



## A Health Care Identifier for Each Patient

Testing a system of establishing voluntary patient identification across multiple health care records to improve outcomes and reduce costs

### SUMMARY

Efforts to use health information technology to improve health outcomes, reduce duplication of effort, and reduce health care costs have been hampered by the challenge of accurately establishing a patient's identity across multiple information systems.

From mid-2011 through 2012, researchers at Long Beach Network for Health (doing business as Western Health Information Network) in Long Beach, Calif., piloted the use of a unique, voluntary universal health care identifier number to link patients in a clinic with their health records. They also assessed the perceptions of clinic staff who registered patients for a card bearing this identifier, as well as the perceptions of the patients themselves.

### Key Findings

The research team reported the following findings to RWJF in 2012:

- This pilot demonstrated that use of the identifier was technically and operationally feasible.
- Staff at a single clinic issued the identifier cards to 250 patients. Some 239 of these patients asked to be enrolled as a result of “word of mouth” from other patients, indicating, to researchers, that the patients found the cards to be helpful and talked about their benefits with their friends.
- A provider survey indicated that clinic staff were “very supportive” of the project and had an above average understanding of it.
- Based on results from a patient survey, the research team believes that patients viewed the identifier system favorably.

## Funding

The Robert Wood Johnson Foundation (RWJF) supported this project through a grant of \$729,705 of which \$663,890 was disbursed because the project was terminated during the fourth quarter of the grant.

## CONTEXT

The current method for establishing patient identity—by matching demographic information from two different medical records—has an error rate of roughly 8 percent to 10 percent, leading to duplicate records, lost information, wasted time and money, and most importantly, lost lives. According to data from both the Institute of Medicine and the Joint Commission, nearly 60 percent of the almost 200,000 deaths each year due to medical errors are the result of misidentification of patients.

One potential solution is to reduce patient-identification errors through the use of a unique, voluntary universal health care identifier (with corresponding identification cards issued to patients) linked directly to all of the patient's health records. The identifier offers two advantages:

- Since it is integrated with the health information exchanges and regional health information organizations, it permits full identification and information-linkage capabilities while resulting in data flows that do not further the creation of any centralized repository containing patient-identity, demographic, or clinical information.
- Because it is a voluntary system, anyone who believes the risks outweigh the benefits may decline to participate.

With the passage of the Health Insurance Portability and Accountability Act (HIPAA) in 1996, Congress acknowledged the benefits of a unique identifier by requiring the creation of a national health care identification system. Two years later, however, it passed another law delaying implementation of the national system until privacy and technology concerns could be resolved.

With the 2010 passage of the Patient Protection and Affordable Care Act, which establishes several programs that require the coordination of care provided by multiple clinicians and provider organizations, the need to publicly resolve these issues is even more important.

## RWJF's Interest in This Area

RWJF's Pioneer Portfolio focuses on the future, seeking breakthroughs with the potential to generate health and social impact. Program staff realized that in spite of significant investments to develop reliable matching algorithms, there has been little progress in

reliably identifying patients across the health care system. A voluntary universal health care identifier seemed to Pioneer Portfolio program staff to be an innovative way to accomplish this while still considering issues of patient privacy and confidentiality.

## THE PROJECT

Under this grant, the research team tested the operational and technical feasibility of using a voluntary universal health care identifier card. They also assessed the perceptions of clinic staff who registered patients for the card, as well as the perceptions of the patients themselves.

The research team enlisted three health care provider organizations to participate in the project. Shortly after the work began, however, the team dropped two of the organizations after determining that only one—Community Health Alliance of Pasadena, a nonprofit community health center in Pasadena, Calif.—had sufficient technology capabilities to participate.

The team:

- Developed software
- With the help of a user’s guide (see the [Bibliography](#) for details), trained staff in one of the provider’s clinics in using the software to both issue the identifier cards to patients and to collect data regarding adoption and use of the card.
- Surveyed and interviewed clinic staff
- Used the responses from clinic staff to streamline the patient registration process and assess provider perceptions regarding the project
- Conducted surveys with patients to assess their perceptions

To accomplish these tasks, the research team worked with the following subcontractors:

- [Global Patient Identifiers](#)—project development and analysis, issuance of unique identifiers
- [HIT Associates](#)—project development and analysis
- [IBM](#)—software development
- [Smooth Presence](#)—software development and website hosting

## Challenges

The research team originally planned to implement and test the feasibility of the identifier system with 1,000 patients, and then use the technology and lessons learned to rapidly expand the use of the identifier cards, while concurrently measuring the value of the

cards (in terms of organizational cost and health care quality) for patients and care delivery organizations.

However, technical issues delayed the project by more than 12 weeks, and financial difficulties within the grantee organization caused the project to shut down one month early. Due to these challenges, the team:

- Reduced the size of the patient sample by 75 percent
- Abandoned plans to expand use of the identifier cards and document changes in cost and health care quality
- Only tested the card in one clinic, rather than testing its use across multiple information systems

## FINDINGS

The research team reported the following findings to RWJF:

- **This pilot demonstrated that use of the identifier was technically and operationally feasible.** The test, however, was limited to patients of a single provider clinic, not multiple providers or multiple sites of a single provider.
- **Clinic staff issued the identifier cards to 250 patients.** Some 239 of them asked to be enrolled as a result of “word of mouth” from other patients, indicating, according to researchers, that the patients found the cards to be helpful and talked about their benefits with their friends.
- **Data gathered from providers—through personal interviews and a survey—indicated that clinic staff were very supportive of the project and had an above-average understanding of it.**
- **Based on results from a patient survey, the research team believes that patients viewed the identifier system favorably.** In the survey—which used a 1 to 5 scale where 1 is the highest rating—the average patient rating for the registration process was 2, and the average self-reported rating of the patients’ understanding of the identifier card system was 1. Patient acceptance of the identification cards was not an issue.
- **The project was terminated too early to assess its favorable impact on the quality of medical care or the reduction in rates of medical errors.**

## LESSONS LEARNED

1. **A large percentage of provider organizations lack sufficient technology capabilities to incorporate an identifier into their procedures.** This shortfall is a barrier both to future studies and implementation. Yet, ongoing federal efforts such as

the Affordable Care Act and the Nationwide Health Information Network continue to increase the penetration of technology into provider organizations, added Barry Hieb, MD, chief scientist of Global Patient Identifiers, one of the subcontractors.

## **AFTERWARD**

The project ended with this grant. Global Patient Identifiers plans to discuss with the pilot provider clinic an expansion of their patient identifier card enrollment in order to assess changes in organizational cost and health care quality, which was left undone under this grant. It has held similar discussions with three health information exchanges.

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## **BIBLIOGRAPHY**

*(Current as of date of the report; as provided by the grantee organization; not verified by RWJF; items not available from RWJF.)*

### **Education or Toolkit**

*The VUHID User's Guide.* Tucson, AZ: Global Patient Identifiers, 2012.