

North American Medical Informatics (NAMI)

James J. Cimino^{1,2}, André Kushniruk^{3,4}, Marc Casselman³

¹ American Medical Informatics Association, Bethesda, MD, USA

² University of Alabama at Birmingham, Birmingham, Alabama, USA

³ Digital Health Canada, Toronto, Ontario, Canada

⁴ School of Health Information Science, University of Victoria, Victoria, Canada

This article reports on North America for both the United States (AMIA) and Canada (Digital Health Canada). In both countries, there have been significant moves to broaden the scope of the national informatics associations and increase the range and scope of memberships. Both countries continue to expand their programs, events, and work in areas such as education, certification, and exposure and dissemination of advances at all levels of the healthcare ecosystem.

Informatics Activities in the United States – Report from AMIA

AMIA – Informatics Professionals. Leading the Way

AMIA represents more than 5,600 healthcare professionals, students, informatics researchers, practitioners, and thought-leaders in biomedicine, healthcare, and science. AMIA's members are subject matter experts in the science and practice of informatics as it relates to clinical care, research, education, and policy. They address challenges across the continuum of the health ecosystem—consumers and patients, healthcare providers and care delivery systems, population and public health, and basic and clinical research with the ultimate goal to advance better health, better healthcare, and improved efficiency through the use of informatics and information technology.

Why Informatics?

In 2021, AMIA continues its communication campaign—promoting the fact that every day people benefit from informati-

ans' ability to accelerate healthcare's transformation by collecting, analyzing and applying data directly to care decisions. The campaign features AMIA members telling their stories on video. Members share how informatics connects to real-world outcomes by lowering costs, increasing safety and promoting the use of high-quality services.

For more information and to share the videos with colleagues and students, visit <https://www.amia.org/why-informatics>.

Meetings and Conferences

AMIA meetings offer education, networking and peer-reviewed presentation opportunities reflecting the comprehensive range of informatics domains serving hundreds of health and healthcare related disciplines. AMIA meetings are widely regarded as the world's most comprehensive meetings on clinical and health informatics and provide a broad range of sessions on timely topics of informatics.

AMIA 2021 Virtual Informatics Summit
Bioinformatics | Clinical Research | Implementation | Data Science
March 22 – 25

The summit focuses on cutting edge research around four main areas: translational bioinformatics, clinical research informatics, implementation informatics and data science. The meeting brings together researchers from these fields and beyond to share their work and promote a vibrant exchange of ideas leading to new

collaborations, innovation and discovery. The program is diverse including research presentations, keynote speakers, panels and short “elevator pitch” presentations highlighting the newest developments in the field of informatics with the goal of enhancing the sharing of methods and approaches across the four areas of focus.

The COVID-19 health crisis has highlighted the critical importance of biomedical and health informatics research, as the world attempts to manage the rippling effects of this outbreak. The government, healthcare industry, policy makers, medical practitioners, and all relevant stakeholders now, more than ever, recognize the need for data sharing, data harmonization and methods and tools to increase the pace and efficiency of discovery. What has the COVID-19 pandemic taught us about the intelligent deployment of healthcare informatics? Are there lessons we can apply to our specific fields of research?

Chaired by Dr. Samuel Volchenboum, the AMIA 2021 Virtual Informatics Summit is the ideal venue to learn about best practices, new methodologies and shared challenges in four main areas: Translational Bioinformatics, Clinical Research Informatics, Implementation Informatics, and Data Science. If you are a physician, scientist, student, economist, analyst, policy maker and/or entrepreneur, you should participate in this one-of-a-kind event, where countless collaborations are formed, complex challenges are discussed, and innovative research is presented. We look forward to seeing you. In the meantime, stay healthy.

AMIA 2021 Virtual Clinical Informatics Conference

Evidence | Analytics | Best Practice
May 19 – 21

AMIA's Clinical Informatics Conference is making a mark on healthcare. CIC is where practitioners in health informatics including physicians, nurses, physician assistants, technicians, HIT developers, data analysts, C-suite executives, and all members of the health care team come together at their home conference. Our collective goal is to advance healthcare systems driven by data, evidence, and best practice with the explicit purpose of creating better health information technologies. We are instituting both a new informatics operations-focused track and submission category for the 2021 Clinical Informatics Conference called Real-time Innovations.

