DEPARTMENT OF HEALTH AND HUMAN SERVICES NATIONAL INSTITUTES OF HEALTH NATIONAL LIBRARY OF MEDICINE MINUTES OF THE BOARD OF REGENTS May 14-15, 2019

The 181st meeting of the Board of Regents (BOR) was convened on May 14, 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 4:10 p.m. On May 15, 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. Alessandro Acquisti, Carnegie Mellon University Dr. Suzanne Bakken, Columbia University Ms. Jane Blumenthal, University of Michigan (Retired) Dr. Eric Horvitz, Microsoft Research Dr. S. Claiborne Johnston, The University of Texas at Austin (By Phone) Dr. Daniel Masys, University of Washington (By Phone) Mr. Neil Rambo, NYU School of Medicine (Retired) Dr. Jill Taylor, New York State Department of Health [Chair]

MEMBERS NOT PRESENT

Dr. Carlos Jaen, University of Texas Health Science Center at San Antonio Dr. Gary Puckrein, National Minority Quality Forum

EX OFFICIO AND ALTERNATE MEMBERS PRESENT

Col. Thomas Cantilina, United States Air Force Dr. Carolyn Clancy, Veterans Health Administration 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, PHS Dr. Dale Smith, Uniformed Services University of the Health Sciences Mr. Paul Wester, National Agricultural Library

SPEAKERS AND INVITED GUESTS PRESENT

Dr. George Hripscak, Columbia University Ms. Carolyn Kurowski, Federal Management Partners, Inc. Dr. Donald Rucker, ONC/HHS

MEMBERS OF THE PUBLIC PRESENT

Ms. Carla Funk, Friends of the National Library of Medicine Ms. Jill James, National Agricultural Library Dr. Barbara Redman, New York University/FNLM

FEDERAL EMPLOYEES PRESENT

Dr. Patricia Flatley Brennan, Director, NLM Mr. Jerry Sheehan, Deputy Director, NLM Dr. Milton Corn, Deputy Director, Research and Education, NLM Ms. Stacey Arnesen, Division of Specialized Information Services, NLM Ms. Dianne Babski, Division of Library Operations, NLM Ms. Joyce Backus, Division of Library Operations, NLM Dr. Dennis Benson, National Center for Biotechnology Information, NLM Dr. Olivier Bodenreider, Lister Hill Center, NLM Ms. Kathi Canese, National Center for Biotechnology Information, NLM Ms. Hua Florence Chang, Division of Specialized Information Services, 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 Ms. Lisa Federer, Office of Strategic Initiatives, NLM Dr. Valerie Florance, Division of Extramural Programs, NLM Ms. Kathryn Funk, National Center for Biotechnology Information, NLM Dr. Dan Gerendasy, Office of Strategic Initiatives, NLM Mr. Daniel Hartinger, Office of the Director, NLM Ms. Christine Ireland, Division of Extramural Programs, NLM Ms. Janice Kelly, Division of Specialized Information Services, NLM Ms. Elizabeth Kittrie, Office of Strategic Initiatives, NLM Ms. Michelle Krever, Division of Extramural Programs, NLM Dr. David Landsman, National Center for Biotechnology Information, NLM Ms. Lisa Lang, Division of Library Operations, NLM Ms. Irene Liu, National Center for Complementary and Integrative Health, NIH Dr. Clement McDonald, Lister Hill Center, NLM Mr. David Nash, Office of the Director, 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 Ms. Amy Powers, Office of Administration, NLM Dr. Jeffrey Reznick, Division of Library of Operations, NLM Dr. Steve Sherry, National Center for Biotechnology Information, NLM Dr. Hua-Chuan Sim, Division of Extramural Programs, NLM Ms. Samantha Tempchin, Division of Extramural Programs, NLM Ms. Victoria Townsend, Division of Extramural Programs, NLM Dr. Bart Trawick, National Center for Biotechnology Information, NLM Ms Patricia Tuohy, Division of Library of Operations, NLM Dr. Alan Vanbiervliet, Division of Extramural Programs, NLM Dr. Rebecca Williams, National Center for Biotechnology Information, NLM Mr. Andrew Wiley, Office of Communications & Public Liason, NLM Dr. Jane Ye, Division of Extramural Programs, NLM Dr. Maryam Zaringhalam, Office the Director, NIH

