Contents

Editorial

Charles Safran, Shane Reti and Heimar Marin

Preface from the Scientific Program Co-Chairs

Riccardo Bellazzi and Johanna Westbrook

Message from the IMIA President

Reinhold Haux

Scientific Program Committee

Part I

Chapter 1. Informatics for the Person

The Role of Patients in Transiting Personal Health Information: A Field Study

Yunan Chen

Need for a New Care Model – Getting to Grips with Collaborative Home Care

Monica Winge, Lars-Åke Johansson, Monica Nyström, Eva Lindh-Waterworth and Benkt Wangler

Barriers and Facilitators that Affect Public Engagement with eHealth Services

Nicholas R. Hardiker and Maria J. Grant

Barriers of Obtaining Health Information Among Diabetes Patients

James Milewski and Yunan Chen

Pathways Home: Comparing Voluntary IT and Non-IT Users Participating in a Mentored Self-Management Project

Elizabeth Cummings, Andrew Robinson, Helen Courtney Pratt, Helen Cameron-Tucker, Richard Wood-Baker, E. Haydn Walters and Paul Turner

Usage and Effect of a Web-Based Intervention for the Prevention of Overweight; A RCT

Saskia M. Kelders, Julia E.W.C. van Gemert-Pijnen, Andrea Werkman and Erwin R. Seydel

The Influence of Crowds on Consumer Health Decisions: An Online Prospective Study

Annie Y.S. Lau, Trevor M.Y. Kwok and Enrico Coiera

Patient Web Empowerment Index (PWEI): An Index for Assessment of Healthcare Providers’ Web Strategies. Case Study: PWEI Application in Italy

Luca Buccoliero, Elena Bellio and Anna Prenestini

Development and Implementation of an Integrated EHR for Homecare Service: A South American Experience

Jerónimo Aguilera Díaz, Antonio Eduardo Arias, Cintia Mabel Budalich, Sonia Elizabeth Benitez, Gastón López Damián Borbolla, Fernando Plazzotta, Daniel Luna and Fernán González Bernaldo de Quirós

A Home-Centered ICT Architecture for Health-Enabling Technologies

Bianying Song, Michael Marschollek, Klaus-Hendrik Wolf, Matthias Gietzelt, Thomas Franken and Reinhold Haux

