

NATIONAL INSTITUTE FOR CHILD AND WOMEN'S HEALTH, SENSORY DISORDERS, AND COMMUNICATION

CONGRESSIONAL JUSTIFICATION
FY 2026

Department of Health and Human Services
National Institutes of Health

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DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH

National Institute for Child and Women’s Health, Sensory Disorders, and Communication

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General Notes

1. The proposed National Institute for Child and Women’s Health, Sensory Disorders, and Communication (NICWHSDC) will consolidate the research activities of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) and the National Institute on Deafness and Other Communication Disorders (NIDCD). Figures for FY 2024 and FY 2025 in this document aggregate NICHD and NIDCD to provide for comparability to the FY 2026 estimates for NICWHSDC.
2. FY 2025 Enacted levels cited in this document reflect the FY 2025 full-year continuing resolution (Public Law 119-4) and include the effects of the FY 2025 HIV/AIDS transfer.
3. FY 2026 FTE levels reflect estimates and are subject to change.
4. Detail in this document may not sum to the subtotals and totals due to rounding.

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Summary

The National Institute for Child and Women's Health, Sensory Disorders, and Communication (NICWHSDC) will be a newly streamlined Institute consisting of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) and the National Institute on Deafness and Other Communication Disorders (NIDCD). The missions of these Institutes will be integrated into NICWHSDC.

NICHD provides leadership for scientific research and training to understand human development, improve reproductive health, enhance the lives of children and adolescents, and optimize abilities for all. Specifically, NICHD supports research on gynecological health conditions, fertility and infertility, contraception, and reproductive health. NICHD leads the scientific exploration of typical child development, as well as primary and specialty care for children with acute and chronic conditions.

NIDCD manages a broad portfolio of basic, translational, clinical, and public health research focused on human communication and associated disorders in three program areas: hearing and balance; taste and smell; and voice, speech, and language. NIDCD's vision is to advance the science of communication to improve lives.

Through continued investments across a broad range of scientific approaches, goals, and objectives, NICWHSDC research holds enormous promise to enhance American's health, productivity, independence, ability to communicate, and quality of life.

The FY 2026 budget request for NICWHSDC is \$1,413.6 million.

Major Changes in the Budget Request

Major changes by budget mechanism and/or budget activity detail are briefly described below. Note that there may be overlaps between budget mechanisms and activity detail, and these highlights will not sum to the total change for the FY 2026 President's Budget for the National Institute of Child and Women's Health, Sensory Disorders, and Communication (NICWHSDC), which is a decrease of \$878.5 million or 38.3 percent below the FY 2025 Enacted Level, for a total of \$1,413.6 million. The FY 2026 President's Budget reflects the Administration's fiscal policy goals for the Federal Government.

Research Project Grants (RPGs) (-\$682.8 million, total \$746.9 million):

NICWHSDC will support a total of 1,929 Research Project Grant (RPG) awards in FY 2026, including Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) awards. The FY 2026 request will continue the FY 2025 NIH policy of allocating half of the budget for competing RPGs for awards that fully fund their outyear commitments as part of the initial grant award, avoiding the need for outyear noncompeting commitments. As a result of this policy and implementation of the NIH-wide policy to limit indirect costs on all research grants to no more than 15 percent of direct costs, noncompeting RPGs will decrease by 360 awards in FY 2026, to an estimated level of 1,467 awards, with costs for noncompeting RPGs reduced by \$484.4 million compared to FY 2025. Competing RPG awards will decrease by 23 compared to the FY 2025 Enacted Level of 443 awards, and the costs associated with competing awards will decrease by \$164.2 million compared to the FY 2025 Enacted level, including the effects of the indirect cost limit and continuation of the policy to allocate half of the competing RPG budget for fully-funded awards.

Research Centers (-\$41.4 million, total \$76.1 million):

NICWHSDC will support a total of 49 Research Centers awards in FY 2026, a decrease of 14 awards compared to the FY 2025 Enacted level. The reduced costs for Research Center awards are due in part to the 15 percent limit on indirect costs for research grants.

Other Research (-\$40.5 million, total \$98.0 million):

NICWHSDC will support a total of 407 awards in the Other Research areas in FY 2026, a decrease of 113 awards compared with the FY 2025 Enacted level of 520 awards. The reduced costs for Other Research awards are due in part to the 15 percent limit on indirect costs for research grants.

Ruth L. Kirschstein Training Awards (-\$12.3 million, total \$42.3 million):

NICWHSDC will support a total of 745 full-time equivalent training positions (FTTP) in FY 2026, a decrease of 211 FTTP compared to the FY 2025 Enacted level, as a result of the overall reduction in the FY 2026 request for NICWHSDC.

Research and Development (R&D) Contracts (-\$34.7 million, total \$99.1 million):

NICWHSDC will support a total of 112 contract awards in FY 2026, a decrease of 40 awards compared to the FY 2025 Enacted level, as a result of the overall reduction in the FY 2026 request for NICWHSDC.

Intramural Research (-\$46.9 million, total \$241.9 million):

NICWHSDC will decrease support for the Intramural Research program by \$46.9 million compared to the FY 25 Enacted level, reflecting reductions in central services costs and staffing.

Research Management and Support (-\$19.8 million, total \$109.4 million):

NICWHSDC will decrease support for the Research Management and Support program by \$19.8 million compared to the FY 2025 Enacted level, reflecting reductions in central services costs and staffing.

