Main Topic Categories: The HIMSS20 Global Conference & Exhibition topic categories are listed and defined below. Please review the entire selection of topic categories listed below to identify the one most appropriate selection for your submission.

- Applied Artificial Intelligence and Machine Learning
- Biomedical Informatics or Healthcare Informatics
- Consumerization and Patient Experience
- Cybersecurity, Privacy, or Security
- Data and Analytics
- Health Information Exchange or Interoperability
- Healthcare Applications and Technologies
- Innovation, Entrepreneurship, or Venture Investment
- Leadership, Governance, or Strategy
- Organizational Change Management
- Personalized Health and Genomics
- Population Health or Public Health
- Professional Development or Workforce Development
- Quality Improvement Model Practices
- Telehealth
- User Experience (UX), Usability, or User-Centered Design
- Value-Based Care Models

Applied Artificial Intelligence and Machine Learning

Description: Next generation tools like artificial intelligence and machine learning provide the promise, and more recently, the reality of revolutionizing the way health and healthcare is delivered. By leveraging the power of reasoning, knowledge representation, planning, learning, natural language processing, and other methods, AI and ML can positively enhance efficiencies, reduce risk, and weaken clinical variation.

Suggested Sub-Topics: Simulation, robotics, computational perception, wearable computing; personal health assistants (chatbots); artificial intelligence and machine learning to support clinical decision-making, care delivery, and business efficiencies; technologies like artificial intelligence, biometric patient identification (fingerprints, automated face recognition, iris pattern, palm vein, voice pattern, and others); machine learning, virtual or augmented reality; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Biomedical Informatics or Healthcare Informatics

Description: The Biomedical Informatics or Healthcare Informatics topic category focuses on information, technologies, innovations and methodologies that identify ways to deliver more efficient and effective patient care to improve health outcomes. Clinicians engaged biomedical informatics strive to improve knowledge access and contributing guidance on effective strategies to engage clinicians in embracing technology and optimizing health information and technology. Health informatics topics also address the interdisciplinary study of the design, development, adoption and application of IT-based innovations in healthcare services delivery, management, and planning.

Suggested Sub-Topics: Health information and technology professional practices that include case studies, strategies, innovations, research, best practices, or other formats that discuss, but are not limited to: use of information systems that positively impact care among anatomic and clinical pathology informatics, applied clinical informatics, cardiology informatics, health informatics, medical informatics, nursing informatics, pharmacy
informatics, radiology informatics, primary care informatics, public health informatics, biomedical informatics or others; return on investment or information; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

**Consumerization and Patient Experience**

**Description:** The Consumerization and Patient Experience topic category focuses on tools, technologies, programs, and strategies designed to embrace consumers, specifically, individuals, patients, and their families, in becoming active partners with providers and other professionals in managing their health and wellness. As individuals confront their challenges and take control of their health, payers and clinicians must provide tools that encourage healthy behaviors. By doing so, individuals, caregivers, and families will have a stronger and more equal voice in their own health and their healthcare decisions.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: provider wellness programs and strategies; provider and payer use of technology to engage patients and caregivers; advances in and access to mobile and wireless technologies that provide opportunities to change people’s health behaviors and support individuals, providers and caregivers; processes that formally empower individuals to participate in healthcare decision-making (i.e. shared decision-making); technical, workflow and adoption challenges and success stories that cover aggregation and coordination of patient-generated health data including integration into clinical workflow with technologies like patient portals and others; efforts that expand access to information about care quality and price transparency to support informed consumer choice; payer wellness programs and strategies; device management; wearable devices; consumer mediated care; mobile and wireless devices; remote monitoring related to devices and functionality; consumer outreach and education; portals and kiosks; personal health records; provider and patient mobile technologies; smart technologies; provider and patient outreach and education; patient advisory panels; mobile health apps; social media outreach; remote monitoring related to devices and functionality; mobile device management (MDM); Bring Your Own Device (BYOD); health apps, wearables, and personal health devices; behavior change; challenges and opportunities to the patient-provider relationship; patient satisfaction; evidence of clinical effectiveness and techniques for effective behavioral change; the availability of secure and affordable sensors, devices, and connectivity; alignment of financial incentives and enabling Government policies; a cultural shift to collaborative care; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

