ITCH 2017

BUILDING CAPACITY FOR HEALTH INFORMATICS IN THE FUTURE

FINAL PROGRAM

February 16 – 19, 2017

Inn at Laurel Point,

Victoria, BC Canada

An international conference addressing Information Technology and Communications in Health (ITCH) presented by the School of Health Information Science, University of Victoria, Canada

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Letter of Welcome

BUILDING CAPACITY FOR HEALTH INFORMATICS IN THE FUTURE
February 16 – 19, 2017 Inn at Laurel Point, Victoria, BC, Canada
An international conference addressing *Information Technology and Communications in Health* (ITCH)

Dear Delegates,

On behalf of the School of Health Information Science and ITCH Steering Committee I am pleased to welcome you to ITCH 2017. We have a wide range of presentations from researchers, practitioners, students and experts in health informatics from around the world. Our theme this year is "building capacity for health informatics in the future". As we all know, health information technologies are revolutionizing and streamlining healthcare and their uptake is rising dramatically. However, in order to effectively implement these technologies scientific, research, industrial and governmental supports must be strongly in place in order to transform healthcare and build capacity at the regional, national and global levels.

The conference will take a multi-perspective view about what is needed in order to move technology along to real sustained and widespread use. Solutions range from improvements in usability and training, to need for new and improved design of information systems, user interfaces and interoperable solutions, to governmental policy, mandates and initiatives.

The conference follows the tradition of ITCH from its first instantiation in 1986, where it offered a Canadian colloquium with an international flavor addressed the impact of information technology on community health. This small, successful gathering was the predecessor of the Information Technology in Community Health conferences which followed in 1987, 1988, 1990, 1992, 1994, 1996, 1998 and 2000. In 2007, we expanded the conference scope to cover Information Technology and Communications in Health (ITCH), and we have been hosting ITCH conferences every two years since.

Over the years we have seen the conference grow and develop and we are thrilled to welcome you back to Victoria, British Columbia for our 14th gathering.

We hope you enjoy the conference, and thank you for contributing to the important work that we all do.

Sincerely,

Andre Kushniruk, PhD
Conference Chair

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Conference Chair

Andre Kushniruk, University of Victoria

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General Conference Information

Conference Badges

Please wear your name badge at all times to ensure admittance to the Opening Reception, conference sessions, and the Gala dinner.

Proceedings

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Student Posters

Private judging of the student posters will take place between 1:00 – 5:00 pm Thursday, February 16, in the Terrace Room of the Inn at Laurel Point. The posters will be open to the public at 5:00 pm. The winners will be announced that evening. The posters will be on display all day Friday and Saturday in the Merino Rooms.

Professional Posters

The practitioner (non-student) posters are on display Thursday evening in the main hallway and in the Merino Room all day Friday and Saturday.

Registration and Information Desk

Registration desk staff will be available to assist you with information and to sell West Coast Gala Dinner tickets and tickets to the ITCH 2017 Bateman Reception. They can also answer your questions about Victoria. The Registration Desk will be open throughout the conference.

Opening Reception

The opening wine and cheese reception will take place in the Terrace Room Thursday, February 16 between 5:00 – 7:00 pm. The winners of the student poster contest will be announced shortly after 5:00. At this time delegates are encouraged to view the student and practitioner posters.

West Coast Gala Dinner

Join us for a relaxing evening Friday, February 17 starting with a cash bar at 6:30 pm followed at 7:00 pm by a bountiful gourmet West Coast buffet to tantalize your taste buds. There are sign-up sheets for dinner seating at the conference Registration Desk.

If your registration includes a ticket for the West Coast Gala, it is included with your nametag. If you do not wish to use your ticket, please return it to the Registration Desk so we may give it to one of our volunteers.

ITCH 2017 Bateman Reception

Saturday, February 18 you are invited to attend a reception at the Bateman Centre, 470 Belleville Street, and a five minute stroll from the Inn at Laurel Point. You may purchase tickets (cash or cheque only) at the Registration Desk.

Keynote Speakers

James Coward Keynote Lecture, Friday, February 17 | 8:45 am

Christoph Lehmann is Professor for Pediatrics and Biomedical Informatics at Vanderbilt University where he directs the Clinical Informatics Fellowship Program. He conceived and launched the journal Applied Medical Informatics, devoted to original research and commentary on the use of computer automation in the day-to-day practice of medicine and he served as the Editor-in-Chief since its inception. In 2009, he co-edited Pediatric Informatics, the first textbook on this subject.

Dr. Lehmann served on the board of the American Medical Informatics Association from 2008 to 2013 and served two terms as the organizations secretary. In 2010, he was inducted as a fellow into the American College of Medical Informatics, in 2014 he was elected to the American Pediatric Society, and in 2012 he became a Vice President of the International Medical Informatics Association in charge of the IMIA Yearbook. In 2015, he became President-Elect of the International Medical Informatics Association.

In 2010, Dr. Lehmann was appointed Medical Director of the Child Health Informatics Center for the American Academy of Pediatrics, where he was involved in developing the Model Pediatric EHR Format. Dr. Lehmann serves on the federal Health IT Policy Committee and as the chair of the Examination Committee of the American Board of Preventive Medicine, Subcommittee for Clinical Informatics.

Steven Huesing Keynote Lecture, Saturday, February 18 | 8:45 am

Elaine Huesing is a 30+-year veteran in the healthcare industry, serving as an executive advocate, lobbyist, and marketing expert to stakeholders around the world. She is the Chief Executive Officer of the International Medical Informatics Association (IMIA); the Executive Director of ITAC Health and a Vice President of ITAC (Information Technology Association of Canada), and is the Owner, Editor, and Publisher of Healthcare Computing & Communications Canada Inc., Canada's preeminent health IT journal.

Among other successes, Elaine has led the marketing efforts of private organizations, organized and managed events such as the annual COACH and bi-annual MEDINFO conferences, co-created the Canadian Health Informatics Technology Trade Association (CHITTA; now ITAC Health), the Alberta Network for Health Information eXchange (ANHIX) and the Canadian Health Informatics Awards (CHIA).

As IMIA's CEO, Elaine leads the efforts of academic institutions spanning the globe to harmonize their educational programs for both present and future informaticians in the healthcare industry. As the lead for ITAC Health, Elaine helps members navigate the ICT challenges and opportunities of the health sector both nationally and globally.

Keynote Speakers

Denis Protti Keynote Lecture, Sunday, February 19 | 8:45 am

Fernando Martin-Sanchez received his BSc/MSc in Molecular Biology and Biochemistry from the Autonomous University of Madrid (UAM), in Spain. He then received his MSc degree in Knowledge Engineering and a PhD in Informatics from Technical University of Madrid (UPM). After a postdoctoral stay at the Joint Program in Biomedical Engineering between Emory University Hospital and Georgia Institute of Technology, in Atlanta, USA, he returned to Madrid and entered Spain's National Institute of Health 'Carlos III' (ISCIII). He was first CIO of the Institute and then became the Founding Director of its Medical Bioinformatics Dept. (BIOTIC).