Chaired by Dr. Subha Airan-Javia and Dr. Kenrick Cato, AMIA's Virtual Clinical Informatics Conference – CIC – is making a mark on healthcare. CIC is where clinician informaticists of all disciplines – physicians, nurses, physician assistants, technicians, HIT developers, data analysts, C-suite executives, and more – share their innovations in bringing the technology advances out of the lab and into the patient room. Our collective goal is to leverage technology in new ways, to advance healthcare delivery, access and outcomes.

CIC features workshops and presentations that provide attendees with practical tools they can bring to their home institution to continue the goal of achieving the quadruple aim. The conference's unbiased, evidence and importantly experience-based content is sure to help each of us foster and build a true learning health system. Join more than 600 of your colleagues of dedicated informaticians in sharing your ideas and experiences to create progress in care delivery.

AMIA 2021 Annual Symposium

October 30 - November 3, San Diego, California, US

Chaired by Dr. Adam Wilcox, AMIA's flagship annual meeting draws the multidisciplinary, interprofessional community of informaticians together for five intensive days of learning and networking. It features

hundreds of scientific sessions, workshops, exhibition, posters, and opportunities showcasing the full breadth and depth of the informatics profession. With this conference, we expect to be able to return to the face-to-face format, so important for networking, exchange of ideas, and building collaborations. Using lessons learned from over a year of virtual meetings, we plan to incorporate elements of the virtual format in ways that will enhance the experience for those attending in person and extending the opportunity to participate to those unable to be physically present.

Virtual Conference on Reducing Clinical Documentation Burden

AMIA sponsored a conference in conjunction with the National Library of Medicine on reducing clinical documentation burden January 2021 (chaired by Dr. Sarah Rossetti and Dr. Trent Rosenbloom). The output of that conference will likely be of interest to the international community.

Publications

JAMIA

JAMIA provides members and subscribers with the best in biomedical and health informatics publishing as the premier journal in the field. Led by Dr. Suzanne Bakken, JAMIA celebrated its 26th anniversary last year with special issues focused on the 30th anniversary of the Unified Medical Language System (UMLS) and one to honor the legacy of Diana Forsythe's work on innovative and cross-disciplinary scholarship at the intersection of biomedical informatics and social science. In 2021, JAMIA will publish a special issue on Clinician Burnout: Informatics Perspectives, to present current research and perspective about the role of informatics and health information technologies on causing and/or reversing burnout among healthcare providers.

JAMIA Open

JAMIA Open, edited by Dr. Neil Sarkar, is AMIA's peer-reviewed, online-only, and gold open access journal provides a global forum for the publication of novel research and insights in the major areas of informatics for biomedicine and health

(e.g., translational bioinformatics, clinical research informatics, clinical informatics, public health informatics, and consumer health informatics), as well as related areas such as data science, qualitative research, and implementation science. JAMIA Open articles, which include application notes, database notes, and patient/community perspectives, alongside original research, reflect the broad diversity of the field of informatics community, focusing on the intersection of informatics, health, communication, and technology, and how that intersection can support patient care through research, practice, and education. JAMIA Open authors are encouraged to make data and source code accessible through publicly accessible repositories that can be cited using digital object identifiers. Accepted manuscripts are required to have a patient/community facing abstract that highlights key findings.

ACI (Applied Clinical Informatics)

AMIA members continue to receive the ACI journal as part of their membership. As the official eJournal of AMIA and IMIA led by Dr. Christoph Lehmann, ACI aims to establish a platform that allows sharing knowledge between clinical medicine and health IT specialists as well as bridging gaps between visionary design and successful and pragmatic deployment. The core editorial subject matters of ACI are: clinical information systems (including electronic medical records and systems, personal health records, physician/provider order entry, electronic prescribing, clinical decision support, nursing information systems, patient scheduling and tracking tools, lab information systems, radiology information systems, PACS, GP information systems), administrative and management systems, eHealth systems, information technology development, deployment, and evaluation, socio-technical aspects of information technology and health IT training.