**Cybersecurity, Privacy, or Security**

**Description:** Healthcare organizations must protect at all levels the privacy and security of patient information. In the digital realm, a strong cybersecurity program is a necessity. Cybersecurity goes hand in hand with information privacy and other aspects of security (such as physical security). Every organization must respect and maintain the privacy and security of patient information, no matter how small or large and no matter where they are located.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: HIPAA, GINA, breach notification, GDPR, PIPEDA, and other country or region-specific laws and regulations; privacy frameworks, enforcement, profiling, surveillance, de-identification of information, identity theft and fraud; identity and access management, protecting confidentiality integrity and availability of information, asset identification, information sharing, threats, asset protection, risk identification, risk assessments, post-risk assessment actions, incident detection and response, disaster recovery planning (natural and manmade disasters), business continuity, wireless security, mobile application security, mobile device security, cloud security, encryption, vulnerability identification, vulnerability scanning and assessments, vulnerability management, cyber-attacks, exploits, phishing, malware identification, cybersecurity research, malware research, malware analysis, reverse engineering of malware, penetration testing, exploitation of vulnerabilities, encryption, network security, physical security, privacy by design, security by design, security metrics, cross-border privacy and security issues; success stories where patients
and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Data and Analytics

**Description:** HIMSS defines data analytics and clinical and business intelligence (C&BI) as the aggregation, analysis, and use of clinical, financial, operational, and non-traditional data captured inside and out of the healthcare setting to directly inform decision-making. As an essential tool for healthcare stakeholders across the continuum of care, data analytics and clinical and business intelligence systems can provide insight and intelligence, making it an essential tool for health systems pursuing clinical transformation while dramatically improving clinical performance aligned with the quadruple aim.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: data use; data integration; data governance in the use of data for clinical, financial, or administrative decisions making; aggregating, sharing, and employing non-EHR data use (social determinants of health, lab, imaging, claims, patient-generated health data, etc.) in analysis, risk, and cost management; analysis and application of data science in healthcare; challenges and opportunities of building an analytically mature, data-driven organization; resource management; staffing and workforce development to support the discipline; skills needed to ensure best practices in clinical and business analytics and reporting (dashboards, scorecards and visualization techniques); return on investment or information; retrospective, predictive, and prescriptive analytics; data science in healthcare; working with patient-generated health data and advanced predictive analytics and predictive modeling to avoid clinician and patient burnout; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Health Information Exchange or Interoperability

**Description:** Topics in this category will examine all aspects of information exchange, interoperability and standards across technical and administrative strategies that contribute to sustaining the healthcare enterprise regardless of the size and enabling a positive consumer experience. Critical to this topic are experiences with connecting patients and their data with clinicians at the local, regional, state, national levels, and global levels while also supporting advanced care models, demonstrating value by increasing quality and reducing costs, and implementing services that add value to a clinician’s workflow.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: consumer-mediated exchange; governance; sources of funding and financial incentives; examples of sustainable and successful business cases; return on investment or information; disruptive business models; blockchain and opportunities for connected care, best practices in architecture design and deployment; challenges and opportunities with all aspects of HIE data repositories; disruptive standards and open source data approaches, like FHIR; use of SOAP and RESTful services; processes and experiences involving the healthcare services platform, query and retrieve; record aggregation and normalization; gateway to public health reporting; immunizations and record management; electronic notification services; processes involve data dictionaries and semantic interoperability; interoperability certification and testing; regulatory and policy issues at the global level; challenges and opportunities with APIs; economic barriers across organizations and governments; challenges and opportunities with consumer engagement and patient generated health data; patient data matching; interoperability supporting the demonstration of value; rules of engagement and stakeholder trust; legal aspects of this topic with contracts, warranties; gag clauses to inhibit information blocking; transparency of operations; culture of data sharing and access; anticipating whether existing HIEs provide a home for patient-generated health data; examining the role of public data exchange; evaluating which interoperability paradigm fits in a digital world; determining whether standards and traditional document-based approaches are accepted from an interoperability perspective or whether a new paradigm needed for an IoT world; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.
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Healthcare Applications and Technologies

**Description:** Proposals in this category focus on the process, the people, and the technologies that lead to improved outcomes with the use of administrative, clinical, and financial applications with emphasis on the infrastructure required to deliver applications and technologies that will lead to improved patient outcomes and quality.

