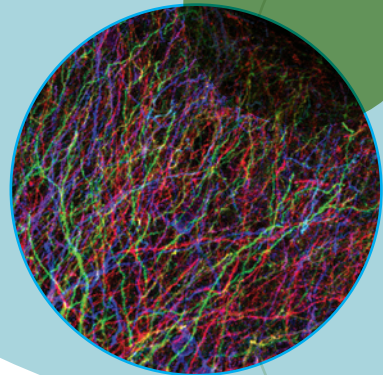


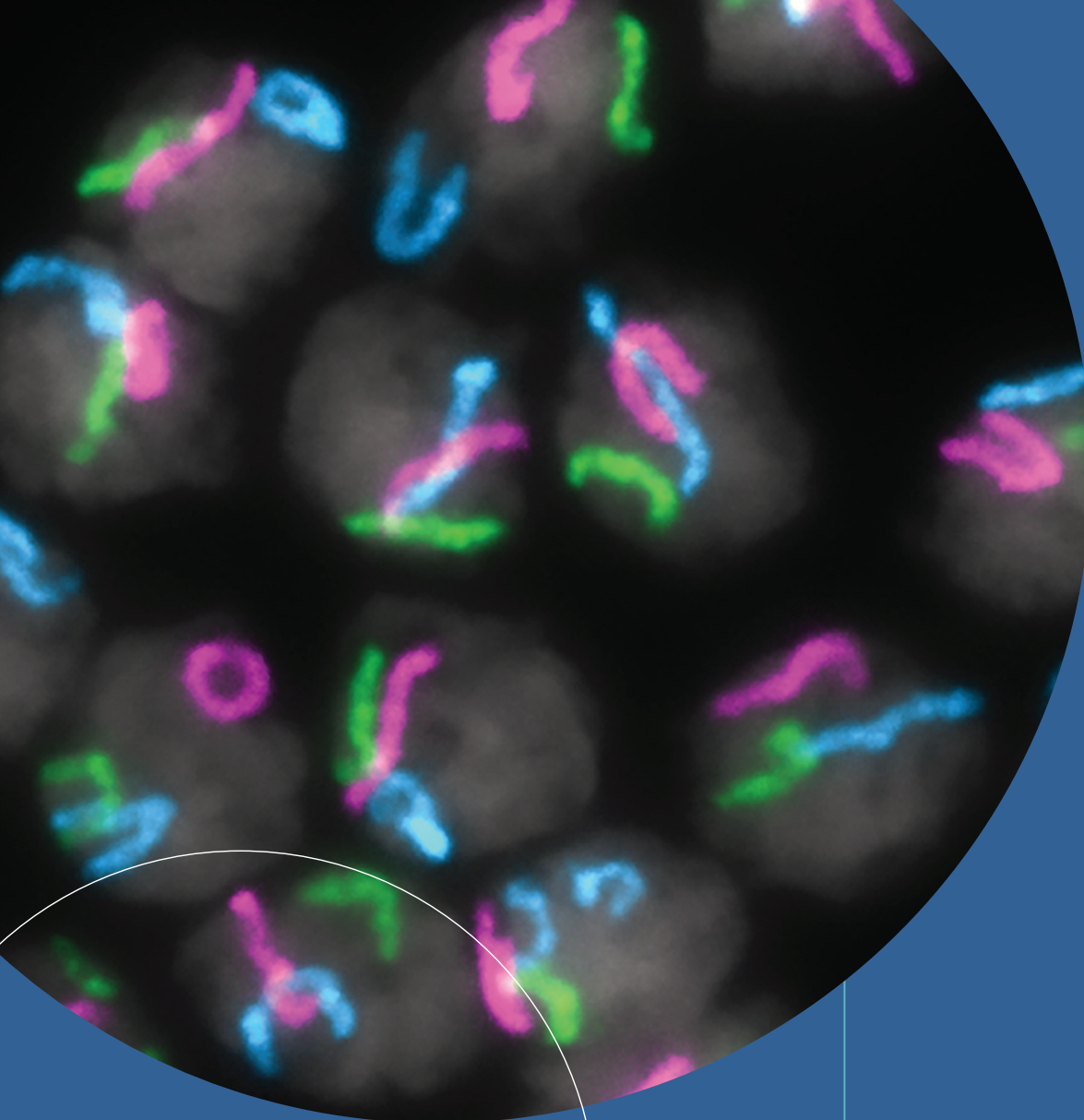
NICHD

Strategic Plan 2025

Healthy pregnancies.
Healthy children.
Healthy and optimal lives.



Eunice Kennedy Shriver National Institute
of Child Health and Human Development



Fluorescence microscopy image of chromosomes in pre-sperm cells from the silkworm, *Bombyx mori*. Three of the 28 chromosomes are labeled using the Oligopaint method, shown in pink, green, and blue. Total DNA is shown in gray. Credit: Rosin Lab, NICHD

Front cover, bottom right image: Cortical interneurons are individually labeled with a unique hue in transgenic Brainbow mice. Credit: Petros Lab, NICHD

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Mission

NICHD leads research and training to understand human development, improve reproductive health, enhance the lives of children and adolescents, and optimize abilities for all.

Vision

Healthy pregnancies.
Healthy children.
Healthy and optimal lives.

Director's Message



For more than 60 years, the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) has led research to improve the health of women, children, and people with disabilities. In the fields of developmental biology, gynecologic and reproductive health, child health and development, population dynamics, and medical rehabilitation, our longstanding commitment to research and training has facilitated new discoveries about health and disease and inspired investigators to confront the medical issues that affect people of all ages.

Today, the United States and the international community face an array of challenges that threaten to erode gains in public health. At the same time, technology breakthroughs, whether in genome sequencing or artificial intelligence, show promise for advancing medical care while raising new ethical issues. NICHD must remain well positioned to support the research and training needed to address these evolving challenges and opportunities.

Our 2025 Strategic Plan offers a fresh look at the institute's research objectives, goals, and aspirations. NICHD staff and external scientists and public representatives worked closely together to identify emerging scientific areas in which the institute can invest and lead, as well as partner with other institutes, centers, and agencies. We also learned from advocacy groups and people with lived experiences, who thoughtfully shared their stories and ideas with us. The remarkable amount of feedback we received during this process reflects the significance of our research to the public's health and well-being.

We are truly grateful to everyone who helped us bring this NICHD 2025 Strategic Plan to fruition. The process has provided us with the welcome opportunity to step back and evaluate progress on our 2020 Strategic Plan and consider the best way forward. Although we cannot anticipate all the challenges the future will bring, we believe that this plan provides a solid foundation for advancing health and quality of life for all Americans through research and research training.

Sincerely,

/S/

Diana W. Bianchi, M.D.

Director

Eunice Kennedy Shriver National Institute of Child Health and Human Development
National Institutes of Health

Introduction



Since its founding in 1962 (via 42 U.S.C. §285g), NICHD has advanced the health of our nation, conducting and supporting research, training, and health information dissemination with respect to gynecologic health, maternal health, child health, intellectual disabilities, human growth and development, population research, and special health requirements of mothers and children (for more details on NICHD’s statutory authority, visit [Appendix 1](#)). NICHD is one of the 27 institutes and centers within the National Institutes of Health (NIH).

NICHD’s organization includes the Office of the Director, the Division of Extramural Research, the Division of Intramural Research, and the Division of Extramural Activities. The institute is also home to the National Center for Medical Rehabilitation Research, which supports scientific programs and coordinates research efforts across NIH and the federal government to enhance the health and quality of life of people with physical disabilities (for more information on NICHD’s organization and functions, visit [Appendix 2](#)).

NICHD recognizes the need to regularly refine the institute's priorities to provide effective leadership of the nation's investment in its research. For this plan, NICHD updated institute priorities to build upon the progress from the NICHD Strategic Plan 2020 and capitalize on technological and scientific advances from the last five years.

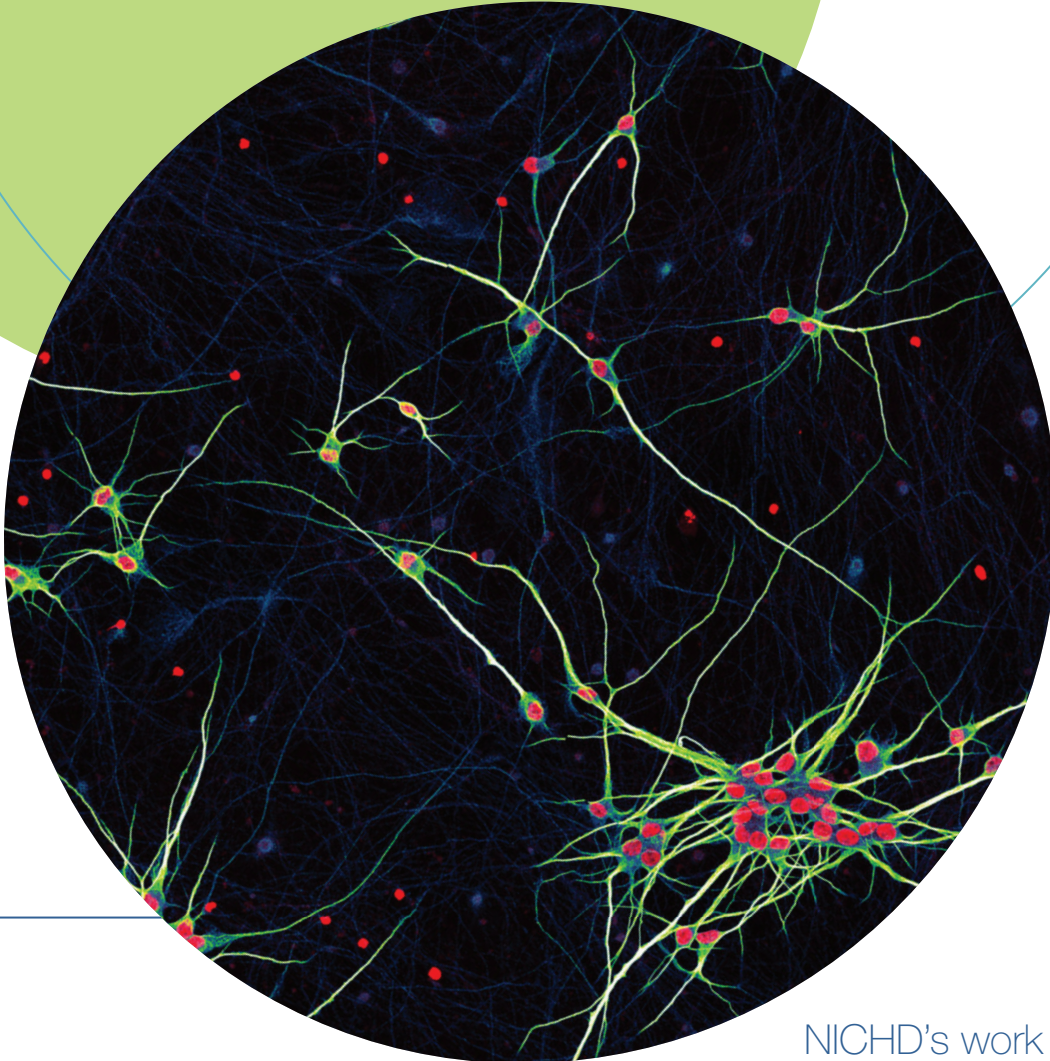
The NICHD Strategic Plan 2025 will guide the institute's activities over the next five years, establishing goals to drive scientific research and build research capacity, enhance scientific stewardship, and support effective management practices and accountability. NICHD adhered to three core principles to define goals and priorities for this strategy: transparency, evidence-informed decisions, and participation of both internal and external experts. The strategic plan is

the result of an institute-wide process that included close consultation with the external scientific community to identify priorities that reflect the current and emerging scientific landscape. The strategic planning process also included identifying measurable objectives and activities that map to refreshed scientific priorities (for additional information on the strategic planning process, visit [Appendix 3](#)).