Information Needs in Home Based Healthcare in South Africa

Retha de la Harpe, Jay Barnes and Mikko Korpela
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration of Cognitive and Physical Training in a Smart Home Environment for the Elderly People</td>
<td>58</td>
</tr>
<tr>
<td>Evdokimos I. Konstantinidis, Antonis Billis, Walter Hlauschek, Paul Panek and Panagiotis D. Bamidis</td>
<td></td>
</tr>
<tr>
<td>A Configurable Home Care Platform for Monitoring Patients with Reminder Messaging and Compliance Tracking Services</td>
<td>63</td>
</tr>
<tr>
<td>Davide Capozzi and Giordano Lanzola</td>
<td></td>
</tr>
<tr>
<td>Daily Activities and Fall Risk – A Follow-Up Study to Identify Relevant Activities for Sensor-Based Fall Risk Assessment</td>
<td>68</td>
</tr>
<tr>
<td>Michael Marschollek, Anja Rehwald, Matthias Gietzelt, Bianiying Song, Klaus-Hendrik Wolf and Reinhold Haux</td>
<td></td>
</tr>
<tr>
<td>Can Multilingual Machine Translation Help Make Medical Record Content More Comprehensible to Patients?</td>
<td>73</td>
</tr>
<tr>
<td>Qing Zeng-Treitleer, Hyeonju Kim, Graciela Rosemblat and Alla Keselman</td>
<td></td>
</tr>
<tr>
<td>Chapter 2, Electronic Health Records</td>
<td></td>
</tr>
<tr>
<td>Measurement of the Utilization of an Installed Electronic Health Record</td>
<td>81</td>
</tr>
<tr>
<td>Prashila Dullabh, Adil Moiduddin and Elizabeth Bahalola</td>
<td></td>
</tr>
<tr>
<td>Measuring Use of Electronic Health Record Functionality Using System Audit Information</td>
<td>86</td>
</tr>
<tr>
<td>Watson A. Bowes III</td>
<td></td>
</tr>
<tr>
<td>A Scheme for Assuring Lifelong Readability in Computer Based Medical Records</td>
<td>91</td>
</tr>
<tr>
<td>Yasushi Matsumura, Noriyuki Kurahayashi, Tetsuya Iwasaki, Shiichii Sugaya, Kanayo Ueda, Takahiro Mineno and Hiroshi Takeda</td>
<td></td>
</tr>
<tr>
<td>Experience Implementing a Point-of-Care Electronic Medical Record System for Primary Care in Malawi</td>
<td>96</td>
</tr>
<tr>
<td>Evan Waters, Jeff Rafter, Gerald P. Douglas, Mwatha Bwanali, Darlus Jazayeri and Hamish S.F. Fraser</td>
<td></td>
</tr>
<tr>
<td>Touchscreen Task Efficiency and Learnability in an Electronic Medical Record at the Point-of-Care</td>
<td>101</td>
</tr>
<tr>
<td>Zach Landis Lewis, Gerald P. Douglas, Valerie Monaco and Rebecca S. Crowley</td>
<td></td>
</tr>
<tr>
<td>Process-Aware EHR BPM Systems: Two Prototypes and a Conceptual Framework</td>
<td>106</td>
</tr>
<tr>
<td>Charles Webster and Mark Copenhaver</td>
<td></td>
</tr>
<tr>
<td>Understanding Resistance Towards Electronic Patient Health Data in South Australian Family Practice</td>
<td>111</td>
</tr>
<tr>
<td>John Knight, Margaret Patrickson and Bruce Gurd</td>
<td></td>
</tr>
<tr>
<td>Usefulness of the Functionalities of an Electronic Medical Record on a Latinamerican Medical Web Portal</td>
<td>116</td>
</tr>
<tr>
<td>Daniel Flichtentrei, Florencina Braga, Dario Garcia, Jorge Janscheck, Carlos Otero, Martin Waldhorn, Daniel Luna and Fernando Gonzalez Bernaldo de Quiros</td>
<td></td>
</tr>
<tr>
<td>How Are Clinicians Involved in EHR Planning? A Process Analysis Case Study of a Region in Denmark</td>
<td>121</td>
</tr>
<tr>
<td>Anna Marie Haestgaard, Pernille Bertelsen and Christian Nehr</td>
<td></td>
</tr>
<tr>
<td>Integration of Healthcare Information: From Enterprise PACS to Patient Centered Multimedia Health Record</td>
<td>126</td>
</tr>
<tr>
<td>Enrique Soriano, Fernando Plazotta, Fernando Campos, Diego Kaminker, Alfredo Cancio, Jeronimo Aguilera Díaz, Daniel Luna, Alberto Seehaus, Ricardo García Mónaco and Fernán González Bernaldo de Quiros</td>
<td></td>
</tr>
<tr>
<td>The Avoidable Misfortune of a Computerized Patient Chart</td>
<td>131</td>
</tr>
<tr>
<td>Inger Dybdahl Sarby, Gry Seland and Øystein Nytra</td>
<td></td>
</tr>
<tr>
<td>A Usability Study of Patient-Friendly Terminology in an EMR System</td>
<td>136</td>
</tr>
<tr>
<td>Yi Hong, Kevin Ehlers, Rick Gillis, Timothy Patrick and Jin Zhang</td>
<td></td>
</tr>
<tr>
<td>A Conceptual Framework for Analyzing How Canadian Physicians Are Using Electronic Medical Records in Clinical Care</td>
<td>141</td>
</tr>
<tr>
<td>Grace Paterson, Nicola Shaw, Andrew Grant, Kevin Leonard, Elisabeth Detisle, Shelby Mitchell, Maryan McCrarry, Bill Pascal and Nancy Kraetschmer</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Towards Automating the Initial Screening Phase of a Systematic Review</td>