In 2010 he received his PhD in Medicine from the University of A Coruna (Spain). As of February 2011 he was appointed Professor and Chair of Health Informatics at the University of Melbourne's Medical School, in Australia. In May 2013 he became the inaugural Director of the University of Melbourne's Health and Biomedical Informatics Centre (HABIC). In December 2015 he has started a new academic role with Weill Cornell Medicine (Cornell University) in New York.

He is a Fellow of the American College of Medical Informatics (ACMI) and the Australasian College of Health Informatics (ACHI). Having served as Vice-President of IMIA from 2007 to 2013 and Co-chair of the Scientific Program Committee for MEDINFO 2015, he continues to be involved with IMIA as current Chair of its Big Data Mining and Analytics Working Group. Prof. Martin-Sanchez is Co-Editor in Chief of the International Journal of Big Data and Analytics in Healthcare and has co-authored more than 180 publications. His research has been funded by the European Commission, and agencies from Spain, Australia and the USA. His most recent research focuses on the application of informatics methods in Participatory Health and Precision Medicine.

Keynote Lecture Titles

Christoph Lehmann *"Pediatrics Medication Safety Through EHRs"*

Elaine Huesing *"Collaboration"*

Fernando Martin-Sanchez *"Exploring New Challenges for Health Informatics Research and Education in the Context of Precision Medicine"*

Workshops Abstracts: Thursday morning 9:00am – Noon

The Expanding Universe of Health Informatics – The Evolving Competency Gap

Like our physical universe, the universe of Health Informatics appears to be expanding and possibly doing so at an increasing rate. As we delve more deeply into the human domain with more and more sophisticated tools, we are experiencing heightened awareness of new competencies/capabilities that must be in the armamentarium of informatics professionals. Some of these new requirements for competence derive from a deepening understanding of the true nature of human health and health care. Others have their origin in new technologies that we must ourselves use or foster for use by health professionals. Still others come from a greater and more realistic appreciation of the nature of Health Informatics itself, both at the basic and applied levels. The result is that there is more to learn and teach, more skills that need to be acquired, and new demands for our own attitudes and personal development.

Emergent factors that stimulate the need for competency/capability development include: the nature of complexity and the implications of complexity research on the operation and management of the health system and the quantization of health Information; precision/personalized Medicine; the cloud as an alternative to localized technologies; growing expectations of analytics and big data; the Internet of Things (IoT); deep learning and its implications in clinical decision support; the increasing overlap between Biomedical Engineering and Health Informatics related to devices and the data they produce (sensors and sensor networks in particular); consumer informatics; personal attitudes with their concomitant behaviors and their implications in our workforce; and many others.

Learning objectives
   Participants in this workshop will be able to:
1. Recognize the need for new competencies/capabilities and position themselves to focus their efforts on acquiring them
2. Develop a list of new inclusions in either their academic programs or their own personal 'bucket list' for learning
3. Participate in the identifying competencies/capabilities either not typically addressed in existing educational programs and/or that have become apparent during work experience
4. Define the need for team competencies (leadership, cohesion, alignment, effective interaction) and the distribution of individual competencies over teams

Key Audience
   We envision the participants in this workshop to be a mix of teachers, students, and working professionals.

Presenters
   H. Dominic Covvey, University of Waterloo, Canada
   Tom Rosenal, University of Calgary, Canada

Managing Public Access and Patient Privacy in Public Health Informatics

In 2015 at ITCH, we identified reasons that laws and regulations governing access to health information restrict access to public health information, and to emerging risks of breaching privacy. Suggestions for public sector privacy legislative changes were put forward by panel experts from Washington State and British Columbia. A publication of that session will be used as a handout to frame the issues for this workshop.

The workshop will progress in three parts:

1. Brief presentations, with ungraded self-assessment pre-test and post-test
    Overview summary of the situation in 2015; Overview summary of any progress since in North America or elsewhere; and, Description of the workshop activities
2. Scenario roll-play exercise
    Assignment to groups (some focusing on how to access the scenario databases, others focusing on how to limit access) and time for group-work; Presentation by each group of the approaches they decided upon; and, Response by workshop leaders, briefly commenting on how likely the suggested approaches would be to succeed and why
3. Political Reality
    Small group discussion of the approaches and responses from part 2 of the workshop relative to the concerns summarized in part 1; Report from each group on recommended strategies and tactics to offer the most viable path to improving current laws, regulations and practices; and, Consensus generating exercise with the entire audience to rank order the recommended strategies

Learning objectives
Participants will be able to:
1. Summarize major concerns in providing open access to public health information while complying with privacy laws in Canada and the US
2. Identify strategies used by public bodies to balance access and privacy rights in compliance with privacy legislation
3. Discuss which strategies are likely to be the most viable for promoting improvements including legislative reform

Key Audience
This workshop should be of interest to those who need access to health information databases (e.g. journalists, researchers) and those responsible for balancing freedom of information and patient privacy (e.g. clinical and public health professionals, informatics security professionals and health database product developers)

Presenters
David Birnbaum, University of British Columbia, Canada
Paulette Lacroix, PC Lacroix Consulting, Canada
TBA, BC Office of the Information & Privacy Commissioner, Canada
Kathryn Gretsinger , University of British Columbia Graduate School of Journalism, Canada

Medication-Related Alerting Systems: How to Apply Desirable Usability Design Principles?

Medication alerting systems are promising technologies but suffer from a poor usability. Defects in the design characteristics of those systems (e.g. issues in the types of information displayed, how they are displayed, when and to whom they are displayed) may question the expected usefulness of the technology and may even pose a risk to patient safety. Those defects are partly due to violation of usability design principles, i.e. usability flaws.

A recent research project intended to build a set of evidence-based usability design principles illustrated by actual instances of their violations and their consequences [1,2]. For this purpose, two independent analyses of the literature have been performed. On the one hand, usability flaws in medication alerting systems and their consequences for the clinicians, the work system, and the patient have been searched and organized; on the other hand, existing usability design principles specific to medication alerting systems have been searched and synthesized. Results of both analyses have been matched together to identify the existing evidence that non-applying usability design principles has negative consequences on the usage of alerting system and its impact.

This evidence-based knowledge will be turn into a tool to inform usability design decision. Yet, providing designers with textual descriptions of the desirable usability characteristics that alerting systems must meet may not be sufficient: the wording of the principles may lead to unforeseen misinterpretations or may not be understood. Therefore it is necessary to validate with experts in the field, the wording of the recommendations to ensure that they are unequivocal and understandable. Moreover, visual illustrations of the recommendations could be useful to help designers understand the recommendations.