The goals outlined in this plan drive progress toward NICHD's vision of healthy pregnancies, healthy children, and healthy and optimal lives. NICHD recognizes that its ambitious mission cannot be achieved alone. The goals in this plan will require collaboration across NICHD and with other NIH institutes and centers, federal partners, public and private entities, and the communities we serve.



Scientific Research



This confocal photo of human neurons was named an *Image of Distinction* in the 2024 Nikon Small World Photomicrography Competition. Credit: Saikat Ghosh, Ph.D., Bonifacino Lab, NICHD

NICHD's work encompasses the full range of scientific research, from the most fundamental studies at the molecular and cellular levels to the behavioral and clinical sciences.

The institute's strategic research priorities are presented under five broad goals:



The five overall research goals from NICHD's Strategic Plan 2020 have not changed. However, the research opportunities and scientific priorities within each goal reflect advancements in the scientific landscape and the resulting new opportunities for innovative scientific discovery. These goals will enable NICHD to focus efforts on critical public health challenges and advance scientific knowledge in these priority areas. Across these five broad goals, NICHD has identified specific research opportunities and scientific

priorities that represent new avenues to accelerate scientific progress. The institute will track its activities related to these goals and priorities; analyze the scientific, clinical, and public health impact of its research; monitor the effect of research capacity-building efforts; and periodically report on research initiatives and scientific progress to the public through the NICHD website, meetings and events, and through presentations to NICHD's advisory groups.

Cross-Cutting Themes

As established in the NICHD Strategic Plan 2020, several cross-cutting themes emerged from discussions on NICHD's public health and scientific priorities. These cross-cutting concepts are tightly interwoven with the scientific research goals. Substantial progress on the institute's scientific research goals and objectives will depend on NICHD's ability to integrate and advance research on these topics within the scientific research goals.

Health Disparities and Health Equity

NICHD's research aims to optimize health for all people. The institute recognizes that overall health is influenced by a wide range of biological, social, and environmental

factors, including safe and healthy environments, poverty, geographic location, and access to health care, among many others. Understanding the full range of social, economic, and structural factors that contribute to differences in health outcomes across various communities will inform research to develop innovative solutions to wide-ranging health problems.

To achieve health equity, NICHD is particularly interested in advancing evidence-based prevention, diagnostic, and intervention research that will improve maternal, infant, child, and adolescent health and birth outcomes; address social determinants of health; mitigate exposure to trauma and injury; facilitate medical rehabilitation outcomes; and promote healthy development throughout the lifespan.

Health Disparity Populations

NIH defines a health disparity as a health difference that adversely affects disadvantaged populations. NIH health disparity populations include:

- » Underserved rural communities
- » Racial and ethnic minority groups
- » People with lower socioeconomic status
- » Sex and gender minority groups
- » People with disabilities





Prevention

Prevention and health promotion are central to NICHD's mission. Establishing healthy behaviors and minimizing exposure to risk in early life sets a course for optimal lifelong health and development. Scientific understanding of the early origins of later disorders can help identify the best ways to approach prevention. To develop this knowledge, researchers need access to detailed, high-quality data on a range of conditions and exposures that occur from preconception through adulthood. Moreover, scientists will require better measurement and analytic tools to fully describe childhood risk factors and how they relate to short- and long-term health outcomes. These outcomes should not be limited to absence of disease, but also encompass measures of positive health and well-being.

New prevention approaches must be accessible and applicable to all people, including individuals with disabilities, pregnant women, lactating women, and children. People who may face greater health care challenges, such as those with chronic conditions and those who live in rural communities, need accessible and affordable interventions that can be provided outside of traditional high-cost clinical settings.

Infectious Disease

Infectious diseases, such as HIV, continue to pose a significant threat to maternal health and child development. At the same time, pathogens with previously unknown disease-causing properties constantly evolve and emerge. NICHD plans to improve the understanding of how infectious pathogens affect pregnant women and pediatric populations,



address the impact of infections on reproductive and overall health in children and adolescents, and advance safe and effective treatments for pregnant women, lactating women, children, adolescents, and people with disabilities.

Nutrition

Nutrition is critical to childhood growth and development and plays a central role in maintaining optimal health throughout the lifespan. New technologies and methods allow scientists to characterize the complex biology of nutrition and the potential beneficial effects of diet on disease prevention. –Omics technologies, including metabolomics, and discoveries related to the effects of diet on the microbiome have emerged as important areas of research. These new avenues for scientific discovery will elucidate the lifetime impact of nutrition on fertility, pregnancy, and childhood growth.

NICHD supports the investigation of human milk as the optimal source of nutrition and mode of nutrient delivery to the infant, especially preterm infants. NICHD seeks to further understand the effects of maternal nutrition and length of gestation on human milk composition and envisions that this area of investigation will lead to precise age-appropriate standard requirements for infant feeding.

Global Health

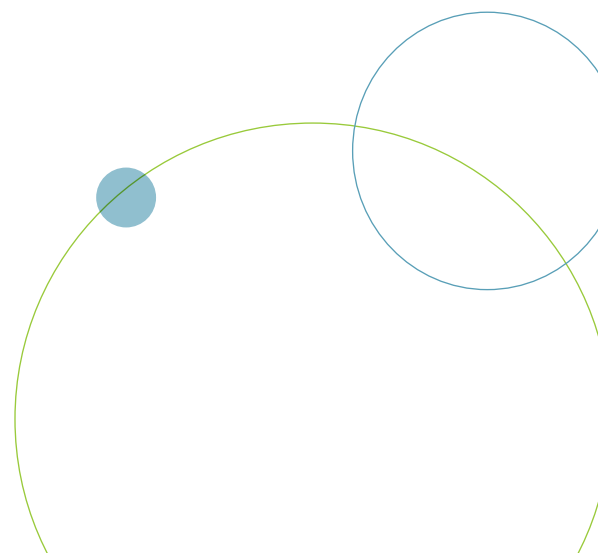
A scientific discovery anywhere in the world will benefit individuals around the globe. The rates of maternal and child survival and long-term health outcomes have improved globally because of research supported by NICHD and other agencies. Recent advances in the treatment of infectious diseases have enabled a shift to research aimed at prevention and early intervention for chronic conditions among at-risk children and adults. New interventions to improve reproductive health will help benefit pregnancy outcomes and prevent prematurity, malnutrition, childhood stunting, disease, developmental delays, and disability. Studying populations globally will improve domestic capabilities to address disease and risk factors among the culturally diverse U.S. population. Finally, new technologies are emerging to improve assessment and intervention for people with intellectual, developmental, and physical disabilities worldwide, and NICHD will support research in this area.

Advanced Technologies and Artificial Intelligence

New technologies such as artificial intelligence (AI), advanced bioinformatics, and related tools have presented opportunities for scientists in a wide variety of biomedical fields. For example, researchers can use AI to analyze patterns in their data and identify therapeutic targets, speeding up the drug discovery process. AI can also help improve the functionality of prosthetic devices and address diagnostic challenges for a wide range of conditions. For example, using AI and advanced techniques to analyze the path of arm movements, NICHD researchers were able to distinguish a high proportion of children with autism spectrum disorder from typically developing children and from neurotypical adults. Using AI and related methods, another group of researchers was able to double the rate of accurate genetic diagnosis compared to previous methods, and to do so more rapidly and at lower cost. NICHD is particularly interested in capitalizing on the full potential of these new tools and technologies to improve understanding of complex developmental mechanisms; advance maternal, infant, child, and adolescent health and birth outcomes; improve medical rehabilitation outcomes; and accelerate the time to market for new therapeutics.

Research Training and Career Development

Obtaining the skills and knowledge to conduct biomedical research takes years of effort. Moreover, because science is complex and unpredictable, young scientists need the time and tools to explore complicated research questions in depth. NICHD's commitment to researchers encompasses training and career development at all stages of a scientific career. The institute provides funding for many graduate students and postdoctoral fellows across the United States who represent the next generation of the scientific workforce. NICHD aims to launch the careers of highly talented people who are motivated by scientific discovery and driven to help others. Moreover, as part of this strategic planning process, NICHD identified areas of biomedical research in which workforce training must adapt to meet growing needs. These imperatives include maximizing the benefits of physician-scientist training, expanding the data science workforce, and promoting cross-training of basic scientists, behavioral and social scientists, and clinical researchers to maximize opportunities for health advances.