<td>146</td>
</tr>
<tr>
<td>Tanja Bekhuis and Dina Demner-Fushman</td>
<td></td>
</tr>
<tr>
<td>Balancing Centralised and Decentralised EHR Approaches to Manage Standardisation</td>
<td>151</td>
</tr>
<tr>
<td>Kirstine Hjøve Rosenbeck, Anne Randorff Rasmussen, Pia Britt Elberg and Stig Kjær Andersen</td>
<td></td>
</tr>
<tr>
<td>Towards Iconic Language for Patient Records, Drug Monographs, Guidelines and Medical Search Engines</td>
<td>156</td>
</tr>
<tr>
<td>Jean-Baptiste Lamy, Catherine Duclos, Salima Hamek, Marie-Catherine Beuscart-Zéphir, Gaetan Kerdelhué, Stefan Darmont, Madeleine Favre, Hector Falcoff, Christian Simon, Suzanne Pereira, Elisabeth Serrot, Thierry Mitouxard, Etienne Hardouin, Yannick Kergosien and Alain Venot</td>
<td></td>
</tr>
<tr>
<td>Building a Logical EHR Architecture Based on ISO 13606 Standard and Semantic Web Technologies</td>
<td>161</td>
</tr>
<tr>
<td>Marcelo R. Santos, Marcello P. Box and Dipak Kalra</td>
<td></td>
</tr>
<tr>
<td>Chapter 3. Clinical Information Systems</td>
<td></td>
</tr>
<tr>
<td>Case Study: Analysis of End-User Requests on Electronic Medical Record and Computerized Physician Order Entry System of Seoul National University Hospital in Korea</td>
<td>169</td>
</tr>
<tr>
<td>Young-Ah Kim, Soo-Yong Shin, Eun-Mi Jo, Chan-Hee Park, Min-A. Hwang, Kyung Hwan Kim and Chun Kee Chung</td>
<td></td>
</tr>
<tr>
<td>Does CPOE Actually Disrupt Physicians-Nurses Communications?</td>
<td>173</td>
</tr>
<tr>
<td>Sylvia Pelayo, Françoise Auceaux, Janine Rogalski and Marie-Catherine Beuscart-Zéphir</td>
<td></td>
</tr>
<tr>
<td>Discuss Now, Document Later: CIS/CPOE Perceived to Be a 'Shift Behind' in the ICU</td>
<td>178</td>
</tr>
<tr>
<td>Sarah Collins, Suzanne Bakken, David Vowdrey, Enrico Coiera and Leanne M. Currie</td>
<td></td>
</tr>
<tr>
<td>Method for Testing a CPOE System in the Medication Process in a Cardiology Ward</td>
<td>183</td>
</tr>
<tr>
<td>Christian Nohr, Marianne Sorensen and Andre Kushmiruk</td>
<td></td>
</tr>
<tr>
<td>Steps Towards Single Source – Collecting Data About Quality of Life Within Clinical Information Systems</td>
<td>188</td>
</tr>
<tr>
<td>Fleur Fritz, Sonja Ständer, Bernhard Breil and Martin Dugas</td>
<td></td>
</tr>
<tr>
<td>Methodology of Integration of a Clinical Data Warehouse with a Clinical Information System: The HEGP Case</td>
<td>193</td>
</tr>
<tr>
<td>Eric Zapletal, Nicolas Rodon, Natalia Grabar and Patrice Degoulet</td>
<td></td>
</tr>
<tr>
<td>TEDIS: An Information System Dedicated to Patients with Pervasive Developmental Disorders</td>
<td>198</td>
</tr>
<tr>
<td>Mohamed Ben Saida, Laurence Robel, Erwan Vion, Bernard Golse, Jean Philippe Jais and Paul Landais</td>
<td></td>
</tr>
<tr>
<td>Developing a User-Centered Voluntary Medical Incident Reporting System</td>
<td>203</td>
</tr>
<tr>
<td>Lei Hua and Yang Gong</td>
<td></td>
</tr>
<tr>
<td>CEDRIC: A Computerized Chronic Disease Management System for Urban, Safety Net Clinics</td>
<td>208</td>
</tr>
<tr>
<td>Omolola Ogunyemi, Sukrit Mukherjee, Chitzobam Ani, David Hindman, Sheba George, Ramarao Ilapakurthi, Mary Verma and Melvin Dayrit</td>
<td></td>
</tr>
<tr>
<td>Determinants of Clinical Information System Post-Adoption Success</td>
<td>213</td>
</tr>
<tr>
<td>Jean-Marc Palm, Andrew Grant, Jean-Marie Moutquin and Patrice Degoulet</td>
<td></td>
</tr>
<tr>
<td>MEDAL: Measuring of Emergency Departments’ Adaptive Load</td>
<td>218</td>
</tr>
<tr>
<td>Edward Vitkin, Boaz Carmeli, Ohad Greenspan, Dorit Baras and Yariv Marmor</td>
<td></td>
</tr>
<tr>
<td>What Effect Does Electronic Ordering Have on the Organisational Dynamics of a Hospital Pathology Service?</td>
<td>223</td>
</tr>
<tr>
<td>Andrew Georgiou, Johanna I. Westbrook and Jeffrey Braithwaite</td>
<td></td>
</tr>
<tr>
<td>Clinicians, Security and Information Technology Support Services in Practice Settings – A Pilot Study</td>
<td>228</td>
</tr>
<tr>
<td>Juanita Fernando</td>
<td></td>
</tr>
<tr>
<td>Learning Lessons from Electronic Prescribing Implementations in Secondary Care</td>
<td>233</td>
</tr>
<tr>
<td>Tony Cornford, Imogen Savage, Yogini Jani, Bryony Dean Franklin, Nick Barber, Ann Slee and Ann Jacklin</td>
<td></td>
</tr>
</tbody>
</table>
Implementation, Monitoring and Utilization of an Integrated Hospital Information System – Lessons from a Case Study  
Ricardo João Cruz-Correia  

