

Project Title: Improving Quality through Health Information Technology: Testing the Feasibility and Assessing the Impact of Using Existing Health Information Technology Infrastructure for Better Care Delivery

Principal Investigator: Hasnain-Wynia, Romana, Ph.D.

Organization: Health Research and Educational Trust; Northwestern University, Feinberg School of Medicine

Contract Number: 290-06-0022-3

Project Period: 09/07 - 07/09

AHRQ Funding Amount: \$393,457

Summary Status as of: December 2008

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to improve health care decisionmaking through the use of integrated data and knowledge management.

Business Goal: Synthesis and Dissemination

Summary: This contract seeks to understand how health information technology (IT) can improve access to and management of laboratory information for patients with HIV and/or in need of cervical cancer screening. The team will illustrate how health IT tools can improve compliance, efficiency, and quality of care by reducing duplicate tests and lost results, and increasing adherence to treatment follow-up guidelines. The project is developing a set of best practices to disseminate to community health centers and physician practices.

Specific Aims

- Understand how health IT can improve access to and management of lab information for patients with HIV and patients in need of cervical cancer screening. **(Ongoing)**
- Illustrate how health IT tools can improve compliance with evidence-based lab test guidelines and improve both the efficiency and quality of care by reducing the numbers of duplicate lab tests, “lost” results, and lab results without follow-up. **(Ongoing)**
- Identify how health IT can aid various types of health care practitioners in lab-related tasks. **(Ongoing)**
- Develop a set of best practices focused on how a specific set of health IT tools can be used to improve both treatment and screening (i.e., HIV treatment; cervical cancer screening and follow-up) that can be disseminated to other community health centers and physician practices. **(Ongoing)**

2008 Activities: These included getting OMB approval, collecting data, conducting a time and motion study, developing qualitative interview protocols, conducting key informant interviews with clinic staff and Alliance leadership, and analyzing data.

Preliminary Impact and Findings:

Low follow-up rates for abnormal Pap smears

Post-implementation data showed that the rate of follow-up for abnormal Pap smears is very low at both centers (<10 percent). This could be because patients go elsewhere to receive follow-up care. It would be helpful if we could quantify (at least hypothetically) how many patients go elsewhere to receive follow-up. However, documenting that follow-up rates for abnormal Paps are low is an important finding: Although we can't say that the health IT made a difference in the rate pre and post, we can say

strategically that health IT can be used to help centers identify areas for improvement. In addition, we found that decision support at the point of care needs modification (e.g., a prompt) to follow up for abnormal Pap smears.

Rate of duplicate viral load tests

The rate of duplicate tests at each center was low both pre and post implementation (<1 percent). When interpreting these results, it is important to consider that the patients seeking HIV care at these centers tend to be very aware of their status, such as when lab tests were last performed, or when they are due. Thus, ordering duplicate tests is not likely to be an issue for these centers, or one that will be notably affected by health IT implementation. Overall, these results speak to the fact that not everything requires a system prompt (and we now have data to support this). Resources are better spent on decision support for abnormal Paps than for HIV viral load testing.

Cost-effectiveness

There is variation in time spent without quantifying by staff type.

The ability to implement depends on staffing—the impact of health IT on workload productivity will vary by provider due to variability in adaptation time and other factors yet to be explored. The lesson for implementation is that the cost estimate must take staffing into account.

At the point of implementation, the burden will be heterogeneous. The team is encouraging providers to shift their focus from the “burden” of implementation to time savings that could be realized once the system is mastered by all staff.

Qualitative component

We completed 33 interviews (11 from HHO, 16 from HB, and 6 from Alliance).

Preliminary findings suggest that lab interface issues have a notable impact downstream—they affect provider satisfaction with the system. Despite staff members’ frustration, no one reported that they would rather go back to paper charts.

What staff like best about the system: they don’t have to search for charts anymore; the system facilitates communication between different providers through “flagging”; and the system facilitates communication with patients.

Selected Outputs

Manuscripts are under development, as well as an implementation handbook.