

**DEPARTMENT OF HEALTH AND HUMAN SERVICES  
NATIONAL INSTITUTES OF HEALTH  
NATIONAL LIBRARY OF MEDICINE  
MINUTES OF THE BOARD OF REGENTS  
September 10-11, 2019**

The 182<sup>nd</sup> meeting of the Board of Regents (BOR) was convened on September 10-11, 2019, at 9:00 a.m. in the Donald A.B. Lindberg Room, Building 38, National Library of Medicine (NLM), National Institutes of Health (NIH), in Bethesda, Maryland. The meeting was open to the public from 9:00 a.m. to 3:30 p.m., followed by a closed session until 4:00 p.m. On September 11, 2019, the meeting reopened from 9:00 a.m. to 12:00 p.m. The meeting adjourned at 12:00 p.m.

**MEMBERS PRESENT** [Appendix A]

Dr. Suzanne Bakken, Columbia University  
Ms. Jane Blumenthal, University of Michigan (Retired) [Chair]  
Dr. Eric Horvitz, Microsoft Research  
Dr. Carlos Jaén, University of Texas Health Science Center at San Antonio  
Dr. S. Claiborne Johnston, The University of Texas at Austin  
Mr. Neil Rambo, NYU School of Medicine (Retired)

**MEMBERS NOT PRESENT**

Dr. Gary Puckrein, National Minority Quality Forum

**CONSULTANTS PRESENT\***

Dr. Lourdes Baezconde-Garbanati, University of Southern California  
Dr. Martin Philbert, University of Michigan  
Dr. Heidi Rehm, Massachusetts General Hospital

\*New Board members attending as consultants until their appointment paperwork is finalized.

**EX OFFICIO AND ALTERNATE MEMBERS PRESENT**

Col. Kent DeZee, United States Army  
Capt. Matthew Lim, United States Navy  
Dr. Mary Mazanec, Library of Congress  
Dr. Brent Miller, National Science Foundation  
RADM Erica Schwartz, Office of the Surgeon General, Public Health Service  
Dr. Dale Smith, Uniformed Services University of the Health Sciences  
Mr. Paul Wester, National Agricultural Library

**SPEAKERS AND INVITED GUESTS PRESENT**

Dr. Marie Bragg, New York University School of Medicine

**MEMBERS OF THE PUBLIC PRESENT**

Mr. Matthew Fenske  
Ms. Rachel Fenske, University of South Alabama Library

Dr. Barbara Redman, New York University/Friends of the NLM (FNLM)  
Dr. Virginia Saba, Uniformed Services University of the Health Sciences/FNLM

**FEDERAL EMPLOYEES/CONTRACTORS PRESENT**

Dr. Patricia Flatley Brennan, Director, NLM  
Mr. Jerry Sheehan, Deputy Director, NLM  
Dr. Milton Corn, Deputy Director, Research and Education, NLM  
Ms. Joyce Backus, Division of Library Operations, NLM  
Dr. Olivier Bodenreider, Lister Hill Center, NLM  
Dr. Teresa Zayas-Cabán, Office of the Director, NLM  
Ms. Brenda Cox, Associate Fellow, Division of Library Operations, NLM  
Mr. Ivor D'Souza, Office of Computer and Communications Systems, NLM  
Mr. Todd Danielson, Office of Administration, NLM  
Dr. Kathel Dunn, Division of Library Operations, NLM  
Dr. Lisa Federer, Office of Strategic Initiatives, NLM  
Dr. Valerie Florance, Division of Extramural Programs, NLM  
Ms. Kathryn Funk, National Center for Biotechnology Information, NLM  
Ms. Rebecca Goodwin, Office of Strategic Initiatives, NLM  
Ms. Sharon Han, Associate Fellow, Division of Library Operations, NLM  
Mr. Daniel Hartinger, Office of the Director, NLM  
Capt. Hassan Tetteh, US Navy  
Dr. Zoe Huang, Division of Extramural Programs, NLM  
Dr. Michael Huerta, Office of Strategic Initiatives, NLM  
Ms. Christine Ireland, Division of Extramural Programs, NLM  
Dr. Stefan Jaeger, Lister Hill Center, NLM  
Dr. Xiaofang Jiang, Office of the Director, NLM  
Ms. Eden Kinzel, Associate Fellow, Office of the Director, NLM  
Dr. William Klimke, National Center for Biotechnology Information, NLM  
Ms. Michelle Krever, Division of Extramural Programs, NLM  
Ms. Lisa Lang, Division of Library Operations, NLM  
Ms. Jennifer Marill, Division of Library Operations, NLM  
Dr. Clement McDonald, Lister Hill Center, NLM  
Ms. Jody Nurik, Office of Communications and Public Liaison, NLM  
Dr. James Ostell, National Center for Biotechnology Information, NLM  
Dr. Dina Paltoo, Office of the Director, NLM  
Dr. Kim Pruitt, National Center for Biotechnology Information, NLM  
Dr. Jeffrey Reznick, Division of Library of Operations, NLM  
Ms. Leigh Samsel, Office of Strategic Initiatives, NLM  
Dr. Hua-Chuan Sim, Division of Extramural Programs, NLM  
Ms. Louise To, Associate Fellow, Division of Library Operations, NLM  
Ms. Samantha Tempchin, Division of Extramural Programs, NLM  
CDR James Tessier, US Navy  
Ms. Victoria Townsend, Division of Extramural Programs, NLM  
Ms. Amanda Wilson, Office of the Director, NLM  
Dr. Rebecca Williams, National Center for Biotechnology Information, NLM