Model-Driven Traceability in Healthcare Information Systems Development  
Ståle Walderhaug, Gunnar Hartvigsen and Erlend Stav  

The Evolution of Hospital Information Systems and the Role of Electronic Patient Records: From the Italian Scenario to a Real Case  
Paolo Locatelli, Nicola Restifo, Luca Gastaldi, Elena Sini and Michele Torresani  

Saoussen Sakji, Quentin Gicquel, Suzanne Pereira, Ivan Kergourlay, Denys Proux, Stéfan Darmoni and Marie-Hélène Metzger  

A Lab-EMR Interoperability Profile as an eHealth Architecture Component for Resource-Constrained Settings  
William B. Lober, Debra Revere and Rebecca Hills  

eVisit: A Pilot Study of a New Kind of Healthcare Delivery  
Rema Padman, Grant Shewchik, Suzanne Paone, Carl Dolezal and Jody Cervenak  

Chapter 4. Documentation and Workflow  

Patients’ Needs Assessment Documentation in Multidisciplinary Electronic Health Records  
Kirstiina Häyryinen and Kaija Saranto  

Impact of a Critical Care Clinical Information System on Interruption Rates During Intensive Care Nurse and Physician Documentation Tasks  
Mark A. Baliermann, Nicola T. Shaw, Kelly J. Arbeau, Damon C. Mayes and R.T. Noel Gibney  

Conceptualization of an Electronic System for Documentation of Nursing Diagnosis, Outcomes, and Intervention  
Heloísa Helena Ciqueto Peres, Diná de Almeida Lopes Monteiro da Cruz, Antônio Fernandes Costa Lima, Raquel Rapone Gaidzinski, Diley Cardoso Franco Ortiz, Michelle Mendes e Trindade, Rosangela Tsukamoto and Neuridene Batista de Oliveira  

Medication Counseling: Analysis of Electronic Documentation Using the Clinical Care Classification System  
Kaija Saranto, Jacqueline Moss and Virpi Jylhä  

HL7 CDA Implementation Guide for Structured Anatomic Pathology Reports Methodology and Tools  
Haitham Kussaibi, François Macary, Mary Kennedy, David Booker, Victor Bradsky, Thomas Schrader, Marcial Garcia-Rojas and Chrystel Daniel  

Peri-Operative Communication Patterns and Media Usage – Implications for Systems Design  
Ero S. Karlsen and Pieter Jelle Toussaint  

Goal-Based Design Pattern for Delegation of Work in Health Care Teams  
Adela Grando, Mor Peleg and David Glasspool  

Participatory Interaction Design in User Requirements Specification in Healthcare  
Susanna Martikainen, Paullina Ikävalko and Mikko Korpela  

Cognitive Evaluation of a Physician Data Query Tool for a National ICU Registry: Comparing Two Think Aloud Variants and Their Application in Redesign  
Linda W. Peute, Nicolette F. de Ketelaer and Monique W.M. Jaspers  

Can Brain Computer Interfaces Become Practical Assistive Devices in the Community?  
Paul McCullagh, Melanie Ware, Maurice Mulvenna, Gaye Lightbody, Chris Nugent, Gerry McAllister, Eileen Thomson, Suzanne Martin, Stephen Mathews, David Todd, Vicente Cruz Medina and Sara Carro
Supporting Human Interaction and Human Resources Coordination in Distributed Clinical Guidelines
Alessio Bottrighi, Mauro Torchio, Stefania Montani, Gianpalo Molino and Paolo Terenziani

Chapter 5. Regional and National Information Systems

LuMiR: The Region-Wide EHR-S in Basilicata
Mariangela Contend, Gregorio Mercurio, Fabrizio L. Ricci and Luca D. Serbanati

Experience Implementing OpenMRS to Support Maternal and Reproductive Health in Northern Nigeria
Adam Thompson, Evelyn Castle, Paul Lubeck and Provost Shehit Makarfi

