

U.S. Department of Health and Human Services
National Institutes of Health

**Twenty-Third Meeting of the
Clinical Center Research Hospital Board
February 17, 2023**

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Clinical Center Research Hospital Board

Norvell V. Coots, M.D., President and Chief Executive Officer (CEO), Holy Cross Health, and Chair, National Institutes of Health (NIH) Clinical Center Research Hospital Board (CCRHB)

Lawrence A. Tabak, D.D.S., Ph.D., Performing the Duties of the Director, NIH

David M. Baum, PMP, Patient, Clinical Center (CC) Patient Advisory Group (PAG)

David C. Chin, M.D., M.B.A., Distinguished Scholar, Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health and Johns Hopkins University School of Medicine

Regina S. Cunningham, Ph.D., RN, FAAN, CEO, Hospital of the University of Pennsylvania Health System

*Sherin U. Devaskar, M.D., Executive Chair of the Department of Pediatrics at the University of California, Los Angeles (UCLA), Physician-in-Chief, UCLA Mattel Children's Hospital, and Assistant Vice Chancellor of Children's Health, UCLA Health

Julie A. Freischlag, M.D., Dean, Wake Forest University School of Medicine

Steven I. Goldstein, M.H.A., President and CEO, Strong Memorial Hospital, University of Rochester Medical Center

*Jack Leslie, Former Chairman, Weber Shandwick, Senior Visiting Fellow, Duke Global Health Institute

Stephanie Reel, M.B.A., Chief Information Officer (CIO), Johns Hopkins University and Health System

Antoinette Royster, Patient, CC PAG

Tara A. Schwetz, Ph.D., Acting Principal Deputy Director, NIH, and Executive Secretary, CCRHB

Craig E. Samitt, M.D., M.B.A., Founder and CEO, ITO Advisors

*Pending Board Member

Executive Summary

The Clinical Center Research Hospital Board (CCRHB) of the National Institutes of Health (NIH) convened its 23rd meeting via videoconference on February 17, 2023. The meeting was webcast live and open to the public. A [video recording](#) is available online.

Norvell V. Coots, M.D., President and Chief Executive Officer (CEO) of Holy Cross Health, and Chair of the CCRHB, called the meeting to order at 9:00 a.m. ET. He welcomed everyone to the meeting and indicated who was attending in person and who was attending virtually. Jack Leslie, former Chair of Weber Shandwick and Senior Visiting Fellow from Duke Global Health Institute, and Sherin U. Devaskar, M.D., Executive Chair of the Department of Pediatrics at the University of California, Los Angeles (UCLA), Physician-in-Chief at UCLA Mattel Children's Hospital, and Assistant Vice Chancellor of Children's Health, UCLA Health, are pending Board members. Dr. Coots said that Tara A. Schwetz, Ph.D., Acting Principal Deputy Director of NIH and Executive Secretary of the CCRHB, will give the opening remarks on behalf of Lawrence A. Tabak, D.D.S., Ph.D., Performing the Duties of the Director of NIH.

Dr. Schwetz listed the people who had stepped down from their positions at the end of 2022: Anthony S. Fauci, M.D., NIAID Director; Andrea Norris, M.B.A., NIH Chief Information Officer and Director of the Center for Information Technology (CIT); Roger I. Glass, M.D., Ph.D., Director of the Fogarty International Center and NIH Associate Director for International Research; and Elizabeth Wilder, Ph.D., Director of the NIH Office of Strategic Coordination (OSC). They were replaced by Hugh Auchincloss, M.D.; Ivor D'Souza, M.S.E.E.; Peter Kilmarx, M.D.; and Douglas M. Sheeley, Sc.D., respectively. Joni L. Rutter, Ph.D., transitioned from Acting Director to Director of the National Center for Advancing Translational Sciences. In October 2022, Renee Wegrzyn, Ph.D., was appointed as the inaugural Director of the Advanced Research Projects Agency for Health (ARPA-H). John I. Gallin, M.D., will be retiring as Chief Scientific Officer at the NIH Clinical Center (CC) in March. Nina F. Schor, M.D., Ph.D., was officially appointed this week as Deputy Director for Intramural Research.

The Albert Lasker Basic Medical Research Award went to NIH grantees Richard O. Hynes, Ph.D. (Massachusetts Institute of Technology), Erkki Ruoslahti, M.D., Ph.D. (Sanford Burnham Prebys Medical Discovery Institute), and Timothy A. Springer, Ph.D. (Boston Children's Hospital/Harvard Medical School) for work on integrins.

The enacted budget went from \$46.2 billion in 2022 to \$49.2 billion in fiscal year (FY) 2023. The Common Fund received an increase of \$65 million, and ARPA-H was given an increase from \$1 billion in 2022 to \$1.5 billion.

James K. Gilman, M.D., CEO of the NIH Clinical Center (CC), provided the CC CEO update. He announced the 70th anniversary of the CC, with commemorative activities planned for the summer. He listed open positions at the CC and indicated the stage in the search process for each position. He announced the appointment of Cecelia C. Henry, M.S., RN, as the Scientific Diversity Advisor for the CC. This week, the CC presented its Racial and Ethnic Equity Plan in consultation with three other institutes; the CC's plan added a sixth initiative focused on accessibility. Dr. Gilman said that the diversity, equity, inclusion, and accessibility (DEIA) advisory committee was created about a year ago and discussed its activities, such as addressing unconscious bias in step pay increases. He announced that 775 people had received 2022 CEO

awards from 115 categories. He described the ceremony where intramural researcher Harvey J. Alter, M.D., received a Nobel Prize (awarded in 2020) at the end of 2022 and summarized a *New Yorker* article that discussed the CC from a patient's perspective. He provided CC statistics, including an average daily census of 94.2 for FYs 2019–2022, a 24% increase in outpatient visits between year-to-date (YTD) 2022 and YTD 2023, and a 31% increase in new patients; about 10% of visits were telehealth appointments. He reported that a Joint Commission Mock Survey had recently been conducted. Dr. Gilman reported on the 2022 CC Federal Employee Viewpoint Survey (FEVS), which showed a decline in the Global Satisfaction and Leaders Lead categories. Dr. Gilman noted the new DEIA index and respective ratings. He mentioned Rare Disease Day, which will occur on February 28, 2023, and summarized a town hall meeting on what to expect in 2023—filling open positions, focusing on DEIA, relaxing of COVID-19 restrictions, expansion of pediatric care and resources, and dialogue on the future of work. He also announced a planned farewell for Dr. Gallin, who will be retiring from NIH after more than 50 years.

