Using Participatory Action Research to Evaluate and Improve Change: Pilot Implementation of an Electronic Health Record in Rural Tanzania

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INTRODUCTION

- Electronic Health Information Systems increasingly part of health care management & delivery
- Funding has increased electronic tracking of patients, drug inventory and order planning
- Change management issues at organizational & individual levels
- Gap in Health Information System evaluation research for Sub-Saharan Africa and internationally
- High-income countries can learn from Health Information System implementations

EVALUATION OF HEALTH INFORMATION SYSTEMS - SOCIAL RESEARCH

- Health Information Systems are part of a larger system
- Social, contextual, and technological influences
- Multiple methods (quantitative and qualitative)
- Formative and summative
- Most theoretical frameworks are based on high-income countries
- Adapting evaluation studies can be problematic

PARTICIPATORY ACTION RESEARCH

- An approach not a method
- Hypothesis-generating
- Build capacity to evaluate implementation within local context
- Mixed methods case study
- Social interactionism, socio-technical paradigms
- Iterative Quality Improvement
- Drives social change

CONTEXT

- The Opportunity
  - ELCT Health of Tanzania implementing Care2X Health Information System
  - Haydom Lutheran Hospital pilot site (commenced January 2007)
- Research question
  - How can Participatory Action Research be used to facilitate the implementation of a new electronic Health Information System within a rural Tanzanian clinical environment?

PURPOSE AND OBJECTIVES

- Purpose
  - To facilitate the implementation of a new Health Information System in rural Tanzania using a Participatory Action Research approach.

- Objectives
  - Identify opportunities to improve
  - Create, implement and evaluate shared plans
  - Build local capacity
  - Provide local information
  - Disseminate results broadly

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METHODOLOGY

- Research Locus
  - Haydom Lutheran Hospital, Mbulu, Manyara, Tanzania
  - 12-18 months field research
- Stakeholder Recruitment
  - Administrators, employees, contractors

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METHODOLOGY

- Participatory Action Research
  - Stakeholder-driven
  - Researcher as facilitator
  - Formative, summative, iterative
  - Drives social change
- “Look”, “Think”, ”Act”
  - Identify issues of importance and build shared plans for change
  - Interviews, focus groups, meetings, observations, literature and document review
  - 8 week cycles (6 cycles in one year)

METHODOLOGY

- Construct validity
  - Multiple perspectives and sources of evidence
  - Member-checking
  - Journaling
  - Action research is modifiable
- External validity
  - Incorporation of general theory
  - Explore rival explanations
- Reliability
  - Protocol will be systematically documented

SIGNIFICANCE

- Contributes to knowledge of the Participatory Action Research approach in health informatics
- Insights into the modification and use of the Care2X system in Sub-Saharan Africa
- Fill a gap in knowledge about Health Information System evaluation research in Sub-Saharan Africa and internationally
- Case study will be used to inform Health Information System evaluation research in resource-rich countries, specifically rural and remote health care environments

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TO DATE…

- January 2006 site visit to ELCT Health and Haydom Lutheran Hospital
- Ethical approval from University of Alberta

- Research and ethical clearance from the Tanzania Commission for Science and Technology and the Tanzania National Institute for Medical Research
- Field research commenced April 2007

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ACKNOWLEDGEMENTS

Research Team

- Dr. Shoo Lee, iCARE
- Dr. Richard Scott, University of Calgary
- Dr. Thorkild Tylleskär, University of Bergen
- Dr. Alan Gillies, University of Central Lancashire

Tanzania Collaborators

- Dr. Mauri Niemi, ELCT Health
- Dr. Øystein Olsen, Haydom Lutheran Hospital
- Ms. Neema Mgana, African Regional Youth Initiative
- Mr. Oscar Mukasa, Ifakara Health Research and Development Centre

Grimm gratefully acknowledges funding from the following sources

- Dr. Nicola Shaw's Health Informatics Establishment Grant
- Alberta Heritage Foundation for Medical Research
- University of Alberta Funds for Support of International Development Activities
- This work is carried out with the aid of a grant from the International Development Research Centre, Ottawa, Canada. Information on the Centre is available on the web at www.idrc.ca.