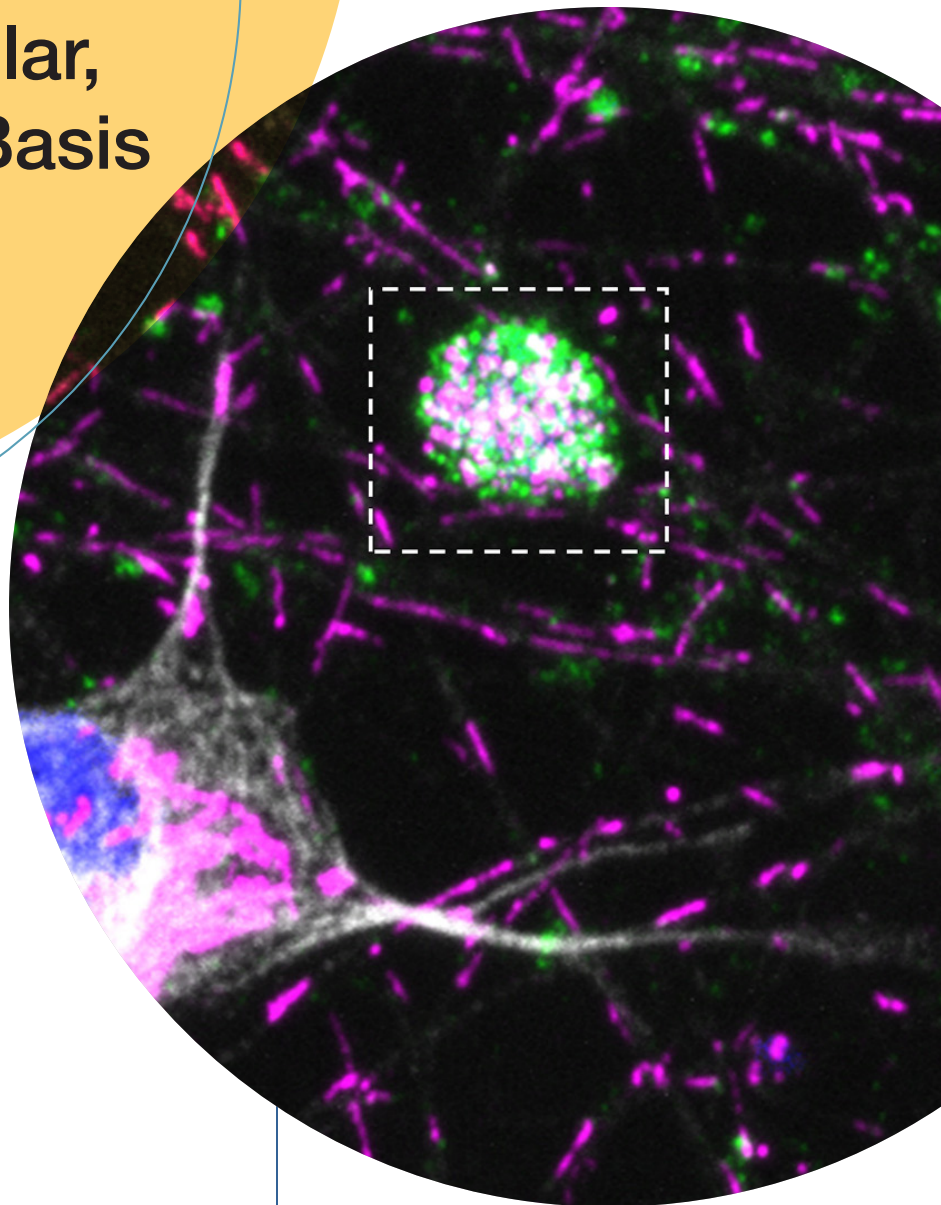
Goal

1

Understanding the Molecular, Cellular, and Structural Basis of Development

Goal Statement

Enhance knowledge of transcriptional and translational networks at a variety of levels, enabling scientists to more fully describe the intrinsic processes and the role of extrinsic factors in typical and atypical human development.

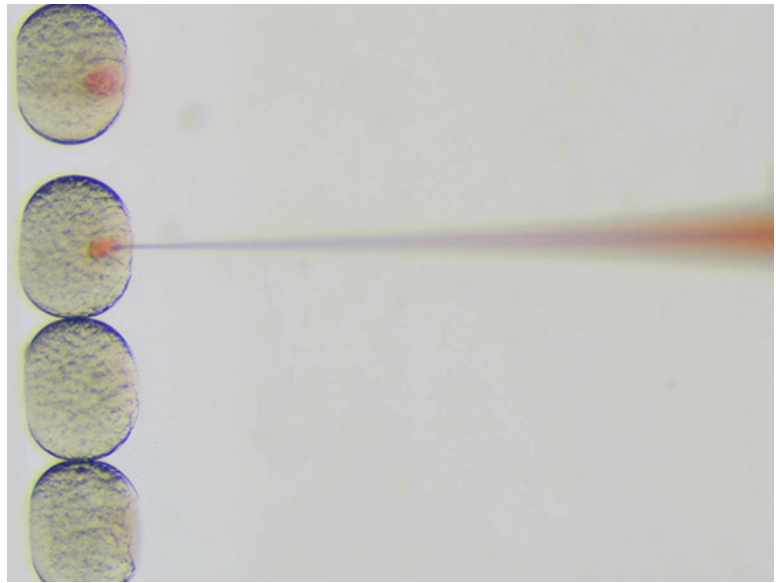


• Fluorescence microscopy image of neurons with defective lysosome transport and fusion. Mitochondria are in purple, and autophagosomes (vesicles in which cellular components are degraded) are in green. Credit: Raffaella de Pace, Ph.D., Saikat Ghosh, Ph.D., Bonifacino Lab, NICHD

Research Opportunities

Investment in understanding typical developmental processes provides the foundation to characterize underlying mechanisms of congenital conditions, such as structural birth anomalies, neurodevelopmental disorders, and intellectual and developmental disabilities. The complex processes underlying early human development have long been difficult to understand. Although scientists have known that regulatory molecular networks control development and differentiation of cells, observing these networks in action has been especially challenging. Now these processes can be scrutinized with new technologies. Powered by computational biology, AI, and advanced imaging techniques, researchers are better able to follow early development at the single-cell and tissue levels. Further advances in methods for temporal and/or spatial transcriptome analysis can help scientists map the intrinsic procedures that underlie development across the lifespan. This expansion of fundamental knowledge may also allow researchers to harness developmental pathways and growth factors to create regenerative interventions.

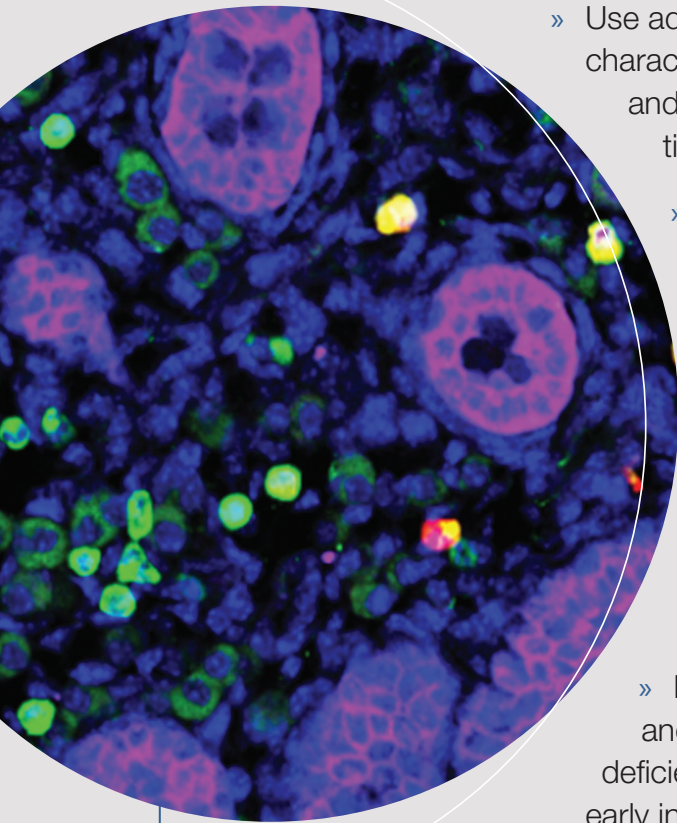
Advances in the basic sciences of developmental biology can pave the way for scientists to identify environmental, nutritional, and other extrinsic factors that may raise the risk of congenital anomalies, intellectual and developmental disabilities, and other conditions that may not arise until



long after birth. As researchers are better able to characterize genetic and cellular variants in a wide variety of model systems and in humans, opportunities will emerge to recognize how extrinsic risk factors contribute to neurodevelopmental disorders. As this knowledge base grows, scientists will be able to identify prevention opportunities. These opportunities will grow in greater abundance, and their promise will arrive more quickly, with investment in infrastructure and the use of advanced analytical techniques, such as AI. With support from NICHD, scientists will rapidly and accurately discern the appropriate model systems and data analysis methods to address the most challenging research questions.

Transparent zebrafish embryos are injected with messenger RNA that introduces light-sensitive proteins to the organism. Credit: Allison Saul, Rogers Lab, NICHD

Scientific Objectives and Priorities

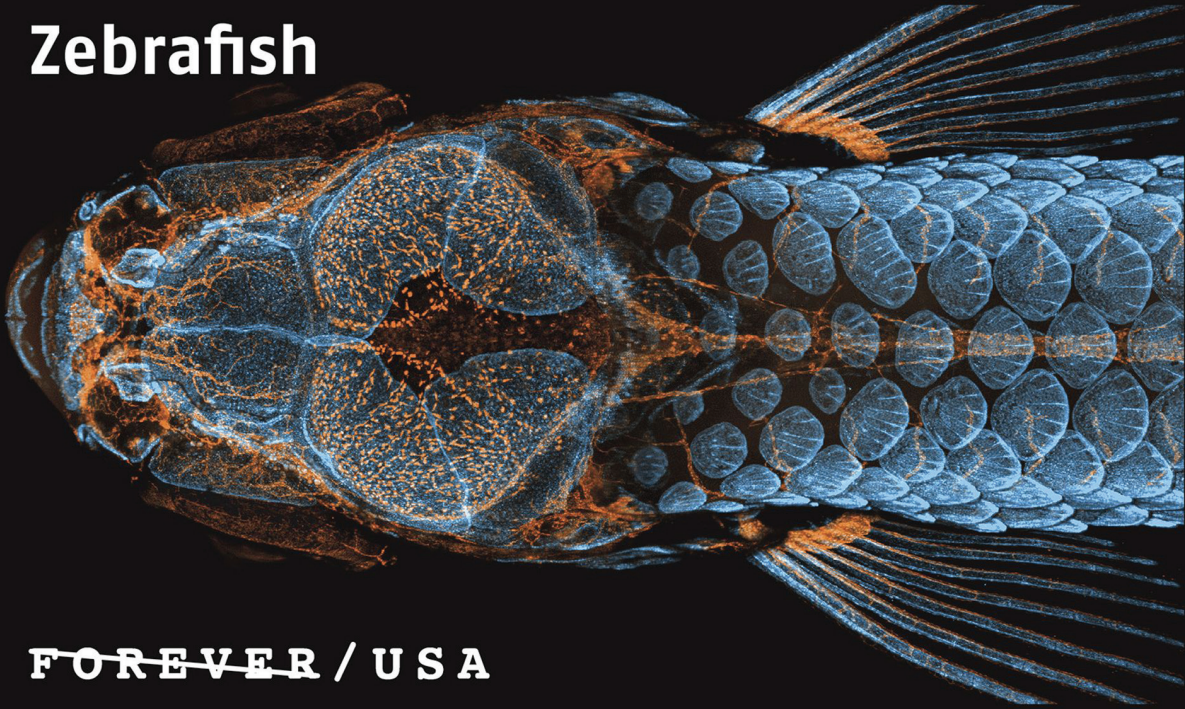


- » Use advanced analytical techniques, including AI, to characterize transcriptional and translational networks and profile gene, RNA, and protein expression across tissues and time during development.
- » Enhance collaborative and interdisciplinary developmental biology research by investing in improved infrastructure, tools, and technologies.
- » Improve understanding of the mechanisms underlying developmental processes by elucidating the intrinsic factors (such as cellular, molecular, genetic, epigenetic, metabolic, and biomechanical factors) that contribute to pre- and postnatal development.
- » Explore how extrinsic factors (such as prenatal and perinatal insults, metabolic and nutritional deficiencies, environmental factors, infection, and early injury) influence developmental and physiological processes, particularly in the context of addressing congenital anomalies, neurodevelopmental disorders, and intellectual and developmental disabilities.

