The Gerber Foundation

"Enhancing the quality of life of infants and young children."

2020 Annual Report

FOUNDATION
ESTABLISHED
1952

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INTRODUCTION

The Gerber Foundation was established in 1952 as the Gerber Baby Foods Fund by Daniel Gerber, Sr. and Gerber Products Company, and provided $14,700 in support to various organizations in that first year. While the Gerber name may imply a strict interest in infant nutrition, our commitment is to a much broader range of activities significantly impacting issues facing infants and young children.

The mission of the Foundation – to enhance the quality of life of infants and young children in nutrition, care, and development – remains the guiding beacon for Foundation giving. Accordingly, priority is given to US research projects whose primary beneficiaries are young children from birth to three years of age. We are particularly interested in research that could provide clinically useful insights and lead to positive changes in the pediatrician's day-to-day practice.

As of the end of 2020, the Foundation has awarded nearly $123 million in grants to individuals and institutions throughout the world. While the Foundation maintains a small grant program that reflects our ongoing commitment to West Michigan communities, the vast majority of the Foundation's grant dollars are distributed on a competitive basis for national research focused on pediatric health and/or nutrition concerns, including the effects of environmental hazards on the well-being of infants and young children. Through our grant-making efforts, we are committed to improving the health and well-being of the youngest members of our society.

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"Research is creating new knowledge."
Neil Armstrong

The hope of sparking true change

Eighteen years ago, the Gerber Foundation's board embarked on a new endeavor. They wanted to find innovative ways to improve the lives of our children. What they had in mind – financially supporting research in infant and toddler nutrition, and in their care and development– began for the foundation a process that anthropologist Zora Neale Hurston called "formalized curiosity."

Since those first discussions in 2003, we have reviewed nearly 3,000 concept papers and almost 500 full research proposals. From these, 247 research grants have been approved totaling more than $42.7 million.

In our 2020 annual report, we are revisiting many of these funded projects, which are divided into three sections based on their primary research focus: Pediatric Nutrition, Pediatric Health and Environmental Hazards.

As we looked back, we were struck by the range of challenges that care providers confront on a daily basis. Thus the Foundation strives to fund a broad range of ideas and researchers, to act as a catalyst for new ideas that can lead to improvements in infant nutrition, care and development. Changes need not be large. Often, small, incremental changes focused on practical solutions to everyday problems can make a world of difference.

And, always, there is the desire to spark true change when it is found to be warranted.

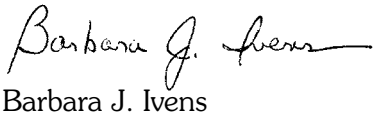
Perhaps an analogy concerning change will be helpful. Prior to 2008, cars with power windows had rocker or toggle switches on the arm rests to open and close windows. Pushing down or forward on the toggle closed the window. Unfortunately, when kids climbed around in the car – sometimes leaning on the armrest to stick their head out of the window - or when a sibling was playing with the "buttons," the child could inadvertently step on the switch, causing the window to close. The child could get their head caught in the window and, in their panic, push the button even harder. A simple suggestion by a mother to the auto industry resulted in a safer window toggle - switches were changed to lift up to close the window and push down to open the window.

Please take your time reading through the 2020 edition of The Gerber Foundation's Annual Report. Browse the titles of the research grants. Perhaps explore the internet for more in-depth reading on the topics. A list of the published research, supported by Gerber Foundation awards, with digital object identifiers (DOIs) or PubMed Identifier (PMID), begins on page 11 of this report.

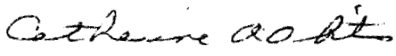
We believe these studies in "formalized curiosity" are laying the foundation for incremental change, perhaps even important breakthroughs, in the nutrition, care and development of our youngest citizens.

"Research is seeing what everybody else has seen and thinking what nobody else has thought."

Albert Sxent-Gyorgyi, Hungarian pharmacologist known for his work on vitamins and oxidation.
He was awarded the Nobel Prize in Physiology or Medicine in 1937.



Barbara J. Ivens
Board President



Catherine A. Obits
Program Director

2020 RESEARCH GRANTS

Children's Hospital Medical Center (Rebecca Steuart, MD) **Cincinnati OH** Influence of respiratory tract bacteria on lung health outcomes in infants and young children with Bronchopulmonary Dysplasia and tracheostomies	**$20,000**
Children's Health Care Foundation (Cristina Miller, MD) **Edina MN** Feasibility and safety of an application-based home monitoring program for premature infants discharged home with a nasogastric tube	**$28,186**
Denver Health Foundation (Holly Frost, MD) **Denver CO** The NO TEARS study: Supplemental grant for COVID testing	**$21,456**
Oregon State University (David Dallas, PhD) **Corvallis OR** Can high pressure processing of donor milk improve lipid absorption and growth in preterm infants compared with Holder pasteurization?	**$349,993**
Spectrum Health Foundation (Caleb Bupp, MD) **Grand Rapids MI** Enhancing the diagnostic accuracy of rapid whole genome sequencing in neonates with rare or unknown diseases	**$349,682**
University of Colorado (Laura Sherlock, MD) **Aurora CO** Standard versus High Selenium Therapy in Extremely Premature Infants	**$240,000**
University of Michigan (Megan Pesch, MD) **Ann Arbor MI** Using a best practice advisory for the identification of infants with Congenital Cytomegalovirus Infection	**$175,173**
University of North Carolina (Stephen Eckel, PharmD, MHA) **Chapel Hill NC** Improving Neonatal and Pediatric Patient Safety through Precision Drug Concentrations	**$347,400**
University of Texas Medical Branch (Roberto Garofalo, MD) **Galveston TX** Innate inhibitory activity and anti-SARS-CoV-2 antibodies in human milk	**$342,069**
Vanderbilt University Medical Center (Alison Carroll, MD) **Nashville TN** Discharge medication counseling in hospitalized children	**$20,000**
TOTAL NATIONAL GRANTS AWARDED:	**$1,893,959**

Nutrition

Adequate nutrition a key interest area for funded projects

Many funded projects respond to the long-standing interest of the Foundation in assuring adequate nutrition for infants and young children. Typical projects may include those aimed at nutrient needs, nutrient supplementation (benefits, side effects, timing, or dosage), the effects of deficiencies or excesses of a specific nutrient, and issues related to general growth and feeding.

Over the years, $17.8 million has funded 104 research efforts in pediatric nutrition, just over 42 percent of grant awards.

What our bodies need

A study at the University of Colorado, Denver, evaluated mannose requirements for preterm infants and those with intrauterine growth failure. Mannose is a kind of sugar related to glucose that is used in metabolism, especially metabolism of proteins.

At Yale University, Dr. Carpenter's study looked for biomarkers for calcium deficiency to better identify infants and young children who need supplementation.

Also, at Brigham and Women's Hospital, a team is studying the zinc status in preterm infants and its relationship to growth and brain development.

Balance is key

During growth and development, infants and young children need just the right amount of every nutrient within a range of values. Excesses or deficiencies can be harmful or negatively affect their growth and development.

A study at Children's Memorial Hospital in Chicago explored risk factors for iron deficiency in premature infants to better identify which infants might need iron supplementation after birth and in what time frames.

Researchers at the University of Minnesota evaluated early macro and micronutrient deficiencies among a group of internationally adopted children, along with the growth and neurodevelopment effects of those deficiencies. While at the University of California San Francisco, a team evaluated the effects of cholesterol and Omega-3 fatty acid levels on the development of the brain in preterm infants.

The amount of manganese being provided to preterm infants during intravenous feedings was the focus of a study at Vanderbilt University. The researchers learned that the amount was excessive for these tiny infants, more than their small bodies required or could manage.

