1	**FAMILY COMMUNICATION**	Use of best practices for patient-centered trials: communication strategy & tactical development plan
2	**FAMILY ENGAGEMENT**	The more families are engaged in support, community, & communication, the more they will continue to be involved in the trial process. Patient organization can also track moves, etc.
3	**STUDY DISSEMINATION**	When key data is ready to be released, will disseminate to communication channels
4	**CONSULTATION**	Continued consultation throughout study period for study sponsor, addressing any regulatory, study-related issues, etc.
5	**MECHANISM FOR FEEDBACK**	Ensuring experiences of families are heard for best support and engagement during trials to troubleshoot anything that comes up, gather best practices, etc.

Solutions: Patient-Family Clinical Trial Participation

Strategic communication and planning for phases of research and clinical trials

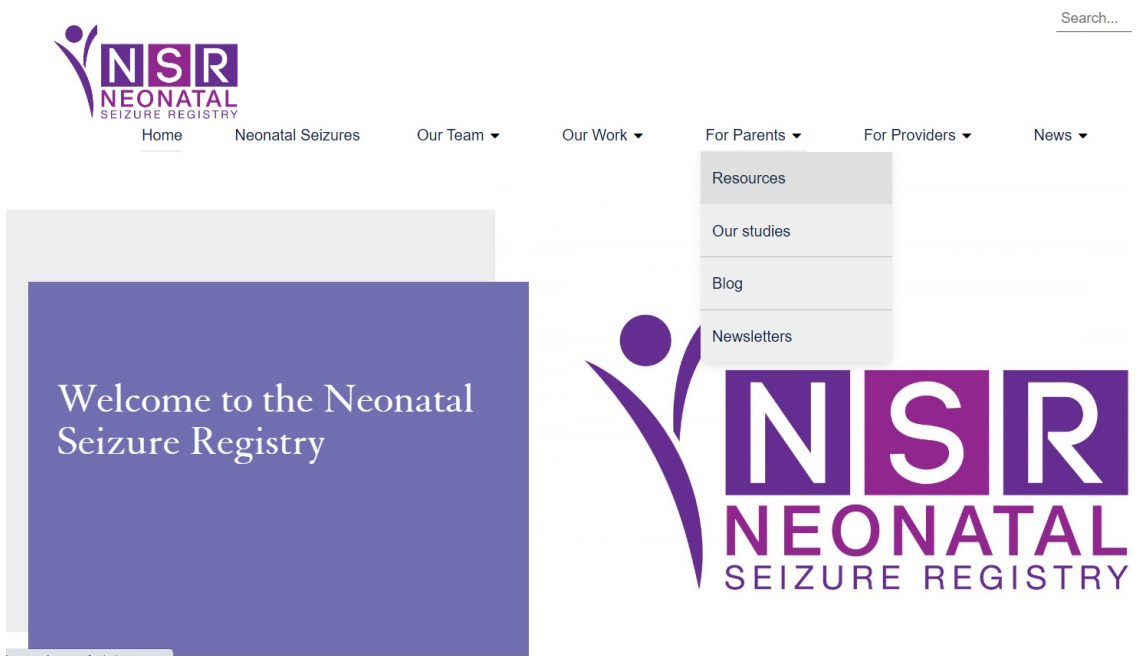
SCHEDULE OF ACTIVITIES & PAO SUPPORT /COMMUNICATION	Enrollment	Discharge	Three Month Assessment	Six Month Assessment	12 Month Assessment	18 Month Assessment	24 Month Assessment
Hope for HIE Staff Study Support			*All team members keep a lookout for Infantile Spasms development with participants & insert education and support as necessary*				
Social Worker							
Child Life Specialist							
Peer Mentor Specialist							
Program Manager							
Executive Director							
Communication Plan & Tactics							
Tailored, individualized electronic communication sent by birthday	Once enrolled, send welcome email & text with support links	Discharge email & text welcoming them home, reminder of resources	1-2 weeks prior to 3 months, email & text appt reminder & prep info	1-2 weeks prior to 6 months, email & text appt reminder & prep info	1-2 weeks prior to 12 months, email & text appt reminder & prep info	1-2 weeks prior to 18 months, email & text appt reminder & prep info	1-2 weeks prior to 24 months, email & text appt reminder & prep info, remind families after study ends, supprot continues
			Neurodevelopmental age & concern info - educate about Infantile Spasms	Neurodevelopmental age & concern info - educate about Infantile Spasms	Neurodevelopmental age & concern info	Neurodevelopmental age & concern info	Neurodevelop mental age & concern info
Study newsletter: Co-written by study sponsor, PIs, Patient-Family perspectives							
Study Website	Family Resources	Clinical Resources	Enrollment Metrics	Published/Relevant Data			