BUDGET MECHANISM TABLE

NATIONAL INSTITUTES OF HEALTH

National Institute for Child and Women's Health, Sensory Disorders, and Communication

Budget Mechanism *

(Dollars in Thousands)

Mechanism	FY 2024 Final		FY 2025 Full-Year CR		FY 2026 President's Budget		FY 2026 +/- FY 2025	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount
<u>Research Projects:</u>								
Noncompeting	1,817	\$976,228	1,827	\$996,443	1,467	\$512,030	-360	-\$484,413
Administrative Supplements	(143)	\$14,349	(80)	\$7,647	(30)	\$3,350	-(50)	-\$4,297
<u>Competing:</u>								
Renewal	75	\$47,251	47	\$50,728	38	\$45,692	-9	-\$5,036
New	611	\$278,597	396	\$307,986	382	\$148,812	-14	-\$159,174
Supplements	0	\$0	0	\$0	0	\$0	0	\$0
Subtotal, Competing	686	\$325,848	443	\$358,714	420	\$194,503	-23	-\$164,211
Subtotal, RPGs	2,503	\$1,316,425	2,270	\$1,362,804	1,887	\$709,883	-383	-\$652,921
SBIR/STTR	97	\$67,876	93	\$66,890	42	\$36,974	-51	-\$29,916
Research Project Grants	2,600	\$1,384,301	2,363	\$1,429,694	1,929	\$746,857	-434	-\$682,837
<u>Research Centers</u>								
Specialized/Comprehensive	63	\$111,408	60	\$111,712	46	\$72,825	-14	-\$38,887
Clinical Research	0	\$0	0	\$0	0	\$0	0	\$0
Biotechnology	3	\$5,250	3	\$5,590	3	\$2,990	0	-\$2,600
Comparative Medicine	0	\$450	0	\$250	0	\$324	0	\$74
Research Centers in Minority Institutions	0	\$0	0	\$0	0	\$0	0	\$0
Research Centers	66	\$117,108	63	\$117,552	49	\$76,139	-14	-\$41,413
<u>Other Research:</u>								
Research Careers	318	\$57,136	306	\$55,751	230	\$45,782	-76	-\$9,969
Cancer Education	0	\$0	0	\$0	0	\$0	0	\$0
Cooperative Clinical Research	52	\$23,252	50	\$27,171	42	\$13,989	-8	-\$13,182
Biomedical Research Support	0	\$0	0	\$0	0	\$0	0	\$0
Other Biomedical Research Support	0	\$0	0	\$50	0	\$40	0	-\$10
Other	182	\$66,551	164	\$55,493	135	\$38,156	-29	-\$17,337
Other Research	552	\$146,939	520	\$138,465	407	\$97,967	-113	-\$40,498
Total Research Grants	3,218	\$1,648,348	2,946	\$1,685,711	2,385	\$920,963	-561	-\$764,748
<u>Ruth L Kirschstein Training Awards:</u>	<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>	
Individual Awards	429	\$21,976	416	\$21,370	307	\$15,764	-109	-\$5,606
Institutional Awards	524	\$33,947	540	\$33,288	438	\$26,554	-102	-\$6,734
Total Research Training	953	\$55,923	956	\$54,658	745	\$42,318	-211	-\$12,340
Research & Develop. Contracts	168	\$182,325	152	\$133,787	112	\$99,050	-40	-\$34,737
SBIR/STTR (non-add)	(4)	(\$1,260)	(4)	(\$1,289)	(4)	(\$1,309)	(0)	(\$20)
Intramural Research	350	\$282,521	355	\$288,796	288	\$241,911	-67	-\$46,885
Res. Management & Support	387	\$122,997	376	\$129,162	341	\$109,388	-35	-\$19,774
SBIR Admin. (non-add)		(\$282)		(\$391)		(\$253)		-\$138
Construction		\$0		\$0		\$0		\$0
Buildings and Facilities		\$0		\$0		\$0		\$0
Total, NICWHSC	737	\$2,292,114	731	\$2,292,114	629	\$1,413,630	-102	-\$878,484

* All items in italics and brackets are non-add entries.

SUMMARY OF CHANGES

NATIONAL INSTITUTES OF HEALTH National Institute for Child and Women's Health, Sensory Disorders, and Communication

Summary of Changes

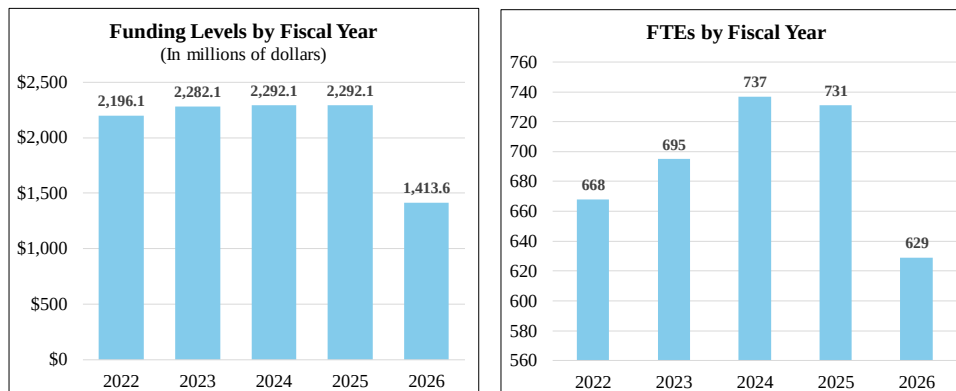
(Dollars in Thousands)

FY 2025 Full-Year CR	\$2,292,114
FY 2026 President's Budget	\$1,413,630
Net change	-\$878,484