Testicular macrophages are recruited during a narrow fetal time window and promote organ-specific developmental functions. Credit: X. Gu, et al. DOI: [10.1038/s41467-023-37199-0](https://doi.org/10.1038/s41467-023-37199-0). Funding: R01HD094698

Zebrafish

2023



~~FOREVER~~ / USA

The photo featured in this postage stamp was taken by Daniel Castranova, with assistance from former trainee Bakary Samasa, while working in the Weinstein Lab at NICHD. USPS® made the image part of its *Life Magnified* stamp panel in 2023. The image also received the top honor in the 46th annual Nikon Small World Photomicrography Competition in 2020. Stamp Credit: USPS®



Unveiling of the *Life Magnified* stamp panel at the USPS, August 10, 2023. Scott English, American Philatelic Society (left); Luke Grossman, USPS (right). Credit: USPS®

Goal

2

Advancing Gynecologic, Andrologic, and Reproductive Health

Goal Statement

Enable women and men to minimize the impact of gynecologic and andrologic conditions and support lifelong reproductive health.



Research Opportunities

Gynecologic and andrologic conditions have a major impact on quality of life for millions of Americans. Many girls and women experience conditions such as endometriosis, uterine fibroids, pelvic pain, polycystic ovary syndrome (PCOS), and pelvic organ dysfunction. Men and boys may experience undescended testes, cryptorchidism, hypogonadism, varicocele, and other andrologic conditions. Male and female reproductive health disorders can be complex clinically and present scientific challenges for researchers. However, recent advances have created opportunities to better understand reproductive health across the lifespan and to develop interventions that prevent and treat gynecologic and andrologic conditions.

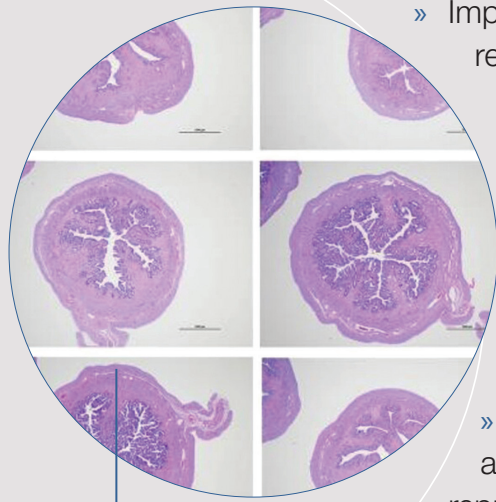
Understanding the basic biology of healthy reproductive development, especially the role of menstruation and endometrial biology, could lead to new avenues for preventing and

treating a wide range of conditions. NICHD is prioritizing research that expands fundamental knowledge of reproductive health across the life cycle and characterizes the role of reproductive aging. For example, characterizing critical windows such as puberty, andropause, and perimenopause and assessing how the timing of puberty affects reproductive development could lead to less-invasive options to treat infertility.

Expanding the options that allow people to manage their fertility will continue to be an area of focus for NICHD. Attention to social determinants of health in research studies could also help scientists uncover the reasons behind the gynecologic health disparities and lead to better outcomes for individuals with endometriosis, fibroids, pelvic floor disorders, and PCOS. Informed by studies of generalized pain conditions, research on gynecologic pain aims to prevent the transition from acute to chronic pain, improving the quality of life for millions of American women.

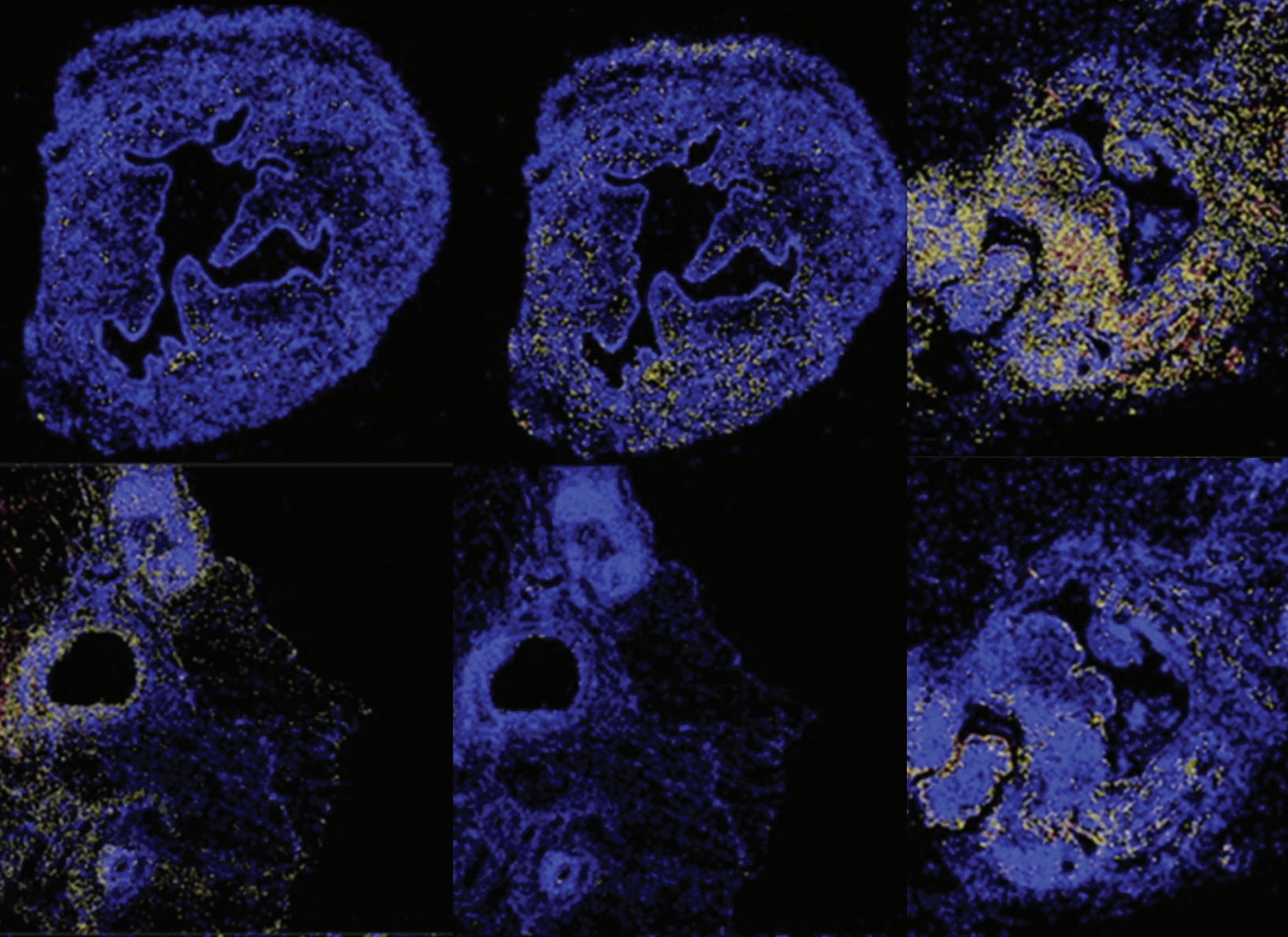


Scientific Objectives and Priorities



Cross-sections of rabbit uteri are used to evaluate progestogenic activity of a potential contraceptive agent. Credit: M.S. Lee, et al. DOI: [10.1093/biore/ioad111](https://doi.org/10.1093/biore/ioad111). Credit: Contraceptive Development Program, NICHD

- » Improve understanding of reproductive stages across the life cycle, with particular emphasis on typical and atypical initiation, timing, and symptomatology of critical windows such as puberty, andropause, and perimenopause.
- » Characterize reproductive aging and its impact on reproductive, andrologic, and gynecologic outcomes, particularly infertility and the health of children born to older parents.
- » Identify biologic and environmental factors that can lead or contribute to infertility in males and females. Apply this knowledge to expand technologies or methods for fertility stimulation, fertility preservation, and contraception.
- » Identify risk factors and biologic and psychosocial mechanisms underlying pelvic and generalized pain in gynecologic conditions, such as endometriosis, fibroids, vulvodynia, dysmenorrhea, and pelvic floor disorders, and prevent transition from acute to chronic pain.
- » Identify interventions for diagnosis and treatment of gynecologic conditions, including endometriosis, fibroids, pelvic floor disorders, gynecologic pain, and PCOS. Assess the impact of new and existing treatment approaches on gynecologic health disparities.
- » Improve understanding of the multilevel factors affecting contraceptive use and non-use and preferences for specific methods. Apply this knowledge to developing new and improved contraceptive options for both men and women and to designing interventions that improve access to and use of preferred methods.
- » Advance knowledge about the effects of contraceptives on human health, including their effectiveness as treatments for health conditions.



In situ hybridization of miR-21 expression and 18S rRNA expression in the mouse uterus and in mouse endometriotic lesions at three months post-induction of endometriosis. Hybridization intensity is displayed in yellow. Credit: M.A. Ochoa Bernal, et al. DOI: [10.3390/ijms25168994](https://doi.org/10.3390/ijms25168994). Funding: R01HD042280, R01HD083273, R01HD099090, F32HD104478, & T32HD087166

Goal

3

Setting the Foundation for Healthy Pregnancies and Lifelong Wellness

Goal Statement

Improve pregnancy outcomes to maximize the lifelong health of women and their children.



Research Opportunities

Pregnancy can be both a joyous and challenging time for families. Although most babies are born healthy, around 10 percent of infants in the United States are born preterm, and thousands of families are devastated by stillbirth. Pregnancy complications, such as preeclampsia, gestational diabetes, postpartum hemorrhage, and thromboembolism, endanger the health of women and infants. Pregnant women with pre-existing chronic conditions often do not have adequate scientific evidence about how their condition and its treatment may affect their infant.