Considerations:

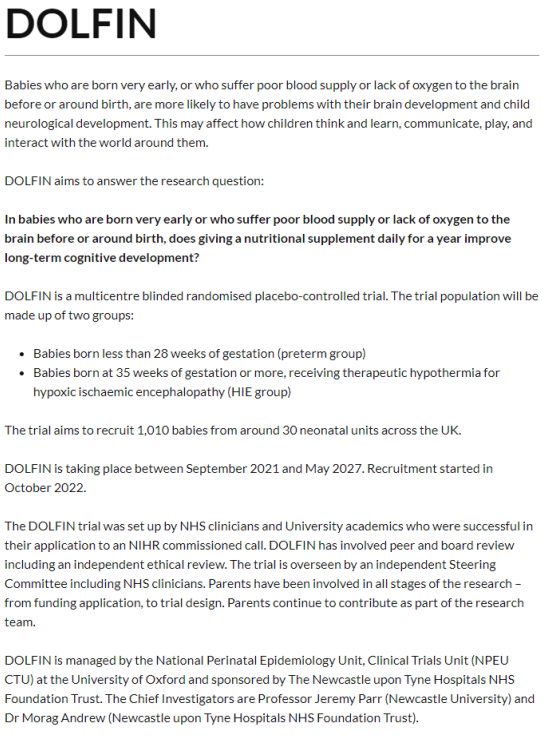
- Accessibility
- Literacy
- Technological acumen
- Communication preferences

Solutions: Patient-Family Clinical Trial Participation

Education for families about clinical trials, post-trial care & regulatory processes



https://neonatalseizureregistry.ucsf.edu



DOLFIN

Babies who are born very early, or who suffer poor blood supply or lack of oxygen to the brain before or around birth, are more likely to have problems with their brain development and child neurological development. This may affect how children think and learn, communicate, play, and interact with the world around them.

DOLFIN aims to answer the research question:

In babies who are born very early or who suffer poor blood supply or lack of oxygen to the brain before or around birth, does giving a nutritional supplement daily for a year improve long-term cognitive development?

DOLFIN is a multicentre blinded randomised placebo-controlled trial. The trial population will be made up of two groups:

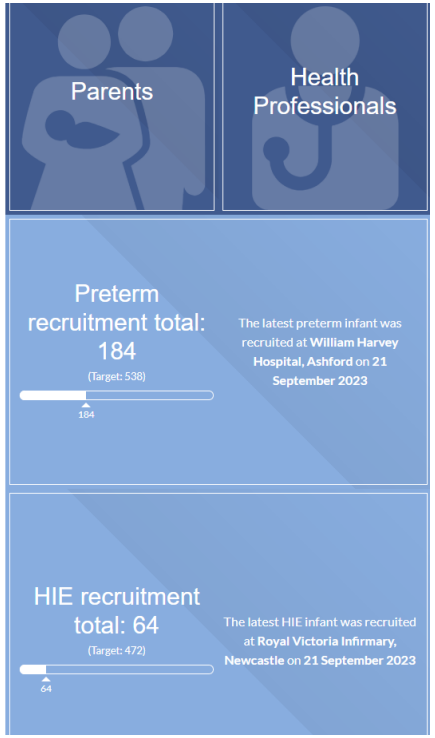
- Babies born less than 28 weeks of gestation (preterm group)
- Babies born at 35 weeks of gestation or more, receiving therapeutic hypothermia for hypoxic ischaemic encephalopathy (HIE group)

The trial aims to recruit 1,010 babies from around 30 neonatal units across the UK.

DOLFIN is taking place between September 2021 and May 2027. Recruitment started in October 2022.

The DOLFIN trial was set up by NHS clinicians and University academics who were successful in their application to an NIHR commissioned call. DOLFIN has involved peer and board review including an independent ethical review. The trial is overseen by an independent Steering Committee including NHS clinicians. Parents have been involved in all stages of the research – from funding application, to trial design. Parents continue to contribute as part of the research team.

