

## eHealth Benchmarking Good Practice Case

### Forward Momentum

### Hospital Use of Information Technology

## Case Summary

In 2005, the American Hospital Association sent a “Forward Momentum” web-based survey to all community hospitals in the U.S. in an effort to gather information about the use of Health Information Technology (HIT). Questions addressed whether hospitals had adopted this technology, which functions were being used (such as EHRs, CPOE, etc.), what percentage of doctors and nurses were using the technology, and perceived barriers to more widespread adoption. Of the approximately 5,000 hospitals surveyed, 936 responded, which represented a 19.2% response rate.

The AHA published the results of the survey in a report entitled “Forward Momentum: Hospital Use of Information Technology” in October, 2005. Results indicated that U.S. hospitals fall on a wide spectrum of levels of incorporating HIT. The primary barrier to access, as reported by hospitals, was the expense of the system.

The survey represents an excellent starting point for learning about the current levels of use of HIT in the U.S., and yields useful information about how to best assist hospitals in future adoption of the technology.

## Background and Objectives

### Objectives

The aim of the benchmarking activity was to ascertain hospitals’ HIT capabilities, use of applications like electronic health records (EHRs), Computerized Physician Order Entry (CPOE), costs, reactions to the use of HIT, and perceived barriers to adoption.

### Background Information

The AHA does many surveys of its member organizations. This was another “standalone” survey which focused on use of EHRs and CPOE in U.S. hospitals. It was put together by a team of researchers at that AHA.

### Type of activity

- Measuring eHealth / ICT availability and use
- Measuring attitudes towards eHealth and eHealth use
- Data gathering with the aim of eHealth market sizing
- Evaluation of an eHealth application / Service

### Budget

Unfortunately, the budget of the survey development and the implementation are not available.

## Forward Momentum - Hospital Use of Information Technology

Executing agency



American Hospital Association

American Hospital Association

Year of publication 2005

Year(s) of available data 2005

Geographic coverage USA

## Main Actors

### American Health Association

Public authority

Conducts questionnaire development, fieldwork, data analyses, and publication of results for annual survey

## Implementation

### Data gathering approach

The data were gathered by means of a web-based survey sent by email and fax to U.S. hospitals. The questionnaire was developed by the AHA in conjunction with its Member Advisory Group on Information Technology, which includes approximately 20 hospital chief executive officers. A copy of the instrument has been included for reference.

### Sampling and fieldwork

The survey was sent to all community hospitals, including the nearly 5000 member hospitals of the American Hospital Association. More than 900 responded to the survey, yielding an overall response rate of 19.2%

### Timing

Questionnaire development occurred in 2004 and the survey was in the field between April and June, 2005. Analysis began after the survey was out of the field, and results were published by the AHA in October, 2005.

### Analysis and Reporting

The results were reported in an AHA publication entitled “Forward Momentum: Hospital Use of Information Technology”, published in October, 2005. The analytic approach was simple and did not take into account non-response bias or made any attempts at imputation.

## Evaluation of implementation aspects

Quality Criteria	Score	Explanation
<b>1. Relevance and transferability</b>		
"The indicators clearly refer to eHealth."	●●●●	The survey was clearly focused on EHR use and therefore, clearly refers to eHealth
"The indicators cover the respective issues/topics in sufficient depth."	○●●●	Because of the limitations of survey instrument length, the survey was not able to go into individual functionality use in great detail.
"The indicators allow regular measurement in the same context in the future".	○●●●	The indicators were designed to be used for an annual survey, although that annual survey was not truly implemented as such.
"The indicators can be applied to a different national context."	○●●●	Because the survey was primarily "function-based", it can be used in other national contexts.
<b>2. Accessibility of information</b>		
"The publication of the study presents enough methodological information to enable the reader to judge its validity. ( i.e. information on sample size, weighting etc.)"	○●●●	Unfortunately, the survey methodology sections provide only few details o the analytical approach.
"The research results have been published in English"	●●●●	Survey was published in English.
<b>3. Validity of measurement</b>		
"The concept of eHealth used by the study is clearly expressed and therefore understandable for a variety of survey respondents."	●●●●	The instrument clearly focused on eHealth and this was clear both by the title, the prologue, and the individual questions.
"The operationalisation of the indicators has been validated before use."	○●●●	The indicators have face validity but were not validated before use.
"The likelihood of social desirability bias/context bias is avoided as much as possible"	○●●●	Because the survey focused primarily on presence or absence of functions, it should have relatively little social desirability bias if the analysis focuses on current state of adoption. However, some of the questions allow for response categories such as "considering implementing" which should not be taken as different from "not implementing" due to issues of social desirability bias.
"In the case of a multinational study: appropriate translation procedures of survey instruments are used."	NA	
"The instrument follows the general rules for questionnaire design:" Question wording: simple, unambiguous, defining unclear terms Question wording: single stimuli Question wording: factual, not hypothetical Question wording: clear time and actor reference Question wording: neutral, not suggestive Question content: respondent has necessary knowledge and information in order to answer the questions	○●●●	The survey instrument largely follows these rules. The survey is usually sent to the Chief Information Officer or equivalent at the hospital.

### Population validity

Sampling frame quality: The sampling frame was a census of all U.S. acute care hospitals (what AHA refers to as "community" hospitals). Therefore, it was a highly valid and high quality sample.

Data collection quality: The collection efforts were very weak and there was little investment in ensuring a high response rate. Therefore, this should be rated low.

Non-response rate documentation: Issues such as non-response bias and deviations from the sampling frame were not addressed in the analysis.

### Respondent load

The survey was not tested for respondent load but given its length, it should represent only a modest commitment of time to answer the questions (likely less than 30 minutes).

## The eHealth Benchmarking Study

The “eHealth Benchmarking” study is carried out by empirica on behalf of the European Commission, Information Society and Media Directorate-General. The study aims to collate and analyse existing eHealth monitoring and benchmarking sources in order to identify best practice in data gathering and to develop a framework for an EU-wide eHealth benchmarking activity. The intention is not only to help better understand eHealth progress but also to identify the main gaps, obstacles and barriers in relation to eHealth monitoring / benchmarking to be overcome in the next few years. In doing so, the study covers the Member States of the European Union, Norway, Iceland, Canada and the United States.

The benchmarking sources were identified by means of a combination of different research methods, including a survey among the experts of the EEA Working Group on Information Society statistics, desk research on sources of eHealth data and measurements on a supranational and European level, and research on the national level carried out by a network of national correspondents.

More information on the study is available online at <http://www.ehealth-benchmarking.eu/> or from the project coordinator:



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### Authorship

This case was written by the case owner institution.

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