NICHD continues to prioritize interdisciplinary research on preterm birth, with a focus on prevention. The institute is also focused on finding new ways to support preterm infants in the neonatal intensive care unit, and assessing the long-term outcomes from prematurity. By using advanced analytic techniques, researchers can assess how genetic, social, behavioral, and environmental factors affect pregnancy. Advances in this area can help scientists determine the biological underpinnings of pregnancy complications and identify new strategies to prevent maternal morbidity and mortality. The institute's scientific research programs can take advantage of large datasets and advanced analytical methods such as AI to better pinpoint how pre-pregnancy characteristics and experiences during pregnancy can increase or decrease risk. Further study



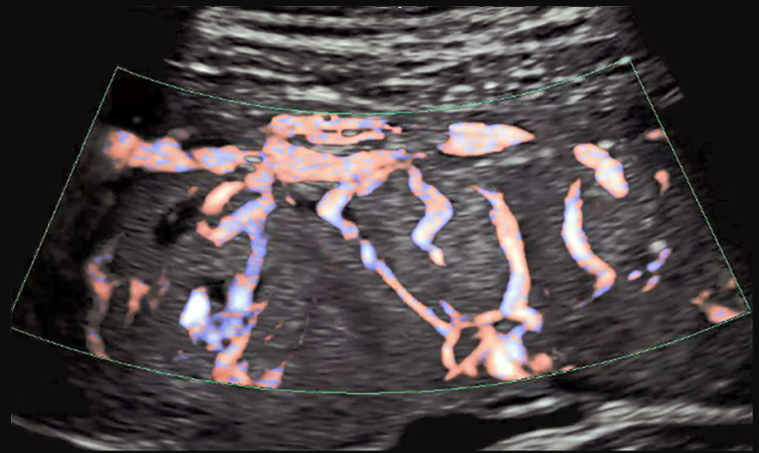
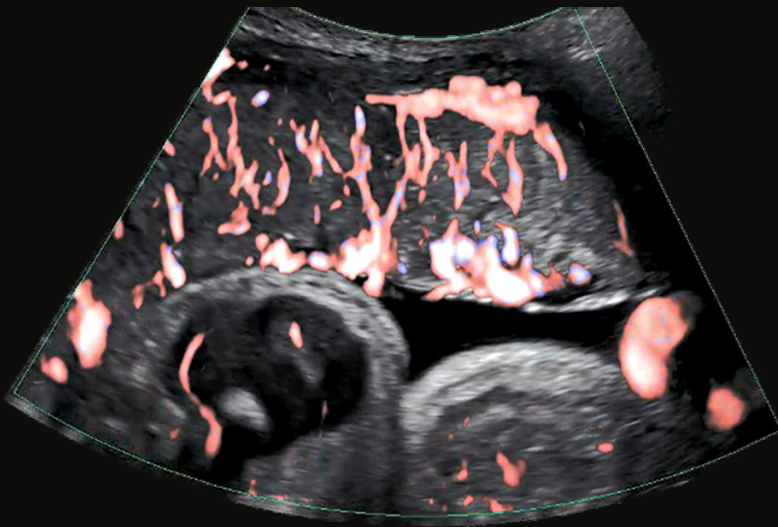
of the placenta, especially focused on how the placenta can protect maternal and fetal health, will play a key role in supporting this goal.

Because many women experience poor health outcomes in the postpartum period, NICHD will emphasize research on postpartum maternal health, including the long-term consequences of conditions that have their roots in pregnancy, childbirth, and postpartum health. Close attention to health disparities in maternal and infant health is also essential to addressing the unacceptably high rates of maternal mortality, stillbirth, and preterm birth in the United States. NICHD will support partnership approaches in which research teams work with local communities to address factors that can lead to preventable pregnancy-related morbidity or death for those at highest risk, including residents of geographic areas with limited access to maternal health care.

Scientific Objectives and Priorities



- » Capitalize on interdisciplinary collaborations to advance knowledge of the mechanisms and potential causes of preterm birth and to develop prevention approaches.
- » Improve the long-term outcomes of infants born preterm or with aberrant fetal growth by understanding the roles of maternal and paternal factors, social determinants of health, environmental and nutritional factors, and early interventions.
- » Use advanced analytical techniques to integrate and analyze diverse types of data, including genomic, social, behavioral, and/or exposure data, to inform interventions for adverse maternal conditions and complications of pregnancy.
- » Support community-informed research to develop maternal health interventions that are widely applicable, with an emphasis on populations experiencing health disparities.
- » Use innovative basic and translational science approaches to further understand the placenta, including its role in pregnancy outcomes and the long-term health of the mother and infant. Continue to develop technologies and methods for human placental models across gestation and test the ability of emerging technologies to assess placental health.
- » Develop prevention strategies for labor and delivery complications that contribute to maternal morbidity and mortality.
- » With an emphasis on populations that experience health disparities, identify new approaches to mitigate maternal and paternal risk factors for pregnancy-associated conditions with effects that extend through the postpartum period and beyond.



Ultrasound images show fetal (upper left) and maternal (lower right) placental vasculature in pink, purple, and white. Credit: R. Horgan, et al. DOI: [10.1002/uog.26312](https://doi.org/10.1002/uog.26312). Funding: R01HD086313

Goal

4

Improving Child and Adolescent Health and the Transition to Adulthood

Goal Statement

Advance understanding of contemporary typical and atypical child development, with an emphasis on identifying sensitive time periods when prevention and treatment strategies will have the greatest impact on lifelong health and wellness. Improve the transition from adolescent to adult health care, especially for adolescents with disabilities or chronic health conditions, and strengthen the evidence base for pediatric primary care.



Research Opportunities

Many facets of lifelong health have deep roots in childhood and adolescence, yet the accelerated pace of societal and technological change makes it challenging to pinpoint exactly how specific biological, social, environmental, and other factors contribute to health and disease across the lifespan. NICHD researchers are working to understand the developmental impacts of nutrition, physical activity, sleep, digital media exposure, the microbiome, and other factors. The timing of these exposures and the opportunity to prevent or mitigate poor outcomes is a major focus for NICHD's pediatric research portfolio. Identifying optimal time periods for intervention after critical illness or traumatic injury can yield new approaches to understanding plasticity and promoting functional adaptation. Throughout this work, there will be a continued focus on social determinants of health and the impact of health disparities on the effectiveness of interventions.

NICHD will lead efforts to improve the transition of adolescents to adult health care providers, especially for those with chronic conditions or illnesses, disabilities, or childhood exposures that require special consideration, such as exposure to trauma or violence. NICHD's focus on improving this transition and exploring methods to enable self-management and encourage adherence among adolescents, as well as ways to enhance adult provider knowledge



of pediatric conditions, will also involve coordination and collaboration with NIH institutes and centers and other organizations that specialize in specific diseases or conditions. The institute also plans a renewed emphasis on strengthening the evidence base for pediatric primary care practice. Pediatric primary care, including well-child visits, provides an essential foundation for lifelong health. However, pediatric primary care encounters are time-limited, and busy providers must prioritize among many elements, including anticipatory guidance, sick-child care, parent education, and developmental screenings. Moreover, because pediatric primary care tends to focus on preventing negative outcomes, documenting the effect of primary care interventions can be difficult for scientists. NICHD will focus on developing new methods and measures to help identify, refine, and implement the most effective elements of primary care practice.

Scientific Objectives and Priorities



- » Identify and assess risk-reduction strategies to address the systemic, as well as individual, causes of infant morbidity and mortality domestically and globally. Identify potential approaches to prevent stillbirth, sudden infant death syndrome, and sudden unexpected infant death.
- » Determine how social and environmental contextual factors affect infant, child, and adolescent health, and use this knowledge to develop new strategies and improve the effectiveness of current approaches to early intervention.
- » Develop and assess prevention, treatment, and implementation strategies to address trauma, injury (unintentional and intentional), child maltreatment, and violence, along with disaster preparedness and response. Advance research and training across the continuum of care to optimize recovery of children and families who experience critical illness or traumatic injury.
- » Increase understanding of physical, cognitive, social, and emotional development from infancy through adolescence to optimize timing of interventions supporting child health and development.
- » Conduct research to support better integration of pediatric and adult systems of care, especially for youth transitioning to adult health care, including children with disabilities. Develop measures that help determine successful transition at the individual, provider, or system level to improve care for adolescents and emerging adults.
- » Enhance the evidence base for pediatric and adolescent primary care by identifying practices and features of health care delivery associated with positive child health outcomes. Support dissemination and implementation research for pediatric prevention strategies with demonstrated efficacy, especially in populations that experience health disparities.



Goal

5

Fostering Safe and Effective Therapeutics and Devices for Pregnant Women, Lactating Women, Children, and People with Disabilities

Goal Statement

Lead efforts to develop, test, and evaluate new and existing therapeutics and devices to identify safe and effective solutions that meet the unique needs of pregnant women, lactating women, children, and people with physical, developmental, and intellectual disabilities.



Research Opportunities

Pregnant women, lactating women, children, and people with disabilities often interact with medication and other therapeutics differently, compared to most adults. Pharmaceuticals may clear from the body more rapidly in some of these populations, necessitating a higher dose to be effective. For other drugs, active ingredients may accumulate in the blood for longer periods, requiring a lower dose for safety. Devices designed for adults may be ineffective for children, even if scaled down to fit smaller bodies. Furthermore, devices designed to serve a general population may not be accessible for people with disabilities.

For people with disabilities, medications may have side effects that interact dangerously with their disability, such as adversely affecting blood pressure in those with spinal cord injuries. Research to describe precisely how therapeutics affect specialized populations is urgently needed. Without these data, pregnant or lactating women who take medications for chronic health conditions do not have enough information to assess whether and at what dose these treatments are appropriate and, importantly, neither do their health care providers. At the same time, leaving a chronic condition untreated could seriously harm a pregnant woman, the fetus, or both.

Advances in pharmacogenomics, bioinformatics, data linkages, AI, and other innovative methods now make it possible to better understand how factors such as obesity, nutrition,



Natalie, left, was born with a rare disease that causes generalized artery calcification and autosomal recessive hypophosphatemic rickets type 2. Parents Anne (middle) and Jerry join Natalie in speaking at a 2024 National Advisory Child Health and Human Development Council meeting about the importance of NICHD research. Credit: NIH

and environmental exposures affect the action of medications. Applying responsible AI, bioinformatics, and data-linkage methods to large-scale data has great potential to advance the study of pharmaceuticals specifically in pregnant women, lactating women, children, and people with disabilities. Ultimately, this research will be essential to help health care providers tailor treatments to the needs of the individual. There are very few incentives for industry to conduct such research, especially for off-patent drugs or devices, making the government's role in this research even more critical.