The human body also needs to efficiently utilize nutrients and supplements. One study at Beth Israel Deaconess Hospital looked at the digestion of dietary fat in preterm infants and how that is altered in their premature guts. Another looked at the ability of the preterm infant gut to digest proteins and the capacity limits for these premature guts. The interplay between vitamin E supplementation and iron deficiency was the focus of another study. Additionally, a University of Wisconsin project examined the effect of inflammation on neonatal iron status, while the effect of inflammation on vitamin D status in the infant was the target of researchers at St. Louis University. And at Texas Children's Hospital, a team evaluated the effects of different feeding regimens on calcium absorption.

Too much of a good thing?

Nutrient supplementation, especially in very small children, can carry risks as well as benefits. A key question: How much supplementation is needed, considering absorption and metabolism at different ages? And what are the absorption and metabolism differences in infants and young children who have organ dysfunction?

Dr. Zeisel at the University of North Carolina studied the effects of choline supplementation on short-term memory in young infants. And Dr. Gensure of the Ochsner Clinic Foundation evaluated the benefits of vitamin D supplementation in breastfed infants.

At Emory University, researchers evaluated the benefits and effects of copper supplementation in infants with cholestasis (a disease of the liver). Other funded projects considered the benefits of added protein supplementation in infants with brain injury and the benefits of L-carnitine supplementation on neurodevelopment in preterm infants. L-carnitine is a chemical similar to an amino acid that is produced in the body that helps the body convert fat into energy.

A study at the University of Colorado evaluated two dosage levels of selenium as a supplement in extremely premature infants. Another study, at St. Jude Children's Research Institute, is evaluating the benefits of vitamin A and D supplements on the immune response after pneumococcal vaccination in toddlers. And a project at the University of Nebraska explored the role of microRNA's, added to infant formulas, on bone health. MicroRNA's help to regulate gene expression and dietary sources of these molecules may be essential for human digestion.

Probiotics and the microbiome

Two big topics cropped up within the nutrition research field over the past few years: probiotics and the microbiome. Two studies, at Michigan State University and at Georgetown University, evaluated the benefits of probiotics on reducing diarrhea in young children, and on reducing early childhood illness in general, respectively.

Researchers at the University of Virginia evaluated the safety and tolerability of various dosage levels of a probiotic in very-low birth weight infants. Another study looked at the use of probiotics and alterations to the developing infant microbiome.

At the University of Maryland, a team is evaluating microbiome biomarkers that may indicate poor or altered intestinal barrier function. Poor barrier function may lead to what is termed a "leaky gut," which may put the infant at greater risk of a devastating gut infection.

An investigation at the University of Illinois, Urbana probed the effects of fats found in breastmilk on the development of the infant gut microbiome. Researchers at the University of Southern California explored those same breastmilk fats and their effect on the gut microbiome and the development of fat mass in a child's early years. And at Duke University, a team is evaluating the differences in the microbiome between extremely preterm infants with growth failure to preterm infants who are growing more normally.

New pathways to find answers

A unique study at Michigan Technological University developed a way to measure vitamin levels utilizing infant tears. This method could provide much-needed information about vitamin deficiencies without drawing blood from infants. Another intriguing study, this one at Mattel Children's Hospital, developed a predictive model using cord blood samples to identify infants at-risk for developing hyperbilirubinemia, an excess accumulation of bilirubin. The test could be especially helpful for identifying infants that would benefit from light therapy to avoid re-hospitalization. At the University of Wisconsin, researchers have evaluated an approach, using urine metabolite measures, to determine more accurate levels of intravenous protein nutrition for preterm infants.

Better measures of infant growth

While weight and length have typically been used to assess premature infant growth, the ratio of fat-to-lean growth over time may be more important for proper development. One study is assessing the use of ultrasound to determine body composition and growth during hospitalization. Another is assessing protein, fat and caloric intake against air displacement plethysmography (a measure of body density) to measure body composition as a means of monitoring lean versus fat growth in premature infants.

When the CDC adopted the World Health Organization growth standards, researchers at Boston Medical Center evaluated the implications of that change on determining poor versus excessive growth and the resulting services that may be provided.

At Kennesaw State University, a team is assessing the use of preterm growth charts (based on intrauterine vs postnatal growth and US versus international), how infants are classified as too small or too large for gestational age, and the best values that may predict morbidity or mortality.

The benefits of human breast milk

A study at Advocate Children's Hospital in Illinois evaluated the nutrient and cellular composition of both donor and mother's breastmilk before and after fortification with standard fortifiers. A novel work at Oregon State University is evaluating current pasteurization methods for donor human milk versus a high-pressure processing method that may improve lipid absorption and growth in preterm infants. And various studies have evaluated targeted versus optimized fortification of human milk to help improve growth in preterm infants.

What else can we do to improve the nutrition of infants and young children?

Researchers at Duke University have developed a method, utilizing minute amounts of peanut powder, to reduce the severity of children's allergic responses to peanuts. At Tuft's University, a new process, using the saliva of preterm infants, is being used to help determine when these infants are ready to feed orally. Called the NOURISH platform, the test uses genomic techniques to test for the ability to take a bottle. And, at Northshore University, a study is underway to test whether providing mother's milk via oral swab to preterm infants early on will help to improve growth, reduce serious infections, and reduce hospital stays.

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Health

Infants' health studies look to improve care, outcomes

Promoting health and preventing or treating disease is the primary focus of the Foundation's pediatric health target area. Of particular interest are applied research projects focused on reducing the incidence of serious neonatal and early childhood illnesses, or improving the cognitive, social and emotional aspects of development.

Typical projects funded in this area may include more rapid, sensitive or less invasive diagnostic techniques; improved treatments; symptom relief; and preventive measures. Pediatric health has been the focus of 122 projects totaling $20.3 million, which is about 49 percent of our total grant awards.

Childhood cancers, genome sequencing

Childhood cancers do not necessarily call for the same treatments as those cancers found in adults. Or variations in the type of tumor may require a different therapeutic approach to make the child less susceptible to a reoccurrence of the cancer.

Several funded studies sought to improve upon the identification of specific variants of tumors. A grant to the Van Andel Institute in Grand Rapids, MI studied tumors of the kidney (Wilm's tumor) to better identify the type of therapy that would work best. And a grant to Seattle Children's Hospital examined variants of liver cancer to determine which were more prone to reoccurrence. Finally a grant to the Children's Hospital of Michigan evaluated differences in acute lymphoblastic leukemia between Caucasian and Black children.

Nationwide Children's Hospital used their Gerber Foundation grant to analyze a set of proteins that could be used as markers for children with a soft tissue tumor – Rhabdomyosarcoma - to better predict outcomes and prognoses. And whole-genome sequencing is being used with other genomic methods to better identify specific causes of rare genetic diseases in infants that can lead to earlier diagnosis and therapies.

New ways to guide decision-making

Diagnostic techniques should not risk further harm to young children. Sedating a child for a diagnostic procedure, or making frequent blood draws on a preterm infant with an already limited blood supply - roughly one-half cup total - can add stress and the risk of unwanted side effects to a child's fragile system. Dr. Fiebiger, from Boston Children's Hospital, identified biomarkers for eosinophilic esophagitis in the blood of young children. This devastating disease had required sedation for the endoscopic exams needed to diagnose and monitor the disease. Blood biomarkers could eliminate or reduce the need for frequent anesthesia and are a focus of current Foundation support.

Sometimes a simple set of questions can help guide decision-making. At the Children's Hospital at Dartmouth, in collaboration with researchers around the country, Dr. Hymel created a five- to six-question prediction rule for pediatric abuse head trauma. He wanted a guide for the emergency room physician who must determine whether an injury might be accidental or a sign of abuse. An examination for suspected child abuse can add stress to the family in an already difficult situation, but not completing one when necessary may place the child at-risk for further harm.