The aim of this workshop is to validate the wording of the usability design principles for medication alerting systems, to improve it if needed, and to provide visual illustrations of the principles.

The workshop will start with the presentation of the process to built evidence-based usability design principles and of the main results (especially of the six meta-principles). Then, several working groups will be constituted. Each group will first work on the wording of the principles to ensure with the hosts of the workshops that they are clear and unambiguous enough. Then, they will be asked to produce visual illustrations of the applications of those principles. To support sketching the visual illustrations, use-case scenarios will be provided. In the last part of the workshop, working groups will be reunited and will present their proposals to the audience for discussion and enrichment.

References
[1] Marcilly R., Ammenwerth E., Vasseur F., Roehrer E., Beuscart-Zéphir M.-C. Usability flaws of medication-related alerting functions: a systematic review. J Biomed Inform 2015 Jun;55:260-71.
[2] Marcilly R., Ammenwerth E., Roehrer E., Pelayo S., Vasseur F, Beuscart-Zéphir MC. Usability Flaws in Medication Alerting Systems: Impact on Usage and Work System. Yearb Med Inform. 2015 Aug 13;10(1):55-67.

Presenters
Romaric Marcilly, Lille University, France
Sylvia Pelayo, Lille University, France
Jessica Schiro, Lille University, France

Hands-on with an Open Source EHR for Longitudinal Data

Electronic health records have the potential to provide a rich source of longitudinal data sets for use in clinical studies and trials. This workshop uses the cityEHR open source health records system to provide a hands-on insight into the issues of creating and manipulating longitudinal data sets.

Learning Objectives

Attendees will work with an installed cityEHR system to explore the practical challenges of creating, querying and extracting longitudinal data in the routine clinical record for use in secondary studies. They will:

1. Create their own EHR application in the cityEHR
2. Design the information model for a longitudinal data set
3. Create an example patient record, storing the longitudinal data
4. Use the example record to generate a larger set of test records
5. Query the longitudinal data to form patient cohorts, matching specified criteria
6. Export data for these cohorts, in formats suitable for secondary analysis or study

Prerequisites

Attendees must bring their own network-capable PC (ideally) or tablet. Information models will be created using standard spreadsheets, using any office application such as Open Office, Libre Office or proprietary MS Office. They can connect to the classroom server to create their own EHR instance, or install the cityEHR on their own PC (not suitable for tablets). They can use the information model of longitudinal data created as a demonstration by the instructor, or they can create a model of their own data set(s).

All software used in the workshop is open source and is available for download before or after the workshop, or can be taken away on a USB stick.

Presenters

John Chelsom, Seven Informatics Ltd., UK
Naveed Dogar, University of Oxford, UK

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PAHO/WHO e-Health Strategic Planning Toolkit and Latin America e-Health Initiatives

The goal of this workshop is to provide an overview major initiatives in Latin America, provide an overview of the Pan American Health Organization/World Health Organization (PAHO/WHO) national e-health strategic planning toolkit, challenges in implementation of e-health systems, overview of the PAHO e-health strategy for the Americas, and provide approaches for implementing programs using cooperative models.

Yuri Quintana, is focused on developing innovative technologies that empower communities of professionals and patients. He is Director for Global Health Informatics in the Division of Clinical Informatics, Beth Israel Deaconess Medical Center, and Assistant Professor in Medicine at Harvard

Medical School. He is developing global online collaboration networks for health care delivery and applications in mobile health. Previously, he was at St. Jude Children's Research Hospital, where he developed Cure4Kids, a pediatric cancer education and collaboration Website used by thousands of health professionals worldwide.

Quintana was a principal investigator in the Canadian HealNet Research Network, and also served as director of the New Media Research Lab developing innovations in interactive media and online education. He has held high-tech positions at IBM Canada Limited and Watcom. Quintana obtained his engineering degrees from the University of Waterloo in Electrical and Computer Engineering and Systems Design Engineering.

David Novillo, serves as Regional Advisor on Digital Health and Knowledge Management at the World Health Organization (WHO) in Washington, D.C. At WHO, he advises and builds capacity in more than 45 countries and territories in the Americas Region on matters related to eHealth (Health IT), such as telemedicine, mHealth, electronic health records, health information systems, standardization and interoperability, and more. He obtained his Ph.D. from the Carlos III University of Madrid (UC3M), and has participated in more than 100 activities in eHealth and knowledge management, including articles in scientific journals such as Health Affairs, Clinical Medicine, and British Medical Journal. He also completed a Certificate Program in Leadership Strategies for Information Technology in Health Care by University of Harvard T.H. Chan School of Public Health; received a Diploma in Health Promotion by the Public University of Navarre; earned the Special Award of the Masters on Research in Documentation by UC3M; and received his Bachelor's in Library and Information Science from UC3M. Prior to joining WHO, he served as Executive Advisor to the Minister of Health of Spain; he was responsible for the Knowledge Management Center at The High Commissioner for Support of Victims of Terrorism in the Presidency of Spain; and he worked as associate professor in the Department of Library and Information Science at UC3M

Learning Objectives
1. Present examples of e-health Initiatives and strategies in Latin America
2. Provide overview of the PAHO/WHO National e-health strategic planning toolkit
3. Discuss models of public-private cooperation for global health challenges
4. Discuss strategies for managing non-communicable diseases
5. Discuss human-centric approaches to healthcare services
6. Discuss ways for managing the risks and impact of current and future epidemics

Key Audience
Government healthcare leaders, hospital healthcare leaders, public health officials, private healthcare sectors, non-governmental organizations in health, and academic researchers.

Presenters
Yuri Quintana, Harvard University, USA
David Novillo, World Health Organization, USA

Workshops Abstracts: Thursday afternoon 1:00pm – 4:00pm

Workshop on Big Data Analytics Education

This workshop is aligned with the effort from the IEEE Big Data Initiative (BDI) on Big Data Education (see http://bigdata.ieee.org/). The main objective of the education track was to democratize access to practical knowledge and skills for working with big data.

Big Data is a collection of data so large, so complex, so distributed, and growing so fast (or 5Vs- volume, variety, velocity, veracity, and vinculation). It has been known for unlocking new sources of economic values, providing fresh insights into sciences, and assisting on policy making. The challenges of the Big Data Analytics (BDA) are that too often, researcher's choice of analytic approach is dictated and constrained by available resources because of a lack of knowledge and/or understanding of available computer hardware, software and methodologies; unware existed similar successful application cases; and unconscious of better analytic methods, tools and resources. In addition, the Big Data skilled people are highly demanded. According to the Burtch Works' 2014 "Salaries of Data Scientists" study reports, the median base salary for Big Data professionals is between $120,000 and $160,000. A Wall Street Journal article indicates that new career track pays up to $300,000 for data analysts able to analyze Big Data. Based on the evidences and predictions, Big Data education is critical.