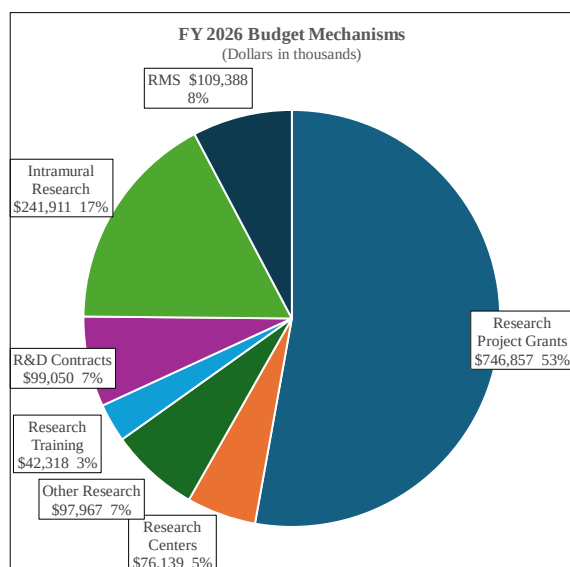
CHANGES	FY 2025 Full-Year CR		FY 2026 President's Budget		Built-In Change from FY 2025 Full-Year CR	
	FTEs	Budget Authority	FTEs	Budget Authority	FTEs	Budget Authority
<u>A. Built-in:</u>						
<u>1. Intramural Research:</u>						
a. Annualization of FY 2025 pay and benefits increase		\$100,333		\$91,716		\$611
b. FY 2026 pay and benefits increase		\$100,333		\$91,716		\$223
c. Paid days adjustment		\$100,333		\$91,716		\$0
d. Differences attributable to change in FTE		\$100,333		\$91,716		-\$18,976
e. Payment for centrally furnished services		\$43,580		\$32,890		-\$10,690
f. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		\$144,883		\$117,306		-\$8,133
Subtotal						-\$36,966
<u>2. Research Management and Support:</u>						
a. Annualization of FY 2025 pay and benefits increase		\$80,806		\$70,018		\$491
b. FY 2026 pay and benefits increase		\$80,806		\$70,018		\$211
c. Paid days adjustment		\$80,806		\$70,018		\$0
d. Differences attributable to change in FTE		\$80,806		\$70,018		-\$7,839
e. Payment for centrally furnished services		\$10,977		\$8,782		-\$2,195
f. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		\$37,379		\$30,588		-\$3,526
Subtotal						-\$12,859
Subtotal, Built-in						-\$49,825
CHANGES	FY 2025 Full-Year CR		FY 2026 President's Budget		Program Change from FY 2025 Full-Year CR	
	No.	Amount	No.	Amount	No.	Amount
<u>B. Program:</u>						
<u>1. Research Project Grants:</u>						
a. Noncompeting	1827	\$1,004,090	1467	\$515,380	-360	-\$488,710
b. Competing	443	\$358,714	420	\$194,503	-23	-\$164,211
c. SBIR/STTR	93	\$66,890	42	\$36,974	-51	-\$29,916
Subtotal, RPGs						-\$682,837
2. Research Centers	63	\$117,552	49	\$76,139	-14	-\$41,413
3. Other Research	520	\$138,465	407	\$97,967	-113	-\$40,498
4. Research Training	956	\$54,658	745	\$42,318	-211	-\$12,340
5. Research and development contracts	152	\$133,787	112	\$99,050	-40	-\$34,737
Subtotal, Extramural						-\$811,825
6. Intramural Research	355	\$288,796	288	\$241,911	-67	-\$9,919
7. Research Management and Support	376	\$129,162	341	\$109,388	-35	-\$6,915
8. Construction	0	\$0	0	\$0	0	\$0
9. Buildings and Facilities	0	\$0	0	\$0	0	\$0
Subtotal, program changes						-\$828,659
Total built-in and program changes	731	\$2,292,114	629	\$1,413,630	-102	-\$878,484

BUDGET GRAPHS

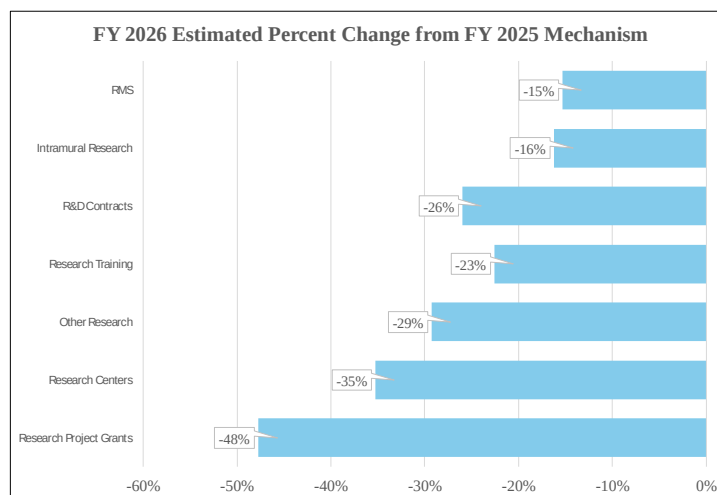
History of Budget Authority and FTEs:



Distribution by Mechanism:



Change by Selected Mechanisms:



National Institute for Child and Women’s Health, Sensory Disorders, and Communication

Budget Authority (BA):

	<u>FY 2024 Final</u>	<u>FY 2025 Enacted</u>	<u>FY 2026 President's Budget</u>	<u>FY 2026 +/- FY 2025</u>
BA	\$2,292,114,000	\$2,292,114,000	\$1,413,630,000	-\$878,484,000
FTE ¹	737	731	629	-102

Program funds are allocated as follows: Competitive Grants/Cooperative Agreements; Contracts; Direct Federal/Intramural and Other.

Overall Budget Policy: The FY 2026 President’s Budget request for the National Institute for Child and Women’s Health, Sensory Disorders, and Communication (NICWHSDC) is \$1,413.6 million, a decrease of \$878.5 million or 38.3 percent compared to the FY 2025 Enacted level. Within this level, NICWHSDC will support statutory requirements in authorizing language and the President’s priorities to implement executive orders, promote efficiency and reduce government waste.