Using Electronic Medical Records for HIV Care in Rural Rwanda
Cheryl L. Amoroso, Benjamin Akimana, Benjamin Wise and Hamish S. F. Fraser

Key Common Determinants for Adoption of Wireless Technology in Healthcare for India and Pakistan:
Development of a Conceptual Model
Abdul Hafeez-Baig and Raj Gururajan

Factors Associated with Health Information System Success: Results of a Survey of Hospitals in South Africa
Lyn A. Hamner, Sedick Isaacs and J. Dewald Roode

The Evolution and Uptake of a Drug Information System: The Case of a Small Canadian Province
Naomi Mensink and Grace Paterson

Social Networking in the National Health Service in England: A Quantitative Analysis of the Online Identities of 152 Primary Care Trusts
Mark D. Hawker

Standardizing Implementation of a Surgical Information System in Danish Hospitals – A Comparative Study
Kitta Lawton, Marianne Holdt, Pia Kopke and Hrön Sigurðardóttir

Interoperability Prototype Between Hospitals and General Practitioners in Switzerland
Bruno Alves, Henning Müller, Michael Schumacher, David Godel and Omar Abu Khaled

Experience Implementing Electronic Health Records in Three East African Countries

Diffusion and Use of Electronic Health Record Systems in Norway
Vigdis Heimly, Anders Grimsen, Trond Palmer Henningsen and Arild Faxvaag

eHealth in Thailand: The Current Status
Boonchai Kijsanayon, Narong Kasitipradith and Supasit Pannanmothai

Diffusion and Use of Cooperative Patient Care – Domain Fields and Architectural Challenges of Regional Health Care Networks
Nathalie Gusew, Annemariin Gerlach, Thomas Bartkiewicz, Michael Goldapp, Reinhold Haus, Ulrich Heller, Nils Hellbring, Horst-P. Kierdorf, Thorsten Kleinschmidt, Ulrich Markurth, Michael Marschollek, Maik Plischke, Rainer Schubert, Christoph Seidel and Holger Wiegmann

A Countrywide Clinical Informatics Project in Uruguay
Alvaro Margolis, Lino Bessonart, Ana Barbiel, Pablo Pazos, Juan Gil, Heber Machado and Alvaro Vero

EHR Implementation in South Africa: How Do We Get It Right?
Parimalaranie Yogeswaran and Graham Wright

Monitoring Diseases Across Borders: African Regional Integrative Information Systems
Tungamirirai Simbini, Rosemary Foster, Paul Nesara and Carola Huffin Lucay Cossio
A Socio-Technical Approach to Continuity of Care and Electronic Records in the South African Context 406
Nicky Mostert-Phipps, Dalenca Polias and Mikko Korpela

Implementing OpenMRS for Patient Monitoring in an HIV/AIDS Care and Treatment Program in Rural Mozambique 411
Eric-Jan Manders, Eurico Jose, Manuel Solis, Janeen Burlison, Jose Leopoldo Nhampossa and Troy Moon

Combining Vital Events Registration, Verbal Autopsy and Electronic Medical Records in Rural Ghana for Improved Health Services Delivery 416
Seth Ohemeng-Dopaah, Paul Pronyk, Eric Akosa, Bennett Nemser and Andrew S. Kanter

Adopting the National Structure of Nursing Documentation Is Consequential in the Development of Care 421
Tapio Ala-Hitro, Kaisa Lemmetty, Sari Pihkanen and Eija Hyyrinen

Chapter 6. Public Health Informatics

Symptoms from Patients as the Primary Information Source for Real-Time Surveillance 427
Monika Alise Johansen, Jan-Are Kolset Johnsen, Neema Shrestha and Johan Gustav Bellika

Electronic Surveillance of Healthcare-Associated Infections with MONI-ICU—A Clinical Breakthrough Compared to Conventional Surveillance Systems 432
Walter Koller, Alexander Blacky, Claudia Bauer, Harald Mandl and Klaus-Peter Adlassnig

Using ProMED-Mail and MedWorm Blogs for Cross-Domain Pattern Analysis in Epidemic Intelligence 437
Avare Stewart and Kerstin Denecke

Improving General Practice Based Epidemiologic Surveillance Using Desktop Clients: The French Sentinel Network Experience 442
Clément Turbetin and Pierre-Yves Boëlle

Attempting to Predict the Fate of an Ongoing Epidemic. Lessons from A(H1N1) Influenza in USA 447
José Luis Hernández Cáceres