The goal of this workshop is to gather researchers, practitioners and industries to discuss approaches and strategies for establishing capabilities to educate decision makers using (health) Big Data for decision making (e.g. government/company managers), researcher/data analyst practical skills for BDA (e.g. data integration, analytics tools, privacy protection etc.), and related educators knowledge for BDA (e.g. university/college professor, high school teachers).

International Renowned Speakers

We plan to invite 3 international renowned speakers to give presentations in the workshop:

1. Professor Fernando Martin-Sanchez from Weill Cornell Medicine, Johns Hopkins, USA (Big Data Coursework for Computational Medicine (BDC4CM)

2. Professor Fred Popowich from Simon Fraser University

3. Peter Madden, Client Executive - Public Sector & Research of IBM Canada Ltd.

Panel Discussion: Strategies and approaches in (Health) Big Data Education

The panel discussion is to determine short term & long term objectives; to propose strategies and approaches; and to address various issues in (health) Big Data education. The panel discussion will involve panelists from academic, governmental and industrial communities.

Presenters

Alex Mu-Hsing Kuo, University of Victoria, Canada.
Steven M Miller, Global Leader Academic Programs for IBM Analytics, USA

Capacity Building for Clinical Informatics: Learning from Island Health's Experience and Developing a 2020 Vision

To support the use and optimization of health information systems, there is a considerable need for Health Informatics (HI) professionals specialized in Clinical Informatics in Canada and across the globe. However, there is currently a high shortage of Clinical Informaticists (HI/HIM Report, 2014). To address this, there is a need "to broaden the skills of current clinical professionals to better support them in Clinical Informatics roles" (HI/HIM Report, 2014, p. 67). In 2014, five Canadian HI and health information management organizations identified that the upgrading of Clinical Informatics skills of clinical professionals is a priority for human resources planning until 2019 (HI/HIM Report). Although the development of Clinical Informatics skills is being introduced into clinical curricula/training, there "continues to be a significant gap in the availability of skill broadening resources for incumbent clinical professionals" (HI/HIM Report, 2014, p. 67). Capacity building in Clinical Informatics is central to addressing this gap to fully realize the quality, accessibility, and productivity benefits of health information systems. Capacity building or development is "the process by which individuals, organizations, institutions and societies develop abilities to perform functions, solve problems and set and achieve objectives" (United Nations, 2006, p. 7). Capacity building is addressed at three-interrelated levels: (1) individual, institutional, and societal. To build capacity for Clinical Informatics, there is a critical need to examine the individual and institutional/organizational levels to (a) build on the existing knowledge and skills of clinical professionals and (b) foster an environment of continuous learning and adapting to change for Clinical Informaticists.

In 2014, Island Health created the Department of Clinical Improvements and Informatics to support clinicians and physicians with providing clinical change management and supporting the integration of computing and biomedical technologies into practice to ensure system usability and adoption. The Clinical Improvements & Informatics team initially included six Clinical Informaticists and has since grown to a team of over 30 Nurse Informaticists, Allied Health Informaticists, and Clinical Informatics Specialists in 2016. This workshop will describe the past, present, and future work and plans for developing capacity for Clinical Informatics at Island Health. Through interactive presentations, small group discussions, and group activities, participants will gain hands-on experience and understanding of the barriers and facilitators to developing capacity for Clinical Informatics.

Learning Objectives
1. Develop a vision for capacity building for Clinical Informatics in their own organization(s) for 2020
2. Collaborate with peers to develop a global vision for capacity building for Clinical Informatics for 2020
3. Apply Island Health's successes and challenges to (a) build on the existing knowledge and skills of clinical professionals to develop Clinical Informaticists and (b) foster an environment of continuous learning and adapting to change for Clinical Informaticists in their own organization(s)
4. Share and learn from the experiences of peers to develop capacity for Clinical Informatics in their own organization(s)
5. Participate in a network/community of practice for building provincial, national, and international capacity for Clinical Informatics

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[1] Health Informatics/Health Information Management Report. (2014). Health Informatics and Health Information Management: Human Resources Outlook 2014-2019. Retrieved on September 22, 2016 from https://www.echima.ca/uploaded/pdf/reports/HI-HIM-HR-Outlook-Report-Final-w-design.pdf

[2] United Nations. (2006). Definition of Basic Concepts and Terminologies in Governance and Public Administration, Committee of Experts on Public Administration, Fifth Session, United Nations Economic and Social Council, New York, 27-31 March. Retrieved on September 22 from 2016.http://unpan1.un.org/intradoc/groups/public/documents/un/unpan022332.pdf

Presenters

Gloria Bouchard, Island Health Nanaimo, Canada
Gurprit Randhawa, Island Health Victoria, Canada

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Using Medical Informatics to Improve Clinical Trial Operations and Clinical Trials of Health Information Technologies: Integrating Usability and Workflow Analysis with Clinical Trials

The relation between work in usability and workflow analysis and clinical trials has remained to be explored. One area where the two can be integrated is in the analysis and improvement of software associated with clinical trials. Site-based costs account for 60-75% of the typical clinical trial's costs. This includes the work sites perform in the trial as well as work the coordinating center performs in managing sites. Half of site-based clinical trials costs may be amenable to novel information technology solutions. In addition, usability and workflow analyses are beginning to be integrated into larger studies of health information technology, where systems and innovations to be evaluated during randomized clinical trials first undergo a phased optimization process (applying usability and workflow analyses).

In the health informatics literature it has been noted that clinical trials of information technologies have resulted in conflicting results, where implementations of the same technology or system may have varying results in terms of success or failure, depending on the particular study site and differing optimization of technologies studies. The authors have been involved in developing a new model for technology evaluation that involves a phased optimization of systems or technologies to be implemented (using usability and workflow analyses) *prior* to being released for use and study in a controlled trial. The results if this approach are promising. In one study that will be described it was shown that conducting a phased approach applying usability and workflow analysis to prototype development of alerts embedded within a commercial electronic health record system resulted in high levels of user adoption once the optimized technology was released in a large-scale trial. Implications for conducting trials of related health information technologies (including electronic health records) will be explored.

There is increasing interest in the secondary use of existing health data to replace de novo data collection in clinical trials. However, the use of these data is associated with limitations in study design and data quality and may create new workflow and usability problems.

Learning Objectives

Workshop participants will gain a greater appreciation for:

1. problems confronting the clinical research enterprise
2. novel ways information technologies may be used to address these problems
3. the relation between usability and workflow analysis in trials of health information technologies
4. workflow and usability issues created by new information technologies

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[1] Kannry, J., McCullagh, L., Kushniruk, A., Mann, D., Edonyabo, D., McGinn, T. A framework for Usable and Effective Clinical Decision Support: Experience from the iCPR Randomized Clinical Trial
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4537146/

[2] Li, A. C., Kannry, J. L., Kushniruk, A., Chrimes, D., McGinn, T. G., Edonyabo, D., & Mann, D. M. (2012). Integrating usability testing and think-aloud protocol analysis with "near-live" clinical simulations in evaluating clinical decision support. *International journal of medical informatics*, *81*(11), 761-772.