Program Descriptions and Accomplishments

Reproductive Health, Pregnancy, and Perinatology

Maternal conditions and pregnancy complications have long been leading causes of death among women, and many babies are born too soon or with complications. More than 800 American women died from pregnancy-related conditions in 2022. Understanding how pregnancy-related conditions contribute to maternal morbidity and mortality, stillbirth, preterm birth, and the long-term health of women and their children are scientific priorities for NICWHSDC. NICWHSDC supports basic, clinical, and translational research on gynecology and andrology, contraception, fertility and infertility, pregnancy, and newborn care.

Implementing a Maternal health and PRegnancy Outcomes Vision for Everyone (IMPROVE)

Initiative: An important part of the NIH research portfolio on maternal health is the NIH-wide IMPROVE Initiative. IMPROVE supports research to reduce preventable causes of maternal deaths and improve health for women before, during, and after pregnancy.

The IMPROVE initiative focuses on community engagement in research, which is essential for developing effective strategies to reduce maternal morbidity and mortality. As part of IMPROVE, NIH established 12 Maternal Health Research Centers of Excellence, supported by a data innovation and coordinating hub and an implementation science hub. Awardees work

¹ FY 2026 FTE levels reflect estimates and are subject to change.

collaboratively and with communities to address pregnancy-related complications and deaths and reduce maternal health disparities. The Rapid Acceleration of Diagnostics Technology (RADx® Tech) for Maternal Health Challenge offered cash prizes to accelerate development of technologies to improve maternal health outcomes, prioritizing home-based or point-of-care diagnostic devices, wearables, and other remote sensing technologies.

Preterm Births and Neonatal Research Network (NRN): Preterm birth rates remain high in the United States. About 1 in 10 infants in the United States is born too soon. Preterm birth is a leading cause of infant death and long-term disability. The Neonatal Research Network (NRN) focuses particularly on conditions that affect extremely preterm and low birth rate infants, such as necrotizing enterocolitis (NEC), the most common, serious gastrointestinal disease affecting newborn infants. Death rates for those with NEC can be as high as 50 percent. NICWHSDC-supported research on NEC focuses on fetal growth, such as the development of the gastrointestinal system and digestive function; identification of infants at risk for NEC; prevention of this disorder, such as through research on the feeding of premature newborn infants; the roles of breastfeeding and prebiotics/probiotics in the prevention of NEC; and comparing treatments, such as different surgical techniques.

Maternal Fetal Medicine Units (MFMU): The MFMU research network seeks to reduce maternal, fetal, and infant morbidity related to preterm birth, fetal growth anomalies, and maternal complications and to provide the rationale for evidence-based, cost-effective obstetric practice. Scientists within the MFMU found that prescribing anti-clotting medications shortly after birth to mothers at risk of forming life-threatening blood clots did not present any additional risk to their health. Another study found that tailoring opioid prescriptions to a new mother's previous pain medication intake helps to reduce overall opioid usage directly after birth, potentially preventing later misuse.

Gynecologic Health Conditions

NICWHSDC manages a broad research portfolio to understand, treat, and prevent common, painful, and costly gynecologic health conditions, including endometriosis, uterine fibroids, Polycystic Ovary Syndrome (PCOS), chronic pelvic pain, and pelvic floor disorders.

Endometriosis: Endometriosis is a gynecological health condition that can cause severe pain, irregular periods, and infertility. Diagnosis and treatment of endometriosis are often delayed, and as a result many women experience years of pain and frustration with no relief. Recently, NICWHSDC-funded researchers used a computer algorithm to evaluate nearly 1,300 existing compounds for their ability to reverse gene expression related to endometriosis. Based on the results, scientists tested fenopufen, a prescription drug often prescribed for arthritis, in a rodent model of endometriosis. The researchers observed that fenopufen successfully alleviated a surrogate marker for endometriosis-related pain.

Uterine fibroids: Uterine fibroids are the most common non-cancerous tumors in women of childbearing age, affecting more than 70 percent of women within their lifetime. These tumors grow in or on the wall of the uterus and can cause debilitating pain and abnormal menstrual bleeding. The tumors can also make it difficult to achieve or maintain a pregnancy. A hysterectomy, or removal of the uterus, is currently the only cure. NICWHSDC research aims to

understand what causes fibroids, how to diagnose and treat them, and how to prevent fibroids from occurring. For example, scientists found that epigallocatechin gallate, a compound found in green tea, reduced the amount of a protein that promotes cell division and disrupted biochemical pathways associated with fibroid cell growth and signaling. Researchers have also found that patients with high reported levels of stress had high levels in their uterine muscle tissue of specific microRNAs that are known to be active in the formation of certain tumors.

Child and Adolescent Health

Research on child and adolescent health encompasses biological and behavioral processes that control development, including development of social-emotional health, cognitive development, learning, and physical growth. This research program also supports the evidence base for pediatric medicine, through clinical studies in pharmacology, infectious diseases, endocrinology, trauma and critical illness, and other aspects of health throughout infancy, childhood, and adolescence.

Research under the Best Pharmaceuticals for Children Act: Medical treatments in infants and children are often extrapolated from methods used to treat similar conditions in adults, despite the physiological differences between children and adults that can make the results less applicable and, in some cases, dangerous. Many prescription drugs used in children today are used off-label, without adequate understanding of appropriate dose, safety, or efficacy in children. Research led by NIH under the Best Pharmaceuticals for Children Act has led to changes to pediatric prescription drug labeling. For example, fluconazole was relabeled in February 2024 to include dosing and safety data in preterm neonates, and oxycodone was relabeled in April 2024 to include information from lactation studies that inform dosing and safety information on potential effects on breastfed infants.

