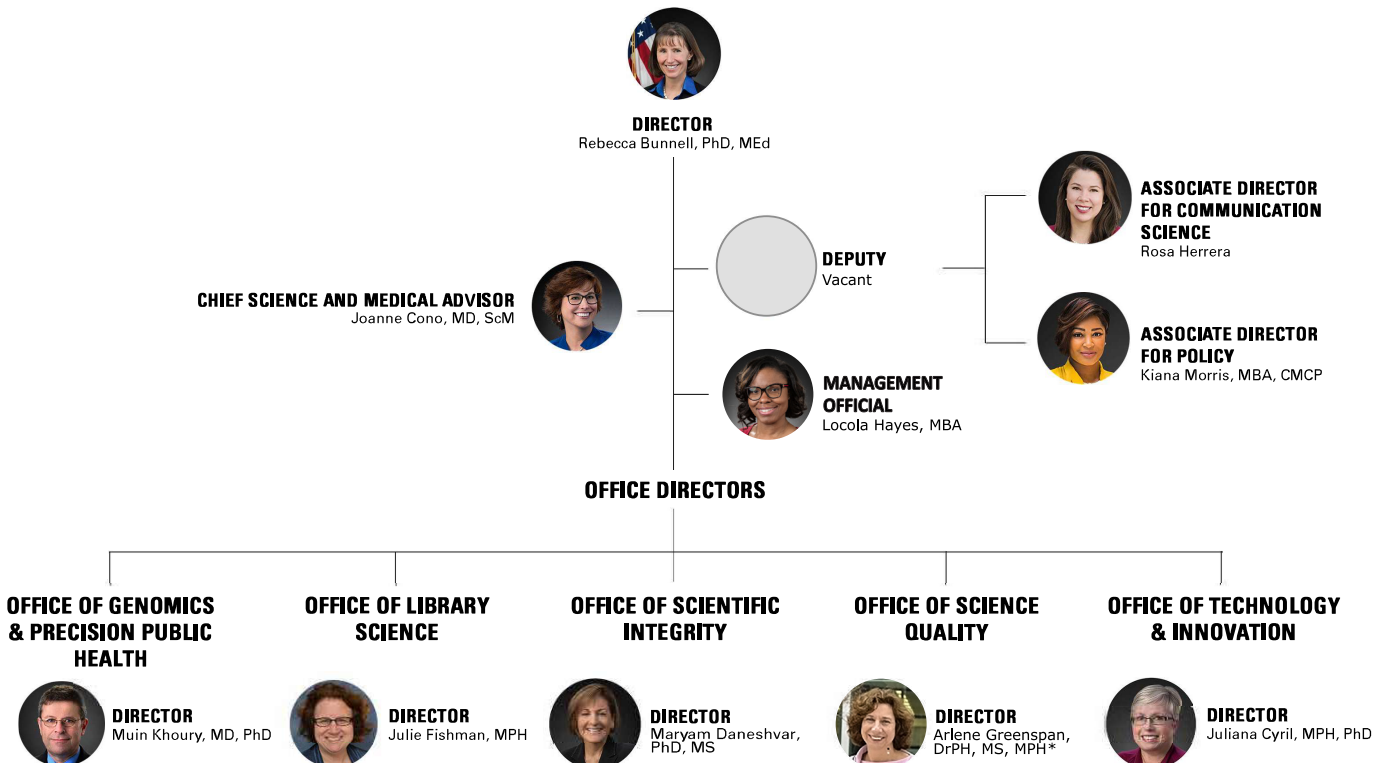




Office of Science Overview

 VISION	 MISSION	 CORE VALUES
<p>OS advances CDC as the global leader in public health science</p>	<p>To promote quality, integrity, and innovation of CDC science to improve the public's health</p>	<p>Expertise, Credibility, Collaboration</p>

Organizational Structure



*Acting

Office of Science Services and Functions

Office of the Director (OD)

- Provides oversight and leadership for major or cross-cutting scientific activities
- Provides guidance on strategic science to support to CDC's centers, institutes, and offices (CIOs)
- Provides management of the office
- Advises on science policy formation and issues management
- Advises on office and agency-wide communication

Office of Science Quality (OSQ)

- Performs scientific review and clearance of CDC products
- Provides oversight of knowledge management:
 - eClearance
 - CDC Stacks
 - CDC Vault
 - STARS
- Promotes high-quality science guidelines and recommendations
- Enhances public access to CDC publications
 - CDC Stacks

Office of Scientific Integrity (OSI)

- Protects the rights and welfare of humans in research
- Ensure compliance with Paperwork Reduction Act (PRA)
- Provides leadership in public health ethics
- Provides guidance to protect individuals' privacy and confidentiality
- Provides training agency-wide:
 - Human Subject Protection Training (CITI)
 - Scientific Integrity and Quality Training (SIQT)

Office of Technology and Innovation (OTI)

- Promotes and facilitates the development of technology and innovation:
 - Small Business Innovation Research (SBIR) Program
- Provides expertise to promote timely transfer of knowledge and technology
- Manages CDC's intellectual property (e.g., patents, trademarks, licenses)
- Facilitates innovation and collaborations:
 - Innovation Lab
 - iFund
 - I-Catalyst

Office of Library Science (OLS)

- Serves as hub for information, education, innovation and collaboration for CDC
- Provides digital and physical access to journal articles and books in all areas of public health
- Provides research consultations, literature searches, and resources to evaluate scholarly impact of CDC publications
- Publishes CDC Science Clips, an online bibliographic digest featuring emerging scientific knowledge