Presenters

Eric Eisenstein, Duke University, USA

Elizabeth Borycki, University of Victoria, Canada

Andre Kushniruk, University of Victoria, Canada

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Usability Regulation for Medical Devices: Challenges for Patient Safety

A good innovation does not make a safe medical device (MD). There is a process that must be followed before the idea becomes a device in the hands of healthcare professionals or patients to ensure that it poses a risk that is as low as possible to those who use it and on whom it is to be used. Unfortunately, many examples of MDs' use errors have been reported that have led to patient harm or death. In these examples, usability flaws of the human-machine interface have often been identified, among others, as root causes of the errors.

In many countries health authorities require that manufacturers demonstrate their MDs' reliability and safety before they are authorized to put them on the market. For instance, in Europe, the European Commission reinforced the "ergonomic essential requirement" for CE marking: now, it is required that a safety oriented Usability Engineering Process (UEP) be integrated in the design and development lifecycle of MDs.

Yet, recent researches have shown that the various stakeholders (e.g. manufacturers, notified bodies) in Europe face difficulties in applying the UEP. Main issues include: (i) essential differences between the safety-oriented UEP required and the usual Human-Centered Design approach; (ii) necessity of a multidisciplinary expertise to implement the UEP; (iii) necessity of a minimum level of usability maturity from the manufacturers to implement properly the UEP; (iv) poor understandability of the harmonized standards that are supposed to guide manufacturers; and (v) methodological challenges to implement the final usability validation step.

Learning Objectives
1. Present the importance of the usability regulation for patient safety and elucidate the European regulatory demands
2. Make the audience discuss the various possible implementations of the UEP, the differences between the practices and the regulation in their own country compared to the European regulation and practices
3. Learn from the differences to improve the application of the usability regulations

The workshop will start with a presentation of common usability problems and how usability engineering can uncover and eliminate them and with a tutorial on how manufacturers can establish a UEP as required by the European regulation for certification. Then, several working groups will be constituted by nationality (as far as possible). Each group will first describe a UEP (proceedings, methods) as practiced by the participants (or that participants can imagine) and the usability regulation of the countries of the concerned participants. They will be then asked to work on the difficulties encountered (based on a case study). In the last part of the workshop, working groups will be reunited and will present their proposals to the audience for discussion and enrichment. Potential rooms for improving practices will be discussed and formalized during this last part with the entire audience.

Presenters
Sylvia Pelayo, Lille University, France
Jessica Schiro, Lille University, France
Romaric Marcilly, Lille University, France

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Novel Teaching Tools and Case Studies for Incorporation of Health Informatics into the Undergraduate Medical Education Curriculum

The introduction of information and communications technologies (ICT) across the world has changed the way we work, play and do business. Even countries that have lagged behind in adoption of health information technology, such as Canada and the United States, have now reached 70-80% adoption of electronic records by physicians. Although adoption rates are high, these technologies are not always used effectively to share and exchange information with other providers, share information with patients, manage patients with chronic disease or conduct quality improvement (Osborn et al., 2015). Use of ICT by patients including searching information on the Internet that may or may not be credible, use of health and wellness mobile apps and wearable devices to monitor health conditions and track behavior, and health-related social media bring multiple additional challenges.

Education is essential to better prepare our medical learners (students and residents) to practice in modern, technology-enabled, clinical environments. Yet, educational interventions that address the challenges are limited. In this workshop we will address the goals and challenges of designing and introducing eHealth topics into the undergraduate medical curriculum.

This workshop stems from the Physician in Training eHealth Curriculum & e-Learning project sponsored by the Association of Faculties of the Medicine of Canada (AFMC) in partnership with Canada Health Infoway (Infoway).

Phase 1 of the project created a peer-to-peer network that informed the creation of medical education resources, including: the eHealth Competencies for Undergraduate Medical Education and an environmental scan of eHealth in Canadian undergraduate medical curriculum.

Phase 2 focused on educating faculty and developing 'train the trainer' workshops. These workshops were delivered in Spring 2016. Webinar participants asked for more resources in French as well as English, particularly in the form of teaching tools, tips, case studies and clinical examples that can help bridge knowledge learned in the classroom setting with the realities of the clinical setting.

Phase 3 focused on developing the requested teaching tools (resources, case studies, and clinical examples) to be presented in this workshop.

Workshop Overview

We will present the learning materials developed in response to the needs identified in Phases 1 and 2. Working with a generic clinical case, participants will be taken through the process of case development and shown how this case can be introduced at the beginner level, intermediate and advanced learner levels. Within the workshop we will demonstrate the completed case and then with input from attendees work through the development of a second case, in particularly asking them for input into moving from simple principles into more complex learning outcomes and competencies for advanced learners and practicing clinicians. Examples from attendees' own institutions and ideas for further incorporation and integration into the medical curriculum will be solicited.

Presenters

Candace J Gibson, Western University, Canada
Aviv Shachak, University of Toronto, Canada
Reza Mirza, McMaster University, Canada

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Working with SNOMED CT as Reusable Clinical Content

Note: This workshop only will be held at the University of Victoria, HSD A150 from 1:30 – 4:30

The uptake of SNOMED CT by health care organizations in Canada has been slow due to the lack of business cases, methods/tools and human capacities to justify, create, and maintain the terminology as reusable clinical content. In this workshop, we will draw on the methods/tools, results and lessons of an ongoing SNOMED CT adoption project in a Canadian Province to show how it can be achieved.

Learning Objectives

Specifically, participants will learn to:

1. Apply business case analysis to justify the value of adopting SNOMED CT in the organization
2. Use a Web-based terminology toolkit and a clinical dataset to work with SNOMED CT as reusable content
3. Assess, create and maintain SNOMED CT maps, expressions, extensions, subsets and queries
4. Implement SNOMED CT in electronic medical records (EMRs)

Key Audience

This workshop is aimed at clinicians, analysts and managers who wish to acquire hands-on knowledge working with SNOMED CT as reusable clinical content in their organization. Clinicians will learn to leverage their expertise to create and assess SNOMED CT content that is relevant to their clinical practice. Analysts will learn the methods/tools used to create and maintain reusable SNOMED CT content. Managers will learn the strategy, infrastructures, tools and resources needed to adopt SNOMED CT in their organization.

Note: Participants will need to bring their own laptop computers with wireless access to the workshop.