I. CALL TO ORDER AND INTRODUCTORY REMARKS

Jill Taylor, Ph.D., Chair, BOR [See Day 1 video, 00:00:44]

Dr. Taylor welcomed attendees to the May meeting of the BOR, including several new official members of the board, Dr. Suzanne Bakken, Dr. Clay Johnston, and Mr. Neil Rambo. She also welcomed a new ex officio member, Mr. Paul Wester, and two new alternate ex officio members, Dr. Brent Miller and RADM Erica Schwartz.

II. REPORT FROM THE OFFICE OF THE SURGEON GENERAL

RADM Erica G. Schwartz, M.D., J.D., M.P.H., Office of the Surgeon General U.S. Public Health Service [See Day 1 video, 00:02:25]

RADM Schwartz introduced herself as the new Deputy Surgeon General and then described the top four priorities of Surgeon General Jerome Adams, M.D., M.P.H., which are (1) drug misuse, in particular, opioid misuse, e-cigarette use, and tobacco use; (2) community health and economic prosperity; (3) national security, in relation to the inability of many American youth to meet the military's physical fitness and health requirements; and (4) oral health. More information about the Surgeon General's priorities can be found at https://www.hhs.gov/surgeongeneral/priorities/index.html. RADM Schwartz noted the Surgeon General's emphasis on private and public partnerships and evidence-based science and also his focus on emerging disease threats and vaccination.

The subsequent discussion included countering misinformation around health topics, e.g., regarding measles vaccination, and approaches to communicating information effectively and engaging the community. Physical fitness as a matter of national security, nicotine addiction, and the high cost of naloxone were also mentioned.

III. FEBRUARY 12–13, 2019, MINUTES AND FUTURE MEETINGS Jill Taylor, Ph.D., Chair, BOR [See Day 1 video, 00:31:10]

Motion: The BOR approved a motion to accept the minutes of the February 12–13, 2019, meeting.

Dr. Taylor asked all BOR members to add the dates May 11-12, 2021 for upcoming BOR meetings to their calendars.

IV. REPORT FROM THE NLM DIRECTOR

Patricia Flatley Brennan, RN, Ph.D., Director, NLM Dina Paltoo, RN, Ph.D., NLM [See Day 1 video, 00:32:53] Dr. Brennan described the new structure of the BOR and the working groups and highlighted events surrounding the fall board meeting. She then showed a video addressing the relationship between NLM and the use of electronic health records as a research resource. The video's three key points were as follows: (1) electronic health records are not a single entity, but the information infrastructure for health information requires bringing together a number of resources; (2) there is a link between clinical care and research; and (3) that link goes in two different directions. She addressed NLM's efforts to be seen across the National Institutes of Health (NIH) as a thought leader, for example, in providing criteria for selecting data repositories. Other focus areas include making large datasets available through cloud services and investing in intramural and extramural research. In general, NLM's datasets, and the related strategies for public access and usability, are growing. Renovations to NLM's physical spaces, changes to its organizational groups, skill assessment and training in data science for its staff, and public outreach and engagement efforts were also described.

Dr. Paltoo provided updates on NLM budgetary, legislative, and policy matters. She noted that the proposed appropriation for NLM for 2020 is an increase of \$20 million over previous budget years. Dr. Paltoo mentioned passage by the House of Representatives of the Federal Advisory Committee Act (FACA) amendments bill, which NIH opposes, and the Save the Internet Act of 2019, a bill to restore net neutrality. She also provided updates on the Evidence-Based Policymaking Act and NIH's progress on a draft data-management and data-sharing policy.