Design and Assessment of a Common, Multi-National Public Health Informatics Infrastructure to Enable H1N1 Influenza Surveillance 452
Aneel Advani, Aarti M. Turuvekere, Conan Liu, Ken Rubin, Chris Lamer and Theresa Cullen

Towards A Multi-Level Game Model for Influenza Epidemics 457
Qiongyu Chen and Tze-Yun Leong

Is Population-Oriented IT Supported Preventive Care in General Practice Feasible? A Database Study 462
Jacobus T. van Wyk, B. Mosseveld and J. van der Lei

Exploring New Directions in Disease Surveillance for People with Diabetes: Lessons Learned and Future Plans 466
Taxiarchis Botsis and Gunnar Hartvigsen

A 3-Step eHealth Approach to Transfer Knowledge on HIV and Sexual Violence in Developing Countries 471
Hendra van Zyl and Liz Dartnall

Using a File Audit to Evaluate Retention in Care and Patient Outcomes in a Programme to Decentralise Antiretroviral Treatment to Primary Health Care Facilities in a High Prevalence Setting in KwaZulu-Natal, South Africa 476
Catherine Searle, Arthi Ramkissoon and Thamandrie Govender

CEMARA an Information System for Rare Diseases 481
Paul Landais, Claude Messiaen, Ana Rath, Loïc Le Mignot, Eric Dufour, Mohamed Ben Said, Jean-Philippe Jais, Laurent Toubiana, Geneviève Baufat, Eva Bourdon-Lanoy, Marion Gérard-Blanluet, Christine Bodemer, Rémi Salomon, Ségolène Aymé, Martine Le Merrer and Alain Verloes for the CEMARA task force
IMPACT: A Generalisable System for Simulating Public Health Interventions
Iain Buchan, John Ainsworth, Emma Carruthers, Philip Couch, Martin O’Flaherty, Duncan Smith, Richard Williams and Simon Capewell

A Full-Text Information Retrieval System for an Epidemiological Registry
Marc Cugnacca, Sahar Bayat, Nicolas Garcelon, Lauren Sanders, Florence Rouget, Arnaud Coursin and Patrick Pladys

Obesity Atlas and Methodbox: Towards an Open Framework for Sharing Public Health Intelligence Workflows
Sarah Thew, Paul Jarvis, John Ainsworth and Iain Buchan

Spatiotemporal Antibiotic Resistance Pattern Monitoring Using Geographical Information System Based Hierarchical Cluster Analysis
Roshan Hewapatherana and Gamini Wijayarathna

Traffic Accidents in Crete (1996–2006): The Role of the Emergency Coordination Center
Dimitris Vourvahakis, Catherine E. Chronaki, Vasilis Kontoyiannis, Demosthenis Fanogopoulos and Spyros Stergiopoulos

Traffic Accident in Cuibá-Mt: An Analysis Through The Data Mining Technology
Noemi Dreyer Galvão and Haimar de Fátima Marin

Investigating Health Information Needs of Community Radio Stations and Applying the World Wide Web to Disseminate Audio Products
Janus Snyders, Elmarie van Wyk and Hendra van Zyl

Documentation in Pharmacovigilance: Using an Ontology to Extend and Normalize Pubmed Queries
Denis Delamarre, Agnès Lillo-Le Louët, Laetitia Guillot, Anne Jamet, Eric Sadou, Theo Ouazine, Anita Burgun and Marie-Christine Jaulent

Chapter 7. Care at a Distance

Leapfrogging Paper-Based Records Using Handheld Technology: Experience from Western Kenya
Martin C. Were, James Kariuki, Viola Chepng’eno, Margaret Wandabwa, Samson Ndege, Paula Braitstein, Juddy Wachira, Sylvester Kimaiyo and Burke Mamlin

Cell Phone Short Messaging Service (SMS) for HIV/AIDS in South Africa: A Literature Review
Khary-Chherty Mukand Bahadur and Peter J. Murray

Exploring Feasibility of Home Telemanagement in African Americans with Congestive Heart Failure
Joseph Finkelstein, Eunme Cha and Cheryl R. Dennison

The Emergence of Mobile-Supported National Health Information Systems in Developing Countries
Ime Asangansi and Kristin Braa

Clinical Users’ Perspective on Telemonitoring of Patients with Long Term Conditions: Understood Through Concepts of Giddens’s Structuration Theory & Consequence of Modernity
Urvashi Sharma, Julie Barnett and Malcolm Clarke