Presenters

Robyn Kuropatwa, RKL Consulting Ltd., Canada
Dennis Lee, RKL Consulting Ltd., Canada
Ronald Cornet, University of Amsterdam, The Netherlands

Final Program Schedule

THURSDAY, FEBRUARY 16, 2017

8:30 am	**Registration for workshops**	Marble Lobby
9:00	**Concurrent workshops**	

The Expanding Universe of Health Informatics – The Evolving Competency Gap — Spirit A

    H. Dominic Covvey, National Institutes of Health Informatics, Canada
    Tom Rosenal, University of Calgary, Canada

Managing Public Access and Patient Privacy in Public Health Informatics — Spirit B

    David Birnbaum, University of British Columbia, Canada
    Paulette Lacroix, PC Lacroix Consulting, Canada
    TBA, BC Office of the Information & Privacy Commissioner, Canada
    Kathryn Gretsinger , University of British Columbia Graduate School of Journalism, Canada

Medication-Related Alerting Systems: How to Apply Desirable Usability Design Principles? — Spirit C

    Romaric Marcilly, Lille University, France
    Sylvia Pelayo, Lille University, France
    Jessica Schiro, Lille University, France

Hands-on with an Open Source EHR for Longitudinal Data — Spirit D

    John Chelsom, Seven Informatics Ltd., UK
    Naveed Dogar, University of Oxford, UK

PAHO/WHO e-Health Strategic Planning Toolkit and Latin America e-Health Initiatives — Merino 1 & 2

    Yuri Quintana, Harvard University, USA
    David Novillo, World Health Organization, USA

10:30 – 10:45	Break	Marble Lobby
10:45	**Workshops cont'd**	
12:00 – 1:00	Lunch Buffet	Terrace Room

THURSDAY, FEBRUARY 16, 2017

1:00 pm   **Concurrent workshops**

Big Data Analytics Education   Spirit A

    Alex Mu-Hsing Kuo, University of Victoria, Canada
    Steven M Miller, Academic Programs for IBM Analytics, USA
    Fernando Martin-Sanchez, Cornell University, USA
    Fred Popowich, Simon Fraser University, Canada
    Peter Madden, IBM Canada Ltd.

Capacity Building for Clinical Informatics: Learning from Island Health's   Spirit B
Experience and Developing a 2020 Vision

    Gloria Bouchard, Island Health Nanaimo, Canada
    Gurprit Randhawa, Island Health Victoria, Canada

Using Medical Informatics to Improve Clinical Trial Operations and Clinical   Spirit C
Trials of Health Information   Technologies: Integrating Usability and
Workflow Analysis with Clinical Trials

    Eric Eisenstein, Duke University, USA
    Elizabeth Borycki, University of Victoria, Canada
    Andre Kushniruk, University of Victoria, Canada

Usability Regulation for Medical Devices: Challenges for Patient Safety   Spirit D

    Sylvia Pelayo, Lille University, France
    Jessica Schiro, Lille University, France
    Romaric Marcilly, Lille University, France

Novel Teaching Tools and Case Studies for Incorporation of Health   Merino 1 & 2
Informatics into the Undergraduate Medical Education Curriculum

    Candace J Gibson, Western University, Canada
    Aviv Shachak, University of Toronto, Canada
    Reza Mirza, McMaster University, Canada

Working with SNOMED CT as Reusable Clinical Content
Note: This workshop only will be held at the University of Victoria, HSD A150 from 1:30 – 4:30
    Robyn Kuropatwa, RKL Consulting Ltd., Canada
    Dennis Lee, RKL Consulting Ltd., Canada
    Ronald Cornet, University of Amsterdam, The Netherlands

2:30 – 2:45	*Break*	Marble Lobby

2:45   **Workshops cont'd**

Judging of the student poster contest. Closed to public and registrants   Terrace Room

5:00 – 7:00	Registration and Opening Reception	Marble Lobby/ Terrace Room

FRIDAY, FEBRUARY 17, 2017

8:00 am	**Registration**	Marble Lobby
8:30	Introduction of keynote speaker	Spirit Rooms
8:45	**JAMES COWARD KEYNOTE LECTURE**	Spirit Rooms

Christoph Lehmann, MD, FAAP, FACMI
Vanderbilt University

"Pediatrics Medication Safety Through EHRs"

9:45 – 10:15	Break	Marble Lobby
10:15 – 12:15	**Concurrent paper presentations**	

Electronic Health Records	*"IT for Bending the Healthcare Cost Curve: The High Needs, High Cost Approach"* Douglas Morrison, University of Waterloo, Canada	Spirit A/B
	"An Enterprise Architecture Perspective to Electronic Health Record Care Governance" Bogdan Motoc, Allied Bionics Inc., Canada	
	"Adoption of Electronic Health Record System in Community-based Physiotherapy cCinics: A Pilot Case Study" Alan Yung, Synthese Pty. Ltd., Australia	
	"The Need for Electronic Health Records in Long-term Care" *Sukirtha Tharmalingam, Canada Health Infoway, Canada*	
Usability	*"Low-Cost Rapid Usability Testing: Its Application in both Product Development and System Implementation"* Andre Kushniruk, University of Victoria, Canada	Spirit C/D
	"Separate or Together? Identifying Handover Data Elements for Teams by Service and Profession" Jordan Andersen, The Ottawa Hospital, Canada	
	AIM - Agile Instrumented Monitoring for Improving User Experience of Participation in HealthIT Development" Janne Pitkänen, Aalto University, Finland	
	"End-Users' Voice in EHR Selection: Development of a Usability Questionnaire for Demonstrations in Procurement (DPUQ)" Johanna Kaipio, Aalto University, Finland	

Friday, February 17, 2017 Concurrent paper presentations cont'd
10:15 – 12:15

Human Computer Interaction	*"Interface Usability Across and Within EHR Vendors and Medical Settings: The Often Unexamined Need for Interface Similarities"* Ross Koppel, University of Pennsylvania, USA	Harbour Room
	"Usability and eHealth Literacy Evaluation of a Mobile Health Application Prototype to Track Diagnostic Imaging Examinations" Janessa Griffith, University of Toronto, Canada	
	"Isolating the Effects of a Mobile Phone on the Usability and Safety of eHealth Software Applications" Elizabeth Borycki, University of Victoria, Canada	
	"Designing Novel Health ICTs to Support Work, Not Generate It: Five Principles" David Peddie, Simon Fraser University, Canada	

12:15 – 1:15	Lunch Buffet	Terrace Room

1:15 – 2:45	**Concurrent paper presentations**	
Patient Centred	*"Patient-Centred Design of Healthcare Services: Meaningful Events as Basis for Patient Experiences of Families"* Johanna Kaipio, Aalto University, Finland	Spirit A/B
	"Translating Behavior Change Techniques to New Delivery Mediums" Marcy Antonio, University of Victoria, Canada	
	"Diabetes mHealth Apps: Designing for Greater Uptake" Karim Keshavjee, InfoClin Inc., Canada	
Socio-Technical	*"Complex Clinical Communication Practices: How Do Information Receivers Assimilate and Act Upon Information for Patient Care?"* Paul Turner, University of Tasmania, Australia	Spirit C/D
	"The Evolving Role of Medical Scribe: Variation and Implications for Organizational Effectiveness and Safety" Deborah Woodcock, Oregon Health & Science University, USA	
	"Collaborators and Communication Channels in Eight Patient-centered Medical Homes" Dian Chase, Oregon Health & Science University, USA	