ACI Open

ACI Open is the open access companion journal to ACI led by Dr. David Dorr and Dr. Lipika Samal. The journal publishes manuscripts in the field of clinical informatics

including clinical information systems (including electronic medical records and systems, personal health records, physician/provider order entry, electronic prescribing, clinical decision support, nursing information systems, patient scheduling and tracking tools, lab information systems, radiology information systems, PACS, GP information systems), mobile health applications, administrative and management systems, eHealth systems, information technology development, deployment, usability, and evaluation, socio-technical aspects of information technology and health IT training.

Certifications and Accreditation Activities

AMIA has appointed a Health Informatics Certification Commission to plan for and manage the AMIA Health Informatics Certification (AHIC) program, including eligibility, exam development, and recertification. Dr. Joseph Hales and Dr. Catherine Ivory serve as chair and vice-chair. The Commission has reviewed and approved a set of recommendations finalized by its subcommittees regarding eligibility criteria, recertification standards and examination specifications. In 2021, AHIC will launch an application portal and start accepting applications for certification. First applicants will have the choice to beta-test a new examination in the summer or take the final version in the autumn. The examination is based on the scope of practice of health informatics (HI) professionals within the USA, having been derived from the HI Delineation of Practice that emerged from a survey of HI professionals that included few outside-the-USA respondents. Applicants who reside, work, or were educated or trained outside-the-USA, and who satisfy the other eligibility criteria, will be eligible for the AHIC certification program.

Strategic Planning

Communities of Practice

AMIA continues to work with the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) through its Health Informatics Accreditation Council to certify health informaticists degree programs and

develop a web-based outreach program to provide information about opportunities for training and careers in health informatics. AMIA has several initiatives to delineate informatics practice for various professional communities, including the clinical informatics subspecialty (for physicians) and other health informatics professionals and has published a practice analysis (Gadd CS, et. al. J Am Med Inform Assoc. 2020). AMIA is now undertaking a crosswalk to clarify commonalities and differences among these communities. We will share our findings with your societies, as they are relevant to health informatics practices throughout the world.

Diversity, Equity and Inclusion

Diversity, equity and inclusion is a strategic umbrella encompassing multiple concerns including, but not limited to, race, ethnicity, nationality, gender, LGBTQIA+, and ability, and initiatives and activities involving affinity groups, S.T.E.M pipeline, program development, education content, leadership development, and mentoring. All are cross-organizational issues affecting AMIA's individual and organizational membership through governance and staff work in membership, education, meetings, marketing communications, and public policy.

AMIA has charged a Diversity, Equity and Inclusion (DEI) Task Force whose purpose is to guide and execute strategic goals and objectives related to diversity, equity and inclusion through recommendations to the AMIA Board of Directors. Their charge includes an environmental scan off ways that other organizations are addressing this issue, creating a framework for developing exposure and retention for students and professionals, and hosting engagement sessions to better inform the task force on issues and potential solutions. They will provide DEI education to AMIA leadership and members and increase awareness of the benefits of DEI towards advancing innovation and excellence in our healthcare system. The goal is to expand awareness of informatics training and careers to a wider, diverse population to create a stronger, more dynamic workforce. We expect that the lessons learned and successful experiences can inform societies in other countries as well.

Response to COVID-19 Pandemic

COVID-19 Impact and Resources Developed by Members

Scientific activities related to the pandemic include:

- Established coronavirus resource central and webinar series
- Dozens of new policy responses and requests for informatics guidance and expertise
- Distribution of corporate member COVID-19 initiatives, informatics resources and how to get involved in public/private partnerships to support the community response
- Member podcasts, community discussions, and rapid publication of COVID-related science

Teleworking

The AMIA office has transitioned to complete teleworking for all activities as of March. This has required extensive technical and social solutions that have been so successful that AMIA's virtual status will become permanent in May 2021, with closure of our physical office in Bethesda, Maryland.

Virtual Conferences

The AMIA 2020 Research Informatics Congress (March 23-26) was quickly transitioned to an all-virtual format. Registration was open to the first thousand participants, with all fees waived or returned. In terms of attendance, it was by far the most successful spring congress in AMIA's history. With somewhat more planning time available, the AMIA 2020 Clinical Informatics Conference (May 19-21) and the AMIA Annual Symposium (November 14-18) were likewise transitioned to all-virtual conferences.