Guillermo Avilés-Mendoza, J.D., LL.M., a member of the public with many years of service in the U.S. Department of Health and Human Services (HHS) and a current patient at the NIH CC, made a 5-minute presentation, in which he recommended that the Board augment the number of patient representatives in the CC, put more resources into the patient library, and draw on the Agency for Healthcare Research and Quality's (AHRQ) *Guide to Patient and Family Engagement in Hospital and Safety* to improve patient engagement.

David Lang, M.D., M.P.H., Director of the Office of Patient Safety and Clinical Quality, reported on clinical and safety performance metrics. He discussed data on hand hygiene compliance, central line-associated bloodstream infections (CLABSIs), catheter-associated urinary tract infections (CAUTIs), surgical site infections, falls, pressure injury prevalence, Code Blue/rapid responses, data on transfusions, documentation and coding, and employee safety.

Andrew Mannes, M.D., M.E., M.B.A., Chief of the Department of Perioperative Medicine, and William Pritchard, M.D., Ph.D., physician at the Center for Interventional Oncology, presented on a miniature 3D-printed emergency respirator that, in collaboration with an extramural group, is currently moving forward into the clinical trial stage. Miniature in-line respirators are inexpensive, are easy to operate, and can be used in emergencies. Dr. Pritchard showed that the device was about the size of a flash drive, and Dr. Mannes described their study, which has been submitted as a Phase I clinical trial to the U.S. Food and Drug Administration (FDA). They will be collecting safety data on patients ventilated with the device after planned surgical procedures at NIH. Data will be collected from respiratory parameters, questionnaires given after surgery, and the results of routine histories and physicals. Both intramural and extramural collaborators are involved, with potential applications for the military and the National Aeronautics and Space Administration (NASA).

Daniel S. Chertow, M.D., M.P.H., from the NIH CC's Critical Care Medicine Department, reported on 44 autopsies of SARS-CoV-2 patients, performed an average of 22 hours post-mortem. The autopsies found SARS-CoV-2 RNA in more than 30 cell types and 35 tissues, including evidence that it grows in the brain. These findings indicate that the virus can be widely disseminated throughout the body and can replicate there (i.e., it is not confined to the lungs).

Dan Wheeland, P.E., Director of the NIH Office of Research Facilities, provided the facilities presentation on construction and improvements of the CC building. He noted an increase in congressional funding for this, from \$250 million to \$350 million from FY 2022 to FY 2023. He mentioned new space for the Center for Cellular Engineering; a renovation of the Pharmacy and Permanent Intravenous Admixture Unit; the development of a Radiopharmacy and Cell Labelling Facility; sterile processing upgrades on the basement of Building 10; the creation of state-of-the-art laboratory facilities in the E Wing for transfusion medicine; and the creation of the new Surgery, Radiology, and Laboratory Medicine building. He also described efforts underway to make the campus more resilient, including a black start project that would enable NIH to operate the cogeneration plant during a regional power outage; the cogeneration plant would enable NIH to generate sufficient steam and chilled water to sustain patient care operations.

On behalf of Barbara A. Jordan, D.N.P., RN, NEA-BC, Acting Chief Nurse Officer, Rachel Coumes, M.S.N., RN, Magnet Program Manager, presented an update on the Clinical Center Nursing Department's (CCND) journey toward Magnet accreditation. The Magnet application was submitted on January 12, 2023, and the CCND hopes for accreditation in the 2024–2025 timeframe. She discussed how the CCND has developed a Magnet education plan and will use the National Database of Nursing Quality Indicators (NDNQI) to assess outperformance on seven (7) Nurse Sensitive indicators; over eight consecutive quarters, the CCND must demonstrate outperformance of the national at least 5 quarters. She discussed areas where the CC was Magnet-ready (e.g., falls with injuries) and areas where it needed to improve (e.g., CLABSIs). The CCND has standardized its unit-based goals, which will be used to evaluate action plans.

Dr. Gilman explained the creation of the Children's Working Group (CWG), eight outside experts charged with reviewing the Pediatric Planning Group (PPG) report, which had assessed the feasibility of doing research at the CC on younger (less than 3 years of age) and smaller children. Two members of the CWG—Dr. Devaskar and Clifford W. Bogue, M.D., from Yale New Haven Children's Hospital—presented at the CCRHB meeting. Dr. Devaskar said there were many strengths associated with creating a pediatric intensive care unit (PICU) at NIH, including helping with the first-in-human trials of rare diseases and creating a family-friendly environment. However, the CWG also identified challenges, such as the logistical difficulties of running a three-bed PICU and suggested developing a network of institutions that already have the infrastructure in place for pediatric studies. The CWG said that the proposed budget feasibility would depend on the specifics of the model developed and contractual arrangements.

The report was unanimously accepted by the Board. Dr. Gilman said that the report would go to the CC governing board, NIH leadership, and the PPG for review and comment. Dr. Gilman said that current budgetary issues may mean that not all the plans will be implemented.

Dr. Tabak thanked the group for its report and feedback. There were no final comments from the floor. Dr. Coats announced that the next meetings would be on June 16 and October 20, 2023. He adjourned the meeting at 12:30 p.m.

Meeting Summary

February 17, 2023

Welcome and Board Chair's Overview

Norvell V. Coots, M.D., President and Chief Executive Officer (CEO), Holy Cross Health, and Chair, NIH Clinical Center Research Hospital Board (CCRHB)

Dr. Coots welcomed everyone to the meeting, which was conducted in a hybrid format. Attending in person were Board members Stephanie Reel, M.B.A.; Antoinette Royster; and Jack Leslie. Attending virtually were Board members David M. Baum, PMP; Sherin U. Devaskar, M.D.; Julie A. Freischlag, M.D.; David C. Chin, M.D., M.B.A.; Regina S. Cunningham, Ph.D., RN, FAAN; Steven I. Goldstein, M.H.A.; and Craig E. Sammit, M.D., M.B.A. Mr. Leslie and Dr. Devaskar are pending Board members. Dr. Coots also welcomed all NIH leaders, members of the NIH community, and members of the public who joined the livestreamed meeting. Tara A. Schwetz, Ph.D., Acting Principal Deputy Director of NIH and Executive Secretary of the CCRHB, will give Dr. Tabak's remarks on his behalf.

NIH Director's Remarks

Tara A. Schwetz, Ph.D., Acting Principal Deputy Director of NIH and Executive Secretary of the CCRHB, gave the remarks on behalf of Lawrence A. Tabak, D.D.S., Ph.D., Performing the Duties of the Director, NIH

NIH Leadership Changes

Dr. Schwetz began with changes in leadership.