Friday, February 17, 2017 Concurrent paper presentations cont'd
1:15 – 2:45

Standards, Terminologies and Ontologies	*"Integration of Health Information Systems Using HL7 - A Case Study"* Alex Kuo, University of Victoria, Canada	Harbour Room
	"Towards Data Value-level Metadata for Clinical Studies" Meredith Zozus, UAMS College of Medicine, USA	
	"Infrastructure and Capacity Building for Semantic Interoperability in Healthcare in the Netherlands" Ronald Cornet, University of Amsterdam, The Netherlands	

2:45 – 3:00	*Break*	Marble Lobby

3:00 – 5:00	***Concurrent paper presentations***	
Mobile Technologies and Telehealth	*"InfoSAGE: Use of Online Technologies for Communication and Elder Care"* Yuri Quintana, Harvard University, USA	Spirit A/B
	"How to Evaluate Mobile Health Applications: A Scoping Review" Pasquale Fiore, British Columbia Institute of Technology (BCIT), Canada	
	"Pokémon Go: Ubiquitous Computing Delivering Better Health or Co-incidental Health Benefits from Technology Use? A Participatory Observational Study" Paul Turner, University of Tasmania, Australia	
	"Thought Spot: Co-creating Mental Health Solutions with Post-secondary Students" David Wiljer, University Health Network, Canada	
	"Building Research Capacity: Results of a Feasibility Study using a Novel mHealth Epidemiological Data Collection System within a Gestational Diabetes Population" Allen McLean, University of Saskatchewan, Canada	

Friday, February 17 2017 concurrent paper presentations cont'd
3:00 – 5:00

Consumer Informatics	*"Consumer Medication Information: Similarities and Differences Between Three Canadian Pharmacies"* Helen Monkman, University of Victoria, Canada	Spirit C/D
	"Enabling Adolescent Electronic Access to Personal Health Information" Cassandra Frazer, Canada Health Infoway, Canada	
	"An Engagement Model for Medication Management: From Prescription to Description and Conscription" Simon Diemert, University of Victoria, Canada	
	"Design and Development of a Web-based Self-monitoring System to Support Wellness Coaching" Reza Zarei, University of Victoria, Canada	
System Safety and Quality Assurance	*"Towards a Framework for Managing Risk Associated with Technology-induced Error"* Elizabeth Borycki, University of Victoria, Canada	Harbour Room
	"Community Paramedicine Initiative: Transforming Paramedicine In BC" Colton Calderone, TELUS Health, Canada	
	"Your Health Care May Kill You: Medical Errors" Kathleen Abrahamson, Purdue University, USA	
	"Designing a Surveillance System in Canada to Detect Adverse Interactions Between Traditional Chinese Medicine and Western Medicine: Issues and Considerations" Jingfei Zhang, University of British Columbia, Canada	
	"Technology-Induced Errors and Adverse Event Reporting in an Organizational Learning Perspective" Line Vinther, Aalborg University, Denmark	

6:30	Cash Bar	Terrace Room
7:00	West Coast Gala Dinner	Terrace Room

SATURDAY, FEBRUARY 18, 2017

8:00 am	**Registration**	Marble Lobby
8:30	Introduction of keynote speaker	Spirit Rooms
8:45	**STEVEN HUESING KEYNOTE LECTURE**	Spirit Rooms

Elaine Huesing, BCom, CMA
International Medical Informatics Association (IMIA)

"Collaboration"

9:45	Break	Marble Lobby

10:15 – 12:15 Concurrent paper presentations

Personal Health Records and Patient Portals	*"Use and Maturity of Electronic Patient Portals"* Simon Hagens, Canada Health Infoway, Canada	Spirit A/B
	"The role of Personal Health Record Systems in Chronic Disease Management" Reshma Prashad, York University, Canada	
	"Designing Personal Health Record Technology for Shared Decision Making" Selena Davis, University of Victoria, Canada	
	"Deriving a Set of Privacy Specific Heuristics for the Assessment of PHRs (Personal Health Records)" Riccardo Furano, University of Victoria, Canada	
Clinical Decision Support Systems	*"Randomized Trial of Population-Based Clinical Decision Support to Facilitate Care Transitions"* Eric Eisenstein, Duke University, USA	Spirit C/D
	"What We Can Learn from Amazon for CDSS" Karim Keshavjee, InfoClin Inc., Canada	
	"A Survey of Standard Information Models for Clinical Decision Support Systems" Ali Mussavi, University of Victoria, Canada	
	"Evaluation of Electronic Prescribing Decision Support System at a Tertiary Care Paediatrics Hospital: The User Acceptance Perspective" Abdurahman Omar, Ambo University, Ethiopia	

Saturday, February 18, 2017 concurrent paper presentations cont'd
10:15 – 12:15

Electronic Health Records	*"The Use of Case Studies in Systems Implementations within Health Care Settings: A Scoping Review"* Elizabeth Borycki, University of Victoria, Canada	Harbour Room
	"The Connecting South West Ontario (cSWO) Benefits Model: An Approach for the Collaborative Capture of Value of Electronic Health Records and Enabling Technology" Ted Alexander, London Health Sciences Centre, Canada	
	"Considering the Language of Computerized Order Entry Systems" Simon Diemert, University of Victoria, Canada	
	"A Conceptual Model for Increasing Use of Electronic Medical Records by Primary Care Physicians through End-User Support" Gurprit Randhawa, Island Health, Canada	

12:15 – 1:15	Lunch Buffet	Terrace Room

1:15 – 2:45	**Concurrent paper presentations**	
Healthcare Modeling and Simulation	*"National Monitoring and Evaluation of Health IT: Protocol for a Scoping Review"* Christian Nohr, Aalborg University, Denmark	Spirit A/B
	"Clinical Simulation: Evaluating the Usability of a Health Information System in a Telenurse Call Centre" Danica Tuden, University of Victoria, Canada	
	"Developing Effective Case Scenarios for Interprofessional Electronic Health Record Research" Kristie McDonald, University of Victoria, Canada	
USABILITY	*"How to Reach Evidence-based Usability Evaluation Methods?"* Romaric Marcilly, Lille Academic Hospital, France	Spirit C/D
	"Naturalistic Usability Testing of Inpatient Medication Reconciliation Software" Blake Lesselroth, VA Portland Healthcare System, USA	
	"Multi-EMR Structured Data Entry Form: User-Acceptance Testing of a Prototype" Karim Keshavjee, InfoClin Inc., Canada	