## **I. CALL TO ORDER AND INTRODUCTORY REMARKS**

*Jane Blumenthal, Chair, BOR*

[See Sept. 10, 2019, 00:01] <https://videocast.nih.gov/summary.asp?Live=34592&bhcp=1>

Ms. Jane Blumenthal called the meeting to order. There was a moment of silence to acknowledge the passing of the former director of the National Library of Medicine, Dr. Donald A.B. Lindberg, who died on August 17, 2019.

Ms. Blumenthal introduced three new Board of Regents members. The three new members are:

- Dr. Lourdes Baezconde-Garbanati, Professor of Medicine and Sociology at the Keck School of Medicine, University of Southern California.
- Dr. Martin Philbert, Provost and Executive Vice President for Academic Affairs at the University of Michigan, Ann Arbor.
- Dr. Heidi Rehm, Chief Genomics Officer at the Center for Genomic Medicine at Massachusetts General Hospital in Boston, Massachusetts.

## **II. REPORT FROM THE OFFICE OF THE SURGEON GENERAL**

*RADM Erica Schwartz, M.D., J.D., M.P.H., Deputy Surgeon General, Office of the Surgeon General, U.S. Public Health Service*

[See Sept. 10, 2019, 00:2:13] <https://videocast.nih.gov/summary.asp?Live=34592&bhcp=1>

RADM Schwartz described the four top [priorities of Surgeon General](#) Jerome Adams, M.D., M.P.H., which include (1) substance misuse, in particular, opioids, tobacco/e-cigarettes use, and marijuana use; (2) community health and economic prosperity; (3) health and national security; and (4) oral health.

In July 2019, the Surgeon Generals of the United States, Army, Air Force, and Navy authored an [open letter](#) highlighting the harms of tobacco use to military readiness, which was published in *Stars and Stripes*. This effort reflects the first time that all four Surgeon Generals have united in issuing such a published joint opinion. RADM Schwartz also noted the 140<sup>th</sup> anniversary of the *Public Health Reports* (PHR), was celebrated in 2018. The PHR is the official journal of the U.S. Surgeon General and the U.S. Public Health Service and the oldest health journal in the U.S.

Subsequent discussion included community health outreach outside of traditional health care settings (i.e., public schools, libraries, playgrounds) and approaches to communicating information about the legalization of marijuana. Specific goals associated with the priorities mentioned will be shared during the next BOR meeting.

## **III. MAY 14-15, 2019 MINUTES AND FUTURE MEETINGS**

*Jane Blumenthal, Chair, BOR*

[See Sept. 10, 2019, 16:36] <https://videocast.nih.gov/summary.asp?Live=34592&bhcp=1>

**Motion:** The BOR approved the motion to accept the minutes from the May 14-15, 2019 meeting.

Ms. Blumenthal noted the dates for upcoming future BOR meetings: February 4-5, 2020, May

12-13, 2020, September 15-16, 2020, February 9-10, 2021, May 11-12, 2021, and proposed the dates of September 14-15, 2021. There were no objections or conflicts noted.