- Anthony S. Fauci, M.D., stepped down after 38 years as Director of the National Institute of Allergy and Infectious Diseases (NIAID). These duties are now being performed by his deputy, Hugh Auchincloss, M.D., the new Acting Director of NIAID.
- Andrea Norris, M.B.A., retired as the Director of the Center for Information Technology (CIT) and the Chief Information Office (CIO) at NIH. The new Acting Director of the CIT is Ivor D'Souza, M.S.E.E.
- Roger I. Glass, M.D., Ph.D., stepped down as Director of Fogarty International Center. He is President of a new board. His deputy, Peter Kilmarx, M.D., became the Acting Director of the Fogarty International Center.
- Elizabeth (Betsy) Wilder, Ph.D., stepped down as the Director of the NIH Office of Strategic Coordination (OSC). The new Acting Director of the OSC is Douglas M. Sheeley, Sc.D.
- Joni L. Rutter, Ph.D., transitioned from Acting Director to Director of the National Center for Advancing Translational Sciences (NCATS). She was officially sworn in as Director of NCATS last week.

- Renee Wegrzyn, Ph.D., was appointed in October as the inaugural Director of the Advanced Research Projects Agency for Health (ARPA-H), which applies the model of the Defense Advanced Research Projects Agency (DARPA) to health research. Dr. Wegrzyn has posted her vision for the new agency on its website.
- John I. Gallin, M.D., will be retiring as Chief Scientific Officer at the NIH CC in March; he previously served as the CC's Director for many years.
- Nina F. Schor, M.D., Ph.D., was officially appointed this week as Deputy Director for Intramural Research (DDIR); she had previously served in this role in an acting capacity.

Lasker Awards

The Albert Lasker Basic Medical Research Award went to NIH grantees Richard O. Hynes, Ph.D., Massachusetts Institute of Technology; Erkki Ruoslahti, M.D., Ph.D., Sanford Burnham Prebys Medical Discovery Institute; and Timothy A. Springer, Ph.D., Boston Children's Hospital/Harvard Medical School for work on integrins.

NIH Budget Update

The budget graphs have shown a steady increase since 2014.

- The enacted budget went from \$46.2 billion in 2022 to \$49.2 billion in fiscal year (FY) 2023. The total increase was around \$3 billion, or about 3.8%, for all Institutes and Centers.
- The Common Fund received an increase of \$65 million, which is about 10%.
- ARPA-H was given an increase from \$1 billion in 2022 to \$1.5 billion for 2023.

They are already working on 2024 and 2025 budgets.

Discussion

- Ms. Reel asked where ARPA-H would be located. Dr. Schwetz said the FY23 appropriations bill placed it in NIH, with an emphasis on a different culture and approach. It would not be physically located on the NIH campus though. The legislation from FY 2023 said that it had to be in at least three locations, and Dr. Wegrzyn is working on how to operationalize this requirement.
- Dr. Coots congratulated the Lasker awardees and is looking forward to ARPA-H's future accomplishments.

NIH Clinical Center (CC) CEO Update

James K. Gilman, M.D., CEO, NIH CC

Dr. Gilman said that there would be comments from a member of the public after his remarks.

70th Anniversary of the Clinical Center

Dr. Gilman said that events this summer to commemorate the 70th anniversary of the opening of the CC would include having former NIH Director Francis S. Collins, M.D., Ph.D., give Grand Rounds.

Open Positions

There are several open positions:

- CC Chief Nurse Officer
- CC Chief Financial Officer (CFO)
- CC Chief, Pharmacy Department
- CC Chief, Office of Clinical Research Training and Medical Education (OCRTME)
- CC Hospital Epidemiologist/Chief, Hospital Epidemiology Service
- CC Chief, Department of Transfusion Medicine

Dr. Gilman opined that some of the recruiting requirements were dated and led to lengthy delays in filling positions, but noted a couple of selections had been made. There are additional requirements to finalize the CFO recruitment, which is part of the senior executive service, but a selection has been made. Selections are being finalized for the Chief Nurse Officer and Chief of the Pharmacy Department. Selections have been made but not finalized for the Chief of OCRTME and the Chief of Hospital Epidemiology Service. The search for the Chief of the Department of Transfusion Medicine has not started.

Scientific Diversity Advisor for the Clinical Center

Cecelia C. Henry, M.S., RN, has been appointed as the Scientific Diversity Advisor for the CC. She understands the history and culture of the CC, and her position involves making the CC more diverse and inclusive in its biomedical, clinical, and social science workforce. She was a nurse educator before taking this position. She attends the Executive Committee weekly and interacts regularly with CC leadership. Her appointment is the latest effort to make the CC leadership more representative of the people cared for at the CC and the people of the country.

Diversity, Equity, Inclusion, and Accessibility (DEIA)

This week, the CC completed its Racial and Ethnic Equity Plan in consultation with three other institutes: the National Institute of Mental Health (NIMH), the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), and the National Institute of Environmental Health Sciences (NIEHS). A sixth initiative was added to the CC's plan that focused on accessibility. About a year ago, the CC DEIA advisory committee was created from staff of different levels from across the organization. Dr. Gilman said the advisory committee functions as a dispersion mechanism for DEIA initiatives and as a grassroots organization to bring ideas back to senior leadership. The leadership is now analyzing who receives quality step increases (out-of-cycle pay raises) and looking at relevant data to determine whether this reflects the diversity of the organization and address any unconscious bias in the award determinations.

2022 CEO Awards

The sixth annual CEO awards for 2022 were announced on December 16, 2022. There were 115 awards with 775 awardees. There will be a later event to distribute them in the CC.

Nobel Award and New Yorker Article

Dr. Gilman discussed two recent instances where the CC had received publicity.

- Intramural researcher Harvey Alter, M.D., received the Nobel Prize in 2020 but went to Stockholm for the in-person award ceremony on December 10, 2022. Dr. Gilman commented on the importance of music in the Nobel prize event, which is appropriate, given that music is also an important part of NIH (several staff members perform music or listen to music with others).
- Dr. Gilman mentioned a *New Yorker* article, “[Nobody Has My Condition But Me](#),” from January 23, 2023, that discussed the author’s experience as a patient at the CC.

Census Update

Dr. Gilman reported on the CC’s level of activity, which had been depressed during the pandemic. The average daily census (ADC) for FYs 2019–2021 was 94.2; the ADC for year-end FY 2022 was 72.5; and the ADC for year-to-date (YTD) FY 2023 (through January 31, 2023) was 69.6. Between YTD 2022 and YTD 2023, total outpatient visits were up by 24% and total inpatient visits were up by 15%. The number of new patients had increased by 31%. Dr. Gilman reported that about 10% of appointments were via telehealth. The Joint Commission (TJC) sets standards for health care organizations. A Mock Survey was conducted February 7 through February 9, 2023, to help improve readiness for the next TJC triennial survey.

