

# Usability Studies in Primary Care Informatics: Searching for Useful Answers to “Everyday Problems”

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Panel: Ian Purves, MD, Newcastle University, Newcastle U.K.

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## Introduction

In the U.S. only a small percentage of primary care practitioners utilize electronic information systems (including an electronic medical record) in their office clinic, or other ambulatory setting. When considering a decision about using information technology, a busy practitioner wants to know “does it make a difference” and seeks answers to a wide variety of questions such as:

*Should I be using information technology?  
If so, why?*

*Does it really improve the quality of patient care?*

*Is it practical to use in my particular office?*

*How difficult will it be for me and my staff to learn how to use it?*

*What hardware and software should I buy?*

*What kinds of network connections do I need? Etc.*

## Objectives

After attending and participating in this panel discussion, attendees will:

- become aware of the increasing need for practitioners to address important decisions about the use of computers and other information technology in ambulatory clinical care
- become familiar with primary care research project that uses a comprehensive range of user participative design methods
- know the underlying principles of heuristic and usability studies and their application to clinical information systems

- know about the application of usability methods in small community-based practices
- participate in general discussion and interact with the panel in exploring future directions for usability studies in primary care informatics

## Format

Panel members will explore the current availability of meaningful answers to those questions; report a study whose methods might serve as a model for others; present an overview of heuristic and usability studies; report on methodologies used in small community-based offices, and after discussion by and with attendees, explore the role of usability studies in primary care informatics research in the future.

## The Problem

Panel members will open this session by raising the question of the usefulness of available published studies in making decisions about the use of computers and other information technology in the primary care ambulatory setting.

## Examples of a Model Study

Dr. Purves will report on Prodigy, a research and development project involving 137 GP practices in England. The basic aim of this project is to test the concept of computer-aided prescription decision support. In addition to reporting the results and conclusion of this study, he will focus on the design of the study and the comprehensive range of methodologies used, including the analysis of video tapes of real practicing GP's, using fully operational electronic medical record systems in actual patient care in their offices. The use of these types of studies might well be transferable to other situations and

useful in a broad range of other primary care informatics studies.

### **Usability Studies: A Solution**

After discussing the need and requirements for more comprehensive evaluation of systems involving the interaction of humans and machines, Dr. Peter Ziemkowski will present an overview of how usability studies might provide meaningful answers to many of the important questions about primary care medical informatics. An overview of the testing and conduct of a usability study will be presented.

### **Beyond the Lab**

Dr. Anne Holbrook, the principal investigator of COMPETE, a research project in Hamilton, Ontario, will report on her experience and the methodology used in working with a group of 80 family physicians in conducting a vigorous process for selecting electronic medical record software for use in small community-based primary care offices. She will also report on studies examining the impact of electronic medical records and computerized decision support on the prescribing practices of Canadian physicians.

### **Potential Future Directions**

The session will close with a summary of the presentations and discussion along with suggestions for the future use of usability studies in primary care informatics research.

### **References**

1. Mullins, H.C. et al, The efficacy of SNOMED, Read Codes, and UMLS in Coding Ambulatory Family Practice Clinical Records, Proceedings of 1996 AMIA Annual Fall Symposium, 135-139.
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