Contents  IMIA Yearbook of Medical Informatics 2015

President’s Statement  L. de Assis Moura Jr. Embracing Strategies for eHealth 1

Obituaries  C. Safran Celebrating Morris F. Collen (1913 - 2014) 2

G. Surján An Extraordinary Obituary for an Extraordinary Man: Attila Naszlady 5

A. Shabo Obituary for Assa Reichert 7

Editorial  B. Séroussi, M.-C. Jaulent, C. U. Lehmann Health Information Technology Challenges to Support Patient-centered Care Coordination 8

Keynote  D. W. Bates Health Information Technology and Care Coordination: The Next Big Opportunity for Informatics? 11

Special Section: Patient-centered Care Coordination

Survey  G. Demiris, L. Kneale Informatics Systems and Tools to Facilitate Patient-centered Care Coordination 15

Working Group Contributions  H. Liyanage, A. Correa, S-T. Liow, C. Kuziemsy, A. L. Terry, S. de Lusignan Does Informatics Enable or Inhibit the Delivery of Patient-centred, Coordinated, and Quality-assured Care: a Delphi Study 22

C. Otero, D. Luna, A. Marcelo, M. Househ, H. Mandirola, W. Curioso, P. Pazos, C. Villalba Why Patient Centered Care Coordination Is Important in Developing Countries? 30

Synopsis  O. Steichen, W. Gregg Health Information Technology Coordination to Support Patient-centered Care Coordination 34

Content summaries of:


## Section 1: Health and Clinical Management

### Survey

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. A. Clifton, K. E. Niehaus, P. Charlton, G. W. Colopy</td>
<td>Health Informatics via Machine Learning for the Clinical Management of Patients</td>
<td>38</td>
</tr>
</tbody>
</table>

### Synopsis

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. Bricon-Souf, E. Conchon</td>
<td>A 2015 Medical Informatics Perspective on Health and Clinical Management: Will Cloud and Prioritization Solutions be the Future of Health Data Management?</td>
</tr>
</tbody>
</table>

### Best Paper Selection

Content summaries of:


## Section 2: Human Factors and Organizational Issues

### Survey

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>M. T. Baysari, J. I. Westbrook</td>
<td>Mobile Applications for Patient-centered Care Coordination: A Review of Human Factors Methods Applied to their Design, Development, and Evaluation</td>
</tr>
</tbody>
</table>

### Working Group Contributions

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Purkayastha, A. Price, R. Biswas, Jai Ganesh A.U., P. Otero</td>
<td>From Dyadic Ties to Information Infrastructures: Care-Coordination between Patients, Providers, Students and Researchers</td>
</tr>
</tbody>
</table>

### Synopsis

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Pelayo, MS. Ong</td>
<td>Human Factors and Ergonomics in the Design of Health Information Technology: Trends and Progress in 2014</td>
</tr>
</tbody>
</table>

### Best Paper Selection

Content summaries of:

## Section 3: Clinical Information Systems

### Survey

**A. Hoerbst, M. Schweitzer**  
A Systematic Investigation on Barriers and Critical Success Factors for Clinical Information Systems in Integrated Care Settings

### Synopsis

**T. Ganslandt, W. O. Hackl**  
Findings from the Clinical Information Systems Perspective

### Best Paper Selection

<table>
<thead>
<tr>
<th>Best Paper Selection</th>
</tr>
</thead>
</table>

## Section 4: Sensor, Signal and Imaging Informatics

### Survey

**J. De Jonckheere, V. Bonhomme, M. Jeanne, E. Boselli, M. Gruenewald, R. Logier, P. Richebé**  
Physiological Signal Processing for Individualized Anti-Nociception Management During General Anesthesia: a Review

### Synopsis

**S. Voros, A. Moreau-Gaudry**  
How Sensor, Signal, and Imaging Informatics May Impact Patient Centered Care and Care Coordination

### Best Paper Selection

<table>
<thead>
<tr>
<th>Best Paper Selection</th>
</tr>
</thead>
</table>
Section 5: Decision Support

Survey
L. Sacchi, G. Lanzola, N. Viani, S. Quaglini
Personalization and Patient Involvement in Decision Support Systems: Current Trends 106

Synopsis
J. Bouaud, V. Koutkias
Computerized Clinical Decision Support: Contributions from 2014 119

Best Paper Selection
Content summaries of:

Section 6: Knowledge Representation and Management

Survey
M. Da Silveira, J. C. Dos Reis, C. Pruski
Management of Dynamic Biomedical Terminologies: Current Status and Future Challenges 125