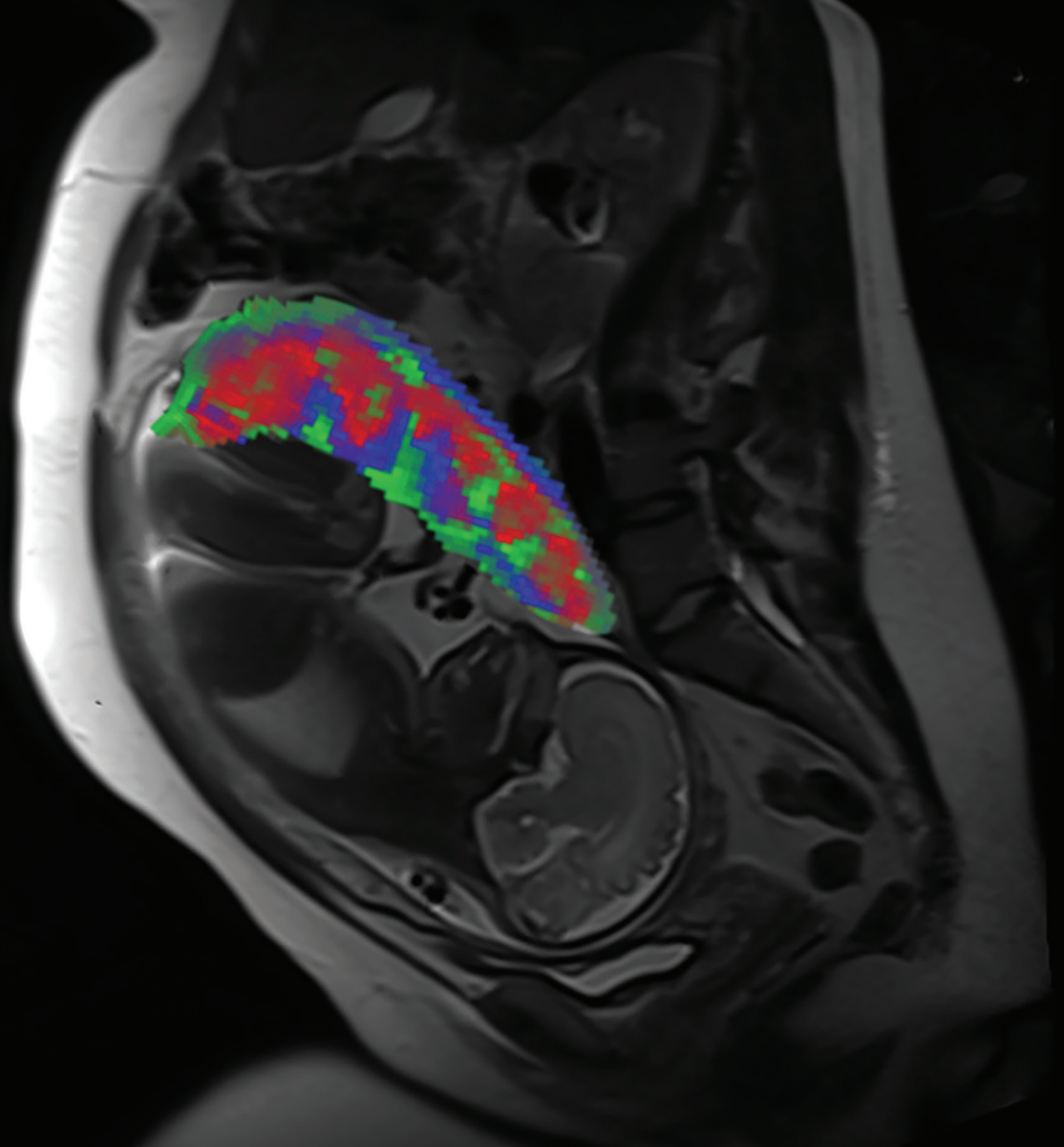
NICHD will continue to lead research efforts to establish the scientific evidence needed for effective treatment of pregnant women, lactating women, children, and people with disabilities. This research area encompasses all types of medical treatment, including pharmaceuticals, behavioral interventions, and medical devices. These efforts will require multidisciplinary collaboration among researchers in fields such as computer science, AI, engineering, genetics and genomics, pediatrics, obstetrics, and other clinical professions.

Scientific Objectives and Priorities



Gyorgy Levay, who lost both of his hands and feet to an infection, uses a prosthetic arm to drink from a cup. Mr. Levay works with NICHD small-business grantee Rahul Kaliki, Ph.D. (R44HD090811), to develop specialized solutions for those with upper limb loss and/or differences. Credit: Infinite Biomedical Technologies

- » Conduct and support foundational research on the development of interventions targeted to the specific needs of pregnant women, lactating women, children, and/or people with disabilities informed by pharmacokinetic, pharmacodynamic, pharmacogenomic, dosing, and formulation studies.
- » Identify and validate biomarkers, modeling approaches, and outcome measures that can be used to support rigorous testing and/or regulatory approval of pharmacotherapies and devices in pregnant women, lactating women, children, and/or people with disabilities.
- » Support clinical research and dissemination and implementation research to evaluate scalable, accessible therapeutics, diagnostics, and medical devices for pregnant women, lactating women, children, and/or people with disabilities.
- » Use advanced data science techniques (including AI and bioinformatics) to assess health outcomes, therapeutic safety and effectiveness, patient engagement, and health care delivery in datasets that include pregnant women, lactating women, children, and/or people with disabilities.



MRI scan shows the fetus and placental compartments—intervillous space (red), placental vessels (green), and placental tissue (blue). Credit: Z. Sun, et al. DOI: [10.1002/uog.24959](https://doi.org/10.1002/uog.24959). Funding: R01HD094381

Aspirational Goals

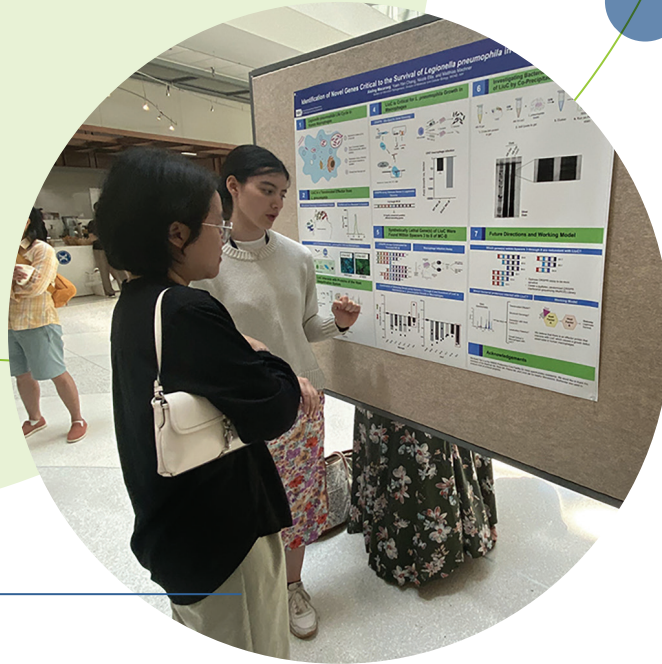


NICHD has set aspirational goals to encourage innovation in areas relevant to its mission. Though they are ambitious and potentially beyond reach by 2030, these goals are intended to serve as a call to action for the scientific community, urging researchers to work across disciplines and undertake novel approaches to deepen our understanding of human development and improve the prevention, diagnosis, and treatment of specific diseases and conditions.

The following aspirational goals encourage the field to accelerate scientific discovery, work beyond traditional boundaries, and collaborate on research that could lead to healthier and more optimal lives for everyone.

- » Build upon advances in developmental biology to improve function for people with acquired or congenital neurologic impairment.
- » Use emerging technologies to advance human limb regeneration by activating the body's growth processes.
- » Identify properties of menstrual effluent and semen that could facilitate diagnosis of diseases and disorders, including gynecologic and andrologic conditions.
- » Accelerate efforts to definitively diagnose, prevent, and treat endometriosis.
- » Advance effective diagnostics and interventions to prevent and treat preeclampsia and postpartum hemorrhage and help reduce maternal mortality in at-risk U.S. populations.
- » Develop new models and methods to inform research studies on the lactation process, the composition of human milk, and the impact of medications taken by the mother on breast milk.
- » Identify the pathophysiological mechanisms underlying stillbirth and develop and test approaches for stillbirth prevention.
- » Understand the mechanisms that lead to illness in preterm infants to improve survival and healthy development.
- » Leverage AI and other emerging technologies to establish an evidence base for pediatric and adolescent well care to prioritize and optimize prevention and treatment strategies.
- » Streamline the translational pipeline from basic research to clinical interventions to improve the health of infants, children, and adolescents by expanding the availability of gene therapies.

Research Capacity and Scientific Stewardship



Aisling Macaraeg, a post-baccalaureate fellow in the Machner Lab at NICHD, presents her work using CRISPR-interference in *Legionella pneumophila* to identify genes involved in bacterial survival during infection. Credit: NICHD

NICHD recognizes the importance of maintaining public trust in its role as a steward of scientific research and resources. The institute works to equip and develop the current and future scientific workforce and to develop research tools, systems, and infrastructure that help investigators advance fundamental knowledge and scientific research priorities. Over the next five years, NICHD will continue its commitment to promoting diversity and inclusion within the scientific workforce, facilitating training and career development opportunities, strengthening scientific infrastructure and partnerships, providing transparency on performance, and ensuring public accountability.

Supporting Training and Career Development

NICHD maintains a fundamental commitment to research training and career development for all scientists, from students exploring the possibility of a research career to experienced research mentors. The institute puts this priority into practice by supporting extramural institutional and individual training grants, short courses, scientific training elements within research grants, and other programs, such as loan repayment. Within its intramural programs, NICHD's support for hundreds of trainees has launched research careers all over the world. Effective and efficient stewardship of these programs is essential

to maximizing the return on our most valuable investment—the people who will carry the future of scientific research.

Facilitating Data Sharing and Access to Biospecimens

Good data stewardship and sharing are critical to trustworthy and equitable scientific research. NICHD will implement and refine a data strategy to maximize data sharing and enable responsible and innovative use of data and biospecimens that accelerates research and improves health for NICHD populations. NICHD will continue to integrate best practices in data stewardship and sharing into the scientific process and make strategic investments to enhance the accessibility, usability, interoperability, and sustainability of the NICHD data ecosystem, promote the responsible use of data science and AI technologies, and bolster data strategy expertise within the internal NICHD workforce.

Partnering to Enhance Science

Partnerships provide the opportunity to enhance existing resources, recruit the expertise and skills needed to benefit science, expand projects, leverage existing infrastructure, and improve recruitment and retention of participants in clinical research. NICHD will augment and strengthen its science by entering into a range of agreements with several public and private entities, including not-for-profits, professional societies, and foundations. Continued leadership of NIH-wide committees, task forces, and consortia will also allow the institute to advance its strategic mission and priorities through collaboration with other NIH institutes, centers, and offices. In addition, partnerships with other federal agencies will allow NICHD to expand its efforts to provide the evidence base for future policies and programs that benefit its communities.



The Ladder, created by Mary Ellen Scheri and located at the North entrance of the NIH Clinical Center, represents the ever-increasing role of genome sequencing in newborn care. From left: Eric Green, M.D., Ph.D.; John Constantino, M.D.; artist Mary Ellen Scheri; NICHD Director Diana W. Bianchi, M.D.; James Gilman, M.D.; and Frank Piatkowski, A.I.A. Credit: NIH

From Wheels to Walking in Pittsburgh. Lily Rosenblum's winning entry in the 2023 NICHD-led youth original artwork competition highlights the strengths of communities that face health disparities. Inspired by a friend who went from using a wheelchair to walking, the bridge represents a golden path to potential opportunities.



Prioritization and Governance

As NICHD implements its strategic plan, there is a need to ensure that its budget can advance strategic objectives while balancing the need to fund science that furthers its mission. NICHD plans to emphasize external involvement in achieving this balance, by relying on the institute's advisory bodies and working with communities, advocates, and those with lived experience to bring a variety of perspectives to inform prioritization. Governance processes within the institute will be updated carefully to ensure the flexibility needed to respond to emerging public health concerns and scientific opportunities.