Reliable diagnostic tools can provide accurate information quickly and speed the way to needed therapies. Point-of-care diagnoses for early onset neonatal sepsis, developed by Dr. Yang at Johns Hopkins University, not only provides an early indication of infants that might develop sepsis, the process also uses cord blood, avoiding the need to draw blood directly from newborns.

A rapid diagnostic assay, developed at Seattle Children's Hospital, guides selection of the most appropriate antibiotic agent for pediatric urinary tract infections, reducing their reoccurrence in susceptible children. Another study, at Vanderbilt University, identified a set of genes that could accurately identify early versus late sepsis in neonates and those who were unlikely to develop sepsis. A current study in Denver is evaluating the use of nasopharyngeal organism testing to aid in determining the need for broad spectrum antibiotics or the risk of treatment failure for children with ear infections.

Recent advances in technology have spurred many improvements in diagnostic tools. At the University of Notre Dame, a team of scientists has worked to develop a simple tool that could calculate the age of a bruise on a child. The goal is to help the medical profession and law enforcement establish the time of abuse injury. Tattoo electronics - wireless miniature circuitry that can be applied via a small patch to an infant's skin – is being used to monitor infant seizures at the University of California, San Diego and infant blood pressure at Lurie Children's Hospital in Chicago. The technology permits continuous assessment, plus parents can hold and connect with their infants with less wiring and tubing involved.

A sensor developed at the University of Nebraska is helping pediatric cardiac surgeons monitor and identify specific points during surgery that cause emboli (blood clots) to travel to the brain, which can cause neurological damage. Knowing the

specific points in time, and the step during surgery that may be causing the emboli to form, may help reduce the occurrence in the future.

Earlier identification of future risk

Other tools seek to identify children at-risk for illness or be more susceptible to severe illness. A researcher at Children's Hospital Medical Center in Cincinnati developed a method, using procalcitonin levels, as a risk stratification tool for pediatric pneumonia. Procalcitonin is a hormone secreted in the thyroid gland, usually at undetectable levels in healthy humans. The tool looks for this hormone, helping to identify children who should be admitted to the hospital and treated aggressively and those less likely to develop severe illness and can be sent home to recover. At Pennsylvania State University at Hershey, another study is evaluating a gene that can be used to evaluate risk for necrotizing enterocolitis, a severe intestinal infection. And best practice advisory methods are being used to develop a tool at the University of Michigan to quickly identify infants with congenital cytomegalovirus infection so that treatment can begin sooner.

At times, we just need to know what is happening now so we can make better plans for the future. Dr. Mourani, from the University of Colorado, studied the relationship between the airway microbiome and the development of chronic lung disease. His work identified several prenatal factors associated with inflammatory profiles of the airway. A study at Cincinnati Children's Hospital evaluated the motility of the intestines of infants with gastroschisis. And Dr. Shannon explored neurodevelopmental outcomes in infants with post-hemorrhagic hydrocephalus. At the University of California, San Diego, researchers are using machine-learning techniques to delve into the molecular basis for lung disease. Five inflammatory genes have been identified that indicate higher risk for developing chronic lung disease.

Improving health outcomes

Several studies have found that protocols based on sound scientific evidence can improve infant health outcomes and reduce health care costs. A study of treatments for infant fever found a wide variation in diagnostic testing and treatment across the country. This study led to the development of five clinical benchmarks for treatment standardization when fever is present that are supported by the American Academy of Pediatrics and are being used across the nation. A novel project is developing guidelines for treatment for infants undergoing congenital heart surgery. Combining clinical data from bedside monitors - and utilizing techniques similar to those used to develop infant growth charts - this multi-center team is identifying percentile ranges, based on infant outcomes, for a range of care parameters, from ventilator support to use of analgesics.

Some projects have helped to eliminate unhelpful diagnostics or therapies. Children's Hospital Cincinnati is working on a decision-support platform, embedded in the electronic health record, to provide individualized precision drug treatment for neonates while monitoring for overdosing.

A small study at the Oregon Health & Science University evaluated the use and benefits of pulmonary function tests in infants about to undergo congenital heart surgery. Other studies looked at reducing unnecessary x-rays in children hospitalized for respiratory illnesses, reducing antibiotic use in the neonatal intensive care unit, the true value of taking temperatures during well-child visits, and decreasing orders for unnecessary diagnostic tests or treatments.

And sometimes we just need to question by asking "Why not?" or "What if?". The Retina Foundation studied the timing of surgery for infants and young children with cataracts, finding that the earlier the surgery, the better visual outcomes for these children.

A study at Georgia State University asked why young children with above the knee amputations and just learning to walk were given a fixed prosthesis rather than a flexible prostheses that worked more like a human limb. The fixed prosthesis (doesn't bend) caused children to learn to walk by swinging that leg out and around to move forward. This results in hip problems later in life. The flexible knee provided a more natural gait and children were easily able to learn to walk and run in a more normal fashion.

Using a method of deep soft tissue manipulation for children with spastic Cerebral Palsy was found to improve mobility and lessen spastic muscle contractions in these children. And the University of North Carolina wanted to see if placental blood samples, taken at birth could reduce the use of blood draws and therefore decrease the need for blood transfusions in premature newborns.

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Environmental Hazard

Our environment can be risky for infants and toddlers

The Foundation invest in projects that evaluate the effects of environmental hazards on infants and young children. Students that document environment exposures and their effects on infants and toddlers, and methods to lessen the effects of exposures, are the focus of the area of interest. Since 2003, 21 funded projects – 8.5 percent - of just more than $4.1 million have related to various environmental hazards.

To change practice and improve care, researchers first examined potential sources of environmental exposures.

One study investigated the source of childhood leukemia cancer clusters. The team used tree bore samples, dust swept from city sidewalks and air sampling, among other sources, to identify the potential cause of the clusters.

Two studies looked at maternal exposures to pesticides during pregnancy and any ensuing effects on their babies. The first compared exposures to structural birth defects. The second evaluated potential DNA changes during embryonic development.

Perchlorate, a naturally occurring substance and a salt found in fertilizers and other compounds, was the focus of another study. Aimed at evaluating the relationship between iodine supplementation and perchlorate levels in breastmilk, the study also found that drinking water was not the major source of perchlorate in some women, a long-held belief.

Some exposures may be man-made, and avoidable

One study, completed at the Medical College of Wisconsin, looked at the fat or lipid emulsions provided to premature infants as a part of their intravenous nutrition. Plant sterols are used in the manufacture of these products but may play a role in the development of liver disease in the immature livers of these young infants.

Other studies examined the amounts of heavy metals - mercury, lead, and cadmium - that may be contained in blood transfusions given to preterm infants. The quantity of these metals may not be at the level to be harmful to adults but could be excessive for preterm infants, especially those who receive multiple transfusions during their hospitalization.

A study at Duke University evaluated exposures to organophosphate flame retardants, found in every day household items, and the effect these exposures might have on immune response to childhood vaccinations.

Effects of environmental exposures over time

One study assessed the levels of aluminum, a substance naturally occurring in many foods especially those that have come in contact with aluminum utensils during processing, in a toddler's system and its effects on early development. Various others studied the effect of non-essential heavy metals on hearing development in infants and the risk of lead poisoning in infants and young children with low iron levels.

Six projects evaluated environmental exposures on childhood development related to breastmilk. These included exposure to methadone metabolites via breastmilk from mothers receiving methadone therapy, and a National Institute of Child Health and Human Development study on the toxicology of breastmilk, a general study examining toxicants that may be present in breastmilk. Two yet-to-be-published works are testing marijuana metabolites in breastmilk and infant outcomes, and COVID-19 antibodies in breastmilk and immune function in the newborn.