Digital Media Use: Parents, teachers, pediatricians, and children and adolescents are concerned about the potential negative impacts of heavy digital media use on children's education, development, and physical and mental health. NIH-supported scientists are exploring the effects of digital media use on child and social and emotional development as well as the influence of technology and digital media on preschoolers' sleep and weight status.

Intellectual and Developmental Disabilities

Research on intellectual and developmental disabilities (IDDs) is designed to discover new ways to ameliorate both common and rare disorders, including Down syndrome (DS), Fragile X syndrome, Rett syndrome, and muscular dystrophy; inborn errors of metabolism; autism spectrum disorders (ASD); congenital conditions currently or potentially detectable through newborn screening; and IDDs that have no identified cause or are not associated with a specific syndrome.

NICWHSDC works to develop the scientific knowledge needed to enhance the health, productivity, independence, and quality of life of people with both physical and intellectual disabilities. As part of NICWHSDC's wide-ranging disability research portfolio, the Institute is leading the Community Champions for Disability Health Challenge, which is offering cash prizes to encourage community-based organizations to develop and implement strategies to reduce health disparities experienced by people with disabilities. Research studies have often

excluded persons with disabilities, even when people with disabilities are disproportionately affected by the conditions under study. The INvestigation of Co-occurring conditions across the Lifespan to Understand Down syndrome (INCLUDE) Initiative is a research project to expand knowledge about DS and to increase the participation of people with DS and their families in research.

Autism Centers of Excellence: The Autism Centers of Excellence program, sponsored by multiple NIH Institutes, supports large-scale multidisciplinary studies to identify causes and potential treatments for ASD. For example, a tablet-based screening application for ASD may improve early detection.

Hearing and Balance Programs

Loss of hearing or balance imposes a significant social and economic burden upon individuals, their families, and the communities in which they live. Untreated hearing loss may lead to serious conditions such as depression, anxiety, dementia, reduced mobility, and falls.

Approximately 2 out of every 1,000 children in the United States are born with a detectable level of hearing loss that can affect their speech, language, social, and cognitive development.² In addition, more than 1 in 20 American children have a dizziness or balance problem.³ Among adults, hearing loss is the third most common chronic condition in the United States.⁴

Ear Infections: Ear infections, or otitis media (OM), are the most common childhood bacterial infection, and there are different causes of infection. Repeated ear infections can contribute to hearing loss and possibly delayed language ability. To address this, NICWHSDC funds basic research to accelerate the development of innovative and effective ways to prevent and treat OM. For example, NIH is funding a study to improve the diagnosis and understanding of one type of ear infection, where fluid stays trapped behind the eardrum leading to hearing loss. Another NIH-funded research team is performing a pilot clinical trial for a new, non-invasive imaging technique that could help clinicians correctly identify the different bacteria causing OM. These results could refine clinical practice guidelines by identifying children most at risk for long-term deficits in speech, language, and auditory processing and reduce unnecessary antibiotic prescriptions, which contribute to antimicrobial resistance. Despite progress and the significant public health concern, research on OM in the United States is declining as senior researchers leave the field and early career faculty are not replacing them. In response, NIH issued a Notice of Special Interest to expand the number of basic and clinical scientists who conduct research on OM, especially early-stage investigators.⁵

Age-Related Hearing Loss: Age-related hearing loss (called presbycusis) occurs gradually for people as they grow older. Nearly 25 percent of adults aged 65–74 have disabling hearing loss, and this increases to 50 percent for those who are 75 and older.⁶ Investigators found that the rate of hearing decline varies depending on multiple factors including age of hearing loss onset.⁷

² cdc.gov/mmwr/preview/mmwrhtml/mm5908a2.htm

³ nidcd.nih.gov/news/2016/more-1-20-us-children-have-dizziness-and-balance-problems

⁴ cdc.gov/nchs/data/series/sr_10/sr10_260.pdf

⁵ grants.nih.gov/grants/guide/notice-files/NOT-DC-22-001.html

⁶ nidcd.nih.gov/health/statistics/quick-statistics-hearing

⁷ pubmed.ncbi.nlm.nih.gov/39215139/

They also developed novel approaches to identify genes and gene variants that were linked to better and worse hearing in older adults.⁸ Understanding genetic factors that affect presbycusis will allow scientists to develop new prevention and treatment strategies for this condition.

Cochlear Implants (CIs): For the adults and children in the United States with severe to profound hearing loss, CIs, a neural prosthesis, can vastly improve the ability to communicate. This small, complex device is made up of a series of electrodes in an array that is inserted directly into the cochlea (the snail-shaped structure in the inner ear). The CI stimulates the auditory nerve, which then transmits sound information to the brain. NICWHSDC supports a specialized CI research program grant focusing on four main themes: 1) preservation of peripheral structures and their function, 2) integration of implants in the central nervous system, 3) processing of language in individuals who use cochlear implants, and 4) improvement in quality of life for CI users. Researchers involved in this NIH-supported research recently published an advance in robotic-assisted insertion of the CI array.⁹ This surgical method avoids trauma and force associated with manual insertion, which can destroy residual hearing. The group then tested this approach with a technique that allows a surgeon to monitor how the auditory nerve responds to noise as the electrode is inserted.¹⁰ With continued NICWHSDC support, research like this innovative surgical approach has the potential to enhance the functionality of CI while preserving residual hearing, ultimately improving communication outcomes for individuals who are deaf or hard of hearing.