Questions from attendees focused on the FACA legislation and NLM's data science training efforts, specifically, the idea of librarians as informationists.

V. WORKING GROUP BREAKOUTS

[See Day 1 video, 01:16:39]

BOR members divided into the following working groups:

- Strategic Planning
- Research Frontiers
- Collections
- Public Service

Group representatives presented summaries of the discussions on day 2 of the meeting.

VI. REPORT FROM THE NATIONAL COORDINATOR FOR HEALTH INFORMATION TECHNOLOGY

Donald Rucker, M.D., National Coordinator for Health Information Technology, Department of Health and Human Services [See Day 1 video, 01:19:00]

Dr. Rucker described the priorities and activities of the Office of the National Coordinator for Health Information Technology. He outlined the two goals related to health care information technology in Title IV of the 21st Century Cures Act—reducing provider burden and creating interoperability requirements—and discussed his office's related efforts. Application

programming interfaces (APIs) were a focus of his presentation, along with secondary uses of health data.

Questions from attendees involved details of efforts to reduce provider burden, NLM's opportunities in these two areas, and the advantages of robust API technology. Attendees also inquired about lessons learned from the experiences of other countries, APIs in relation to public health, and Health Insurance Portability and Accountability Act-related challenges.

VII. STEPPING UP TO OUR STRATEGY: BUILDING A CHANGE-READY WORKFORCE

Joyce E.B. Backus, NLM Carolyn Kurowksi, M.A., Federal Management Partners, Inc. [See Day 1 video, 02:06:37]

Ms. Backus and Ms. Kurowski described NLM's approach to managing organizational changes that are focused on creating a data-ready workforce and eliminating barriers to a collaborative environment. Ms. Backus discussed staff realignment decisions that had been made. Attendees were invited to share their thoughts about lessons learned, recommendations, and questions. Ms. Kurowski facilitated this discussion.

VIII. DISCOVERING AND APPLYING KNOWLEDGE IN CLINICAL DATABASES

George Hripcsak, M.D., M.S., Columbia University [See Day 1 video, 02:38:41]

Dr. Hripcsak discussed his NLM-funded research entitled "Discovering and Applying Knowledge from Clinical Databases." The project was one of the earliest to do phenotyping of electronic health records and has also encompassed time-series analysis, health care process bias, and causal interference. Dr. Hripcsak is currently focused on collaborations that will impact the field, specially, work on observational health data sciences and informatics and on data assimilation. Questions from attendees focused on how missing data were handled, the bias of practice, the models used for data assimilations, guidance for the community, and bias in the data related to gender and socioeconomic status.

IX. CLOSED PORTION

The closed portion of the meeting took place from 3:30 p.m. to 4:10 p.m. on May 14, 2019.

X. WORKING GROUP REPORTS AND DISCUSSION

[See Day 2 video, 00:00:50]

This session featured reports from representatives of the Strategic Planning, Research Frontiers, Collections, and Public Service working groups and discussions of those reports.

Dr. Eric Horvitz reported for the Research Frontiers working group. This group discussed portfolio analysis in relation to both intramural and extramural research and the questions that

could be addressed to the Office of Portfolio Analysis to help guide decisions on program investments, topics, and initiatives (instead of simply requesting a data visualization). The group also discussed aspirational goals for the biomedical informatics community with a clinical focus that could be set by NLM. The group suggested creating a small subcommittee to draft a proposed set of challenges to be reviewed by the board. BOR members then discussed what those challenges might look like.

Dr. Dale Smith reported for the Collections working group. This group discussed the changing nature of the literature, specifically, that it is information curated in some way, and the areas targeted for collection. The group highlighted the need for the collections policy to address preservation and also discussed collection utilization and access. Recommendations included adopting a new collections policy and allowing NLM staff to bring issues not explicitly addressed by that policy to the board for guidance, to avoid the need for frequent policy updates. Dr. Brennan raised the issue of the need for boundaries.