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"Enhancing the quality of life of infants and young children."

GERBER FOUNDATION FUNDED RESEARCH

(Project title, (funded researcher), DOI or other identifier list of publications)

Nutrition related articles

A predictive model for neonatal hyperbilirubinemia using cord blood bilirubins (Calkins)

Doi: 10.3233/NPM-15814111. PMID 26518407.
PMID 29856776. PMCID: PMC5983417

Supplemental choline neurodevelopment in humans (Zeisel)

Doi: 10.1016/j.peds.2006.06.065. PMID: 17212955
Doi: 10.3945/ajcn.2010.29459. PMID: 20534746

Impact of obesity during pregnancy on neonatal iron status and programming of inflammatory response patterns (Kling)

PMID: 26970931
Doi: 10.3390/nu11102478, PMID: 31623079, PMCID: PMC835945

Lipid infusion versus enteral lipid in infants with enterostomies (Q Yang)

Doi: 10.1177%2F1941406412472698
Doi: 10.1159/000357554
Doi: 10.1016/j.jpeds.2014.02.002

Lactoferrin and the intestinal microbiome (Sherman MP)

Doi: 10.1016/j.jpeds.2016.02.074
PMID:24193200, PMCID:PMC3903415, DOI: 10.1159/000354944
PMCID:PMC3579561, DOI: 10.1016/j.clp.2012.12.006
DOI: 10.1097/MOP0000000000000068
Doi: 10.1016/j.jpeds.2016.02.074, PMID: 27234409
Doi: 10.1016/j.bbrc.2015.10.067

Cholesterol and Fatty Acid levels and developmental outcomes of premature infants (Tam)

Doi: 10.1038/pr.2017.230
Doi: 10.1038/s41390-018-0260-0

Evaluation of manganese deposition in the brain during parenteral feedings (Aschner)

Doi: 10.3945/ajcn.115.116285, PMID: 26561627
Doi: 10.1111/j.1469-8986.2011.01353.x
Doi: 10.1111/dmcn.12191
Doi: 10.1177/0883073813493502
Doi: 10.1016/j.pharmthera.2006.09.002

Use of bedside ultrasound to assess neonatal body composition in the NICU (E Nagel)

DOI: 10.1002/jpen.1829.
Doi: 10.1111/ijpo.12744

Impact of a multi-interventional nutrition program on the outcomes of newborns requiring surgery for congenital heart disease (S Killen)

DOI: 10.1016/j.jpeds.2020.08.039.

Early risk factors for gastrointestinal mucosal food allergies (Q. Yuan)

DOI: 10.1016/j.jaip.2019.12.029
DOI: 10.1542/peds.2020-0202

Optimizing individual nutrition in preterm very low birth weight infants (L Brion)

Doi: 10.1038/s41372-020-0609-1

Modulation of infant microbiome and metabolome by dietary oligosaccharides (S Donovan)
PMID: 30307320 page 6 of 8
Doi: 10.1093/cdn/nzz007.

Impact of behavioral feeding intervention on parent-child attachment in young children (A Drayton)
Doi: 10.1097/MPG.0000000000002382, PMID: 31107793.

Safety and tolerability of lactoferrin in very low birth weight infants (D Kaufman)
DOI: 10.1139/bcb-2020-0217.
DOI: 10.1139/bcb-2020-0238.

Efficacy of oropharyngeal mother's milk: late-onset sepsis in ELBW infants (Rodriguez-Garofalo)
Doi: 10.1016/j.clp.2018.09.005

Evidence synthesis for preterm infant nutrition (Soll/Cochrane Neonatal)
Doi: 10.1002/14651858.CD002971.pub5
Doi: 10.1002-14651858.CD004204.pub3
Doi: 10.1002/14651858.CD007644.pub3
Doi: 10.1002/14651858.CD012412.pub3
Doi: 10.1002/14651858.CD002972.pub3

Determining limitations in premature infant protein digestion capacity via digestomic analysis (Dallas)
Doi: 10.1093/jn/nxz326
Doi: 10.1093/ajcn/nqz123

Donor milk supplementation to increase breastfeeding duration and exclusivity (Kair)
Doi: 10.1177/0009922819826105 PMID 30688082

Neonatal iron homeostasis in women carrying multiples (O'Brien)
DOI: 10.1093/jn/nxy286, PMID: 30770543, PMCID: PMC6398393
PMID 30247706
PMID: 29907852
PMID 29652240
PMID: 29070557
PMID: 28715784
PMID 27581469

Identification of microbial biomarkers of intestinal barrier function in preterm infants (Viscardi)
Doi: 10.3389/fmicb.2018.02755

Detecting neonatal hypoglycemia using real-time continuous glucose monitoring (Nally)
Doi: 10.1089/dia.2018.0337

Protein supplementation in infants at risk for brain injury (Merhar)
Doi: 10.1177/0884533614567715. PMID: 25616519

Rapid nutritional analysis of vitamins from infant tears (Minerick)
Doi: 10.1016/j.exer.2016.12.007. PMID: 28025000
Doi: 10.1016/j.dib.2017.02.033. PMID: 28275666 PMC5328915

Implications of adopting new World Health Organization growth standards for young children (Meyers)
Doi: 10.1542/peds.2012-2382. PMID: 23690515

Use of Vitamin E to improve treatment for iron deficiency (Krebs)
Doi: 10.1096/fasebj.29.1_supplement.262.4

Neonatal oral feeding readiness in salivary high throughput diagnostics (Maron)
Doi: 10.1038/jp.2013.170
Doi 10.1016/j.jpeds.2014.10.065

Evaluation of early macro and micronutrient deficiencies on growth and neurodevelopment (Georgieff)
Doi: 10.1007/s10995-012-1090-z

Effects of NOT measuring gastric residuals in very low birth weight babies (Torrazza)
Doi: 10.1038/jp.2014.147
Doi: 10.1001/jamapediatrics.2019.0800.

Pregnancy and Biotin Status (Perry)
Doi: 10.1097/NT.0b013e31824c5ca0
Doi: 10.3945/jn.114.194472

Effects of Omega-3 fatty acid supplementation in premature infants (Baack)
Doi: 10.1038/jp.2014.195

Prevention of anemia (Bauchner)
Doi: 10.1542/peds.114.1.86

Evaluation of effects of fatty acids on development (Jen)
Doi: 10.1016/j.ntt.2006.10.009
Doi: 10.1016/j.ntt.2007.12.008. PMID: 18243652
Doi: 10.1016/j.ntt.2009.09.006. PMID: 19818397
Doi: 10.1016/j.ntt.2008.09.001. PMID: 18834936

Enteral feeding in infants receiving Indomethacin or Ibuprofen in infants with PDA (Clyman)
Doi: 10.1016/j.peds.2018.09.012. PMID: 30340932
Doi: 10.1038/s41372-019-0347-4
DOI: 10.1016/j.jpeds.2019.05.049.
Doi: 10.1016/j.jpeds.2020.09.047

Evaluation of biomarkers of calcium deficiency (Carpenter)
Doi: 10.3945/ajcn.111.018721

Human breast milk and intestinal microbiome formation (LaTuga)
Doi: 10.1371/journal.pone.0027858

Evaluation of zinc protoporphyrin levels and optimization of iron supplementation in preterm infants (Miller)
Doi: 10.1038/jp.2013.40

Effects of TGF-beta on modulation of gut inflammation in neonates (Frost)
Doi: 10.1038/pr.2014.96. PMID: 24995914

NIH Human Microbiome Study of neonatal Gut (Tarr)
Doi: 10.1073/pnas.1409497111
Doi: 10.1016/S0250-6736(16)00051-7