DOLFIN is managed by the National Perinatal Epidemiology Unit, Clinical Trials Unit (NPEU CTU) at the University of Oxford and sponsored by The Newcastle upon Tyne Hospitals NHS Foundation Trust. The Chief Investigators are Professor Jeremy Parr (Newcastle University) and Dr Morag Andrew (Newcastle upon Tyne Hospitals NHS Foundation Trust).



https://www.npeu.ox.ac.uk/dolfin

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Trial Dilemmas: The PI's Perspective

M. Scott Perry, MD
Head of Neurosciences
Jane and John Justin Institute for Mind Health
Cook Children's Medical Center
Ft Worth, TX

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Disclosures

M. Scott Perry, MD

- **Speaking**: Zogenix/UCB, NobelPharma, Marinus
- **Consulting**: Zogenix/UCB, Biocodex, Stoke Therapeutics, Marinus, Bright Minds, Eisai, Jazz, and Neurelis
- **Research** (funds paid to Cook Children's): Zogenix/UCB, Stoke, Encoded, Neurocrine, Takeda

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Essential Elements for Trial Success

- ✓ Realism
- ✓ Transparency
- ✓ Communication
- ✓ Teamwork

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Be realistic about who you can enroll

- **Population**: Do you have the patients? If not locally, where?
- **Interest**: Do the patients want to participate?
- **Feasibility**: Do you have the staff and the time to do it well?
- **Competition**: Does it exist with yourself or other sites?

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Maintain transparency through the trial

Access

- Enrollment strategy: Sponsor vs Institution
- Equitable access to all eligible

Process

- Avoid mistakes by recognizing poor processes (and sharing them)
- Advocate for patients, staff, and yourself

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Manage intra-trial dilemmas

- Engage external influencers (social media, et al)
- Maintain enthusiasm for the long haul
  - Continued enrollment
  - Ensuring quality data for the long term

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Dilemma: Imperfect Protocols

Despite best efforts, clinical trial protocols are rarely perfect. In some cases, investigators may need to revise the protocols after the trial has started to improve the patient experience or for other reasons.

Tabletop Discussion

Think about an instance where a trial protocol might need to be improved:

- What are some typical challenges you might see in trial design?
- How could stakeholders help support a needed revision? For example:
  - Investigators/staff: How would you address this with the sponsor?
  - Sponsors: How do evaluate and rectify need for protocol amendments?

Clinical Nurse Perspective on Clinical Trial Protocols

Maintain relationships

Keep the referring provider "*in the know*"

- Clarify do's and don'ts per protocol
- Provide patient status updates throughout the trial
- Encourage a continued patient relationship with the referring provider

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All Good Things Come to an End

Dilemmas after the trial

Dilemma: Return to Primary Care

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Returning to “standard” clinical care after a trial can be both a blessing and a curse for patients. The transition can be difficult for everyone involved.

Tabletop Discussion

- What are some of the toughest challenges for stakeholders during the transition back to a primary provider?
  - What do patients and families experience in that transition?
  - What do primary providers experience when resuming care of patients exiting from their clinical trial?
  - What do investigators face, especially when a patient wants to remain in their care?
- What steps could mitigate these challenges?

Clinical Nurse Perspective on Supporting Families when the Clinical Trial Ends

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Breaking up is hard to do

Patient transition back to “standard” care can be tough

- Frequency of visits decreases
- Access to care team often diminished
- Reporting everything isn’t necessarily required anymore
- Responsibility for scheduling goes back to the patient

Transition back to the referring provider after study completion

- Familiarity with new treatment may be limited
- Patient desire to remain under study physician’s care

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Dilemma: Transitioning

Tabletop Discussion

- What issues can you imagine during this transition? For example:
  - Managing the supply of medications
  - Working with insurers
  - Demand for the product from patients not in the trial
  - What else?
- What steps could stakeholders take to mitigate these challenges?

Clinical Nurse Perspectives on Transitioning

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Moving to a commercial product

- When will the study drug supply end?
- Insurance dilemmas
  - Insurance formulary
  - Prior authorization
  - Specialty pharmacy and REMS programs
  - Study dosing vs FDA approval
  - Insurance denials over-step therapy
  - Out-of-pocket expense
- Managing the demand for product from patients not in the trial

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Clinical trials of the future

- ✓ De-centralized study design
- ✓ Virtual visits
- ✓ New outcome measures

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Stretch Break

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After FDA Approval

Michael Storey, PharmD, MS

Medication Use Strategist
Nationwide Children's Hospital

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Disclosures

Michael Storey, PharmD, MS

- Advisor to Sarepta Therapeutics, CSL Behring, and BioMarin

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Welcome to beautiful British Columbia!