Advancing Health Equity in Scientific Research Infrastructure, Workforce, and Communications

NICHD remains committed to advancing optimal health for all people by supporting the scientific workforce and implementing initiatives throughout NICHD's extramural and intramural scientific programs. Efforts will span the array of disciplines relevant to the institute's mission, including strategies to broaden participation in NICHD research. NICHD will continue to cultivate investigators at critical stages of their research careers and support an inclusive workforce across the full range of biomedical, biobehavioral, and clinical sciences. NICHD's goal to promote a robust scientific workforce will require the collective efforts of research and training experts across the institute. Partnerships and effective communication strategies will also be needed to expand and strengthen outreach and engagement efforts to make NICHD research, funding, career development, and training opportunities more accessible for all.

Clinical Research Oversight and Management

NIH is committed to responsible stewardship, accountability, oversight, and transparency of clinical research and clinical trials supported by the agency. NICHD will continue efforts in its extramural and intramural research programs to ensure appropriate funding mechanisms and infrastructure, milestone planning and progress

review, ongoing risk management, and public sharing of clinical trials data. Clinical research supported by the institute will continue to reflect NICHD's priority on appropriate inclusion of a wide range of populations in research, including pregnant women, lactating women, children, and people with disabilities. Careful and complete monitoring and documentation of participant data will ensure appropriate recruitment and retention.

Planning, Reporting, and Program Evaluation

NICHD regularly reviews and rigorously evaluates its scientific research and training programs to ensure effectiveness and transparent stewardship of research investments. NICHD is committed to enhancing its ability to monitor the implementation of the strategic plan and continuously improve alignment of institute activities with overall strategy. The institute will enhance its ability to track, analyze, and report on the activities of complex scientific research and training programs; pursue new methods to analyze information on stakeholder participation and perspectives; gather wide-ranging data on the impact of scientific, organizational, and community collaborations; and develop and implement objective assessments of scientific results and public health effects. Portfolio analysis and program evaluation will inform the development, implementation, and reporting of NICHD efforts and accomplishments.



Federal health leaders, including NICHD Deputy Director Alison Cernich, Ph.D., and advocates gather for a stillbirth prevention event at the White House in July 2024. Credit: HHS

Facilitating Transparency and Communication

NICHD communications activities help convey the goals, results, and health impact of taxpayer-funded research, reinforcing to the public and other audiences the benefits of their continued investment. NICHD will continue to seek new ways to reach its many audiences through an array of vehicles, including media engagement, content development, social media messaging, and other approaches. The institute will also collaborate with NIH to streamline Freedom of Information Act processes and improve fulfillment of document requests. NICHD's legislative and public policy efforts include engagement with and outreach to its many communities about the institute's wide range of research activities. The institute will convey the significance and value of the research it conducts and supports so that the public understands how NICHD uses funds to improve health, thus allowing new legislation and policies to better reflect and facilitate the institute's efforts.

Operational Priorities, Management, and Accountability



Jeffrey Farrell, Ph.D. (center), stands with members of his laboratory, the Unit on Cell Specification and Differentiation. Credit: NICHD

NICHD's success in its scientific endeavors depends on the institute's success in management and administration. Effective program management, in which decisions are based on careful analysis, will allow NICHD to maximize the value of its scientific initiatives. Innovation in administrative functions will help NICHD adapt rapidly to changing needs and requirements and allow programs to take advantage of the growth opportunities presented by advanced technologies and new collaborations. NICHD will enhance its ability to manage for results, develop its workforce, and create excellence in performing administrative responsibilities, creating an innovative administrative culture that can proactively and effectively support NICHD's scientific mission.

Promoting Workforce Development and Balance

The work performed at NICHD requires staff to demonstrate a wide range of technical skills, knowledge, and adaptability to continually develop and adjust to fast-paced changes. The institute will enhance the recruitment and development of its workforce through systematic and thoughtful initiatives aimed at growing leadership, supervisory, technical, and scientific skills to meet current and future organizational needs. Over the next five years, NICHD will focus strongly on developing innovative approaches to knowledge management, career development, staff engagement, recognition, and recruitment of highly qualified individuals.

Enhancing Infrastructure Innovation

More than ever, effective management depends on essential infrastructure such as facilities, scientific equipment, and high-quality data and information technology resources. This infrastructure must not remain static but must adapt to the changing needs of institute programs and staff. At the same time, sustainability is necessary for effective stewardship. To accomplish this goal, NICHD will focus on capitalizing on existing resources, innovating, anticipating the potential needs of the workforce, and leveraging ongoing efforts and resources throughout NIH to ensure operational efficiency.

Improving Administrative Efficiency

NICHD aims to improve and streamline administrative management and processes while maintaining the highest standards and quality of service. NICHD will continue to develop as a learning organization that anticipates change,

adapts readily to changing needs and mandates, and leverages data to inform decision making. NICHD will identify opportunities to reduce the administrative burden on scientific staff by streamlining and automating processes.

Advancing Enterprise Risk Management

As the environment supporting biomedical research has become increasingly complex and the pace of change has accelerated, NICHD has evolved its risk management approach to ensure prompt, appropriate assessment of internal and external risks. Working with NIH leadership, NICHD will continue to evaluate its administrative, operational, and scientific programs and improve management practices. NICHD will focus on the ability to adapt risk management best practices to confront and address emerging issues by adjusting standardized procedures over time to accommodate changing risk levels and types.



NICHD's 2024 Combined Federal Campaign Cornhole Cheerleaders include (left to right) Sybil Philip, Deserae Philpott, Kimberly Kober, Jessica Wu, Rodney Rivera, and Elizabeth Walsh, Ph.D. Credit: NICHD

Appendix 1: NICHD Statutory Authority



NICHD Director Diana W. Bianchi, M.D. (center), joins Maria Shriver and Timothy Shriver, Ph.D., at an event for the White House Initiative on Women's Health Research in 2024. Credit: NICHD

42 U.S.C. §285g: Purpose of the Institute

The general purpose of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (hereafter in this subpart referred to as the “Institute”) is the conduct and support of research, training, health information dissemination, and other programs with respect to gynecologic health, maternal health, child health, intellectual disabilities, human growth and development (including prenatal development), population research, and special health problems and requirements of mothers and children.

Establishment

The early years of President John F. Kennedy’s administration were influenced by senior advisors, notably his sister, Eunice Kennedy Shriver. Mrs. Shriver championed the acceptance of people with intellectual and developmental

disabilities (IDDs), while also advocating for research to address the health needs of those with IDD.

In 1961, Dr. Robert E. Cooke, a pediatrician and another advisor to President Kennedy, chaired a task force on the health and well-being of children. Among the task force’s recommendations was the establishment of a new institute within the NIH. Despite skepticism from some leaders at NIH on the need for a separate institute on children, the law establishing the National Institute of Child Health and Human Development (NICHD) was signed on October 17, 1962. NICHD became the first NIH institute to focus on health throughout human life, rather than on a specific disease or organ system. From its inception, NICHD targeted its efforts toward helping the scientific community, policy makers, and public recognize the importance of supporting research not only to help those with IDD, but also to increase understanding of human development.

Purpose

Since 1962, NICHD’s statutory “purpose” has only been amended three times. In 2000, the phrase “gynecologic health” was added. In 2007, the institute’s official name was changed to the “*Eunice Kennedy Shriver* National Institute of Child Health and Human Development” to honor the contributions of Mrs. Shriver.

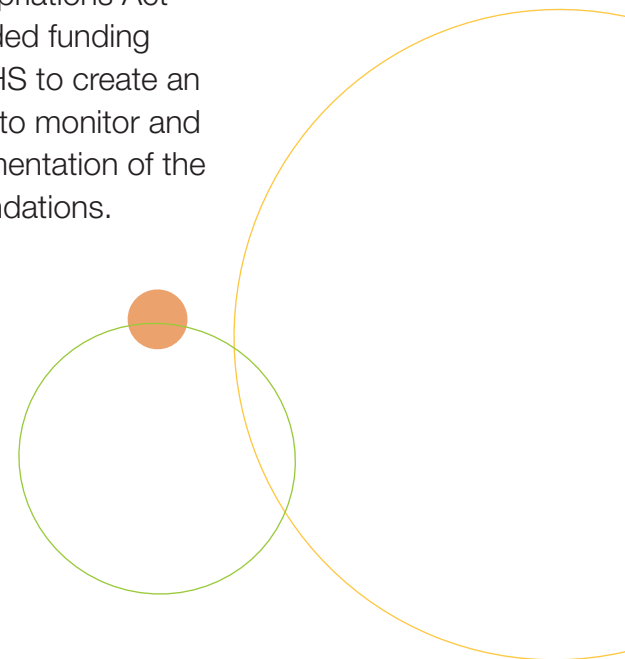
In 2010, another law was passed that updated NICHD's statutory language to change all references from "mental retardation" to "intellectual disabilities." In addition, in 1990, Congress established the National Center for Medical Rehabilitation Research within NICHD to support research, training, and dissemination of health information on the rehabilitation of people with physical disabilities. This program was reauthorized in 2016 by the 21st Century Cures Act.

Other Statutory Directives

Other provisions of the Public Health Service Act specifically direct NICHD to support certain areas of research in addition to the general mandates governing NIH. Among these provisions, which became law at different points during NICHD's history, are research on sudden infant death syndrome, intellectual disabilities, contraception, and infertility; intramural research on obstetrics and gynecology; child health research centers; studies on both adolescent health and children's health; research centers on Fragile X syndrome; and pediatric research training.

More recently, Congress has provided directives to the Secretary of Health and Human Services (HHS) or to NIH, with the understanding that NICHD would be charged with their implementation. One example, first passed in 2000, is the directive for NIH to create a program of research for conducting pediatric clinical trials with the aim of obtaining pediatric

labeling on drugs often prescribed to children (Best Pharmaceuticals for Children Act). Among other provisions of the Newborn Screening Saves Lives Act, NIH is directed to coordinate and expand research on newborn screening (Hunter Kelly Newborn Screening Research Program). A provision of the 21st Century Cures Act directed the HHS Secretary to establish a Task Force on Research Specific to Pregnant Women and Lactating Women (PRGLAC) to identify the research needed to inform appropriate dosing of medications used by these populations. The Fiscal Year 2022 Consolidated Appropriations Act (P.L. 117-103) directed the HHS Secretary to develop a task force on stillbirth in the United States and the Fiscal Year 2023 Consolidated Appropriations Act (P.L. 117-328) continued the work of that task force. The Fiscal Year 2023 Consolidated Appropriations Act (P.L. 117-328) included funding and language for HHS to create an advisory committee to monitor and report on the implementation of the PRGLAC recommendations.



Appendix 2:

NICHD Organization and Functions

The Division of Extramural Research (DER) develops, implements, and coordinates cross-cutting, multidisciplinary research activities within NICHD's mission. DER supports this research through grants and contracts to colleges, universities, medical schools, hospitals, and small businesses.