Preliminary evaluation of immunotherapeutic treatment to reduce peanut allergy in children (Burks)
Doi: 10.1016.j.jaci.2010.12.1111

Vitamin D deficiency and bronchopulmonary dysplasia in premature infants (Christou)
Doi: 10.1038/jp.2016.115.
Doi: 10.1210/jc.2016-3831

Comparison of nutrient and cellular composition of donor and mother's milk pre and post-fortification (R Donovan)
Doi: 10.1038/jp.2016.166

Health related articles

Use and misuse of antibiotic therapy in the Neonatal Intensive Care Unit (Cantey)
Doi: 10.1097/INF.0000000000000542
Doi: 10.1016/s1473-3099(16)30205-5

Systemic monitoring during hypothermia and rewarming in neonatal asphyxia (Chalak)
PMID: 24530976
PMID: 24332821
Doi: 10.1016/j.
PMID: 24399806
PMID: 24218465, PMCID: PMC3838529
PMID: 23759422
PMID: 22871488, PMCID: PMC3712522
Doi: 10.1016/j.peds.2013.04.043, PMID: 23866716
Doi: 10.1001/jama.2014.16058.
Doi: 10.1016/j.earlhumdev.2014.06.010.
Doi: 10.1016/j.earlhumdev.2014.10.010.
Doi: 10.1038/jp.2014.67

Validation of a Clinical Prediction Rule for Pediatric Abusive Head Trauma (AHT) (Hymel)
DOI: 10.1542/peds.2014-1329

Genetic variation in SLC30A2 risk for necrotizing enterocolitis in preterm infants (Kelleher)
Doi: 10.1038/pr.2017.54.

Hearing Impairment Prevention and Monitoring System for Incubator Newborns (Liu)
Doi: 10.3397/1.3702015
Doi: 10.3397/1.3677182

A national benchmarking study of febrile infant diagnosis and treatment (McCulloh)
Doi: 10.1542/hpeds.2016-0162. PMID: 28729240

Intestinal Motility and Gastroschisis (South, Kingma)
Doi: 10.1055/s-0037-1607420 PMID: 29084414

Study of Erythromycinin GER-Associated apnea of the newborn (Ballengee, Davalian)
Doi: 10.1097/MPG.0000000000002086, PMID: 29985874

Contribution of the airway microbiome to chronic lung disease in premature infants (Mourani)
PLOS ONE 12(1): e0170120. Doi: 10.1371/journal.pone.0170120.
Doi: 10.1080/14767058.2017.1407310. PMID: 29157044

Biomarkers of eosinophilic esophagitis in infants and young children (Fiebiger)
Doi: 10.1186/s40413-016-0114-3
Doi: 10.1016/j.jim.2011.08.018. PMID: 21903095

Translational development of novel neonatal vaccine adjuvant (Oh)
Doi: 10.1074/mcp.M115.055541

Peripheral blood neutrophil gene expression during neonatal sepsis (Wynn)
Doi: 10.2119/molmed.2015.00064, PMID: 26052715
Effect of packed red blood cell transfusions on intestinal inflammation (Ho)
Doi: 10.1038/jp.2015.73

Evaluation of accelerator mass spectrometry to determine optimal drug dosages in infants (Blood)
Doi: 10.1002/jcph.327
Doi: 10.4155/BIO.12.173

Genomics of lung inflammation in preterm infants and machine learning approaches for discovering the molecular basis of neonatal lung disease (L Prince)

Doi: 10.1159/000494070
PMID: 31118442.
PMID: 31959980.

Effect of prenatal medications on kidney injury in premature infants (A El Samra)

DOI: 10.1055/s-0041-1723829.

The Efficacy of Intravenous Acetaminophen on Patent Ductus Arteriosus Closure in Preterm Neonates (K Tauber)

Doi: 10.1002/hsr2.183.

Efficacy and safety of acute normovolemic hemodilution in pediatric cardiac surgery patients (Crescini)

Doi:10.1111.aas.13095. PMID: 29504128

Effect of delayed cord clamping on chronic intermittent hypoxia in extremely premature infants (Abu Jawdeh)

Doi: 10.1038/pr.2017.10. Epub 2017 Jan 18.
Doi: 10.3389/fped.2017.00253.
PMID: 28099422
Doi: 10.1111/trf.14808.

Neurological consequences of emboli burden during cardiopulmonary bypass (Bashford)

Doi: 10.1177/2150135120909761

Evaluation of a comprehensive neonatal resuscitation and adaptation score (Jurdi)

Doi: 10.1038/s41372-018-0189-5

Multi-site assessment of the effectiveness of the early knee prosthetic prescription protocol for young children (Geil)

Doi: 10.1371/journal.pone.0231401

Nucleotide signaling in the genesis and treatment of autism (Zolkipli)

Doi: 10.1371/journal.pone.0057380

Mode of delivery and cerebral autoregulation in neonates with congenital heart disease (Votava-Smith)

Doi: 10.1016/j.jtcvs.2017.05.045. PMID: 28634025

Biomarkers for necrotizing enterocolitis (Good)

Doi: 10.1586/1744666X.2014.913481. PMID: 24898361

Improving visual outcomes in infants with cataracts (Birch)

Doi: 10.1016/j.jaapos.2011.11.007. PMID: 22525172. PMC 3614087

Biomarkers of kidney growth and renal function in low birth weight infants (Bunchman)

Doi: 10.1007/s00247-010-1605-y

Rotavirus vaccine and prevention of hospitalization (Desai)

Doi 10.1016/j.vaccine.2010.09.013. PMID 20851087

Characterizing Electrographic Seizures in the preterm brain (Mathur)

Doi: 10.1016/j.clinph.2018.02.129, PMID: 29729590

Early Detection of Progressive kidney Disease in Preterm Infants (Abitbol)

Doi: 10.1016/j.jpeds.2014.01.044.
Doi: 10.1007/s00467-016-3327-3
Doi: 10.1017/s2040174417000113

Brain temperature in HIE infants undergoing hypothermia therapy (Wu)

Doi: 10.1016/j.jpeds.2014.07.022

Measuring function and development of the preterm newborn brain via multimodal neuromonitoring during birth resuscitation (Katheria)

Doi: 10.1016/j.jpeds.2018.02.065
Doi: 10.1038/s41372-021-00942-w

California late impact of phototherapy study (Wickremasinghe)

Doi: 10.1542/peds.2015-1353

Urinary biomarkers in preterm infants (Charlton)

Doi: 10.1038/pr.2012.63

Targeted therapy for retinoblastoma and neuroblastoma (Xu)

Doi: 10.1038/nature13813

Deep soft tissue manipulation for children with spastic Cerebral Palsy (H Feldman)

Doi: 10.1177/2156587211430833
Doi 10.3389/fped.2015.00074. PMID: 26442234

Testing and empiric therapy for neonatal herpes simplex virus (Brower)

Doi: 10.1542.hpeds.2015-0166, PMID: 26740558

Determination of the ideal systemic vascular resistance for patients recovering from Stage 1 palliation for critical congenital disease (Kheir)

Doi: 10.1017/S1047951118001385.
Doi: 10.1111/aas.13225.
Doi: 10.1016/j.athoracsur.2018.05.068.
Doi: 10.1213/ANE.0000000000003308.
Doi: 10.1016/j.jtcvs.2018.02.101.
Doi: 10.1016/j.jtcvs.2018.02.106.