My home away from home

Me 72 hours before an injury leading to a controlled clinical trial enrollment

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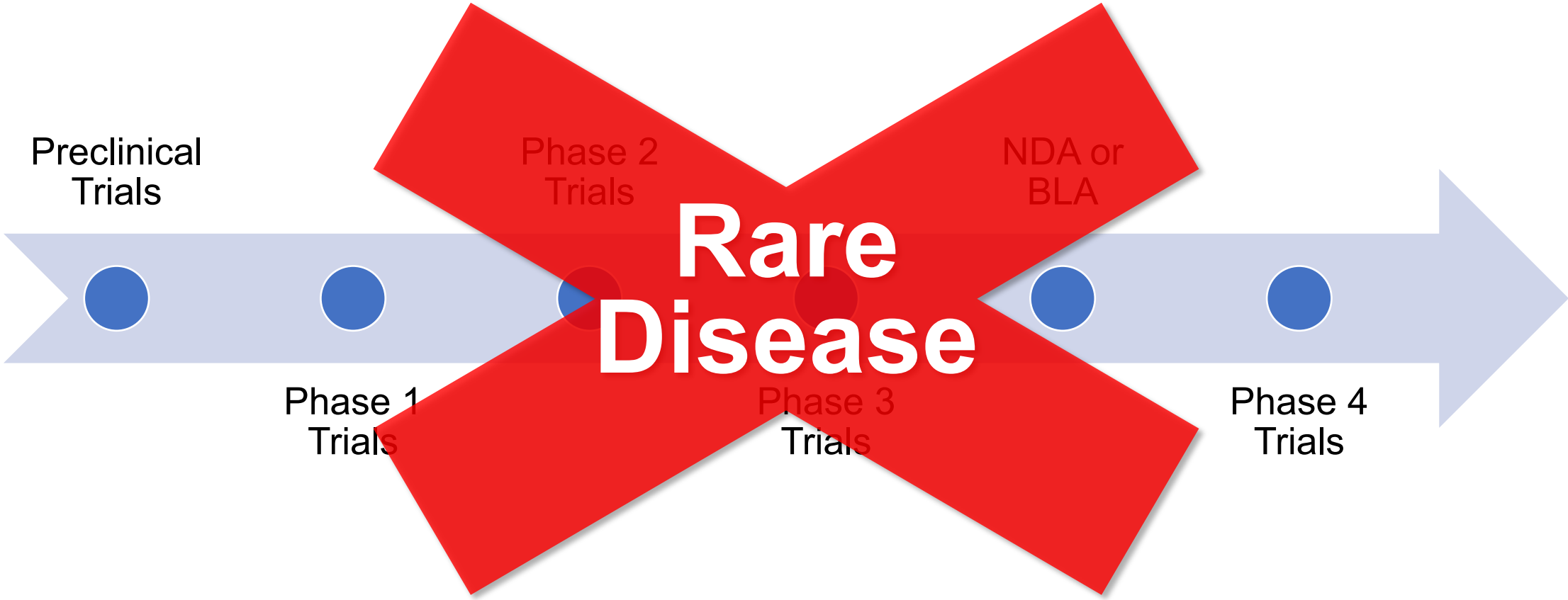
FDA Approval Process



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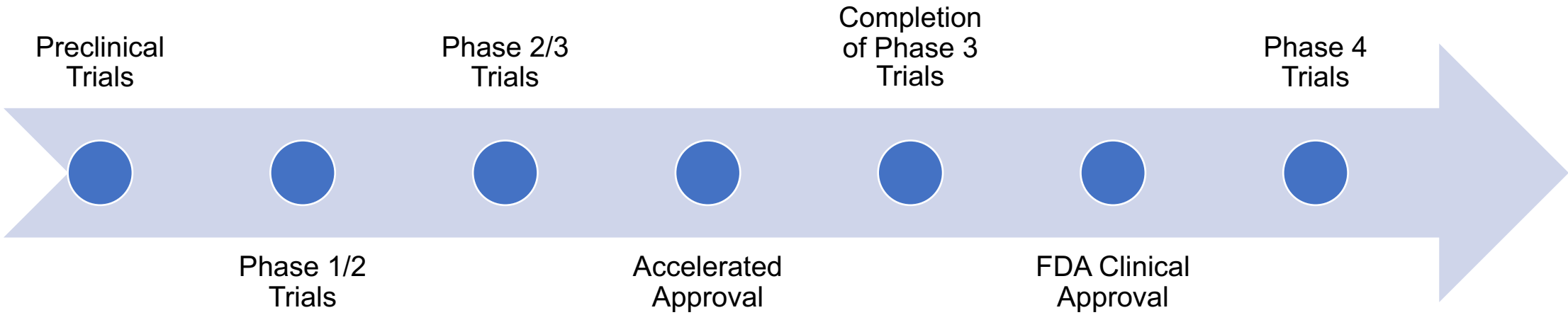
Accelerated FDA Approval Process