**Subtopics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: enterprise applications like anatomic and clinical pathology informatics, cardiology information systems, clinically-integrated supply chain, enterprise imaging, laboratory information systems, pharmacy information systems and others; the application of EHR technologies and functions that drive and optimize value; examples of demonstrated ROI in major capital investments in applications and technologies; education and training regarding use of applications; standards challenges and opportunities related to the use of healthcare applications; other technologies that contribute to the delivery of patient care across an isolated or geographically-dispersed population of patients; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Innovation, Entrepreneurship, or Venture Investment

**Description:** Proposals in this category should examine the entire lifecycle of all aspects of healthcare information and technology innovation and investment that positively affect healthcare by improving the care experience, individual and population health, and reducing costs. Strategies and tactics to do so, including, but are not limited to, the emerging business landscape, funding trends, barriers to investment and provider technology adoption, and new market and sector opportunities. By exploring the challenges and opportunities of taking viable ideas and new products to market more efficiently, as well as, novel collaborations and partnerships between entrepreneurs, investors and providers for designing, evaluating, validating, funding, and adopting emerging tech-enabled solutions that meet clinical needs, quality of care delivered can be greatly enhanced.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: new business opportunities; business-building and business development strategies; innovation and investment cycles; pilot case studies; emerging technologies; new technology implementation and adoption models; technology or clinical outcomes evaluation and validation; benefits realization; state/statewide healthcare reform initiatives; SIM grants; return on investment or information; the European Commission’s Framework Programme for Research and Innovation Horizon 2020 project; original case studies that contribute to the HIMSS Innovation Pathways Maturity Model; collaborations that fuel the innovation of local, regional, or world economies; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Leadership, Governance, or Strategy

**Description:** The environment of healthcare information and technology is fast-paced, dynamic, global, and ever changing. Leading organizations through disruptive changes brought about by digitization of data and information presents both challenges and opportunities across many administrative, clinical, and financial aspects. Leaders in today’s digital health environment must constantly adapt in order to understand and leverage the interdependencies of people, culture and technology to drive optimal value from data and what it reveals about delivering better, cost-effective care to all.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: the role of various levels and types of professional leadership in defining and executing organizational strategy; formulating unique value propositions for your organization, including the value propositions for data at all stages of its lifecycle from acquisition through development of knowledge and wisdom; aligning healthcare information, technology, and digital investments with organizational strategy; establishing governance that prioritizes the implementation process
of these investments; ways in which leaders embrace information, innovation, and technology to positively affect change; interacting with and aligning system operational leadership with strategic initiatives; building and growing leadership in an organization; qualities and skills required to lead in this rapidly changing digital environment; case studies with actionable guidance on how information, innovation, and technology has transformed the organization; advice on various strategies such as executive leadership, supply chain, digital health, how to manage knowledge within an organization in a digital state; experiences with strategy planning and alignment; the challenges and opportunities with governance of all types; coaching; peer mentorship; leadership development; surviving executive transitions; examples of technology and digital health investments that demonstrate a return on investment or information; planning for digital care; leveraging digital care to deliver an outstanding patient experience; experiences with service expansion through digital health; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Organizational Change Management

Description: To truly transform care processes, critical organizational capabilities like process improvement, change management, and workflow analysis and design are essential for today’s healthcare information and technology professional. By focusing on the design, installation, and improvement of integrated systems of people, material, facilities, information, equipment, and energy both internal to the IT organization and the organization as a whole, organizations anywhere can realize transformative change in the delivery of care that is provided.

Suggested Sub-Topics: Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: challenges and opportunities with operations research methodology; time-motion studies; field research; observational studies; leadership aspects of organizational change; return on investment or information; processes focused on integrating analytics into clinical workflow; learning loop; continuous improvement concepts like Plan, Do, Study, Act; techniques for identifying gaps in care delivery; digital transformation of provider organizations; success stories where patients and their families positively benefited from these technologies; and other examples that fit closely with the intent and spirit of this topic category.