**Motion:** The BOR approved the motion to accept the fall BOR meeting date of September 14-15, 2021.

#### **IV. REPORT FROM THE NLM DIRECTOR**

*Patricia Flatley Brennan, RN, Ph.D., Director, NLM*

[See Sept. 10, 2019, 17:39] <https://videocast.nih.gov/summary.asp?Live=34592&bhcp=1>

In memory of Dr. Donald A.B. Lindberg, Dr. Brennan highlighted some of the achievements during Dr. Lindberg's 30-year leadership of NLM. During that time, NLM launched resources utilizing the internet including [PubMed](#), [PubMed Central](#), [MedlinePlus](#), and [ClinicalTrials.gov](#). These resources provide researchers, clinicians, and the general public with access to biomedical journal literature, health information, and clinical trials.

Dr. Brennan showed a video depicting the biological and health applications of artificial intelligence (AI), such as computational analysis, to advance network biology and precision therapeutics to translate science to the human experience. She highlighted two key activities at NIH using AI: 1) the use of natural language processing to save time in the grant application referral process and 2) the use of AI and machine learning methods to provide fast and efficient access to the medical literature, via the PubMed repository.

Dr. Brennan also described recent NLM activities including the launch of NLM Labs, cloud migration of NLM services, and the initiation of the modernization of [ClinicalTrials.gov](#). Regarding the latter, the BOR's Public Services Working Group will discuss the formation of a working group for the modernization of [ClinicalTrials.gov](#). Dr. Brennan also addressed personnel and budget updates.

Dr. Brennan provided an update regarding the NLM building renovation. BOR members discussed issues regarding the availability of the NLM's collection during this renovation. They also discussed a potential update of the database of Genotypes and Phenotypes (dbGaP), and details about the proposal review assignment process.

#### **V. WORKING GROUP BREAKOUTS**

BOR members divided into four working groups: Collections, Public Service, Research Frontiers, and Strategic Planning. Group representatives summarized their discussions later in the meeting.

#### **VI. RESEARCH DIRECTIONS IN ARTIFICIAL INTELLIGENCE**

*Eric Horvitz, Microsoft Research, Board of Regents Member*

[See Sept. 10, 2019, 01:16] <https://videocast.nih.gov/summary.asp?Live=34592&bhcp=1>

Dr. Horvitz noted that advancements in AI resulting from challenges in biomedical health care, such as Bayesian networks, have defined the current probabilistic trend. He mentioned several

examples, including theorem proving and machine learning. According to Dr. Horvitz, there has been a marked variation in AI outputs as a result of the renaissance of the classification of the predictive and perceptive capabilities of AI.

There have also been advances in service with the combination of the different AI techniques, such as object recognition and natural language. In biomedical research, online toolkits provide pattern recognition in different specialization areas, such as dermatology and radiology. Dr. Horvitz noted three opportunities for research and development to improve upon current AI techniques, specifically in predictive models: 1) predictions to decisions; 2) the development of models associated with space, time, and causality; and 3) transfer of learning (for the use of models in different locations that are not site-specific).

BOR members discussed challenges translating AI techniques to health care initiatives and how to implement tools that can improve workflows. Dr. Horvitz acknowledged an ongoing effort to advance human intelligence augmentation and determine how to get people to use AI tools. Using AI tools and techniques to extend the capability of health care providers, especially in remote settings, was also discussed.

## **VII. NLM OFFICE OF ENGAGEMENT AND TRAINING – BACKGROUND AND PLANS**

*Amanda J. Wilson, Office of the Director, NLM*

[See Sept. 10, 2019, 02:05] <https://videocast.nih.gov/summary.asp?Live=34592&bhcp=1>

Ms. Wilson encouraged the audience to provide live feedback on her presentation through menti.com. In June 2015, the NLM Working Group of the Advisory Committee to the NIH Director recommended a “functional audit” of all NLM programs and subcomponents, including its outreach program. As a result of recommendations from the outreach audit, the NLM [Office of Engagement and Training \(OET\)](#) was established within NLM’s Division of Library Operations. The OET brings together many of the outreach, training, and capacity-building staff, programs, and services from across the Library.