The Virtual AMIA Annual Symposium attracted 2083 attendees, somewhat less than previous face-to-face meetings but 30% more than expected. Lessons learned included:

- AMIA met the value-threshold with 2020 Virtual Annual Symposium performance
- Approach to program planning with peer-reviewed contributed content applying rigor and quality standards was central to success
- The platform and technology enabled

systematic curation and dissemination of live streaming plus conference artifacts

- Content can be translated into a digital library for additional engagement
- Our members and attendees do stay connected during virtual sessions but there's competition for their attention
- We Need more data to understand ongoing value of archived conference assets

For more information

AMIA

4720 Montgomery Lane, Suite 500

Bethesda, MD 20814

Tel: +1 301 657 1291

Fax: +1 301 657 1296

E-mail: mail@amia.org

Website: www.amia.org

Twitter: [@AMIAinformatics](https://twitter.com/AMIAinformatics)

LinkedIn: Official Group of AMIA

Facebook: American Medical Informatics Association

Digital Health Canada

Digital Health Canada connects, inspires, and educates the digital health professionals creating the future of health in Canada.

Digital Health Canada is a member-supported not-for-profit professional association that connects, inspires, and educates the digital health professionals creating the future of health in Canada. Our members are a diverse community of accomplished, influential professionals working to make a difference in advancing healthcare through information, technology, and data management.

Digital Health Canada fosters network growth and connection; brings together ideas from multiple segments for incubation and advocacy; supports members through professional development at the individual and organizational level; and advocates for the Canadian digital health industry.

Virtual Member Engagement in 2020

In response to pandemic challenges, Digital Health Canada accelerated efforts to deliver virtual events to offer Canadian professionals an expanded online experience, with multiple opportunities to connect, learn, and network online. New event platforms

allow attendees to use chat boards, jump into live speaker Q+A, start unique discussion threads, connect with colleagues through the event platform, and more. As long as physical distancing recommendations remain in place, Digital Health Canada will continue to offer high-quality, user-friendly, travel-free ways to connect, inspire, and educate the digital health professionals creating the future of health in Canada.

e-Health 2020 Virtual PopUp (July 20/21)

This interactive and engaging online event included 35 speakers from across Canada: Opening Plenary, six concurrent sessions, virtual tradeshow networking, five sponsor symposia, happy (half) hour and closing keynote speaker. The PopUp included 17 Virtual Exhibitors and 11 Event Sponsors. There were more than 750 registrants for this national event hosted by Digital Health Canada, Canada Health Infoway, Canadian Institute for Health Information.

By the numbers: Attendee Engagement

- 92% app download; 1,339 community board messages; 3,000 attendee to attendee messages; 4,000+ agenda views

Key Statistics from Attendees Surveyed:

- 92% said that the conference met their objectives; 81% found the program quality "excellent or good"; 75% were "very satisfied" with their overall event experience

Regional Events

The Atlantic Region Virtual Conference was held October 5 & 6, 2020 and had the following themes:

- Theme Day 1: Public Health
- Theme Day 2: Clinical Standardization

Driving the Future of Digital Health (virtual) was held October 19 & 20, 2020 with the following themes:

- COVID-19, Virtual Care, Digital Health Innovation
- A virtual tradeshow was included

In addition, Chapter Virtual LinkUps were hosted by the Atlantic Chapter, the Alberta Chapter, and the BC Chapter which have welcomed more than 100 members in virtual networking and discussion between April and November.