Personalized Health and Genomics

Description: Precision health represents a new frontier with the goal of providing the best available care for each patient through genomics-informed personalized care. Facilitated with evidence-based medicine, precision health is an emerging approach for disease treatment and prevention, as well as research and development to accelerate biomedical research, using very large sets of health and disease-related data linked to individual patients to collect and link genotypic, phenotypic and lifestyle data. Tools employed can include molecular diagnostics, imaging, and analytics/software. Next-generation genomic technologies allow clinicians and biomedical researchers to drastically increase the amount of genomic data collected on large study populations. Combining new informatics approaches that enable access and integrate many kinds of data with genomic data in disease research allows researchers to better understand the genetic bases of drug response and disease.

Suggested Sub-Topics: Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: the Precision Medicine Initiative; the Cancer Moonshot Initiative; evidence-based medicine and advance decision support; precision medicine and precision care; unique disease principle; predictive and data modeling; balancing privacy and accessibility of data for research purposes; pharmacogenomics; genetic testing and registries; rare diseases and orphan drug development; molecular diagnostics; emergence of systems biology; challenges and opportunities with reimbursement policies; regulatory guidance and requirements; legal and ethical considerations; patient participation focused on education, and counseling; emerging technologies; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.
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Population Health or Public Health

**Description:** Public and population health management address the health and wellness status issues of aggregate populations from various perspectives. It brings significant health concerns into focus and addresses ways in which communities, healthcare providers, and public health organizations can allocate resources to overcome the problems that drive poor health conditions – e.g., diabetes, obesity, autism, heart disease, opioid addiction – and support health and wellness in that population. Both public health and population management programs work to know the population, optimize health status, and protect groups from harm. As healthcare continues to be viewed as a more holistic endeavor, remaining connected to patients outside the traditional clinic walls of a healthcare setting will require coordination of care, which will also demonstrate to patients that their needs are fully understood and met. Facilitated on a foundation of people and culture, business and financial functions, and data, information, technology, and actionable analytics, stakeholders can identify ways to allocate resources to overcome the challenges and opportunities of managing the population and public health of a community and beyond.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: advanced population analytics (including use of tools such as GIS); stratification and attribution techniques and tools; challenges and opportunities of contract and risk management; automated outreach and health campaigns; automation of public health reporting processes; identification of at-risk populations for early intervention; patient life-cycle management; patient activation management (PAM); challenges and opportunities of patient portals; provider or patient activation, engagement, and change management strategies and case studies; relationship management tools like metric selection (metrics identified for driving system change vs. patient outcomes; minimum data sets needed to drive change; metric evolution 1-2 years and 3 to 5 years) or efforts to align metrics to reduce efforts of tracking; remote patient monitoring; reporting, dashboards, and visualization techniques; social determinants of health; workflow integration tools; patient generated health data (daily blood sugars, weight, exercise, blood pressures etc.); and application programming interfaces (APIs); patient generated quality measures; public health focused on non-clinical populations; closing the gap in health disparities via digital health; business models and the ability to scale solutions; developing a culture of innovation; experiences, challenges, and opportunities of partnering and coordinating care and information across care settings; digitally-managed transitions of care; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Professional Development or Workforce Development

Professional development occurs when employees engage in lifelong learning and networking to advance one’s professional practice, whereas, workforce development provides the education and training needed for employees to support current and future business and industry needs. When delivering patient care in today’s complex healthcare environment, executive leadership faces a multitude of health informatics professional development or workforce development challenges and opportunities across administrative, financial, operational, and technical areas. To meet the pressures of maintaining clinical excellence and technical competence, healthcare leaders must define, attract, and develop the right mix of talent for today and the future; academicians and others must ensure the right education, tools, resources, and experiences exist to support and grow a diverse and inclusive health informatics workforce; and continuing professional development opportunities must exist so that professionals may maintain and advance their practice.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: educating and preparing the next generation of clinicians and non-clinicians for the workforce of now and the future; the importance of lifelong learning; tools and resources to establish and nurture one’s career; learning from others, either individually or as part of a team, to positively impact one’s career; ways that organizations and others may be accelerating diversity, inclusion, and equity for health information and technology professionals; the challenges and opportunities of the inter-generational workplace; developing as a leader; empowering work-life balance; the importance of talent management; developing a personal brand; the importance of creating a career roadmap that includes professional
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advancement; best practices for developing a professional social media persona; challenges and opportunities in identifying and communicating transferable skills; differentiating and positively impacting the next generation of academics for healthcare information and technology professionals; professional certification and its impact on professional practice; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Quality Improvement Model Practices