Ms. Wilson noted that staff are diverse in their expertise, including national/international networks, training and capacity-building, assessments and evaluations, exhibits, engagement communications, and partnerships. Fostering partnerships is critical to the goals of the OET.

Future OET activities include needs assessments to determine gaps; the development of standards, guidelines, and tools for engagement activities; training; capacity-building; liaison and coordination activities; and alignment with the National Network of Libraries of Medicine (NNLM) and other NLM partners. Ms. Wilson discussed the goals to map and understand workflows and processes (e.g., connections, relationships, information flows) with and between NLM partners in support of [NLM’s strategic plan](#).

The subsequent discussion included training and engagement activities in data science to address capacity-building outside of NLM, programs to target at-risk communities and special populations (e.g., the *All of Us* program), and future collaboration between the HIV/AIDS outreach program to regional health administrators to help develop their own networks. It was

noted that with the launch of the OET, there may be changes within the NNLM.

### **VIII. IMPACT OF RACIALLY TARGETED FOOD AND BEVERAGE ADS ON ADOLESCENT BEHAVIOR**

*Marie Bragg, Ph.D., New York University, Grant Number: 5DP5OD021373-04*

[See Sept. 10, 2019, 02:46] <https://videocast.nih.gov/summary.asp?Live=34592&bhcp=1>

Dr. Bragg noted a correlation between the increase of women entering the workforce and the growth in advertising and marketing of processed foods. She shared evidence of the multi-billion-dollar advertising budget for soda and fast food industries compared to the much smaller budgets for NIH and other campaigns to combat obesity. Studies have shown a significant influence of packaging on consumer behaviors, particularly when it comes to influencing perceptions of nutritional quality, taste, and the amount of food consumed.

Dr. Bragg emphasized the importance of providing evidence-based research using strategic science to inform policy and address knowledge gaps. Through media training, research can be influential in efforts to counter food marketing efforts that promote unhealthy choices. For example, in studies examining the use of popular culture in food marketing, celebrities (both musicians and athletes) who participate in food endorsements were more likely to endorse unhealthy foods that are popular among adolescents. Social media channels such as YouTube also influence food marketing. With racially targeted advertising, preliminary results have shown that adolescents prefer social media (e.g., Instagram) marketing compared to other channels. Black adolescents rated racially congruent ads higher than White counterparts.

Dr. Bragg also described her areas of research including the examination of culture and food and beverage advertising. Future studies will include communicating the distinct nature of social media advertisements and determine the policy implications of the targeted marketing (racial differences), if any. There will also be a focus on e-cigarette marketing to adolescents.

The subsequent discussion focused on strategic targets for potential social media legislation, potential comprehensive approaches to countering fast food marketing, and potential resilience or resistance to marketing due to immigrant cultural ties.

### **IX. CLOSED PORTION**

The closed portion of the meeting took place from 3:30 p.m. to 4:00 p.m. on September 10, 2019.

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On September 11<sup>th</sup>, Dr. Suzanne Bakken served as Acting Chair of the Board of Regents.

### **X. BOR COLLECTIONS AND PRESERVATION POLICY**

*Joyce E.B. Backus, Associate Director for Library Operations, NLM*

[See Sept. 11, 2019, 01:00] <https://videocast.nih.gov/summary.asp?Live=34612&bhcp=1>

Ms. Backus shared a draft NLM [collections](#) and [preservation](#) policy that combines the policies created in 1992 and 1986, respectively. In drafting the policy, the Collections Working Group

considered the evolution of scholarly communication (with the advent of the internet and electronic publishing), alignment with NLM's current strategic plan, and inclusion of advancements/changes to the collections. The prospective policy is also intended to be general enough to provide NLM staff flexibility and acknowledge future shifts in the collections.

Members of the Collections Working Group noted that the policy needs to allow for flexibility to interpret which research outputs, including datasets, protocols, and standard operating procedures, should be collected and provided to the public and scientific community. The working group provided recommendations and terms to keep the policy prospective and not restrict decisions based on future changes. It was noted that the proposed policy also includes issues related to access rather than just collections.