2022 Clinical Center Federal Employee Viewpoint Survey (FEVS)

The FEVS goes to full- and part-time federal employees. The response rate was 65%, an increase of 6% from 2020. The Office of Personnel Management (OPM) and the U.S. Department of Health and Human Services (HHS) had measured indices for these surveys.

- A few scores declined: Global Satisfaction went down by 6%, and Leaders Lead (“leaders demonstrate integrity, communication, and workforce motivation”) went down by 5%. The Belief in Action indicator stayed basically the same, still better than 2019. The Employee Engagement Index (EEI) and the Global Satisfaction Index (GSI) were down from 2020 but better than in 2019; the biggest driver for the latter may be pay, over which the CC has limited control.
- CC strengths and challenges: While the CC typically scores lower than most of the rest of NIH, but was often close. Dr. Gilman said the wording of one question may have been unclear.
- Dr. Gilman reported on items from 2022 that had declined in the past 5 years. Satisfaction with pay and senior leadership motivation went down the most.
- CC opportunities: None of the items listed had neutral rates above 30%.
- New DEIA index: The earlier survey had the lowest scores around equity, which relates to perception. Dr. Gilman said that the CC is one of the most diverse centers.

Rare Disease Day

Rare Disease Day will be held in person on February 28, 2023. Nikita Curry, M.H.A., Supervisor from the CC Office of Patient Recruitment, will give a featured presentation.

What to Expect in 2023

Based on a recent town hall meeting, Dr. Gilman said the CC will focus on the following issues in the coming year:

- Staff positions that need to be filled
- The ongoing focus on DEIA
- A gradual relaxation of COVID-19 restrictions (small tours of the CC are now being allowed, and more people are evident in the common areas)
- Continued assessment of expanding pediatric research in the CC
- Staff well-being
- The continuing dialogue on the future of work.

Farewell to Dr. John Gallin

Dr. Gallin is retiring after more than 50 years at NIH; he is the longest-serving CC Director (1994–2017). Dr. Gallin welcomed the CCRHB when it was created in 2016. He officially retires on March 25. Dr. Gilman will be the master of ceremonies for the retirement event in April.

Discussion

- Ms. Royster commented about delays in phlebotomy. Dr. Gilman said that there have been significant improvements, with four more phlebotomists hired. He said that, with some exceptions, the situation was better in January 2023 than in October and November 2022. Ms. Royster agreed the situation in phlebotomy is much better now.
- Dr. Cunningham asked about the opportunities in the CC for internal candidates who could be developed for leadership roles. She also asked about the DEIA category of accessibility, which she had not seen in other healthcare organizations.
- Dr. Gilman said that there was a robust series of training programs, and internal candidates are encouraged. It would be good to see how participation from CC staff has grown. There are Fundamentals in Leadership courses, but they were hard to do during the pandemic. He said that the courses have been well received. He said that the initiative of accessibility was added to the CC Racial and Ethnic Equity Plan in response to the DEIA survey results because they highlighted another group in need of support and the CC plan should address them all together. The accessibility initiative focuses on educating staff, because people were afraid to talk about their conditions related to accommodation for fear that doing so would affect their career or promotion, even though that would be illegal. The education initiative is designed to counter this misconception.
- Dr. Schwetz added that many of the people in higher levels of government service with access to training programs were fairly homogenous, so NIH training programs are being designed for GS-11 and below to both provide additional training opportunities and increase diversity. This approach showed how the training and diversity issues were being addressed simultaneously.
- Mr. Leslie observed that employee survey scores in the mid-60s or above are comparatively high and asked whether the CC was also benchmarked against other large

hospitals, which have similar work environments. Dr. Gilman said that OPM benchmarks are relative to other federal agencies.

- Mr. Baum asked how DEIA related to patient perspectives. Dr. Gilman said that DEIA programs focused on government staff, but there are surveys to obtain the patient perspective that the CC, which are analyzed demographically.

A Perspective from the Public

Dr. Coots said that Guillermo Avilés-Mendoza, J.D., LL.M., wished to address the Board as a member of the public who had worked at HHS for more than 18 years and had been a patient at the CC. Mr. Avilés-Mendoza quoted Jack Mazur, M.D., a former CC Director: “We don’t follow standards, but we create standards.” Mr. Avilés-Mendoza did strengths, weaknesses, opportunities, and threats (SWOT) analyses for G7 countries. He told the Board to look at lessons of the pandemic from the patient engagement perspective. This would affect the morale of the staff. The CC has a unique opportunity for improvement for the post–COVID-19 era. Mr. Avilés-Mendoza met with the patient representative, but he said that there is only one person in this role; he said that this office should be augmented to allow the patient representative more time for patient engagement. He said there should also be more electronic patient engagement. He ended his presentation with three recommendations:

- Augment patient representative resources.
- Put more resources in the patient library on the 7th floor.
- Consider consulting with the Agency for Healthcare Research and Quality’s (AHRQ) guide to improve patient and family engagement.

He concluded by saying that the charter of the Board should include the word “patient.”

Clinical and Safety Performance Metrics

David Lang, M.D., M.P.H., Director, Office of Patient Safety and Clinical Quality, NIH CC

Dr. Coots introduced Dr. Lang.

Dr. Lang reported on quality metrics and said that he relied on the expertise of colleagues to provide data. He began by discussing infection control metrics followed by other quality metrics:

- Hand hygiene compliance was close to 95%. This is recorded by staff who are trained to report on what they see.
- For central line–associated bloodstream infections (CLABSIs), the staff tried to identify the causes for upticks and use of interventions to see whether these could be reduced. Also, the number of days that a patient had a blood line was recorded so that days with a line could be minimized. He also reported on the intensive care unit (ICU) CLABSI rate.
- The catheter-associated urinary tract infections (CAUTIs) rate was reported, and Dr. Lang looked at the surgical oncology CAUTI rate to see whether changes are needed.
- Surgical site infections (SSIs) show a downward trend.

