

IMECCHI 2015
October 20-21, 2015
Macdonald Manchester Hotel
Manchester, UK

Meeting Summary

Attendees:

1. Bernard Burnand – Switzerland
2. Bill Ghali – Canada
3. Hude Quan – Canada
4. Danielle Southern- Canada
5. Rosa Gini – Italy (Tuscany)
6. Marie-Annick Le-Pogam – Switzerland
7. Emmanuel Ngwonkwi – Qatar
8. Phil Hider- New Zealand
9. Marie- Helen Metzger – France
10. Jean-Marie Januel- Switzerland
11. Amy Metcalf- Canada
12. Alka Patel- Canada
13. Dr. Shih- Taiwan (Geneva)

Regrets: Saskia Drosler, Niek Klazinga, Patrick Romano, Alan Forster, Harold Pincus, Vijaya Sudarajan, Cyril Colin, Lisa Lix, Lori Moskal, Henrick Soren, Gabe Fabreau

Specific Meeting Objectives:

1. Introducing and developing a clearer understanding of each attendees' interests, expertise, and perspective(s).
 2. Discussing and gaining an understanding of the future of coded health information research and use.
 3. Strengthening the relationship with WHO-FIC and international
 4. The development of a detailed work plan for international collaboration in ICD-11 field trial translation and validation research.
 5. The development and refinement of further research priorities
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1) Discussion of reasons and advantages for continuing IMECCHI

- Reasons and Advantages of IMECCHI:
 - Consensus on methodologies (BMC- HSR services- identification of priorities in methodological research)
 - Access to regional networks and resources
 - International comparisons
 - Harmonization of strategies
 - Potential bridging of national and international agendas
 - Opportunity for linkages with WHO, OECD- ie: when ICD is used to measure quality of care and patient safety- advising WHO on this
- History of meetings- this is the 9th meeting of IMECCHI over a 10 year time period

- Moving forward:
 - New initiatives- working collaboratively on shared initiatives, knowledge translation, linkages with other institutions

2) Areas of Research- future of “codeable” health information

- Data science precision medicine- how can we project individual patient’s response and outcomes
- To produce value- making these linkages allows us to then produce value utilizing the linkages that we have, gives a competitive advantage
 - 1) Data quality assessment
 - 2) Data quality improvement
 - 3) Data processing and analytics

3) Potential projects:

EMR Exploration and Utilization

1. Extracting information/variables for defining conditions in EMRs using techniques such as NLP
 - Ways to make these variables more meaningful
 - Linkage between EMRs and administrative data – unstructured versus structured data
 - Assessment/evaluation of EMR data quality
2. Head-to-head comparison of concept definitions from EMR data to admin data (+/- add-on data linkages to lab and med data) to human-generated reference standard
3. Global availability of EMRs: Which countries have implemented the use of EMRs; What is available for research use (Country comparisons)
4. EMR Denominator

ICD-11 Field Trials

- Automatic detection of coding variations
- ICD-11 field testing for PSIs (AHRQ PSIs and OECD PSIs)
- Field Trial testing of other adverse events – Quality and Safety TAG
- ICF field testing for identifying and measuring frailty and disability
- Validation/evaluation of ICD-11 to snomed crosswalks

Data Quality

- Using ICD-10 data, developing and implementing in different jurisdictions
- Development of logic checks for data quality assessment
- Data quality indicators/ score development
- International comparisons of data quality

Administrative Data Definitions

- Development of processes of care definitions
- ICD data dictionary– collaboration on dissemination of results from systematic review (people who are interested)
 - Priority of comorbidities?
 - Way to update the search?
 - Valid vs. non validated algorithms?
 - Currently limited to ICD-9/ICD-10 only – other concepts?
- Defining Chronic patient safety issues /chronic disease definitions in EMRs
- Defining Obesity/overweight- description of obesity in the population with co-morbidities
- Common definitions for co-morbidities