Saturday, February 18, 2017 concurrent paper presentations cont'd
1:15 – 2:45

Standards, Terminologies and Ontologies	*"Storing and Querying Longitudinal Data Sets in an Open Source EHR"* John Chelsom, Seven Informatics Ltd., UK *"Mapping Local Codes to Read Codes"* Wilfred Bonney, University of Dundee, UK *"Information Exchange Between Providers During Transitions of Surgical Care: Communication, Documentation and Sometimes Both"* Stacey Slager, University of Utah, USA	Harbour Room
2:45 – 3:00	Break	Marble Lobby
3:00 – 5:00	**Concurrent paper presentations**	
E-learning, Education and Training	"Mobile Audience Response Systems at a Continuing Medical Education Conference" Alexandra Beaumont, University of Manitoba, Canada *"Expanding the Reach of Continuing Educational Offerings through a Web-based Virtual Network: The Experience of InspireNet"* Noreen Frisch, University of Victoria, Canada *"Baccalaureate Nursing Student's Abilities in Critically Identifying and Evaluate the Quality of Online Health Information"* Magdalena Theron, Trinity Western University, Canada *"All Consumer Medication Information Is Not Created Equal: Implications for Medication Safety"* Helen Monkman, University of Victoria, Canada *"Adding Live-Streaming to Recorded Lectures in a Non-Distributed Pre-Clerkship Medical Education Model"* Adrian Gooi, University of Manitoba, Canada	Spirit A/B

Saturday, February 18, 2017 concurrent paper presentations cont'd
3:00 – 5:00

Evaluation Studies	*"Model-driven Paediatric Cardiomyopathy Pathways – A Clinical Impact Assessment"* Karl Stroetmann, empirica Communication & Technology Research, Germany	Spirit C/D
	"Using Medical Informatics to Improve Clinical Trial Operations" Eric Eisenstein, Duke University, USA	
	"Critical Success Factors and Engagement Methodology for Successful Project Delivery" Darryl Tourond, TELUS Health, Canada	
	"Novel Approaches to Digital Health Evaluation Capacity Building" Simon Hagens, Canada Health Infoway, Canada	
	"Expert Medical Decision-Making: How the Data-Frame Theory Can Explain Physician Sense-Making" Darren Hudson, University of Alberta, Canada	
System Safety and Quality Assurance	*"Usability Validation of Medical Devices: Issues in Identifying Potential Use Errors"* Jessica Schiro, Lille University, France	Harbour Room
	"The Impact of Computerized Provider Order Entry (CPOE) on Nursing Practice" Elizabeth Borycki, University of Victoria, Canada	
	"Better Data Quality for Better Healthcare Research Results - A Case Study" Robert Hart, University of Victoria, Canada	
	"The Cost of Quality in Diabetes" Karim Keshavjee, InfoClin Inc., Canada	

7:00 – 10:00	**ITCH 2017 Bateman Centre Reception** Tickets ($20 each) are available for purchase at the conference registration desk.

SUNDAY, FEBRUARY 19, 2017

8:00 am	Registration	Marble Lobby
8:30	Introduction of keynote speaker by Mark Brisson, Assistant Deputy Minister, Alberta Health	Spirit Rooms
8:45	**DENIS PROTTI KEYNOTE LECTURE**	Spirit Rooms

Fernando Martin-Sanchez PhD, FACMI, FACHI
Cornell University

"Exploring New Challenges for Health Informatics Research and Education in the Context of Precision Medicine"

9:45 – 10:15	Break	Marble Lobby

10:15 – 11:15	**Concurrent paper presentations**	
Consumer Informatics	*"Nursing Students' Perceived Learning from a Digital Health Assignment as Part of the Nursing Care for the Childbearing Family Course"* Magdalena Theron, Trinity Western University, Canada *"Digital Health Services and Digital Identity in Alberta"* Aiden McEachern, Government of Alberta, Canada	Spirit C/D
Patient Centred	*"A Student-Centered Mental Health Virtual Community Needs and Features: A Focus Group Study"* Christo El Morr, York University, Canada *"Selfies of Sickness: The Use of Video Diaries with Chronically Ill Children"* Mika P. Nieminen, Aalto University, Finland	Harbour Room
11:15 – 12:30	**Panel**	Spirit A/B

"International Trends/Directions in Electronic Health Record Systems: Where are We Headed?"

Moderator: Dr. Andre Kushniruk

Dr. Karim Keshavjee.
Dr. John Chelsom
Dr. Johanna Kaipio
Dr. Jonathan Nebeker

12:30	**Closing Remarks**	Spirit A/B

Thank you for attending ITCH 2017!

Visitor Information

Tourism Victoria suggests the following classic Victoria attractions within walking distance:

Royal BC Museum

675 Belleville Street

See all of British Columbia at the Royal BC Museum, a world-class museum of natural and human history. Explore our permanent galleries and immerse yourself in tales of where we've been and where we are going. Discover things and people you never knew before at what TripAdvisor users have twice voted number one in the Top 10 Museums in Canada. Experience authentic artifacts and highly realistic settings -- from the Woolly Mammoth in his rocky, icy world to a tar-scented trip on the HMS Discovery. Stroll through Old Town's wood-cobbled street and enjoy its shops, cinema and railway station. Visit royalbcmuseum.bc.ca for a current exhibition schedule.

Fisherman's Wharf

1 Dallas Road

Just around the corner from Victoria's Inner Harbour, Fisherman's Wharf is a hidden treasure waiting to be discovered. This unique marine destination offers food kiosks, unique shops and eco-tour adventures in a working harbour setting. Wander down to the docks and check out the unique array of commercial, pleasure vessel, and float home moorage. Watch the commercial fishing vessels unload their wares and view wild seals.

Beacon Hill Park

Just walk up Belleville Street past the Museum of Natural History and the Imax Theatre to Douglas Street. Take a right on Douglas Street. You'll climb a short hill and at the top of that hill is the beginning of Beacon Hill Park.

Beacon Hill Park is one of downtown Victoria's crown jewels. The 200 acres was officially established as a park in 1882, after being set aside in 1858 by James Douglas, governor of Vancouver Island. Beacon Hill Park was named after a pair of masts strategically placed on a hill to act as a beacon and navigational aid to mariners approaching Victoria's inner harbour.

The park is beautifully landscaped and manicured with bridges, lakes and ponds, and an alpine and rock garden. It is home to numerous species of ducks, birds and wildlife. A pair of Bald Eagles nests in one of the huge trees and regularly cause havoc for the large family of Great Blue Herons that also nest in a copse of Douglas-fir trees at the west end of the park.

The park boasts wondrous displays of exotic and native trees, including Garry Oak, Arbutus, Douglas-fir, Western Red Cedar, birch, willow and maples - to name just a few.

END