High-Resolution Imaging for Inner Ear Visualization: The human inner ear anatomy poses significant challenges for imaging because of its small size and location deep within the bony part of the human head. Most of what researchers know about how the inner ear works is based on preclinical studies. Now, there is a critical need to translate those findings from animal models to humans. However, no current imaging techniques exist that provide enough resolution to fully visualize the inner ear structures or produce images of those structures for patients in the clinic. NIH highlighted these critical needs in a workshop “Visualizing the Human Inner Ear.”¹¹ Further, NIH issued a Request for Information¹² inviting input from the scientific community regarding NIH’s support of non-invasive inner ear imaging in humans. Experts agreed that improving high-quality, high-resolution imaging of the human inner ear for accurate understanding, diagnoses, and treatments, like gene therapy, will enhance human health for those who have hearing and balance problems. In response to the feedback and to address this critical need, NIH issued two funding opportunities.^{13,14} The notices solicit applications for low-risk and high-risk clinical trials addressing the development or improvement of human *in vivo* structural and functional imaging technologies.

Taste and Smell Programs

The senses of taste and smell are closely connected and dysfunction of either or both are often overlooked. Taste and smell disorders can negatively impact health and quality of life. These

⁸ pubmed.ncbi.nlm.nih.gov/38011198/

⁹ pubmed.ncbi.nlm.nih.gov/38728567/

¹⁰ pubmed.ncbi.nlm.nih.gov/38206061/

¹¹ nidcd.nih.gov/research/workshops/visualizing-human-inner-ear-workshop/2019/agenda

¹² grants.nih.gov/grants/guide/notice-files/NOT-DC-23-004.html

¹³ grants.nih.gov/grants/guide/rfa-files/RFA-DC-25-005.html

¹⁴ grants.nih.gov/grants/guide/rfa-files/RFA-DC-25-003.html

senses serve as an early warning system, alerting an individual to dangers such as spoiled food, a gas leak, or fires. NICWHSDC supports studies of the chemical senses — taste (gustation), smell (olfaction), and chemesthesis (chemically provoked irritation) — to understand the normal development of the taste and smell systems and to develop diagnostic tools, treatments and prevention strategies for taste and smell disorders.

Smell and Neurodegenerative Diseases: Problems with the sense of smell increase as people get older with as many as 1 in 4 adults aged 70 and older experiencing smell loss.¹⁵ In 2023, NIH hosted a two-day workshop titled Olfactory Dysfunction in Aging and Neurodegenerative Disease.¹⁶ Leaders in olfaction and brain aging convened to review the current state of the science, identify knowledge gaps, and explore the mechanisms underlying the association between smell loss and risk of cognitive decline and neurodegenerative diseases. The workshop participants identified research opportunities, including leveraging of emerging technologies to study olfactory dysfunction and the use of olfactory dysfunction as a risk predictor for Alzheimer’s disease or Parkinson’s disease. They also highlighted the use of tools such as biomarkers and smell tests to identify individuals at risk for neurodegenerative disease to facilitate early diagnosis and potential treatment.

Voice, Speech, and Language Programs

Disorders involving voice, speech, or language can have an overwhelming effect on an individual’s health and quality of life. These disorders affect people of all ages with or without hearing impairment, including children with autism, those who stutter, and adults with acquired communication disorders. Voice, speech, and language disorders also come at a significant financial cost due to work-related disability, lost productivity, and direct health care cost.¹⁷ The Voice, Speech, and Language program supports innovative research to develop effective diagnostic and intervention strategies for individuals with communication impairments.

Laryngeal Disorders: The sound of your voice is produced by vibration of the vocal folds. Vocal fold tissue is a complex biological structure, and people who have sustained injuries to the larynx or have undergone head and neck cancer surgery can exhibit voice disorders due to vocal fold dysfunction. It is difficult to study laryngeal disorders because taking tissue samples can cause irreversible damage and reliable human tissue models do not exist. However, NIH-funded researchers have created an *in vitro* model of vocal fold tissue from induced human pluripotent stem cells. Further, when exposed to environmental insults like cigarette smoke, the model tissue had an inflammatory response like human vocal fold tissue — an important feature for a model system.¹⁸ Additionally, these researchers are using molecular and genetic approaches in animals and humans to better understand vocal fold development and response to injury across the lifespan. In another study, they aim to create vocal fold organoids (simple miniaturized tissue) to characterize and better understand the biology of both healthy and damaged vocal folds. This research will provide the knowledge for scientists to identify new targets and molecular pathways to one day develop regenerative medicine treatments for injured or damaged vocal fold tissue.

¹⁵ nidcd.nih.gov/news/multimedia/sense-smell-us-adults-over-age-40

¹⁶ nia.nih.gov/research/dn/workshops/olfactory-dysfunction-aging-and-neurodegenerative-disease

¹⁷ pubmed.ncbi.nlm.nih.gov/22549455/

¹⁸ pubmed.ncbi.nlm.nih.gov/33959913/

Stuttering: Stuttering can affect individuals of all ages but occurs most frequently in young children between the ages of two and six. Although most children who stutter outgrow the condition, as many as 25 percent will continue to stutter, a condition known as persistent developmental stuttering.¹⁹ NICWHSDC supports research that aims to investigate how brain networks develop in children who stutter and how these networks might predict whether stuttering will continue or resolve as they grow. For example, NIH-funded researchers found that stuttering is associated with functional deficits in a specific brain network, called the basal ganglia thalamocortical (BGTC) motor loop, and the deficits are worsened during spontaneous speech.²⁰ This group also analyzed brain scans in children between the ages of 3 to 12. They found that changes in the BGTC network started in the earliest phases of stuttering and structural changes to the BGTC were associated with recovery.²¹ Another research group is using advanced imaging techniques to analyze brain activity and identify structures critical for speech production. The study seeks to uncover early markers of stuttering. The findings will help scientists understand why some children have persistent stuttering and could lead to precision medicine approaches to improve communication outcomes.