Evaluation of pain assessment techniques in premature infants (Tutag-Lehr)

Doi: 10.1097/AJP.0000000000000126. PMID 24918475

Development of an adverse drug reaction assessment tool for newborns (Wei Du)

Doi: 10.1177/0091270011433327. PMID 23400748

Study of Wilm's Tumor in children (Bin Tean Teh)

Doi: 10.1158/0008-5472.CAN-08-0592, PMID: 18519660
Doi: 10.1158/1078-0432
Doi: 10.1058/0008-5472.CAN-06-4571

Environmental Hazard related articles

Nutritional evaluation of methadone-exposed mother-infant dyads (Bogen)

Doi: 10.3109/10826084.2011.635324. PMID: 22217127
Doi: 10.1089/bfm.2010.0060

Potential toxicity of plant sterols in infants receiving intravenous nutrition (Nghiem-Rao)

Doi: 10.1038/pr.2015.78
Doi:10.1016/j.jacl.2016.03.005
Doi: 10.1177/0884533616663487. PMID: 27540004.
Doi: 10.1038/s41390-019-0391-y. PMID 30965357

Pregnancy exposures to pesticides as risk factors for structural birth defects in infants (Shaw)

Doi: 10.1093/aje/kwt324.
Doi: 10.1002/bdra.23263

Does pesticide exposure in pregnancy cause fetal DNA imprinting? (Winchester)
PLoS ONE 12 (9): e0184306. Doi 10.1371/journal.pone.0184306

Evaluation of iodine supplementation on reduction of perchlorate levels in breastmilk (Dasgupta)
Doi: 10.1289/dhp.9558
Doi 10.1016/j.scitotenv.2012.01.045
Doi: 10.1021/es801549w PMID: 19031911
Doi: 10.1016/j.ab.2008.10.015
Doi: 10.1021/es8020952

Toddler development and aluminum concentrations in body tissues (A Woolf)
Doi: 10.1016/j.acap.2017.09.003, PMID: 28919482.

Immune function in children exposed to organophosphate flame retardants (K Hoffman)
Doi: 10.1016/j.envint.2020.106009 PMID: 32771876
Doi: 10.1021/aces.estlett.0c00794.

Mercury in donor blood: Hazard to preterm infants (Bearer)
Doi:10.1038/s41390-019-0635-x

Detection of Marijuana Metabolites in Human Milk (Chambers)
Doi: 10.1542/peds.2018-1076

Detection of marijuana metabolites in human milk (Chambers)
Doi: 10.1542/peds.2018-1076

Study of low dietary iron and risk of lead poisoning (Bressler)
Doi: 10.1177/0960327107070573
Doi: 10.1016/j.taap.2007.02.001

Study of effects of tungsten exposure on development of leukemia (Witten)
Doi: 10.1007/s10661-006-9440-1, PMID: 17131081
Doi 10.1016/j.spgeochem.2005.09.012
Doi: 10.1016/j.cbi.2011.04.008. PMID: 21565177
Doi: 10.1038/news031208-3
Doi: 10.1191/0748233703th185oa

NATIONAL RESEARCH GRANT GUIDELINES

FOUNDATION GOALS
The Foundation's mission focuses on infants and young children. Accordingly, priority is given to projects that improve the nutrition, care and development of infants and young children from the first year before birth to three years of age.

The Foundation is particularly interested in fresh approaches to solving common, everyday problems or emerging issues within our defined program areas. Projects should be focused on issues faced by care providers that, when implemented, will improve the health, nutrition and/or developmental outcomes for infants and young children. Projects may include research on etiologic mechanisms, diagnostic procedures, reduction of side effects or symptoms, therapies or treatment, dosing (under or over) for drugs, nutrients or other therapeutics, or preventative measures. Projects may be focused on small incremental changes with defined outcome parameters.

The Foundation gives priority to projects of national or regional impact. Foundation support is not typically ongoing. Project outcomes should be of sufficient impact, if successful, to generate long-term support from other sources.

PRIMARY INTERESTS
The Foundation has three primary categories of interest in its national grant-making program:

Pediatric Nutrition. These projects respond to a long-time interest of the Foundation in assuring adequate nutrition for infants and young children. Projects include applied research that evaluates the provision of specific nutrients and their related outcomes in infants and young children.

Pediatric Health. Projects in this category respond to the Foundation's interest in promoting health and preventing disease.

We are especially interested in applied research focused on preventing serious neonatal and early childhood illnesses, and on preventing the development of serious, chronic illnesses later in life. We also welcome research that evaluates or improves cognitive functioning in infants and young children, or the social and emotional aspects of development.

Environmental Hazards. Finally, we are interested in research that evaluates the effects of environmental hazards on infants and young children and, ultimately, promotes children's health and well-being. Projects might include applied research that documents the impact of, or ameliorates the effect of, environmental hazards on the development of infants and young children.

WHAT WE DO NOT FUND
While we endeavor to maintain a high degree of flexibility in our programming, we do observe several practical limitations. We do not make grants or loans to individuals. Outside the West Michigan area, we do not support capital campaigns, operating support, event sponsorship, exclusive food or baby products giveaway programs, national child welfare programs, international based programs, or product testing for commercialization purposes.

WHO CAN APPLY
Organizations recognized as tax-exempt under Internal Revenue Code 501(c)(3) or a federal, state or municipal unit exempt from federal, state and local taxes are eligible to apply for Foundation grants. Organizations must also be determined not to be private foundations under Internal Revenue Code 509. No grants are made to individuals.

With few exceptions, only organizations with principal operations in the United States and its territories are eligible for funding. Within the United States, there is no geographic limitation to the Foundation's grant-making.

FUNDING LIMITATIONS
Projects requiring small grants (generally under $50,000) are typically local in scope and impact, and therefore may not be within the scope of national funding initiatives, with the exception of Novice grants made to young investigators. Novice research grants are limited to $20,000 and all other research grants are limited to $350,000 over a maximum 3-year period. The researcher should clearly describe the impact Foundation dollars will have on the course of the project.

In some cases, projects are best funded by multiple funders to provide evidence of broad acceptance of the project concept or potential outcome. At other times, the role of single project donor is appropriate. In either instance, you should make the case for your funding plan.

HOW TO APPLY

Step One: Review Foundation interests and limitations above.

In all of our grant-making, the Foundation is particularly interested in fresh approaches to solving common, everyday problems in our defined program areas, approaches that, if proven successful, can generate long-term support from other sources, research and interventions that promote the health and well-being of infants and toddlers up to the age of three, and approaches and activities that lead to systemic change. We welcome and encourage contact from researchers at any time.

Step Two: Review general application guidelines and procedures.

General application guidelines and procedures can be found under the "Pediatric Research" tab on our website (www.gerberfoundation.org).

Step Three: Submit a letter of inquiry/ concept paper.

The concept paper should outline the hypotheses to be examined, the methods to be used, and the type of result to be anticipated. A cover letter should provide information on the researcher and the organization. Submission is through our online system at https://gerberfoundation.smartsimple.com. The letter enables the Foundation staff and Trustees to determine the relevance of the proposed project to the Foundation's interests. Concept papers are due May and November 15th by 4pm eastern of each year.

Step Four: Submit full proposal.

If the concept paper is accepted, the full proposal will be submitted online. Proposal deadlines are February and August 15 at 4 p.m. Eastern of each year.

REVIEW PROCESS

Organizations seeking grants should begin the application process at least six months before the start of the proposed grant period. Concept papers are initially reviewed by program staff and select Trustees. If recommended for a full proposal, the full proposal is subject to review and approval under guidelines established by the Foundation's Board of Trustees.

Grant awards are approved within 6 months, by the end of November or May.

CONTACTING THE FOUNDATION

For questions, contact the Program Manager, Catherine Obits in writing at 4747 West 48th Street, Suite 153, Fremont, Michigan 49412-8119. You may phone us at (231) 924-3175. Our fax number is (231) 924-7906, and our email address is tgf@gerberfoundation.org.