Usage of International Standards for Integrating Extramural Monitoring and Personal Health Device Data into Medical Information Infrastructure
A. Mense, S. Sauermann, G. Gerbovic, M. Frohner, B. Pohn, R. Bruckner, Ph. Urbauer, F. Eckkrammer and H. Wahl

Deploying Portable Ultrasonography with Remote Assistance for Isolated Physicians in Africa: Lessons from a Pilot Study in Mali
Cheick Oumar Bagayoko, Mahamoudane Niang, Seydou T. Traoré, Georges Bediassang, Jean-Marc Nuef and Antoine Geissbuhler
Web-Based Asynchronous Teleconsulting for Consumers in Colombia: A 2-Year Follow Up

José Ignacio Valenzuela, Catalina López, Yuli Guzmán and Roosevelt Fajardo

Chapter 8. Education

Medical Education & Health Informatics: Time to Join the 21st Century?

Nicola Shaw

Investigating the Potential of e-Learning in Healthcare Postgraduate Curricula: A Structural Equation Model

Maria Katharaki, Stelios Daskalakis and John Mantas

Earnings in e-Learning: Knowledge, CME Credits or Both? Hints from Analysis of Attendance Dynamics and Users' Behaviour

M. Cristina Mazzoleni, Carla Ragnoni, Enrico Finozzi, Mauro Landro, Edda Capodaglio, Marcello Imbriani and Ines Giorgi

Multidisciplinary Education in Medical Informatics – A Course for Medical and Informatics Students

Bernhard Breil, Fleur Fritz, Volker Thiemann and Martin Dugas

Training Software Developers for Electronic Medical Records in Rwanda

Rowan P. Seymour, Amy Tung, John DeRiggi, Christian Munyabawanga, Rita Cuckovitch, Patrick Nyirishema and Hamish S.F. Fraser

Strengthening Health Systems Through Training of Health Care Providers in the Conduct of Routine Waiting Time and System Efficiency Surveys

Gavin Reagon and Ehimario Igumbor

Learning of Each Other – Online: On the Division of Labour Between Technology and Supervisors

Roar Stokken and Gjermund Eikli

eBug – Teaching Children Hygiene Principles Using Educational Games

Patty Kostkova, David Farrell, Edde Quincy, Julius Weinberg, Donna Lecky, Cliodna McNulty and eBug Project Partners

Ambulatory Orthopaedic Surgery Patients Knowledge with Internet-Based Education

Kalja Heikkinen, Sanna Salantera and Helena Leino-Kilpi

An Open Repositories Network Development for Medical Teaching Resources

Gérard Soula, Stefan Darmoni, Pierre Le Beux, Jean Marie Renard, Badisse Dahamna and Marius Fieschi

Using the Virtual Reality World of Second Life to Teach Nursing Faculty Simulation Management

Elizabeth Weiner, Ryan McNew, Patricia Trangenstein and Jeffry Gordon

Teaching During a Pandemic Event: Are Universities Prepared?

Jeffry Gordon, Elizabeth Weiner, Ryan McNew and Patricia Trangenstein

An Approach to Simulate and Visualize Intraoperative Scattered Radiation Exposure to Improve Radiation Protection Training

Markus Wagner, Christopher Duwenkamp, Wolfram Ludwig, Klaus Dresing and Oliver Johannes Bott

A Compositional Personalization Approach for Designing Personalized Patient Educational Interventions for Cardiovascular Risk Management

Selena Davis, Syed Sibté Raza Abidi and Sam Stewart

Augmented Notebooks for Pervasive Learning in Medical Practice

Nathalie Bricon-Souf, Nicolas Leroy and Jean-Marie Renard

Advancing the State-of-the-Art for Virtual Autopsies – Initial Forensic Workflow Study

Isabella Scandurra, Camilla Forsell, Anders Ynnerman, Patric Ljung, Claes Lundström and Anders Persson
An Analysis of Nursing Education’s Immersion into Second Life, a Multi-User Virtual Environment (MUVE)

**Patricia A. Trangenstein, Elizabeth E. Weiner, Jeffry S. Gordon and Ryan McNew**

**Chapter 9. Ethics, Governance and Policy**

**Trust – Can It Be Controlled?**

*Debra Box and Dalenca Pottas*

**Informatics and Evidence-Based Medicine: Prescription for Success**

*John M. Starmer, C. Wright Pinson and Nancy M. Lorenzi*

**The Trajectory of Scientific Discovery: Concept Co-Occurrence and Converging Semantic Distance**

*Trevor Cohen and Roger W. Schvaneveldt*

**Access Control in Healthcare: The Methodology from Legislation to Practice**

*Ana Ferreira, Ricardo Correia, David Chadwick and Luis Antunes*

**Can Signalling Theory and the Semaphoric Nature of Information Systems Explain Clinicians’ Ambivalence to Informatics?**