The subsequent discussion included consideration of the coverage of supplemental material and the specific revisions to the Collections and Preservation policies that are included in the new policy. It was suggested that clear summary of the major changes be provided. It was also noted that this policy is meant to be an umbrella policy that would set the overall framework for more specific practices aimed at individual repositories and other collections (e.g., where content would not be vetted by NLM), and that it would be prospective, affecting future collections decisions.

## **XI. BOR WORKING GROUP REPORTS AND DISCUSSION**

[See Sept. 11, 2019, 44:36] <https://videocast.nih.gov/summary.asp?Live=34612&bhcp=1>

### **Strategic Planning**

Dr. Martin Philbert reported for the Strategic Planning Working Group. This group discussed new initiatives outlined by NLM that have already yielded awards (i.e., the expanded funding for extramural research). The group noted two points for consideration: 1) NLM activities should be prioritized in terms of importance and funding; and 2) for continuity of operations plans, it should be determined which outside government agency would continue operations if NLM were unable to do so. The group also discussed partnering with local universities to take advantage of their data science training programs. The NLM operations budget, including terms of the upcoming renovation and multi-year planning, was discussed. NLM future goals and defining milestones were also discussed. Dr. Brennan noted that NLM's strategic plan will be coming up for review and potential revision next year.

### **Research Frontiers**

Dr. S. Claiborne Johnston reported for the Research Frontiers Working Group. This group discussed the three recommendations provided by the [Blue Ribbon Panel](#) including 1) completion of an assessment of the current research portfolio and development of a strategic plan; 2) consideration of a grand goal; and 3) consideration of bringing the Lister Hill and NCBI research groups together. The group noted that the strategic plan would need to address the last two recommendations. The Working Group recommended a process, or individual to define the process, of how to assess and grow the research program. How this would be completed was also discussed.

## **Public Service**

Col. Kent DeZee reported for the Public Service Working Group. Based on staff recommendations, this group proposed the formation of the modernization of ClinicalTrials.gov Working Group and discussed potential goals including helping to maintain the integrity of the website and determining how to strengthen communications. Dr. Brennan noted that this working group will be a subgroup within the Public Service Working Group who will report directly to the BOR. How the ClinicalTrials.gov Modernization Working Group could implement the modernization, including engagement with stakeholders to determine any necessary changes or updates, was discussed.

**Motion:** The BOR approved the motion to accept the recommendation to form the Clinical Trials.gov Modernization Working Group.

## **Collections**

BOR members further discussed the draft BOR Collections and Preservation policy. Defining trust in terms of the NLM's role as the "library of record" was considered as well as how to convey this message throughout NLM's offerings. NLM is committed to be a trusted source of health information and health data and will work to ensure that the attributes of what comprises trust in our various offerings, including data sets and scientific information, is fit for its purpose. It was noted that the definition of trust would vary between the datasets and other scientific information that NLM collects or would collect in the future.

**Motion:** The BOR approved the motion to accept the BOR Collections and Preservation policy drafted by the Collections Working Group.

## **XII. PRESENTATION OF REGENTS' AWARD**

*Suzanne Bakken, RN, Ph.D. [Acting Chair]*

[See Sept. 11, 2019, 02:15] <https://videocast.nih.gov/summary.asp?Live=34612&bhcp=1>

Dr. Bakken presented the 2019 Board of Regents award for Scholarship of Technical Achievement to Dr. William A. Klimke, National Center for Biotechnology Information, in recognition of his technical and intellectual excellence in his development of improved methodology for the pathogen detection real time surveillance system.

## **XIII. ADJOURNMENT**

Dr. Bakken adjourned the Board of Regents meeting at 12:00 p.m. on September 11, 2019.

### **ACTIONS TAKEN BY THE BOARD OF REGENTS:**

- Approval of the May 14-15, 2019 Board Minutes
- Approval of the September 14-15, 2021 Future Meeting Dates
- Creation of the Working Group on ClinicalTrials.gov Modernization
- Approval of the Collections and Preservation Policy



Appendix A - Roster - Board of Regents

I certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.

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Patricia Flatley Brennan, RN, PhD  
Director, National Library of Medicine

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Jane Blumenthal, MSLS  
Chair, NLM Board of Regents