APPLICATION PROCEDURES

Full Proposal Format

The Full Proposal provides an in depth description of the project, enabling the Foundation to assess the scientific merit and quality of the research. Both lay and medical professionals will review the proposal. Medical jargon should be limited, where feasible. (Please use lay terminology).

The proposal includes the following information: Each heading here refers to a tab in the application system.

PROJECT INFORMATION

1. Covering letter, signed by a senior administrative official of the applying organization, briefly describing the applicant organization and endorsing the project. Note: this carries over from the concept paper but you have the option to delete it and upload a new one if you wish
2. Synopsis/abstract of the proposal, including hypotheses, methods, and expected outcomes
3. Planned target enrollment by year and by group
4. Study design (randomized, observational, proof of concept, etc)
4. Hypothesis(es) and objective(s)
5. Uploaded proposal narrative (Limit 15 pages, double spaced in pdf format). This is the main source of proposal information and should include:
   - Goals, objectives, and methods to be used
   - Size of the population to be studied in terms of age, gender, ethnicity, the source of subjects, and the recruitment process
   - Description of evaluation measures in place or planned to assess project results and outcomes
   - Expected impact of the project nationally or regionally, potential for project replication or ways in which the project responds to the Foundation's preference for broad impact projects
6. Uploaded schedule/timeline of events (in pdf format). Include time periods for achieving enrollment targets of 25%, 50%, 75% and 100%
7. Outcomes/measures to be used
8. Plan for acknowledging Foundation support

TEAM INFORMATION

1. List of team members and contact information
2. Uploaded biosketches of principal investigator and significant support staff
3. Novice researchers should include their mentor in the team list and provide a biosketch for the mentor

BUDGET

1. Uploaded line item project budget, by year. If a multi-year project, travel to a conference is not allowed in year 1. Indirect costs are limited to 10%. Salaries: Percentage of time applied to grant for PI and Co-PI's will not exceed 30% per person. Base salaries for PI and Co-PI's will not exceed the base salary imposed for NIH grants.
2. Plan for project funding, including a description of any current or requested funding from other major donors
3. Budget narrative summary including description of duties of investigator and staff

ORGANIZATION INFORMATION

1. Pre-award contact information (Development officer)
2. Uploaded brief description of applying organization, its current programs, services, and population(s) served
3. Uploaded board roster, indicating names and affiliations of the organization's governing board
4. Uploaded most recent Independent Audited Financial Statement. This must include the balance sheet, statement of revenues, and cash flow statement from an independent auditor (not internal or governmental audit).
5. Uploaded IRS documentation indicating that the applying organization is tax exempt and is not a private foundation (for non-government agencies)

OTHER DOCUMENTS

1. Uploaded statement of collaborations with other institutions (sub-contracts, etc.)
2. Uploaded Informed Consent documentation for human subject studies. Please provide a draft if not approved yet.
3. Uploaded Scientific references
4. Optional items (uploaded)
   - Letters of support from organizations with key input or interest in the project
   - Relevant news articles
   - Organization's annual report
   - Organization newsletters

Due dates are February 15 and August 15 of each year.
Applications are submitted through https://gerberfoundation.smartsimple.com
Individuals seeking assistance with their proposal may contact the Foundation at any time.

"There can be no keener revelation of a society's soul than the way in which it treats its children."

- Nelson Mandela

West Michigan

The year 2020 proved to be a difficult year for local non-profits. Maximum flexibility was the rule as local non-profits shifted to online or curbside services, due to the pandemic. Extra time and extensions to grant timelines along with consideration for the added costs of adjusting to this new format for service delivery were provided where needed. Additional special grants were made to support critical services such as food pantries to assist with the growing numbers of unemployed individuals and families requiring support.

As the Foundation learned of the status of each project and the agency's ability to carry on the funded activity, decisions were made regarding extensions and payment timing. When funds were identified that would not be expended in 2020, alternate grants were made to support necessary services. For example, because of significant increases in childhood food insecurity, one-time special donations were made to foodbanks at TrueNorth, Love INC, and Trinity Lutheran Church of New Era and to a local Hand2Hand Program.

The Foundation maintained its focus on youth and youth development through the grants awarded. Several agencies stepped up to meet the needs of our youth and demonstrated commitment, innovation, and agility. Examples of youth services offered in a COVID safe environment or through a virtual experience model include:

- The Grand Rapids Children's Museum developed educational Play@Home Kits and, partnering with TrueNorth, kits were mailed to 300 low-income families in Newaygo County.

- The Lakeshore United Way and the Newaygo County RESA received $10,000 each in support of the Dolly Parton Imagination Library Program, adding to the number of children under the age of 5 receiving books through the mail.

- Junior Achievement of the MI Great Lakes sponsored their Empowering Kindergarten Students program by providing free online access to their financial education and distributing workbooks to kindergarten students at their homes.

- National Inventors Hall of Fame Camp Invention STEM Program for the classroom became Camp Invention Connect. Children received boxes filled with all the materials they would need for the virtual learning sessions that were hosted by local teachers.

- Lake County 4-H leaders mailed 4-H members STEAM learning kit projects, complete with supplies and instructions for hands-on learning.

- Utilizing music mentors and Zoom, the West Michigan Symphony (WMS) provided virtual visits to classrooms. Students participated in an interactive concert with the WMS and the concert was recorded and streamed to schools.

- The National Kidney Foundation of Michigan successfully pivoted offering their preschool health and wellness Regie's Rainbow Adventure programs to an online format using different video and learning platforms.

- The Newaygo County 4-H Council revised Ag Adventures 2020 by providing agriculture curriculum and education resources directly to teachers. Classroom kits were sent to nine schools impacting over 600 youth.

- Harbor Hospice Camp Courage made connections with campers by mailing monthly care packages, grief support activities and journaling sheets. Campers also had access to online videos. Caregivers were provided with additional educational resources on how to support their children in the grief process.

- Supporting children with cancer, Camp Quality Michigan offered a virtual camp option mailing each camper a backpack filled with craft supplies, music activities and a camp t-shirt. Daily Zoom meetings were held for campers to share their projects and visit with other campers.

- Using COVID-careful distribution protocols TrueNorth Community Services continued to operate their youth programs with great success. Distributions included car seats, backpacks full of school supplies, and winter coats along with hats, mittens and other warm outerwear. Food distribution of weekend meals totaling 10,323 packs were distributed with the help of Newaygo County schools.

In summary, 69 grants were awarded totaling $386,957. Grants continued to support the six main focus areas of West Michigan grants – Health and Nutrition (15%), Early Childhood/Literacy (18%), Education (15%), Life Experiences (28%), Other Youth programs (19%), and Parenting (5%) across the four counties of Newaygo, Oceana, Lake and Muskegon.