The Division of Intramural Research (DIR) conducts laboratory, clinical, and population-based research to seek fundamental knowledge about the nature and behavior of living systems. The Division of Population Health Research within DIR designs and conducts innovative etiologic and interventional research to promote health and well-being of all populations, including vulnerable subgroups such as pregnant women, infants, and children.

The Division of Extramural Activities (DEA) is responsible for administering and coordinating the implementation of the institute's research grant and training programs. Activities conducted within DEA include initial scientific merit review of research grant applications and contract proposals, assistance with advisory council activities and meetings, grants management, extramural staff training, and enhancing NICHD-wide understanding of standardized approaches, policies, methods, and procedures.

The National Center for Medical Rehabilitation Research (NCMRR) aims to foster development of scientific knowledge to enhance the health, productivity, independence, and quality of life of people with physical disabilities through basic, translational, and clinical research.

The NICHD Office of the Director (OD) provides overall leadership, planning, direction, coordination, and evaluation of the institute's research programs and activities. OD also develops and monitors internal policies and procedures to effectively and efficiently advance NICHD's mission.

For a full organizational chart, visit <http://bit.ly/NICHDOrgChart>



Stanford University researchers, co-funded by NICHD (P41EB027060), demonstrate OpenCap, an open-source platform for measuring human movement dynamics using smartphone videos. Credit: Florent Vial

Appendix 3: Strategic Planning Process



During the *NICHD: 60 Years of Innovation* virtual symposium on October 17, 2022, NICHD's Valerie Maholmes, Ph.D. (lower left), moderates the session on Raising Healthy Children. Top left: Wendy Chung, M.D., Ph.D.; top right: Audrey Odom John, M.D., Ph.D.; lower right: Kenneth Dodge, Ph.D. Far upper right: sign language interpreter.

The pace of scientific and technological progress demand that NICHD refresh its strategic plan to capitalize on new opportunities to accelerate basic, translational, and clinical research. In October 2023, the institute embarked on a collaborative process with internal and external experts to identify priorities and inform future investments in research, training, and infrastructure. The process for refreshing the NICHD strategy was guided by three core principles: transparency, decision making informed by evidence, and external participation.

For the NICHD Strategic Plan 2025, NICHD updated priorities to reflect public health trends and progress since the publication of the previous

plan, while maintaining the structure of the NICHD Strategic Plan 2020. The overarching goal of the process was to identify scientific priority areas in which NICHD can lead, harness new technologies and methods to address health disparities, promote health equity, and improve the health of the institute's primary populations: children, women, and people with disabilities.

The refresh started with reviewing progress from the prior plan and discussing emerging areas of opportunity and importance to validate existing priorities and identify new ones across three focus areas: scientific research, scientific stewardship, and management and accountability. The strategic planning

process entailed three phases:
1.) formation of working groups,
2.) external engagement, and
3.) incorporating feedback and finalizing the plan.

Formation of Working Groups

To guide the strategic plan refresh, NICHD established working groups charged with identifying the priorities to highlight in the strategic plan. Of the seven working groups, five were focused on scientific research (one for each scientific research goal), one on scientific stewardship, and one on management and accountability. The NICHD Executive Committee nominated members for the seven working groups based on members' knowledge of relevant extramural and intramural research portfolios and familiarity with the goal areas. The Executive Committee also provided initial direction by delineating potential emerging priority areas for working groups to examine. At predetermined milestones, the Executive Committee reviewed and advised on updated priorities the working groups identified. Given the length and complexity of the focus areas, the scientific research working groups met on a structured, recurring cadence (bi-monthly at minimum). *Ad hoc* meetings were held for scientific stewardship and management and accountability working groups. The Executive Committee identified champions for each cross-cutting theme in addition to the working groups. Champions were responsible for identifying and

proposing priorities related to their theme across scientific research objectives and aspirational goals. To ensure representation throughout the strategic plan, champions served as members of relevant scientific research working groups. Cross-cutting theme champions were engaged throughout the process to provide feedback on representation of their theme across the strategic plan.

The scientific research working groups began their efforts by conducting a detailed data-informed review of progress made on the NICHD Strategic Plan 2020. Working groups considered major programs and funding opportunities to understand grant spending trends and how upcoming programs and opportunities may impact research areas. They also reviewed representation of the cross-cutting themes in the scientific research goals, noting well-represented areas and opportunities to increase representation in the refreshed strategic plan. These initial efforts helped steer the priorities of the strategic plan and provided direction for planned external engagement opportunities.

External Engagement

External feedback was essential to the strategic planning process. NICHD's planning process intentionally outlined three key avenues for soliciting external feedback to identify and confirm the refreshed strategic priorities: listening sessions focused on each of the five scientific research goals, an update to the National Advisory Child Health and Human Development (NACHHD) Council, and a public Request for Information (RFI) on the updated priorities.

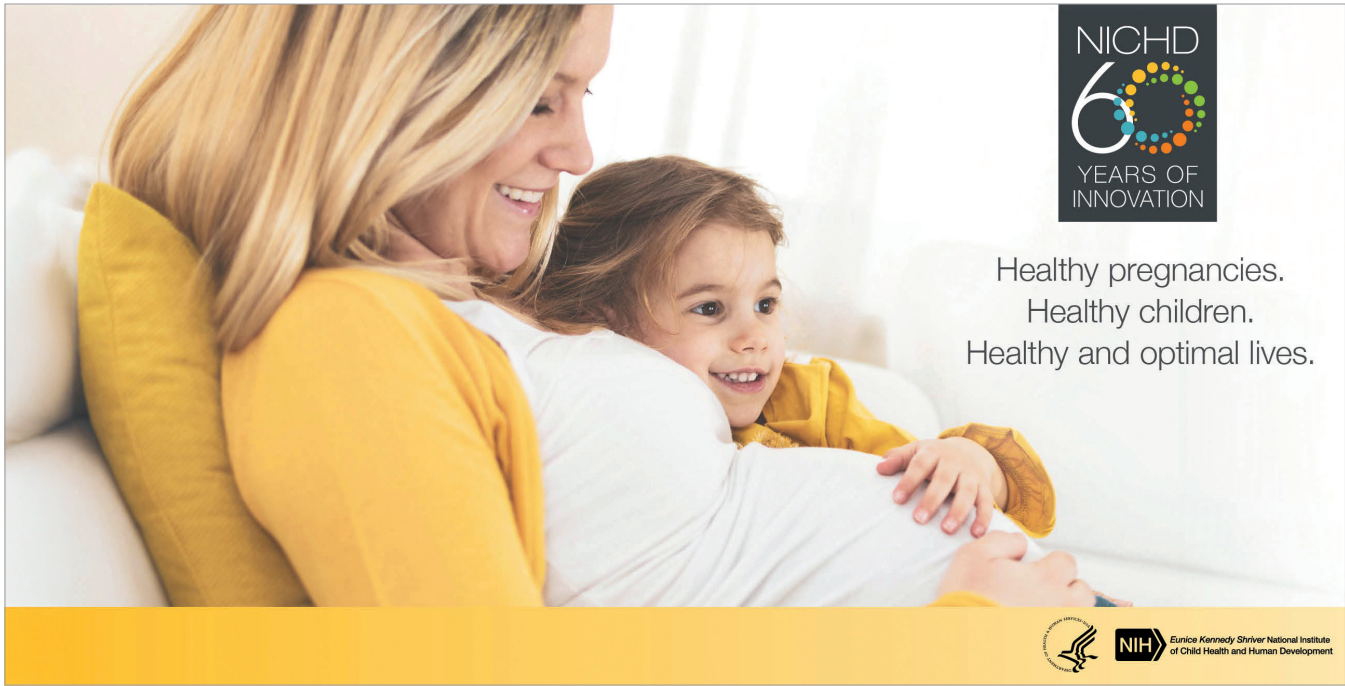
In July 2024, NICHD engaged external researchers in five structured listening sessions, one for each of the scientific research goals. Attendees were invited based on their expertise in the scientific research goal area and knowledge of NICHD's portfolio. Working groups developed and presented draft concepts for each scientific research goal, providing attendees with the opportunity to offer feedback and ask clarifying questions. Attendees were encouraged to share novel research opportunities not represented in the goals, directly informing further iteration of the concepts. Following the listening sessions, working groups constructed draft research objectives, taking feedback from the listening session into account. These draft research objectives were subsequently reviewed and refined by the Executive Committee.

In fall 2024, the NACHHD Council received an update on the refreshed strategic plan, including an overview

of the strategic planning process to-date and the draft scientific research objectives. This presentation coincided with the release of the RFI, which summarized research opportunities for each scientific research goal and the updated cross-cutting themes. Council members provided feedback on the draft objectives, noting areas that required clearer emphasis within the plan, including endometriosis, digital media and technology use, and judicious use of AI. NICHD gave due consideration to each piece of feedback provided by the NACHHD Council and made updates as appropriate.

In August 2024, the institute published an RFI on the draft priorities for the NICHD Strategic Plan 2025. The RFI (NOT-HD-24-028) solicited feedback on the scientific research goals and opportunities from a large external audience, including academia and industry, scientific and professional organizations, and health care professionals. The notice contained background information on the purpose of the strategic plan refresh and summaries of the prioritized areas of opportunity within each of the scientific research goals. The RFI also included brief overviews of the cross-cutting themes, given their relevance to the scientific research goals.

The RFI was open for a 44-day review period and obtained a total of 170 relevant responses; 131 responses were from individuals from 85 different academic and research institutions. Thirty-nine responses



Healthy pregnancies.
Healthy children.
Healthy and optimal lives.

were on behalf of societies, advocacy groups, and government agencies or government contractors. Across these 170 responses, each piece of feedback was summarized and tagged to the most relevant research goal and/or cross-cutting theme. Comments were generally supportive of the direction of the plan and offered suggestions on clarifying important concepts. NICHD thoroughly reviewed and considered each piece of feedback and made updates to the plan as appropriate.

Incorporating Feedback and Finalizing the Plan

Working groups reviewed the feedback provided across external engagement opportunities, considering alignment to emerging priorities and NICHD’s mission. Edits were made to the draft strategic plan and the internal implementation plan. The updates were reviewed and approved by the Executive Committee.

NICHD leadership dedicated extensive consideration to the public health priorities that the institute will address over the next five years, including the representation of cross-cutting themes and the enhancement of scientific stewardship and management and accountability. In tandem with finalizing the objectives, all seven working groups began detailed internal implementation planning that defined specific activities designed to guide the institute in meeting the set objectives.

Future Progress

The institute considers the strategic plan to be part of an ongoing discussion with its research, advocacy, and policy communities, as well as the public. Over the next five years, NICHD will provide regular updates on its progress across these focus areas. NICHD has also defined metrics to measure success of implementation efforts and will track and report on those.

The institute promoted its *NICHD: 60 Years of Innovation* virtual symposium on various digital channels throughout 2022.



Eunice Kennedy Shriver National Institute
of Child Health and Human Development

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