Development and validation of Patient Safety Indicators

- a) ISPAHAN-ACO project: Geriatric Patient Safety Indicators (GPSIs) based on hospital administrative data linked to insurance claims data:
 - GPSIs to assess thrombo-embolic and hemorrhagic adverse events in elderly patients;
 - Frailty and disability indexes for risk-adjustment;
 - Thrombo-embolic and hemorrhagic risk scores;
 - Process indicators assessing thromboprophylaxis and anticoagulant curative treatment
- b) Patient safety indicator in Obstetrics assessing post-partum hemorrhage based on clinically enriched hospital administrative data
- c) Expanding list of patient safety indicators for obstetrics – looking at international variation in incidence, patient management and outcomes

Data mining for Social Characteristics

- Developing social characteristic definitions of populations for epidemiologic studies – data mining to predict outcomes
- Determining which social characteristics are important; Create standardized information:
 - a) which parameters are important
 - b) degree of
 - c) type of health organization
 - d) how to normalize this information on an international level

Multi-source database development

To explore / to develop potential linkage between several massive databases, with need because of the existing fragmented data

- Develop a playground of data to use for multiple studies ie: primary care datasets, physician claims data, EMRs with ICD coded data, pharmacy data, lab data, vital statistics
- Validation studies – combine and link to chart reviews- extent to which ICD coded data agrees with text mining definitions- congruence between datasets
- Develop common structure to facilitate comparative studies in collaborative projects (OHDSI)
- **Ethical and legal aspects of research based on multi-sources data, linked administrative health data, data linkages and NLP, etc.**

Exploration of non-physician generated sources of data

- Research into the potential value of non-physician generated sources of data
- Interdisciplinary nature in rating indicators for measuring patient safety using the International Classification of Diseases (ICD)- developing a common taxonomy
- Defining the role of nurses and physicians in decision making around care; Leadership roles and decisions around care
- Quality of this type of data
- Evaluate how the nursing, midwifery and medical disciplines could improve the ability of the ICD-10 and the Beta version of ICD-11 (ICD-11-β) in measuring a series of patient safety indicators

Patient Safety and Quality

- Risk adjustment - explore methodologies and develop guide related to admin data
- Assessing mortality, length of stay and readmission rates for a group of common surgical procedures
- Compare adverse event rates from PSIs
- Measuring quality and safety of selected interventions
- Cross-national study on avoidable hospitalizations using AHRQ's preventable quality indicators (PQIs)
- Improving accuracy in predictive models to assess patient safety ie: Sepsis outcome- assess potential subgroup with specific risk of sepsis and risk of death

Surveillance

- Using administrative data or EMRs for the risk factor surveillance
 - Cardiovascular disease
- Monitoring the health status, use and appropriateness of care, quality and safety of care in patients with one or more chronic disease
 - Longitudinally throughout the healthcare system (hospital acute and rehabilitation ambulatory, long term care)
 - Choose one / a few case studies – common chronic diseases (diabetes, heart failure, COPD, depression, neurodegenerative diseases, osteoarticular diseases, etc.)
 - Include monitoring and improvement strategies of data quality
- Health services utilization and health services supply
 - For vulnerable populations

Conceptual framework of data science in health services research context

- Developing a conceptual description of data science a) production/generation; b) gathering/compilation; c) configuration/specification; d) analysis
- Questions re: What is coding, what is in a code, what is big data, movement of research using coded health information (structured) to unstructured
- Develop historical paper of our priorities

4) IMECCHI to meet again:

- Work on Qatar grant for meeting in 2016
- Need presence at the WHO-FIC 2016 in Tokyo- perhaps not have IMECCHI meet in Tokyo, dependent on the type of meeting we want to have
- IPDL 2016 conference in Swansea (August 2016)

ACTION ITEMS:

1. IMECCHI Meeting in Qatar- application to Qatar National Science Foundation
Lead: Emmanuel Ngwakongnwi
2. History of IMECCHI paper
Rachel, Bill, Hude
3. Data Science Framework Paper
Lead: Bernard, Bill
4. Multi-source data architecture
Lead: Rosa Gini
5. Meeting report summary
Lead: Rachel and Danielle