**Description:** Topics in this category address technologies, applications, technology-enabled workflows, policies, and internal strategies for leveraging data to identify opportunities for improved care delivery designed to help healthcare professionals measurably improve clinical outcomes; and develop sustainable health IT-enabled quality measurement and outcomes improvement programs along with guidance for designing, installing, and improving integration of systems, including but not limited to people, material, facilities, information, equipment, and energy all designed to improve the care delivered to patients.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: clinical decision support and care pathways (expert systems, knowledge management, knowledge engineering, knowledge representation, decision rules, clinical guidelines, clinical reminders); experiences with Learning Health Systems; challenges and opportunities of evidence-based medicine; reducing readmissions; reducing healthcare acquired infections (HAIs); experiences with non-US based public health programs; experiences with US-based federal programs like the National Quality Strategy, National Priorities Partnership, National Quality Forum, CQM Feasibility, CQM Field Testing, Alternative Payment Models, Inpatient Quality Reporting Program (IQR), Quality Payment Program (QPP), National Patient Safety Foundation, Data Visualization and Quality Improvement, eCQMs, and CMS eCQM Strategy Project; leveraging measurement to improve quality; core clinical data elements; empanelment; and risk adjustment for determining the standard of care; data element driven quality reporting using FHIR driven APIs; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Telehealth

**Description:** Telehealth, or the provision of care via information and communications technology (ICT) across time and space, is transforming healthcare operations of all types. From bringing specialty provider expertise to rural and remote areas to offering clinicians flexibility to better balance their lives, telemedicine use is growing rapidly through integration into the ongoing operations of hospitals, specialty departments, home health agencies, private physician offices as well as consumer’s homes and workplaces. Telemedicine is the natural evolution of healthcare in the digital world since it greatly improves the quality, equity and affordability of healthcare throughout the world.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: opportunities and challenges with rural broadband access; establishing and administering tele-psychiatry/psychology, tele-dermatology, tele-radiology, or tele-neurology; creating and implementing new clinical specialties utilizing telehealth, i.e., tele-stroke; policy needs surrounding funding, access, and federal/state regulation; guidance on identifying and securing telehealth technology needs; establishing a telehealth marketing plan; conducting effective and efficient telehealth program operations; experiences with integrating telehealth and other clinical information systems; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.
User Experience (UX), Usability, or User-Centered Design

**Description:** There is a vast and increasing array of spaces, systems and devices used by providers and patients to diagnose, treat and manage disease states and wellness activities. The experience patients and providers have while interacting with those spaces, systems, and devices has direct impact on clinical, operational, and financial outcomes. This category explores the effect that product and process design choices have on the user experience, and its implications for quality, safety, satisfaction and operational efficiency.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: ergonomics; human factors; human-computer interactions; cognitive workload; workflow; customer experience; industrial design; interaction design; interface design; experience design architecture incorporating behavior science into solution design; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.

Value-Based Care Models

**Description:** This topic category provides global guidance on business processes and technical functionality required to create the administrative, clinical, and financial framework necessary to support the disruption of traditional care models to effectively and efficiently deliver value-based chronic and acute care.

**Suggested Sub-Topics:** Health information and technology professional practices that include case studies, strategies, research, best practices, or other formats that discuss, but are not limited to: emerging and/or disruptive care models from around the world that highlight the innovation of alternative plans of care; revenue cycle management functions to ensure financial integrity of emerging and value-based care models; administrative simplification and prior authorization in clinical integration models; pricing and cost of care; impacts of price transparency; experiences with managing healthcare costs with information and technology; challenges and opportunities with consumer engagement in a non-traditional, or disruptive care models; return on investment or information; global risk management issues like identifying and containing potential international health crises and access to care in remote regions, halting the spread of disease through immunization compliance, etc.; and US-based concepts like Quality Payment Program, HITECH, and Sarbanes Oxley; experiences with CMS Innovation Models, Comprehensive Primary Care Plus (CPC Plus), Comprehensive ESRD Care Model, Advance Payment ACO Model, and Pioneer ACO Models; success stories where patients and their families positively benefited from these technologies; and other sub-topics that fit closely with the intent and spirit of this topic category.