# Technical Information

## **Equipment Options**

HealthQuiz can run on any computer or device connected to the Internet that can run a web browser or support the Java run-time environment.

If you need to make a hardware purchase to use HealthQuiz, your choices are very open and affordable. Suitable machines are available from vendors such as Apple, Compaq, and Dell.

We also recommend a touch screen for patient terminals, such as that made by EDMark (~\$300). More information can be found at EDMark's web site (http://www.edmark.com/).

#### **Systems Integration**

HealthQuiz can be integrated with many information systems. Our system is very flexible and open to multiple forms of computer communication, including (but not limited to) HTTP, HTTP/SSL, FTP, ODBC, and CORBA.

# Start an Account

Account information is available on request by writing email to accounts@healthquiz.com

## Review Samples

Sample questionnaires, reports, and physician's office are available online at http://www.healthquiz.com

#### **Secure Data**

1) All information transmitted to our servers, stored on our servers, and transmitted back to the physician is anonymous. The physician must link the randomly assigned HQIDs to the patient's identity.

2) HealthQuiz uses the industry-standard SSL encryption technology to further protect the link between users and the HQ web servers and databases. This is the same technology used in hundreds of other commercial Internet sites to secure personal and financial information.



#### More information

#### Write to:

University Community Healthcare, Inc. HealthQuiz/WWW Project 5741 S. Drexel Ave. Suite 216 Chicago, IL 60637

#### Phone/Internet:

Phone: (773) 834-0485 E-mail: info@healthquiz.com Web: http://www.healthquiz.com

# HealthQuiz

Solutions for Challenges in PreOperative Medicine

Learn how HealthQuiz PreOp can improve the quality of care AND save time and money



# **Challenges:**

Too much to do in too little time.

Pre-operative evaluations are time-consuming but essential for positive surgical outcomes. Paper evaluations vary in legibility and are not simultaneously viewable by multiple collaborating physicians.

#### Inconsistent data collection.

Public health researchers' efforts to establish patterns amongst a sample of patients are thwarted by incomplete or inconsistent data gathered through traditional patient interviewing. While consistent in their content, paper questionnaires have limited capacity for "branching," which is the ability to appropriately follow up on patient responses.

## Billing problems.

Testing without proper justification and unbillable physician hours increase costs that must be absorbed by the institution.

Medicare routinely changes ICD-9 codes and will deny payment for pre-operative tests without the current proper codes. Failure to note patient's co-morbid conditions leads to underbilling. Coding is time-consuming.

# **A Solution: HealthQuiz**

HealthQuiz is a suite of patient self-administered, computerized health history screening based on current established health guidelines. The questionnaire has been shown to be reliable in clinical settings.

HealthQuiz may be administered on the Internet, on a stand-alone Java-based application, or via telephone.

Using branched, decision-tree logic, HealthQuiz asks only those questions which are appropriate to the age, sex, and risk profile of the patient. All questions are formatted to elicit a "yes," "no," or "not sure" response. Patients take an average of 15 minutes to complete the questionnaire.

HealthQuiz PreOp takes a complete medical history prior to the face-to-face interview with the anesthesiologist or other caregiver. The questionnaire provides a comprehensive pre-surgical screening of systems, pertinent anesthesia care items, allergies, and medications.

A computer analysis of the patient's answers to interview questions provides caregivers with a report that includes

- (1) a list of suggested pre-operative laboratory tests, and
- (2) a measure of patient co-morbidity called HQASA, which approximates the ASA physical status score.

HealthQuiz PreOp test recommendations are accompanied by ICD-9 codes for Medicare billing. Test suggestions are based on guidelines recommended by leading medical authorities such as the American Society of Anesthesiologists, American College of Surgeons, American College of Physicians, Blue Cross/Blue Shield Necessity Panel, and United States Preventive Services Task Force.

PreOp HealthQuiz was written ad developed by Dr. Michael Roizen, Chair of the Department of Anesthesia and Cricial Care, University of Chicago, and reviewed by practicing anesthesiologists.

# **Benefits**

#### **Improved Care**

HealthQuiz provides a complete preoperative screening. Issues relevant to each individual patient are less likely to be overlooked by the anesthesiologist.

## **Increased Efficiency**

HealthQuiz makes the doctor and the preoperative evaluation process more efficient. The patient's health history is already known and highlighted for the doctor, so discussions with a patient can focus on specific areas of concern.

## Simple, Accurate Billing

HealthQuiz PreOp provides ICD-9 codes to justify tests to Medicare. The HQASA score alerts the physician to comorbidity, for improved billing of more complicated cases. The system stores rationales and literature references for each suggested test, and cites the patient's health history item(s) that triggered the pre-operative test recommendation.

Physicians can use CPT code 99090 (interpretation of data stored in a computer) to recapture cots of time used to evaluate test suggestions and results of HealthQuiz.

#### **Lower Institutional Costs**

HealthQuiz reduces unnecessary test selection. Stanford estimates savings of \$120 per patient. University of South Florida saves \$137 per patient. University of Chicago saves \$100 per patient and 12 minutes of OR time.

#### **Integrated Medical Data**

Responses can be integrated into medical information systems, allowing physicians to maintain a health history and researchers to draw on a consistent data set.