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FDA Approval Process

- Most new FDA approvals are specialty drugs
- Often for rare diseases or subpopulations of a disease
- Accelerated Approval – based on a surrogate endpoint
  - FDA expects clinical trials to be completed after this
- Ordinary/Full Approval – based on a clinical endpoint

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FDA Therapy Designations

Designation	Requirements	Benefits
Fast Track	Serious condition with unmet medical need where either no therapy exists or a potential improvement over existing therapies	More frequent meetings and communication with FDA, eligibility for Accelerated Approval and Priority Review, rolling review submission
Breakthrough	Serious condition with preliminary evidence showing it may have a substantial improvement over existing therapies on a clinically significant endpoint	• All Fast Track Benefits • Intensive guidance from FDA from as early as Phase 1 • Engagement with senior FDA leaders
Accelerated Approval	Serious condition with unmet medical need and clinical trial data showing improvement of a surrogate endpoint with reasonable expectation of correlated clinical benefit	Approval years earlier than could be possible with a clinical trial with a clinically meaningful endpoint
Priority Review	Serious improvement in safety or efficacy of treatment for a serious condition	Review of NDA or BLA within 6 months rather than 10 months

https://www.fda.gov/patients/learn-about-drug-and-device-approvals/fast-track-breakthrough-therapy-accelerated-approval-priority-review

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Advocacy Leaders Play Key Roles

- Support clinical trials
  - Financial support for investigator-initiated trials
  - Patient support for expenses not covered by trials
- Coordinate comments to regulators
  - Advisory committee meetings
  - Sometimes in other settings – public forums, private meetings
- Advocate for regulatory options
  - Access pathways and regulatory flexibility
  - ”Right to Try” legislation

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Pharmacists Support Patient Access

- Some diseases have complicated screening needs or patient education
- Assist/review prior authorizations
- Coordinate product availability to ensure patients get medications
- Therapy onboarding – contracts, budgets, and formulary
  - Often begins months before approval

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High Cost of New Therapies

- New gene and cell therapies are $2M+
- Several therapies that can exceed $1M per year with weight-based dosing
- Some new therapies have high manufacturing costs
- Offset other expenses
  - Other medications
  - Other healthcare
  - Personal/societal costs

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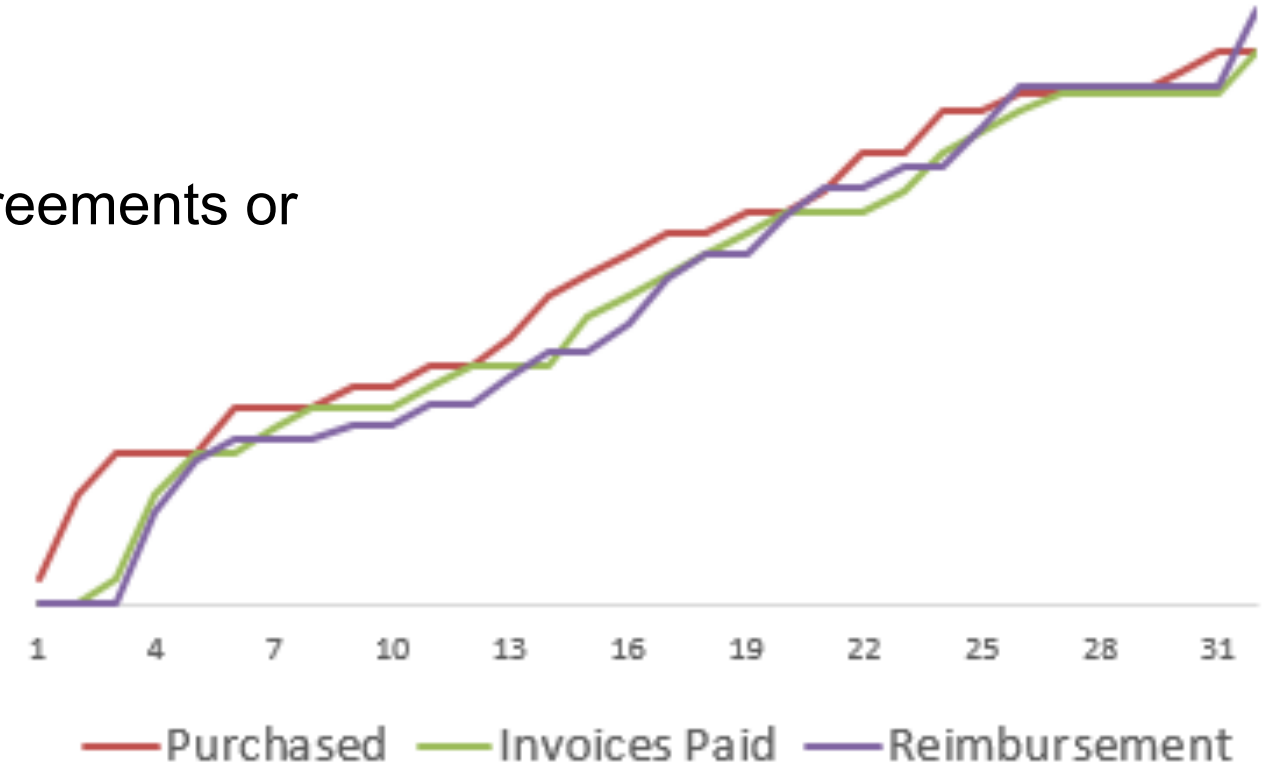
High Cost Is an Access Issue

