



Published Study Proves Isabel Diagnostic Decision Support System's Effectiveness in Adults

In Emergency Room Setting, Web-Based System 95 Percent Accurate In Comparison to Patient Discharge Records; Consistent with Independent Panel's "Must-Have" Diagnoses 90 Percent of the Time

Reston, Va.—September 04, 2007—Isabel Healthcare, Inc. today announced a landmark study proving the Isabel diagnostic decision support system's effectiveness in a large emergency room (ER), adult patient population. Isabel is a Web-based system that instantly reminds clinicians what diagnoses to consider, after they input patient symptoms and clinical history. Because the study was based on a rigorous evaluation against real patient discharge records and expert panel review, it represents the most comprehensive data ever collected for a diagnostic decision support system.

Published today in the September issue of the *Emergency Medical Journal*, the multi-center study was led by Drs. Padmanabhan Ramnarayan et al. at the Children's Acute Transport Service in London. The research demonstrated that the Isabel system displayed the final discharge diagnosis in 95 percent of ER patients, and "must-not-miss" diagnoses suggested by an expert medical panel 90 percent of the time. This is largely superior to traditional systems, where the final diagnosis was present in only 30 percent of cases (*Emergency Medical Journal*, 2003).

The study evaluated 494 "real" patients in the emergency room (ER) setting, across four centers. Importantly, neither the ER doctors nor expert panel had access to the Isabel system during the trial. The ER doctors evaluated each patient and delivered the symptoms to an independent clinical administrator, who exclusively used the Isabel system. This removed any possibility the Isabel results could bias the final patient discharge records. The administrator then provided the list of symptoms to the expert panel.

"Clinicians have been awaiting strong evidence demonstrating a diagnosis reminder system's effectiveness in adults," said Dr. Ramnarayan, Pediatric Critical Care Attending Physician at Children's

Acute Transport Service. “This ER study raises the bar by evaluating a decision support system against the most rigorous endpoints possible—discharge records collected after extensive medical testing, and an independent body of experts unconstrained by time or other clinical pressures. The study’s implications are clear: when used in conjunction with a doctor’s superior interpretive reasoning skills, Isabel represents an important tool in the fight against misdiagnosis.”

The *Emergency Medical Journal* builds upon important previous Isabel studies. Recent peer-reviewed data presented at the American Medical Informatics conference suggest that in ten percent of cases, Isabel’s technology led physicians to consider a major diagnosis they had not yet identified. This illustrates the system’s additive benefit. Additionally, a 2003 peer-review study in *Archives of Disease in Childhood* shows that Isabel displayed the accurate, final diagnosis in 95 percent of real pediatric cases.

The Problem of Misdiagnosis

It is estimated that one in 20 patient deaths in hospitals are a result of misdiagnosed illnesses. Furthermore, about one in six patients personally experience a misdiagnosis during their lifetime. This typically occurs due to the cognitive error of premature closure – failure to consider all likely diagnoses. The ER is a particularly high-risk setting, with contributing factors large patient volumes and the pressures of lengthy work shifts. Isabel is now further validated to help physicians make effective adult diagnoses at the point of care.

“As a former ER physician, I know firsthand that it is the most challenging environment to make accurate diagnoses,” said Joseph Britto, M.D., co-founder and chief executive officer of Isabel Healthcare. “By demonstrating superior effectiveness in this difficult setting, Isabel is proven to help clinicians nationwide as we collectively work toward our ultimate goal—eradicating misdiagnosis as a serious medial epidemic.”

About the Isabel Diagnosis Support System

The Isabel system allows physicians to analyze patient symptoms and clinical features. In a split second at the point of care, Isabel addresses the question clinicians frequently ask themselves: What are the diagnoses I should be considering? Isabel acts as an instant reminder system and aids the diagnosis process, however, it is up to the provider’s clinical judgment to determine which diagnoses to investigate and treat.

About Isabel Healthcare

Isabel Healthcare, founded in 2000 by Jason Maude and Dr. Joseph Britto, is named after Maude's daughter who almost died after a potentially fatal illness was not recognized by family and emergency room physicians. The Isabel system is comprised of two components: the Isabel Diagnosis Reminder System (IDRS) and the Isabel Knowledge Mobilizing System (IKMS). Given a patient's clinical features, Isabel searches a database of more than 11,000 diagnoses and 4,000 drugs to provide clinicians with a checklist of likely diagnoses and/or drugs that may be causing a patient's symptoms, as well as additional disease specific knowledge. The Isabel system, validated in clinical trials, is designed to improve the quality of diagnosis decision making at the point of care. For more information, please visit <http://www.isabelhealthcare.com>.

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