CHIEF Executive Forum Virtual Events

Digital Health Canada's CHIEF Executive Forum provides a place for senior professionals and leaders in digital health and healthcare to collaborate, exchange best practices, address professional development needs, and offer their expertise in setting the agenda for the effective use of information and technology to improve health and healthcare in Canada. CHIEF events included the following:

- CHIEF Executive Forum C90 - July 16, 2020
- CHIEF Executive Forum CGlobal - Sept 10, 2020
 - With guest Australasian Institute of Digital Health
- CHIEF Executive Forum Fall Symposium - October 15 & 16
- CHIEF CHIEF Executive Forum C60 (Networking event)- November 19, 2020

CHIEF Executive Forum - National Virtual Care Working Groups

Given the recent accelerated deployment of virtual care services across all jurisdictions due to COVID-19, CHIEF Executive Forum leaders recognized the challenges and opportunities that now exist, including:

- Lack of common lexicon to describe virtual care services across Canada
- Gaps in standardized approaches to deployment of virtual care and continued "re-learning" of same lessons across jurisdictions
- Workflow challenges for clinical, operations, and technical professionals and patients and family caregivers
- Few tools available to assist professionals and patients with information, skills, and education related to use of virtual care services

In addition, the CHIEF Executive Forum has initiated a working group to provide national perspective and resources to address key needs, including:

- Maturity model to describe stages of maturity in deployment of virtual care nationally
- shared lexicon/language and definitions of virtual care and sub domain areas for Canada;
- resources aimed at educating and informing stakeholders using virtual health in Canada

Combined these resources will help leaders to sustain the innovation in virtual care – and support work focused on national alignment, direction, and decision-support.

Webinars

- More than 3,400 viewers have joined a weekly webinar session through the first half of the membership year at Digital Health Canada
 - Many Digital Health Canada members participate in Webinar Wednesdays and unlimited access to a large library of past webinars in our Resource Library
 - Research + Innovation Series of webinars shines a spotlight on the great ideas coming from Digital Health Canada academic members working in graduate programs like health informatics, data science, and computing for healthcare.
 - Industry Showcase webinars are special events presented by some of Canada's leading digital health and healthcare organizations. Topics include successful public-private partnerships, ground-breaking case studies, or interesting innovations.

Training & Education Highlights

- Digital Health Canada 'Learn' Learning Management System was launched as a one-stop-shop for digital health education, professional development, and learning community engagement
- Nearly 100 users have engaged with 'Learn' Learning Management System since the launch

- New microcredentials are being launched: Enterprise Innovation Certificate program is available now; Virtual Care Certificate is in development stage; Patients in Tech Certificate in planning stage.

Awards

The Women Leaders in Digital Health Awards celebrates the top ten female visionaries who are harnessing the power of IT to transform health and healthcare in Canada today.

The annual Women Leaders in Digital Health Award is unique among power lists and award programs in that it recognizes women at any stage of their career and is inclusive of all women of influence no matter where they might be in the health IT field. Each year, ten new Women Leaders in Digital Health are recognized for the work they have accomplished in the last year. We will announce the 2020 Women Leaders in Digital Health during Digital Health Week (Nov 16-20): <https://digitalhealthcanada.com/resources/women-leaders-digital-health-award-winners/>

Response to COVID-19 Pandemic

Digital Health Canada staff demonstrated creativity and innovation by rapidly deploying program offerings to assist members and non-members alike, including:

- Webinar Wednesday access to members and non-members with COVID-19 focused topics such as virtual care, mental health, and more;
- Rapid launch of a COVID-19 resource pages and new interactive discussion

forum on our website: <https://digitalhealthcanada.com/covid-19-resources/>

- Chapter Virtual LinkUps to bring together member segments and chapters
- Developing new Virtual Event bundle sponsorships for fall virtual events and webinar showcase sessions;
- Research & Innovation webinar series to engage student, academic, and emerging professionals;
- CHIEF Executive Forum Spring Symposium (Virtual) and monthly CHIEF Executive Forum LinkUp virtual events

Promoting IMIA to our Members

- Digital Health Canada is promoting the benefits of engaging with IMIA with our members
- Regular messages have been included in our social media feeds to highlight the work IMIA is doing
- This has included highlighting member benefits from joining IMIA Working Groups and getting involved at the international level, given the need for sharing international perspectives in dealing with the global challenges

Digital Health Canada

1100 - 151 Yonge Street
Toronto, ON M5C 2W7
Canada

E-mail: info@digitalhealthcanada.com

Website: www.digitalhealthcanada.com

Twitter: [@DigiHealthCA](https://twitter.com/DigiHealthCA)

LinkedIn: [digital-health-ca](https://www.linkedin.com/company/digital-health-ca)