Next Steps in Evaluation and Evidence – from Generic to Context-Related

Michael RIGBY
Jytte BRENDER
Marie-Catherine BEUSCART-ZEPHIR
Hannele HYPPÖNEN
Pirkko NYKÄNEN
Jan TALMON
Nicolette de KEIZER
Elske AMMENWERTH
The Importance of Evidence-Based Health Informatics

- Health Informatics and e-Health have major potential
- Also disruptive, cost-incurring, and with risks
- However, the drivers are often inappropriate:
  - Political
  - Administrative
  - ‘cost-saving’ (but cost transfer)
  - Political modernisation
The Desirable Approach

• Evidence-based
• Comparable with other health innovations
• Benefits and claims proven; risks assessed

• In line with wider move for evidence-based policy
• In line with seeing Informatics as a Health Science
Evaluation and Evidence

- Evaluation is soundest source of scientific evidence
- EFMI and IMIA Groups
- ESF Workshop – Declaration of Innsbruck

- STARE-HI approved reporting standard
- GEP-HI evaluation guidance (in print)
- UMIT Inventory of Evaluations; list of Bad HI.
Next Step – onwards from Generic

• So far EFMI/IMIA work has been generic
• Sound to establish principles and methods
• But there are some special situations; need addressing next
  1. National e-Health Plans and Progress
  2. Telemedicine
  3. Health Informatics 3.0
  4. Usability
  5. Economics
1. National E-Health Plan Evaluation

- Innovative work in Finland
- Parliamentary requirement to evaluate progress with E-Health Plan
- Dedicated evaluation planning project (KaTRI)

- Need to validate and assess for use elsewhere
• Finnish project approach
  – Assess aims and objectives of national plan
  – Define technology
  – Identify external assessment models – mapped Canadian work to new medical and surgical intervention HTA model
  – Lack of models on development and implementation phases, so used ISO 9241-210 "Human-centered design for interactive systems".
  – The outcome was a framework of evaluation questions for development, implementation and established use.
2. Telemedicine Evaluation

• Telemedicine by definition transcends all boundaries
• Users not co-located – may not know one another
• Challenge of evaluating application and use which may be global
• Many forms of telemedicine; need to identify generic principles and specific issues
• Particular challenges of patients as ‘users’
• Quality assessment issues
• Outside normal clinical audit, epidemiology
• Service, and setting, particularly important
• Economic and cost assessment issues
• How to obtain impartial data
• ‘Other effects’ issues - identification

• Some first steps now made
3. Health Informatics 3.0 Evaluation

- The challenge of evaluating virtuality
- Data items can be tagged, transferred and re-used
- Benefits in principle, but must be subject to scientific validation
- Expanding concepts of ‘stakeholder’ and ‘user community’
- Research governance challenges when no boundaries

- Issues paper in IMIA Yearbook 2011 (in press)
4. Usability Evaluation

- By definition, focussed on user, perception, practice
- Assessing the risk of error
- User type and context are variables to be defined
- Usability usually iterative, aims to improve product, so formative rather than summative
- Has own methods
- May not synchronise with rest of evaluation
5. Economic Evaluation

• Vital but often laden with pre-determined view

• Economic or social costs?

• How to cost quality improvement, better use of assets.

• Operating organisation, partner organisation, or health economy view

• Savings may not be reaped by operator, who may be loser financially.
Conclusion

• Health Informatics must no longer be based on hopes

• Evidence is vital to drive policy and implementation

• Generic methodological issues now addressed, but specifics need further discussion and development.