- Data on inpatient falls rate were reported. Every fall is evaluated with a post-fall huddle, and falls with injury with a root cause analysis. This is a nursing quality metric.
- Pressure injury prevalence was reported, with teaching hospitals as benchmarks. This is also a nursing quality metric.
- For emergency response, a Code Blue can be called for “everything” (more than just cardiac arrest). The uptick in Code Blues during the fourth quarter was in response to a discussion of calling Code Blue in certain outpatient areas so people get the help that they need. Most Code Blues are actually stable events. Code Blues were broken down by type of patient (i.e., inpatient, outpatient, employee, or visitor).
- A brain code was created for people who may be having a stroke so they can be sent to a stroke center as soon as possible. Other types of events for Code Blue responses were cardiac arrest, acute emergency and stable event. Also monitored are situations requiring a difficult airway response team.
- Data were also obtained on where patients go following a Code Blue: transferred to ICU, transferred to an outside hospital, remained in unit, expired, released, or other. Many remain in their unit after receiving the care that they need.
- Patients can get a rapid response, which is different from a Code Blue. In such situations, patients can go to the ICU, remain in their unit, or go to another unit. Events and calls are evaluated both individually and by the Code Blue committee to determine whether the rapid response was appropriate.
- Dr. Lang reported the crossmatch-to-transfusion ratio, which is fairly stable, and said that transfusion reactions are tracked by class; he said the most common reaction from transfusion may be fever (which may not be causally related).
- The percentage of unacceptable blood bank specimens is also tracked.
- Clinical documentation looks for delinquent records (i.e., the patient does not have the properly signed documentation 30 days after discharge). The CC numbers for delinquent records are below 10%, with a benchmark of 50%; in other words, the CC numbers are well below what would be considered disturbing.
- Popup software has led to a compliance rate above 90% “agent for” orders countersigning compliance.
- “Do Not Use” abbreviations (e.g., a handwritten “U” might be interpreted as a zero) should be avoided, because it could be misinterpreted. There was high compliance on this (consistently in the high 90% range).
- Accuracy of record coding is achieved by audit of charts (nearly always 90% or higher).
- Employee safety is tracked quarterly, with the most common safety issue being musculoskeletal trauma (62% for October–December 2022, $n = 13$). Efforts in safe patient handling to make both patients and staff safer were being made.

Discussion

- Ms. Reel asked whether there was a change in falls with a lower census in the past few years and whether the causes of falls are different.

- Dr. Lang said that the patients coming to the CC had serious medical conditions, so they may have been more fragile. He reiterated that there had been efforts around safe patient handling and identifying patients at higher risk. He said there had been efforts to engage with the patients as partners to explain why they are being asked to do things (e.g., they should ask for help to minimize the chance of falling). He did not know whether the census or COVID-19 had changed things.
- Ms. Reel asked about the Joint Commission benchmark of 50% compliance for 30 days post-discharge, which she found surprising. Dr. Lang thanked her for the question and said that he would investigate whether the information is current.
- Ms. Royster asked why the rate for pressure injuries (e.g., sores) had fallen. She said that whenever she was hospitalized, she had had pressure sores. Dr. Lang suggested nursing checks and frequent turning of patients as well as other aspects of the “pressure injury bundle” possible explanations for the reduction in pressure injuries.
- Mr. Baum asked that population numbers on the charts be included. Dr. Lang said that the data are normalized per 1,000 patients or per patient days, so the data should not be affected by the census, but he thought that including these numbers might be a good idea for showing data over time. Dr. Gilman said safety data included both outpatients and inpatients, which would make it difficult to represent in a normalized or percentage way.

Miniature 3D-Printed Emergency Respirator

Andrew Mannes, M.D., M.E., M.B.A., Chief, Department of Perioperative Medicine, NIH CC

William Pritchard, M.D., Ph.D., Physician, Center for Interventional Oncology, Radiology and Imaging Sciences, NIH CC

Dr. Coats introduced the speakers.

Dr. Mannes said that this research was a virtual collaboration. The miniature emergency ventilator was developed in a basement and has now moved into a clinical trial. There are problems with current ventilators: They are bulky and expensive, have limited availability, and require adequate training, electricity, and service/maintenance. Miniature in-line respirators are low-cost and require only compressed gas; have no moving parts; and are scalable, small, and reliable. They will work whether the patient is breathing or not.

Dr. Pritchard showed that the miniature in-line respirator, which went into development in winter 2020, is about the size of a flash drive. There are three models, appropriate for different levels of lung injury. He presented a diagram showing the stable flow pattern during inspiration and expiration. Bench testing used a lung ventilation test system, and the prototypes worked well for mild and moderate needs, but there were problems with severe respiration needs. Animal testing was done on domestic swine. The researchers gave detergents to create disease in the lungs, and there was normal ventilation whether or not the animal was injured. No difference in the blood gases was seen by device.

Dr. Mannes described the clinical study design, which was submitted as a Phase I clinical trial to the FDA. The researchers plan to recruit patients who would receive surgery at NIH and would

gain consent to use the ventilator the day before the patient undergoes the procedure. They will look at whether the device would ventilate the patient at the end of planned surgical procedures and whether it would perform as designed, collecting performance and safety data. They will look at respiratory parameters, questionnaires given after surgery, and the results of routine histories and physicals. There are both intramural and extramural collaborators, with potential applications for the military and NASA.

Discussion

- In the chat, Dr. Freischlag said the device was “cool.”
- Ms. Reel asked about the battlefield application. Dr. Mannes said that the device could be used while leaving the provider’s hands free to do other things. Dr. Gilman said that “space and transport is like gold,” and less-complex equipment would enable better care for patients. Dr. Mannes emphasized that the device was very light.
- Dr. Cunningham noted the shortage of respiratory therapists; Dr. Mannes responded that the device simplifies ventilation, and the training is very quick. Dr. Cunningham thought it might be helpful.
- Dr. Mannes said that the device may not be appropriate for severe cases of lung injury (in which case a ventilator would be used) but that it would simplify the response in many situations.

A Paradigm Shift: Widespread SARS-CoV-2 Infection and Persistence in Humans

Daniel S. Chertow, M.D., M.P.H., Tenure-Track Investigator and Head, Emerging Pathogens Section, Critical Care Medicine Department, NIH CC

Dr. Coats introduced Dr. Chertow.

Dr. Chertow said that the study had four objectives: to describe SARS-COV-2 infection, describe cellular tropism, see whether the virus persists in tissues, and determine whether the virus replicates.

The study began with 44 autopsies to evaluate tissues during the first year of the pandemic, before vaccines were available. All major organs were procured, including 11 cases with the brain and central nervous system. Specimens were preserved so that they could be analyzed later, and adjacent samples were flash-frozen to grow the virus. A final sample was used for microscopic analysis.