*Derek Meyer and Benita Cox*

**Why Do People Want a Paper Copy of Their Electronic Patient Record?**

*Torunn Wilie, Mirjam Ekstedt, Raghild Hellesen and Laura Slaughter*

**Exploring Control in Health Information Systems Implementation**

*Maryam Ali, Tony Cornford and Ela Klecun*

**Ghost Charts and Shadow Records: Implication for System Design**

*Ellen Balka*

**Why Don’t Innovation Models Help with Informatics Implementations?**

*Rod Ward*

**Chapter 10. Quality, Safety and Value**

**The Information Quality Triangle: A Methodology to Assess Clinical Information Quality**

*Rémy Choquet, Samitha Qouiyd, David Ouagne, Emilie Pasche, Christel Daniel, Omar Boussaïd and Marie-Christine Jaulent*

**Understanding Effective Clinical Communication in Medical Errors**

*Saif Khairat and Yang Gong*

**Combining Relevance Assignment with Quality of the Evidence to Support Guideline Development**

*Marcelo Fiszman, Bruce E. Bray, Dongwook Shin, Halil Kilicoglu, Glen C. Bennett, Olivier Bodenreider and Thomas C. Rindflesch*

**Theories, Models and Frameworks for Diagnosing Technology-Induced Error**

*Elizabeth Borycki, Andre Kushniruk and Jytte Brender*

**The Nature of Unintended Effects of Health Information Systems Concerning Patient Safety: A Systematic Review with Thematic Synthesis**

*Habibollah Pirnejad, Roland Bal and Nosrat Shahsavaran*

**A System for Solution-Orientated Reporting of Errors Associated with the Extraction of Routinely Collected Clinical Data for Research and Quality Improvement**

*Georgios Michalakidis, Pushpa Kumarapelli, Andre Ring, Jeremy van Vlymen, Paul Krause and Simon de Lusignan*

**Toward a Human-Centered Voluntary Medical Incident Reporting System**

*Yang Gong*
Enhanced Notification of Infusion Pump Programming Errors
R. Scott Evans, Rick Carlson, Kyle V. Johnson, Brent K. Palmer and James F. Lloyd

Extraction of Adverse Drug Effects from Clinical Records
Eiji Aramaki, Yasuhide Miura, Masatsugu Tonoike, Tomoko Ohkama, Hiroshi Masuichi, Kayo Waki and Kazuhiko Ohe

SeReM2 – A Meta-Model for the Structured Definition of Quality Requirements for Electronic Health Record Services
Alexander Hoerbst, Werner Hackl and Elske Ammenwerth

Exploiting UMLS Semantics for Checking Semantic Consistency Among UMLS Concepts
Halit Erdogan, Esra Erdem and Olivier Bodenreider

Empirical Analysis of the Reduction of Medical Expenditures by eHealth
Yuji Akematsu and Masatsugu Tsuji

Using a Business Rule Management System to Improve Disposition of Traumatized Patients
Philipp Neuhaus, Oliver Noack, Tim Majchrzak and Frank Úckert

Measuring the Effectiveness of Hospital-Acquired Infection Prevention
Jimison lavindrasana, Gilles Cohen, Adrien Depeutinge, Henning Müller, Rodolphe Meyer, Hugo Sax and Antoine Geissbuhler

Evaluating the Relevance of Disability Weights for Adjusting Disease-Cost and Comorbidity Calculations at the Kigali University Teaching Hospital
Frank Verbeke, Frank De Pauw, Candide Tran Ngoc, Gustave Karara, Emmanuel Gasakure and Marc Nyssen

Analysis of Data Captured by Barcode Medication Administration System Using a PDA; Aiming at Reducing Medication Errors at Point of Care in Japanese Red Cross Kochi Hospital
Masanori Akiyama, Atsushi Koshio and Nobuyuki Kihotsu

A Business Case for HIT Adoption: Effects of “Meaningful Use” EHR Financial Incentives on Clinic Revenue
Nima A. Behkami, David A. Dorr and Stuart Morrice

Why Is It So Difficult to Measure the Effects of Interruptions in Healthcare?
Farah Magrabi, Simon Y.W. Li, Adam G. Dunn and Enrico Coiera

Subject Index

Author Index