Synopsis
J. Charlet, S. J. Darmoni
Knowledge Representation and Management. From Ontology to Annotation 134

Best Paper Selection
Content summaries of:
### Section 7: Education and Consumer Health Informatics

**Survey**
- K. Denecke, P. Bamidis, C. Bond, E. Gabarron, M. Househ, A. Y. S. Lau, M. A. Mayer, M. Merollii, M. Hansen
  - Ethical Issues of Social Media Usage in Healthcare

**Working Group Contribution**
- M. Rigby, A. Georgiou, H. Hyppönen, E. Ammenwerth, N. de Keizer, F. Magrabi, P. Scott
  - Patient Portals as a Means of Information and Communication Technology Support to Patient-Centric Care Coordination — the Missing Evidence and the Challenges of Evaluation

**Synopsis**
- P. Staccini, L. Luque
  - Health Social Media and Patient-Centered Care: Buzz or Evidence?

**Best Paper Selection**
  - Internet-based intervention for smoking cessation (StopAdvisor) in people with low and high socioeconomic status: a randomised controlled trial. Lancet Respir Med 2014 Dec;2(12):997-1006

- Obadina ET, Dubenske LL, McDowell HE, Atwood AK, Mayer DK, Woods RW, Gustafson DH, Burnside ES
  - Online support: Impact on anxiety in women who experience an abnormal screening mammogram. Breast 2014 Dec;23(6):743-8

- Vaughan Sarrazin MS, Cram P, Mazur A, Ward M, Reisinger HS

- Wicks P, Sulham KA, Gnanasakthy A
  - Quality of life in organ transplant recipients participating in an online transplant community. Patient 2014;7(1):73-84

### Section 8: Bioinformatics and Translational Informatics

**Survey**
- K. Regan, P. R.O. Payne
  - From Molecules to Patients: The Clinical Applications of Translational Bioinformatics

**Synopsis**
- L. F. Soosalia, T. Lecroq
  - Bioinformatics Methods and Tools to Advance Clinical Care

**Best Paper Selection**
- Antonov AV, Krestyaninova M, Knight RA, Rodchenkov I, Melino G, Barley NA


- Taati B, Snoek J, Almeida D, Ghavamzadeh A
Section 9: Clinical Research Informatics

Survey

M. Dugas
Clinical Research Informatics: Recent Advances and Future Directions 174

Synopsis

C. Daniel, R. Choquet
Information Technology for Clinical, Translational and Comparative Effectiveness Research 178

Best Paper Selection

Content summaries of:


Section 10: Natural Language Processing

Survey

S. Velupillai, D. Mowery, B. R. South, M. Kvist, H. Dalianis
Recent Advances in Clinical Natural Language Processing in Support of Semantic Analysis 183

Synopsis

A. Névéol, P. Zweigenbaum
Clinical Natural Language Processing in 2014: Foundational Methods Supporting Efficient Healthcare 194

Best Paper Selection

Content summaries of:


Section 11: Public Health and Epidemiology Informatics

Survey
B. E. Dixon, H. H. K. Kharrazi, H. P. Lehmann
Public Health and Epidemiology Informatics: Recent Research and Events in the United States 199

Working Group Contribution
Patient-Centred Coordinated Care in Times of Emerging Diseases and Epidemics 207

Synopsis
L. Toubiana, N. Griffon
Modelling, Simulation and Social Network Data: What's New for Public Health and Epidemiology Informatics? 216

Best Paper Selection
Content summaries of:
Khormi HM, Kumar L. Climate change and the potential global distribution of Aedes aegypti: spatial modelling using GIS and CLIMEX. Geospat Health 2014;8:405-15

Research & Education
I. Chouvarda, N. Maglaveras
Medical Informatics Education & Research in Greece 220

History of Medical Informatics
C. A. Kulikowski
An Opening Chapter of the First Generation of Artificial Intelligence in Medicine: The First Rutgers AIM Workshop, June 1975 227

Information on IMIA
Information on IMIA 234
Honorary Fellows 237
IMIA Member Societies 238
Institutional Members 239
Addresses of IMIA Member Societies 241

Information on IMIA Regions
Information on APAMI (Asia Pacific Association for Medical Informatics) 256
Information on Helina (African Region) 260
Information on IMIA-LAC (Federation of Health Societies in Latin America) 262
Information on MEAHI (Middle East Association for Health Informatics) 263
Information on North-American Medical Informatics (NAMI) 264
Information on EFMI (European Federation For Medical Informatics) 270
Information on EFMI Working Groups 272

Miscellaneous
Contributors 286
MIA Yearbook Special Topics 287