Aphasia: Stroke is a leading cause of adult disability in the United States. A significant proportion of stroke survivors have communication disorders, such as aphasia (post-stroke difficulty in using language). Aphasia is directly associated with social isolation, decreased participation in rehabilitation therapies, and diminished quality of life. NICWHSDC is supporting the Center for the Study of Aphasia Recovery to improve outcomes for these individuals. This center has made progress towards understanding the mechanisms that promote spontaneous and therapy-induced recovery in aphasia, in addition to understanding the effects of drug therapy, brain health, and neurolinguistic factors on the outcome of aphasia therapy. Recently, this group used AI to analyze brain imaging that captured information about brain networks in stroke survivors.²² The AI tool was better able to predict which individuals would have more severe language problems. With further developments, AI may be able to help clinicians understand the extent to which language problems can be improved after a stroke.

Advancing Brain-Computer Interface through Clinical Trials: NICWHSDC has expanded its clinical trial program to identify effective interventions for the treatment or prevention of communication disorders.²³ Some complex, high-risk clinical trials benefit from close interaction, oversight, and guidance through a cooperative agreement between NIH and the research institution. For example, through this program, significant progress has been made to help people with severe speech impairment regain their ability to communicate. Conditions such as brainstem stroke or amyotrophic lateral sclerosis (ALS) can rob an individual of their ability to speak, although they retain both the ability to think clearly and the desire to communicate with others. Over 25 years ago, these individuals were “locked-in” with no hope of communicating with the outside world.²⁴ Over the last two decades, brain-computer interface (BCI) technology

¹⁹ pubmed.ncbi.nlm.nih.gov/21606152/

²⁰ pubmed.ncbi.nlm.nih.gov/37099876/

²¹ pubmed.ncbi.nlm.nih.gov/36863188/

²² pubmed.ncbi.nlm.nih.gov/38866977/

²³ grants.nih.gov/grants/guide/pa-files/PAR-24-050.html

²⁴ pubmed.ncbi.nlm.nih.gov/33401571

has made communication possible. BCI technology uses surgically implanted electrodes to analyze brain electrical activity as an individual thinks about speaking or writing, and decodes words and sentences based on the brain activity. In a recent advance, an NIH-funded research team significantly improved a BCI technology tool which allowed an individual with ALS to communicate with a 125,000-word vocabulary with 90 percent accuracy after less than 2 hours of training just 26 days after implantation surgery — an improvement from a previous study with an initial 17 hours of training data and only 24 percent word accuracy. After 16 hours of use, this individual achieved 98 percent accuracy in self-paced conversations, communicating approximately 32 words per minute. This person is now able to independently have conversations with family, friends, health care professionals, and colleagues using a voice that closely resembles their own.

Rehabilitation

NICWHSDC houses the National Center for Medical Rehabilitation Research (NCMRR) which fosters the development of scientific knowledge to enhance the health, productivity, independence, and quality of life of people with physical disabilities.

Assistive Technology Devices: In a recent breakthrough, NCMRR-supported research led to a procedure enabling a lower leg prosthetic limb to be fully controlled by the user's brain signals. A new surgical approach connects the ends of severed muscle pairs in the limb, resulting in neural signals that more closely match those of an intact limb. Using the neurally-controlled prosthetic leg, patients achieved a normal walking gait and reached peak walking speeds equivalent to those without an amputation. Compared to individuals using the prosthesis who received conventional surgery, those who received the new surgical approach walked 41 percent faster and were better at climbing stairs and avoiding obstacles.

Development of Therapies: Other recent work from NCMRR's portfolio includes development of therapies to improve physical activity in those with physical disabilities. More than half of stroke survivors have trouble walking in the first year of recovery. High intensity walking therapy improves mobility, but most patients return to being sedentary after completing these programs, increasing their risk for additional strokes. A new intervention in which stroke survivors tracked their daily step counts and regularly met with a therapist to discuss progress and goals helped patients stay more physically active after the program had ended compared to those who underwent high intensity walking therapy.

Artificial Intelligence (AI) leading to Healthy and Optimal Lives: As a result of NIH's efforts, the experiences of people with intellectual and physical disabilities are becoming more fully integrated into medical treatment. Researchers developed a new AI system that incorporated a series of features designed to help solve cases that were diagnostically challenging. The new AI tool doubled the rate of accurate genetic diagnosis when tested in three distinct groups of individuals previously assessed using current methods. Moreover, the AI method can analyze thousands of samples within days, making it feasible and cost-effective. For people with physical disabilities, a new surgical procedure for below-knee limb amputation allows for neural control that improves maneuverability of a robotic limb. Compared to a control group who had traditional surgery, patients undergoing the procedure walked faster with their prostheses and were better at climbing stairs and avoiding obstacles.

APPROPRIATIONS HISTORY

**NATIONAL INSTITUTES OF HEALTH
National Institute for Child and Women's Health,
Sensory Disorders, and Communication**

Appropriations History¹

Fiscal Year	Budget Estimate to Congress¹	House Allowance	Senate Allowance	Appropriation
2017 Rescission	\$1,761,284,000	\$1,807,534,000	\$1,837,589,000	\$1,817,170,000 \$0
2018 Rescission	\$1,357,875,000	\$1,845,351,000	\$1,877,860,000	\$1,911,980,000 \$0
2019 Rescission	\$1,763,584,000	\$1,934,813,000	\$1,981,904,000	\$1,980,862,000 \$0
2020 Rescission	\$1,705,090,000	\$2,077,674,000	\$2,087,548,000	\$2,047,571,000 \$0
2021 Rescission	\$1,862,763,000	\$2,077,181,000	\$2,164,276,000	\$2,088,413,000 \$0
2022 Rescission	\$2,453,909,000	\$2,212,544,000	\$2,190,250,000	\$2,197,894,000 \$0
2023 Rescission	\$2,183,645,000	\$2,287,766,000	\$2,276,529,000	\$2,283,411,000 \$0
2024 Rescission	\$2,282,114,000	\$2,283,411,000	\$2,293,411,000	\$2,293,411,000 \$0
2025 Rescission	\$2,302,344,000		\$2,313,411,000	\$2,293,411,000 \$0
2026	\$1,413,630,000			

¹ FY 2017 Budget Estimate to Congress includes mandatory financing.