The average age at death was 60 years (range: 6–91 years); 77% had two or more comorbidities. Heat maps of SARS RNA. Most died with SARS-CoV-2 in the respiratory tract. Heat maps of the brain found RNA from SARS-CoV-2 across multiple regions. Patient 42 died 230 days after developing another illness but had RNA in multiple regions (including the brain). Dr. Chertow and colleagues successfully grew the virus in the samples from the respiratory tract and other body parts, showing that the virus can replicate throughout the body. They found RNA in more than 30 cell types and 35 tissues. Further testing for brain tissues found evidence that the virus grows in the brain. The new paradigm is that the virus can be widely disseminated throughout

the body and can replicate there (i.e., it is not confined to the lungs). However, there is not much damage outside the respiratory tract. Dr. Chertow observed that the autopsies were performed 22 hours post-mortem on average. These results were published in the journal *Nature* in January 2023.

Discussion

- Dr. Coots asked about implications of these findings for Long COVID. Dr. Chertow said that the answer is not yet clear, but the persistence of RNA may contribute to Long COVID or could be its underlying etiology. Dr. Chertow said that his group is researching this question.
- Dr. Gilman asked where else this study could have been done. Dr. Chertow said that this was unique to the CC; many NIH institutes were involved in this, as were many local hospitals.
- Dr. Chin said that it was a brilliant study and asked whether the findings are unique to COVID-19 or generalizable to coronaviruses more broadly. Dr. Chertow said that we do not know. He pointed out that these were quick autopsies and not convenience samples, so this approach could be a model for future studies of this type.
- Dr. Coots said that we learn new things about COVID-19 every day.

Facilities Presentation to the Clinical Center Research Hospital Board

Dan Wheeland, P.E., Director, Office of Research Facilities, NIH

Dr. Coots introduced Mr. Wheeland, who provided an update on facilities.

- There was good news from Congress: From FY 2022 to FY 2023, Congress passed an increase in funding from \$250 million to \$350 million. He said that the studies from the National Academies of Sciences, Engineering, and Medicine and support from the CCRHB contributed to greater confidence, which was reflected in the higher appropriations. This additional funding will enable NIH to carry out a number of projects to enhance patient safety and patient care. Mr. Wheeland went on to describe specific projects.
- The first project provides new space for the Center for Cellular Engineering (CCE) cell processing facility. The facility is in the process of becoming operational. In order to sustain the facility in a state of control, NIH has planned several enhancements and improvements to the facility, including an Uninterruptible Power System, Enhanced Humidification, and new Exhaust Stacks.
- The second project that was presented was the Pharmacy and Permanent Intravenous Admixture Unit (P-IVAU), which has been renovated at a cost in excess of \$50 million.
- The next project involves a new Radiopharmacy and Cell Labeling Facility. Construction will begin in June 2023 and is estimated to be completed in 18 months.
- Next, Mr. Wheeland described sterile processing projects. The first phase, located in the basement level of Building 10, is nearly complete. The next phase involves the second floor, which will be renovated to house new sterilization capabilities.

- The next project briefed is the Building 10 E Wing Renovation, which will house the Clinical Center’s Department of Transfusion Medicine as labs for NIAID, NIDDK, NHLBI, NIMH, and the Foundation for Advanced for Education in the Sciences.
- The next project briefed by Mr. Wheeland was the Surgery, Radiology, and Laboratory Medicine (SRLM) building, which will involve a 527,000 gross square feet addition and the renovation of 103,00 gross square feet of existing space. Phase 0 began in January and involved the closure and rerouting of campus traffic. The closure will help ensure safety during the construction activities. A number of activities were implemented to minimize the impact on parking and traffic. The utility vault that will house the electrical switching station and emergency generators is structurally complete; the completed project will improve electrical reliability and capacity.
- In addition to the projects housing patient care functions, improvements are being made in campus-wide infrastructure. One such project is the Black Start of the Cogeneration Plan. In the event of a regional power outage, NIH will be able to start the 23-megawatt Cogeneration plant to 1) supply power to boilers to generate steam to buildings during an area power outage; and 2) supply power to chillers to generate chilled water for critical loads, including patient care. Natural disasters (and cybersecurity) require constant vigilance. These investments will reduce risk.

Discussion

- Dr. Chin asked about inflation and its impact. Mr. Wheeland said that there was a backlog of maintenance and repair (about \$3.5 billion), and that construction inflation has been 6% per year. The building construction index has been relatively flat for the past 8 months, so the Office of Research Facilities is cautiously optimistic that they can deal with inflation, but “we are not out of the woods yet.” He said that the next meeting with Congress is February 21, 2023. Dr. Chin said that the backlog number is helpful and asked whether these were necessary or developments that would be nice to have. Mr. Wheeland said that the backlog relates to several buildings in different geographical locations. He said that some building functions require triage (e.g., patient care is most important, but other activities may take more time). He thinks that patient needs can be addressed with the increased funding, but risks unrelated to patient care will need more time to be addressed.
- Ms. Royster asked about floors 13 and 14 both being characterized as mechanical and asked for clarification. Mr. Wheeland explained that due to constraints associated with the original Building 10 dimensions, mechanical and electrical infrastructure is located on floors 4, 9, 13, and 14.
- Ms. Reel asked whether getting off the grid would generate any savings. Mr. Wheeland said that the cogeneration plant saves at least \$6 million annually. He said that it was one of the cleanest plants in the United States and helps Maryland achieve its environmental goals because it is generating electricity with less emissions than the local utility company.

Magnet Journey Update

Rachel Coumes, M.S.N., RN, Magnet Program Manager, Clinical Center Nursing Department (CCND), presented on behalf of Barbara A. Jordan, D.N.P., RN, NEA-BC, Acting Chief Nurse Officer, NIH CC

Dr. Coots said that Dr. Jordan could not be at the meeting, but Ms. Coumes, the Magnet program manager, would deliver her presentation.

Magnet is an accreditation process to ensure quality patient care and nursing excellence in health care institutions. Ms. Coumes said that the presentation would revisit the journey milestones, application status, professional practice model, communications plan, and quality indicators.