- Hospitals/providers need cashflow to provide therapies
  - Can take months to be paid
  - Often require single case agreements or contract amendments
- Insurers may be hesitant to cover
- Patient assistance programs



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Insurance denials

- Clinical denial – clinical policy covers the drug, but not for this patient based on clinical characteristics
- “Experimental and investigational” – clinical policy may not cover for any patient
- Excluded benefit – administrative denial based on plan-specific design in self-funded/employer-sponsored plans

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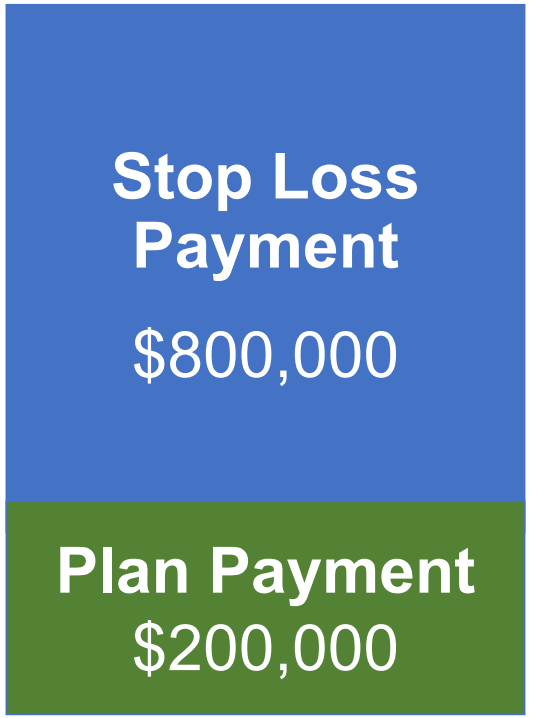
Self-funded Plans

- Most large employers are self-insured
- Reduces total cost of health insurance for employer
- Flexibility in benefit design
- But what happens when there is a huge expense?
  - Excess Insurance (or Stop-Loss) covers costs over a certain threshold

Example

$1,000,000 claim



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Under-represented populations

- Research often focused on easier populations to study
  - Most common forms of disease
  - Socio-economically
  - Geographically
  - Culturally
- Rare diseases often have very small trials
- Downstream complication is getting coverage for heterogeneous patients
  - What can we extrapolate for safety and efficacy?

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Ethics in implementing a new therapy

- Clinic capacity
- Prioritization of patients
- Management of insurance denials
- Management of referrals

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Case Example

delandistrogene moxeparvovec-rokl

- Approved June 22
- Approved for 4 and 5 year olds
- Largest sites had more than a dozen kids
- Benefit likely greatest with early treatment
- Many patients seen at a clinic far from their home
- Weekly monitoring required

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In summary…

- Approval ≠ Access
- The pathway to FDA approval can vary, which can have implications for insurance coverage
- Implementing high-touch therapies can require extensive team planning

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Key Take Aways

Erika Fullwood Augustine, MD, MS

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Disclosures

Erika Fullwood Augustine, MD, MS

- No disclosures

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Paired Discussion

- *What insights are you taking away from today's symposium?*

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My Take Aways…

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