BUDGET AUTHORITY BY OBJECT CLASS

**NATIONAL INSTITUTES OF HEALTH
National Institute for Child and Women's Health, Sensory Disorders, and Communication**

Budget Authority by Object Class ¹

(Dollars in Thousands)

	FY 2025 Full-Year CR	FY 2026 President's Budget	FY 2026 +/- FY 2025
Total compensable workyears:			
Full-time equivalent	731	629	-102
Full-time equivalent of overtime and holiday hours	2	2	0
Average ES salary	\$225	\$226	\$1
Average GM/GS grade	12.7	12.7	0.0
Average GM/GS salary	\$141	\$142	\$1
Average salary, Commissioned Corps (42 U.S.C. 207)	\$133	\$116	-\$17
Average salary of ungraded positions	\$159	\$171	\$13
OBJECT CLASSES	FY 2025 CR	FY 2026 President's Budget	FY 2026 +/- FY 2025
Personnel Compensation			
11.1 Full-Time Permanent	\$73,342	\$61,068	-\$12,274
11.3 Other Than Full-Time Permanent	\$35,669	\$33,768	-\$1,901
11.5 Other Personnel Compensation	\$4,085	\$3,866	-\$220
11.7 Military Personnel	\$740	\$770	\$29
11.8 Special Personnel Services Payments	\$20,104	\$20,205	\$101
11.9 Subtotal Personnel Compensation	\$133,942	\$119,677	-\$14,264
12.1 Civilian Personnel Benefits	\$44,335	\$40,831	-\$3,504
12.2 Military Personnel Benefits	\$227	\$236	\$9
13.0 Benefits to Former Personnel	\$2,636	\$990	-\$1,646
Subtotal Pay Costs	\$181,139	\$161,734	-\$19,405
21.0 Travel & Transportation of Persons	\$2,053	\$1,773	-\$280
22.0 Transportation of Things	\$314	\$237	-\$78
23.1 Rental Payments to GSA	\$1	\$2	\$0
23.2 Rental Payments to Others	\$215	\$219	\$5
23.3 Communications, Utilities & Misc. Charges	\$131	\$134	\$3
24.0 Printing & Reproduction	\$6	\$6	\$0
25.1 Consulting Services	\$70,408	\$54,459	-\$15,949
25.2 Other Services	\$53,200	\$47,120	-\$6,080
25.3 Purchase of Goods and Services from Government Accounts	\$176,475	\$129,745	-\$46,730
25.4 Operation & Maintenance of Facilities	\$213	\$218	\$4
25.5 R&D Contracts	\$55,859	\$42,789	-\$13,070
25.6 Medical Care	\$805	\$733	-\$72
25.7 Operation & Maintenance of Equipment	\$6,284	\$5,216	-\$1,068
25.8 Subsistence & Support of Persons	\$0	\$0	\$0
25.0 Subtotal Other Contractual Services	\$363,246	\$280,280	-\$82,966
26.0 Supplies & Materials	\$13,919	\$10,527	-\$3,392
31.0 Equipment	\$9,430	\$7,178	-\$2,252
32.0 Land and Structures	\$1,015	\$855	-\$160
33.0 Investments & Loans	\$0	\$0	\$0
41.0 Grants, Subsidies & Contributions	\$1,720,619	\$950,661	-\$769,958
42.0 Insurance Claims & Indemnities	\$0	\$0	\$0
43.0 Interest & Dividends	\$26	\$26	\$0
44.0 Refunds	\$0	\$0	\$0
94.0 Financial Transfers	\$0	\$0	\$0
Subtotal Non-Pay Costs	\$2,110,975	\$1,251,896	-\$859,079
Total Budget Authority by Object Class	\$2,292,114	\$1,413,630	-\$878,484

¹ Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

DETAIL OF POSITIONS

NATIONAL INSTITUTES OF HEALTH
National Institute for Child and Women's Health,
Sensory Disorders, and Communication

Detail of Positions ¹

GRADE	FY 2024 Final	FY 2025 Full-Year CR	FY 2026 President's Budget
Total, ES Positions	2	2	2
Total, ES Salary	\$424,666	\$450,314	\$452,566
General Schedule			
GM/GS-15	94	90	85
GM/GS-14	115	111	104
GM/GS-13	162	155	134
GS-12	94	91	85
GS-11	29	28	25
GS-10	1	1	1
GS-9	19	19	15
GS-8	14	12	11
GS-7	11	11	10
GS-6	6	6	5
GS-5	2	2	2
GS-4	0	0	0
GS-3	2	2	2
GS-2	1	1	1
GS-1	0	0	0
Subtotal	550	529	480
Commissioned Corps (42 U.S.C. 207)			
Assistant Surgeon General	0	0	0
Director Grade	1	1	1
Senior Grade	2	2	1
Full Grade	0	0	0
Senior Assistant Grade	0	0	0
Assistant Grade	0	0	0
Junior Assistant	0	0	0
Subtotal	3	3	2
Ungraded	229	227	189
Total permanent positions	553	532	482
Total positions, end of year	784	761	673
Total full-time equivalent (FTE) employment, end of year	737	731	629
Average ES salary	\$212,333	\$225,157	\$226,283
Average GM/GS grade	12.7	12.7	12.7
Average GM/GS salary	\$138,293	\$141,247	\$141,848

¹ Includes FTEs whose payroll obligations are supported by the NIH Common Fund.