- The CCND met the application goals, which required creating a strategic plan for nursing. The CCND will submit Magnet documents by April 1, 2024; patients, families, and employees can submit public comments to the American Nurses Credentialing Center. Then there will be a site visit to make sure that the Magnet plan has been implemented. The Magnet application was submitted on January 12, 2023, and the CCND hopes for accreditation in 2024 or 2025. The application requires showing that all nurse leaders have at least a bachelor's degree in nursing, that there is one nurse on the Institutional Review Board (IRB), and that all IRB members have received human subjects protection training.
- The Professional Practice Model incorporates everyday nursing practice among nurses in the CC. This establishes Magnet readiness across the organization, because Magnet is a hospital accreditation. The CCND is developing a Magnet education plan and will hold several meetings. Helen Mayberry, M.S.N., RN, CPPS, is available to answer questions. Ms. Coumes said that patient data will be submitted and explained how the CCND uses the National Database of Nursing Quality Indicators (NDNQI), which requires eight separate quarters, and that the CCND must outperform the mean five out of eight times.
- Ms. Coumes reported on the CC's performance on falls with injuries compared against hospitals on a broader scale. In most cases, the CC outperformed the mean, which means it is Magnet ready.
- For CLABSIs, the CC is technically Magnet-ready, but there is still work to be done because CLABSIs occurred too frequently. The CC is trying to improve and observed the nursing care to see how CLABSIs could be reduced; there was education on proper hand hygiene procedures at two critical points in patient care, resulting in an 80% reduction in CLABSIs over time. This work is ongoing, not only to maintain Magnet readiness but also to make sure that patients are safe.
- The unplanned post-procedure transfer indicator is a new indicator, and there is no process to track these data, but this deficiency is being corrected. Ms. Mayberry said that for the first three quarters, a full set of data was not available. When all the data cells are filled in, the department anticipates that the table will have fewer results below the mean (i.e., be Magnet-ready).

- Going forward, the CCND has introduced standardizing unit-based goals, with a focus on how an action plan will be evaluated based on those goals. Spotlight reports for the units will be displayed on huddle boards, and the teams will review the data during unit huddles. The department works with interdisciplinary colleagues in creating action plans and problem solving, because “it takes a team to care for a patient.” The CCND will update the spotlight reports as data become available. The department reviews the reports in quality and safety meetings, where Ms. Mayberry presents findings for Dr. Lang’s quality and safety group and for the hospital infection committee.

Discussion

Dr. Coots thanked Ms. Coumes and Ms. Mayberry for the presentation. He congratulated the team; coming from a health system himself, he knows how difficult it can be to achieve Magnet status.

CCRHB Pediatric Working Group Report

James K. Gilman, M.D., CEO, NIH CC

Sherin U. Devaskar, M.D., Executive Chair, Department of Pediatrics, UCLA; Physician-in-Chief, Mattel Children’s Hospital; and Chair, CCRHB Pediatric Working Group

Clifford W. Bogue, M.D., Waldemar Von Zedtwitz Professor of Pediatrics; Chair, Pediatrics; Chief Medical Officer, Yale New Haven Children’s Hospital; and Member, CCRHB Pediatric Working Group

Dr. Coots introduced the participants. The Board must vote to accept the report. Dr. Gilman provided the background while waiting for Dr. Devaskar to join.

- Dr. Gilman said that the care of smaller children in the CC is limited as patients generally must be at least 3 years old and weigh at least 15 kilograms. However, there has been a growing number of pediatricians (~250) on the NIH campus and increasing work funded by NIH that would allow interventions (e.g., gene therapy or engineered cells) for younger and smaller children.
- A working group had been created to determine how to conduct clinical research studies in younger and smaller children. Dr. Gilman recounted the experiences of a gene therapy trial that received outside funding from a sponsor that enabled a pilot study at the CC for a usually fatal neurodegenerative disease in children. Based on a clinical trial for this disease in older children, one treatment looked promising, and the FDA had approved trials in younger children. In the study, two infant participants, between 6 and 12 months old, were enrolled in a trial of a gene therapy in partnership with the Children’s National Medical Center. There was didactic and simulation training to prepare clinicians for the trial.
- Those at the CC involved in this trial considered whether this type of study might be done more frequently by partnering with hospitals that treat large pediatric populations. The Pediatric Planning Group (PPG) was developed, chaired by William A. Gahl, M.D.,

Ph.D. -- the designer of the Undiagnosed Diseases Program and Network -- that included key pediatric stakeholders across NIH institutes and centers. Dr. Gahl and colleagues met with staff interested in this type of research and prepared a comprehensive report of findings shared with the CCRHB and with the CC Governing Board (CCGB), who requested an outside review from national pediatric thought leaders.

- Drs. Devaskar and Bogue are members of this group of outside experts convened as a Working Group of the CCRHB and chaired by Dr. Devaskar. Two other members, D. Wade Clapp, M.D., and Gary A. Silverman, M.D., Ph.D., joined Drs. Devaskar and Bogue to visit the CC on December 14, 2022. They met with staff responsible for care of pediatric patients and investigators doing research involving pediatric patients, as well as staff and leaders from other disciplines, and Dr. Schor, the new Deputy Director for Intramural Research. Dr. Gilman said the Board appreciated the work this group accomplished in 4 months.

Dr. Devaskar made the formal presentation. She thanked Dr. Gilman and welcomed Dr. Bogue.

- The Pediatric Working Group of the CCRHB, referred to as the Children’s Working Group (CWG), was established to review and assess the PPG report, “Pediatric Care at the NIH Clinical Center,” which was released on April 29, 2022.
- The CWG considered the following questions:
 - Could more children be treated at the NIH CC, and could the age be lowered from 3 years to 6 months?
 - When applied to children, is the CC’s business model of early-in-human clinical trials a significant addition to the research landscape?
 - Could the partnership model proposed provide safe care, and was the partnership feasible?
 - Were the proposed costs realistic?
 - What has the model failed to account for?
- Subgroups were developed on three subjects: the PICU and emergency services, pediatric subspecialty needs, and rare and genetic childhood disorders that justified first-in-human clinical trials.
- The CWG identified many strengths in the proposed initiative, but there were many challenges to overcome. They also addressed some gaps in the report.
- The CWG identified the following strengths:
 - The proposed expansion will help with the first-in-human trials in rare diseases. Surveys of Institute Clinical Directors found a 2- to 3-fold increase in those needing critical care, but the increase could be as high as 6-fold.
 - Proposal for managing pediatric emergencies is appropriate. The CWG recommended a closed unit.
 - Establishing and formalizing the positions of PICU medical director, nurse manager, and clinical nurse specialist/educator are major strengths.
 - Contracting with academic institutions is important.