WEST MICHIGAN GRANTS

Access Health Inc	
Muskegon Heights Youth Initiative Summer Program	**7,000**
American Heart Association	
Parent and Teacher CPR and First Aid training	**5,000**
Arbor Circle	
Muskegon and Newaygo Total Trek Quest Program	**4,000**
Baldwin Family Health Care	
New Mother education materials	**450**
Bellwether Harbor	
PetPals Education and Dog Bite Prevention Starts Young	**3,000**
Blue Lake Fine Arts Camp	
Camp Scholarships	**4,000**
Boys and Girls Club of the Muskegon Lakeshore	
STEM Education	**5,000**
Camp Henry	
Camp Scholarships	**4,000**
Camp Newaygo	
Hands on STEAM, G3 Get Outside! Get Environmental! Go Green!	**10,000**
Speak UP! 2.0	**3,000**
Camp Scholarships	**6,000**
Camp Pendalouan	
Camp Scholarships	**4,000**
Camp Pinewood	
Camp Scholarships	**4,000**
Catholic Charities West MI	
Muskegon & Oceana Healthy Families America & Teen Parent Program	**14,000**
Close Up Foundation	
Close Up program	**8,000**
City of Fremont	
Newaygo County Shop with a Cop	**500**
Community enCompass	
Youth Empowerment Project (YEP)	**3,000**
Croton Township	
Croton Township Summer Recreation Program	**2,000**
Gerald R. Ford Council, Boy Scouts of America	
Scoutreach Muskegon County	**1,000**
Grand Rapids Children's Museum	
Play@Home Kits	**10,000**
Grant Public Schools	
Readers into Leaders	**1,600**
Hand2Hand	
Weekend Food Backpack program (Health Care Fund)	**5,000**
Weekend Food Backpack program	**5,000**

Harbor Hospice	
Camp Courage	**1,000**
Helen DeVos Children's Hospital	
2021 Gala	**3,500**
Holton United Methodist Church	
School Backpack program	**500**
Hospice of Michigan	
Camp Good Grief Program	**3,119**
Insight Pregnancy Services	
Client Services Programming	**2,000**
Joyful Strides Foundation	
Scholarships for Equine Therapy	**10,000**
Junior Achievement of the Michigan Great Lakes	
Get Started Saving: A Financial Education program for Kindergarten Students	**5,000**
Kids Food Basket	
Healthy Children Healthy Futures	**10,000**
Love INC	
Food Pantry (Health Care Fund)	**5,000**
Food Pantry	**12,500**
Mary Free Bed Hospital & Rehabilitation Center	
Youth Wheelchair and Adaptive Sports program scholarships	**4,700**
Mental Health Foundation of West Michigan	
Be nice. Program	**5,000**
MSU Extension - Lake County	
4-H Activity Learning Kits	**7,500**
Youth Archery Program	**2,000**
Michigan State University	
OsteoChamps program	**1,500**
Michigan Youth Teaching Rodeo Association	
RESPECT Initiative	**4,000**
Mission for Area People	
Supporting Muskegon County Children in Need	**2,000**
Muscular Dystrophy Association	
Summer camp scholarships	**700**
Muskegon Area District Library	
Wimmee's Words early literacy program	**5,000**
Muskegon Covenant Academy	
Food and Baby Pantry	**5,000**
National Inventors Hall of Fame	
Camp Invention	**5,000**
National Kidney Foundation of Michigan	
Regie's Rainbow Adventure nutrition program	**9,300**
Newaygo Area District Library	
STEAM Educational Resources	**2,000**

Newaygo Conservation District	
Hands on Science Exploration	**5,784**
Newaygo County Agricultural Fair Association	
4-H Fair Auction	**3,000**
Newaygo County Area Promise Zone	
Promise Zone Support	**20,000**
Newaygo County Council Prevention of Child Abuse	
Kids Have Rights Sexual Abuse Prevention	**6,400**
Newaygo County RESA	
Orton Gillingham Teacher Training	**10,000**
FIRST Robotics	**7,500**
4-H SPIN Club	**3,000**
Dolly Parton Imagination Library	**10,000**
Oceana County Early Learning Center	
Early Learning educational materials	**2,000**
Operation Warm	
Winter coat program for children	**5,000**
Pathfinders	
Urban Youth Learning & Exploratory Project	**4,000**
Reeths Puffer Education Inc	
Cartoonversation Read-Along	**3,000**
Ronald McDonald House of Western Michigan	
Family Support Program	**2,000**
Rose Lake Youth Camp	
Camp Scholarships	**2,960**
Springhill Camps	
Summer camp scholarships	**2,000**
Suicide Prevention Coalition	
Suicide Prevention QPR Community Trainings	**1,944**
Tall Turf Ministries	
Summer camp scholarships	**2,000**
Trinity Lutheran Church New Era	
Baby Pantry and Food Pantry	**7,000**
TrueNorth Community Services	
Food Pantry (Health Care Fund)	**5,000**
Food Pantry and Youth programs	**24,500**
2021 Youth Programs	**29,000**
United Way of the Lakeshore	
Dolly Parton Imagination Library	**10,000**
West Michigan Symphony	
Link Up Program	**5,000**
TOTAL WEST MICHIGAN GRANTS AWARDED:	**386,957**

Scholarships

While formal recognition of students was interrupted due to the pandemic, scholarships continued to be supported during this year. The application process was complete prior to the March shutdowns and selections of recipients were made within the normal timeline. Students were notified vie email and mail of their selection when awards ceremonies were cancelled.

Continuing the Gerber Foundation's 67-year tradition of providing scholarships for local students, scholarships were awarded to 86 students in 2020. The overall total for scholarships awarded came to just over $351,000. These scholarships are provided to graduating seniors from designated high schools in Newaygo, Muskegon, or Oceana Counties in Michigan. An additional 120 students continue to receive support from prior year selections.

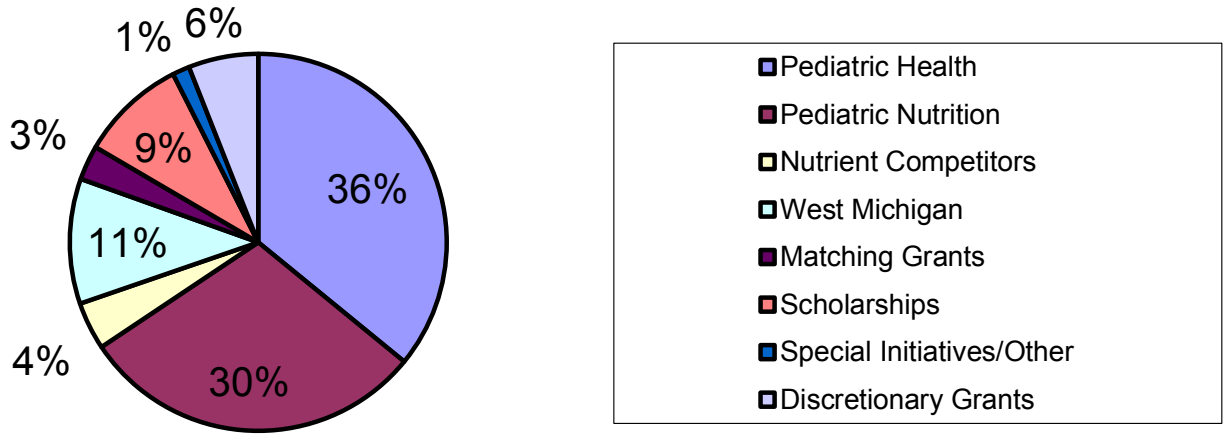
Twenty students received the Daniel Gerber Sr. Medallion Scholarship, available to Newaygo County students. This scholarship is worth $10,600 each.

The Gerber Foundation Merit Scholarship is awarded to students in all three counties. The scholarship provides $2,600 to each student. Forty-six students received this scholarship.

The Newaygo County Career-Tech Center scholarships are awarded based on the program that the student graduates from at the Center. Scholarships are provided to two students selected from each of the 14 programs offered. Scholarship amounts vary by program and range from $150 to $2,660. Scholarships can be used to purchase tools or equipment required for further study in their field, as well as certification exams or tuition. In 2020, 20 students received scholarships for a total of $19,403.

Summary of 2020 Grants Paid

		(Current and Prior Year Commitments)	
Pediatric Health	$	1,001,035	36%
Pediatric Nutrition	$	828,812	30%
Nutrient Competitors	$	114,373	4%
West Michigan	$	299,204	11%
Matching Grants	$	82,743	3%
Scholarships	$	254,014	9%
Special Initiatives/Other	$	41,000	1%
Discretionary Grants	$	167,000	6%
	$	2,788,181	100%



The Gerber Foundation
4747 W. 48th Street, Suite 153
Fremont, Michigan 49412
(231) 924-3175
www.gerberfoundation.org