Office of Genomics and Precision Public Health (OGPPH)

- Identifies, evaluates, and implements evidence-based genomics practices
- Provides digital access to the Public Health Genomics and Precision Knowledge Base (PHGKB)
- Integrates evidence-based genomic and precision health applications into practice and programs:
 - Surgeon General My Family Portrait Tool
 - Tier 1 Genomics Applications Tool



CY19 Programs and Initiatives



Public Health Data Modernization Initiative (PHDMI): Georgia Tech Research Institute (GTRI)

World class data and analytics is a vital asset that requires continuous improvement to meet agency priorities. The PHDMI is CDC's strategy to improve public health data acquisition, data use, data sharing, and information technology. Managed by OTI, CDC is pursuing a 5-year strategic academic partnership with GTRI to discover cross-cutting solutions for data science services and data interoperability. The GTRI partnership will accelerate data modernization across CDC by identifying and solving public health data challenges.



Charles C. Shepard Science Awards

Established in 1986, The Charles C. Shepard Science Awards recognize scientific excellence that solves critical public health problems. Peer-reviewed scientific publications are awarded in each of the following areas: Assessment, Prevention and Control, Laboratory Science, and Data Methods and Study Design. This year, the Lifetime Scientific Achievement Award was presented to Dr. Rima Khabbaz from the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID). Dr. Khabbaz was honored for her outstanding leadership and supervision of CDC emergency responses and laboratory initiatives throughout her 40-year career at the agency.



Presidential Early Career Awards for Scientists and Engineers (PECASE)

PECASE awards early career scientists and engineers that have exhibited excellence in leading science and technology across the government. This year, CDC honored seven scientists beginning their independent research that embody the zeal and tenacity to lead science in the 21st Century. OSQ liaises between the agency and White House to coordinate the nomination and award process. The following honorees are recognized for significant research contributions to innovations and far reaching developments in U.S public health science.



Study Tracking and Reporting System (STARS)

In 2019, OS launched the first ever cloud based informatics tool designed to support consistent and standardized submission, review, clearance, tracking, and reporting of CDC-wide research and non-research activities. STARS is built on the existing eClearance platform and helps CDC staff meet federal regulatory compliance requirements for scientific affairs. This innovative system both expedites review processes and protects CDC's scientific integrity while tracking projects through the entire life-cycle. In its inaugural year, over 1,000 project submissions are now in the cloud through a centralized platform that reduces processing time drastically.



CDC Investigator Series

The "Federal Policy for the Protection of Human Subjects" (Common Rule, 45 CFR 46) provides ethical guidelines for human subjects that participate in biomedical and behavioral research. As of January 21, 2019, institutions were permitted to implement the revised Common Rule government-wide. OSI implemented the new CDC Investigator Series to ensure scientists were aware of the revised regulations and equipped with the skills needed to conduct policy compliant research. This training series ensures that ethical human research is conducted which garners public trust and increases CDC's ability to protect Americans from health safety and security threats. To date, more than 1,300 staff has been trained through the CDC Investigator Series.



Public Health Genomics and Precision Health Knowledge Base (PHGKB)

The explosive increase in genomics studies and precision health data requires that information be rapidly interpreted, translated, and disseminated. PHGKB is an online precision health and genomics database of published scientific literature and CDC resources available to the public. The Knowledge Base is managed by OGPPH and addresses genomics and precision health discoveries that translate into improved health care and disease prevention. More than 129,000 users have logged into the database in 2019 to search for genomics and precision health related information. PHGKB reduces literature search time for public health practitioners, researchers, health care providers, health care payers, and the general public.



Virtual Reality Demo Day

Virtual Reality (VR) is the future of Public Health with widespread applications from global training to emergency response preparation. OSI and OLS collaborated to host a VR Demo Day to feature seemingly real computer-generated simulations that staff can use to advance public health. More than 150 CIO participants engaged with live, hands-on demonstrations and learned about current internal and external efforts utilizing VR technology. The demo also highlighted the potential power of VR as a safe and cost-effective tool that can be applied agency-wide. The Division of Laboratory Systems and Center for Preparedness and Response are currently piloting VR laboratory trainings to transform the delivery and experience of educational content.



QUALITY (OSQ)



50+ participants in the science rotation program



Developed and implemented the CDC-wide Study Tracking And Reporting System (STARS)



Conducted GRADE workshops with > 40 CDC scientists



1165 reviewed documents through eClearance with an average turnaround time of 2.6 days

INTEGRITY (OSI)



>1000 workforce hours saved by eliminating the continuing review process for exempt and reliance out research



Decreased the time it takes for the public to respond to Information Collection Request (ICRs) by 2,292,169 hours



338 CDC staff trained on confidentiality protections



150,000 downloads of the CDC Public Health Ethics Case Book

GENOMICS (OGPPH)



>1.7 million PHGKB web page views



> 57,000 Genomics and Precision Health weekly update subscribers



> 1.4 million My Family Health Portrait web page views



43 published editions of Advanced Molecular Detection clips

INNOVATION (OTI)



27 executed license agreements



84 issued patents (15 U.S., 69 foreign)



41 innovation projects completed

LIBRARY (OLS)



23,444 document delivery requests including interlibrary loans, document scans, and book check-outs



1.335 million articles downloaded



1,163 literature searches and systematic reviews completed



120,940 library web page views