- Lowering the age in a graded fashion rather than immediately, based on care provider teams.
- Creating a family-friendly environment; the CWG was impressed with the Children's Inn.
- Adjusting the blood collection policies to minimize blood loss is extremely important. Likewise, pediatric laboratory values may not correspond with adult values.
- Dr. Bogue said it was a well-thought-out report that followed published recommendations in critical care medicine for the PICU. The committee had taken these recommendations to heart. Caring for young children with a pediatric intensivist as attending physician in a closed unit would be an asset. He thought the facilities were suitable to support the care of children.
- Dr. Bogue addressed the following challenges and gaps:
 - The feasibility of running a three-bed PICU is difficult, because staff must manage high-risk events that could occur with low-frequency. He asked how to maintain competencies and whether the staff could be rotated to a larger-volume PICU to experience real-life situations.
 - It is hard to maintain adequate staffing when the number of beds and the pool of staff is so small. Operational needs must be addressed.
 - There should be a robust quality and safety program. Well-documented safety events, safety coaches, and the ability to do root cause analyses for events that do occur are needed.
 - The proposed PICU should identify prospectively treatments that will not occur at the CC but for which patients must be transferred. The mechanism for transfers is in place, but parameters for when a transfer would occur needs to be defined.
 - All the necessary equipment that focuses on children needs to be acquired.
- Dr. Bogue addressed other options besides developing a PICU in the CC. One option is to develop a network to perform the studies at institutions that already have the infrastructure in place. The disadvantage is that doing so separates the intramural scientists from the place where the clinical trials are occurring. He suggested developing consortia to facilitate these studies.
- Dr. Devaskar said the CWG looked at a PICU as a tertiary-level institution, but children and infants can deteriorate. The CWG did not address the budget feasibility but said that this would depend on the model developed and the specifics of the contractual arrangements. She reiterated the possibility of NIH partnering with local institutions. Some current NIH staff expressed concerns about taking care of these younger children.
- Budget feasibility depends on the model developed and contractual agreements, but one consideration is to develop a Request for Applications (RFA) with larger PICUs at local institutions to assure full buy-in and commitment to CC pediatrics.
- Dr. Devaskar mentioned that Dr. Bogue is a pediatric intensivist and introduced the other members of the CWG chosen because of their breadth of expertise: Tina Cheng, M.D.,

Ph.D., Chair of Pediatrics, University of Cincinnati, Chief Medical Officer and Director of the Cincinnati Children's Research Foundation, Cincinnati Children's Hospital Medical Center; Dr. Clapp, Chair of Pediatrics, Indiana University, Physician-in-Chief, Riley Children's Hospital; Terence S. Dermody, M.D., Chair of Pediatrics, University of Pittsburgh, Physician-in-Chief, UPMC Children's Hospital of Pittsburgh; Donna Martin, M.D., Ph.D., Chair of Pediatrics, University of Michigan, Physician-in-Chief, Mott Children's Hospital; Jordan Orange, M.D., Ph.D., Chair of Pediatrics, Columbia University, Physician-in-Chief, Morgan Stanley Children's Hospital; Dr. Silverman, Chair of Pediatrics, Washington University, Physician-in-Chief, Saint Louis Children's Hospital.

Discussion

- Mr. Baum said that the electronic health record (EHR) would need to be changed because the drop-down menus of dosages would not be applicable for children and infants. He also mentioned environmental concerns that may be specific to pediatric populations but that were not included in the original building design.
- Dr. Gilman said that every protocol involves an order set that is protocol-specific that would identify drugs and dose ranges that would be appropriate for the protocol. He does not think the issue of dosages as it relates to EHRs will be a problem.
- Regarding the newer part of the building, Dr. Gilman does not think there are environmental controls that need to be addressed.
- Dr. Devaskar said that in the electronic medical record (EMR), drug dosing and other aspects had to be modified based on children and their age ranges. She also said that, depending on where the pediatric unit is located, there might be a possibility for cross-training with other staff. Dr. Bogue said that cross-training would provide for more staff.
- Dr. Gallin asked about interventional radiology as another service. Dr. Devaskar said that much could be done by telemedicine, but not everything (i.e., some services require intervention). For this, there might have to be consultation services onsite rather than by telemedicine.

Dr. Coots said that a vote needed to be taken on the report; a motion was seconded by Mr. Baum. There were no comments or objections. The motion carried by a unanimous vote. Dr. Gilman said that the report would go to the CC governing board, NIH leadership, and Dr. Gahl and his PPG for review and comment. Dr. Gilman said the report would be widely studied, but current budgetary issues may mean that not all the plans will be implemented.

Dr. Tabak thanked the group for its report and feedback. He said that the report will be helpful. He also apologized for not being at the meeting earlier, but he was involved with the HHS Secretary. He thanked Dr. Schwetz for delivering his remarks.

Adjournment

Dr. Coots adjourned the meeting at about 12:30 p.m.

/ Norvell Coots /

Norvell Coots, M.D.

Chair, NIH Clinical Center Research Hospital Board

President and CEO, Holy Cross Health

/ Tara A. Schwetz /

Tara A. Schwetz, Ph.D.

Executive Secretary, NIH Clinical Center Research Hospital Board

Acting Principal Deputy Director, NIH

Abbreviations and Acronyms

ADC	Average Daily Census
ARPA-H	Advanced Research Projects Agency for Health
AHRQ	Agency for Healthcare Research and Quality
CAUTI	catheter-associated urinary tract infection
CC	Clinical Center
CCE	Center for Cellular Engineering
CCND	Clinical Center Nursing Department
CCRHB	Clinical Center Research Hospital Board
CEO	chief executive officer
CFO	chief financial officer
CIO	chief information officer
CIT	Center for Information Technology
CLABSI	central line–associated bloodstream infection
CWG	Children’s Working Group
DARPA	Defense Advanced Research Projects Agency
DDIR	Deputy Director for Intramural Research
DEIA	diversity, equity, inclusion, and accessibility
EI	employee engagement index
EHR	electronic health record

EMR	electronic medical record
FDA	U.S. Food and Drug Administration
FEVS	Federal Employee Viewpoint Survey
FY	fiscal year
GSI	global satisfaction index
GS	General Schedule
HHS	U.S. Department of Health and Human Services
ICU	intensive care unit
IRB	Institutional Review Board
NASA	National Aeronautics and Space Administration
NCATS	National Center for Advancing Translational Sciences
NDNQI	National Database of Nursing Quality Indicators
NIAID	National Institute of Allergy and Infectious Diseases
NICHD	<i>Eunice Kennedy Shriver</i> National Institute of Child Health and Human Development
NIEHS	National Institute of Environmental Health Sciences
NIH	National Institutes of Health
NIMH	National Institute of Mental Health
OCRTME	Office of Clinical Research Training and Medical Education
OPM	Office of Personnel Management

OSC	Office of Strategic Coordination
PAG	Patient Advisory Group
PICU	pediatric intensive care unit
PPG	Pediatric Planning Group
P-IVAU	Pharmacy and Permanent Intravenous Admixture Unit
RNA	ribonucleic acid
SRLM	Surgery, Radiology, and Laboratory Medicine
SSI	surgical site infection
SWOT	strengths, weaknesses, opportunities, and threats
UCLA	University of California, Los Angeles
YTD	year to date