Ms. Jane Blumenthal reported for the Strategic Planning working group. This group reviewed the portfolio dashboard, which is prototype and is not ready for implementation. The prototype was shown to BOR members and various related issues were discussed, in particular, the audiences for NLM's offerings, the costs of those offerings, and their value. Overhead costs were also discussed.

Dr. Brennan asked for the board's assessment of the working group model, including how the groups are used and their themes, and for suggestions for alternate structures. BOR members discussed working group structures and work products as well as the focus of the groups. Dr. Brennan also said that the ClinicalTrials.gov staff had asked the board to consider creating a working group to help oversee ClinicalTrials.gov. Dr. James Ostell provided more details.

XI. PUBMED 2.0

Bart Trawick, Public Services Division, NLM [See Day 2 video, 01:44:32]

Dr. Trawick opened his presentation of modernizing PubMed by mentioning Dr. Steffanie Strathdee. Dr. Strathdee described how PubMed and the worldwide research community played a role in the treatment her husband received after he was infected with antibiotic-resistant bacteria. Dr. Trawick said that Dr. Strathdee's experience reinforced to the PubMed team the importance of PubMed's search functions and that PubMed connects individuals directly to the literature. He also shared the positive results from a recent survey of PubMed users. Dr. Trawick described the goal of the modernization project as transforming PubMed into a fast hub that quickly and reliably connects people to information, and he discussed the various planned improvements, the process being used, and the metrics that will determine how successful the effort is.

Questions arose from attendees related to reaching communities not already familiar with PubMed, the use of Solr search commands, benchmarking, working with search engine providers, and combatting misinformation. Dr. Trawick described changes being made to the NLM's PubMed website, the process for making the updates, and the timeline for completing the new site development and launch.

XII. REPORT FROM THE BOR CHAIR NOMINATING COMMITTEE Dale Smith, Ph.D., Uniformed Services University of the Health Sciences See Day 2 video, 02:29:53]

The BOR Chair Nominating Committee nominated Ms. Jane Blumenthal as the new BOR chair. Ms. Blumenthal accepted the nomination. The BOR unanimously approved of the nomination.

XIII. PRESENTATION OF NLM DIRECTORS' AWARDS, FRANK B. ROGERS AWARD, AND OUTGOING BOR MEMBER CERTIFICATES

Patricia Flatley Brennan, RN, Ph.D., Director, NLM [See video 1, Feb. 13, 2019, 02:31:23]

Dr. Brennan presented certificates to outgoing BOR members Dr. Jill Taylor, Dr. Daniel Masys, and Dr. Alessandro Acquisti.

Dr. Brennan also presented awards to the following individuals:

- Ms. Patricia Tuohy, Division of Library Operations: The Frank B. Rogers Award in recognition of her outstanding leadership in developing and implementing Exhibitions Connect, a new program for institutions that host NLM traveling exhibitions, helping them connect visitors to relevant NLM health information resources
- Ms. Stacey J. Arnesen, Division of Specialized Information Services: An NLM Director's Honor Award for outstanding contributions to the outreach audit, implementation of the strategic plan, and incorporation of Specialized Information Services offerings into the NLM Portfolio Analysis Dashboard
- Dr. Stephen T. Sherry, National Center for Biotechnology Information: An NLM Director's Honor Award for exceptional technical contributions and outstanding trans-NIH leadership in leveraging National Center for Biotechnology Information resources to advance data science at NIH

XIV. ADJOURNMENT

Dr. Taylor adjourned the Board of Regents meeting at 12:00 p.m. on May 15, 2019.

ACTIONS TAKEN BY THE BOARD OF REGENTS:

- Approval of the February 12-13, 2019 Board Minutes
- Approval of the May 11-12, 2021 Future Meeting Dates
- Selection of Ms. Blumenthal as the next BOR Chair

Appendix A - Roster - Board of Regents

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

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

Jill Taylor, Ph.D. Chair, NLM Board of Regents