USDA United States Department of Agriculture
Food and Nutrition Service

USE OF BIOMETRIC IDENTIFICATION TECHNOLOGY TO REDUCE FRAUD IN THE FOOD STAMP PROGRAM: FINAL REPORT

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Summary

Biometric identification technology provides automated methods to identify a person based on physical characteristics—such as fingerprints, hand shape, and characteristics of the eyes and face—as well as behavioral characteristics—including signatures and voice patterns. Although used in law enforcement and defense for several years, it has recently been used in civilian applications and shows some promise to reduce the number of duplicate cases in the Food Stamp Program (FSP) and other assistance programs

Biometric identification systems are currently operational at some level in Arizona, California (under county initiative, first by Los Angeles County), Connecticut, Illinois, Massachusetts, New Jersey, New York, and Texas. Finger imaging is the principal form of technology used in all eight States, though alternative technologies have simultaneously undergone trials in Massachusetts (facial recognition) and Illinois (retinal scanning). By the end of 2000, new systems are expected to be in place in California (statewide unified system), Delaware, and North Carolina. Other States are currently in the initial planning stages, including Florida, Maryland, Michigan, Mississippi, Pennsylvania, and South Carolina. However, there is little information available at this point regarding the specific course and trajectory these States will follow in terms of system types, implementation schedules, and the benefit programs in which they will implement the new requirement.

This report provides an overview of the experience of nine States with biometric identification technologies as of September 1999 and discusses some of the major policy and operational issues encountered during implementation and testing. The report also synthesizes available information on the effectiveness of the technology in reducing duplicate participation and provides a discussion of measurement complexities and issues on the horizon as use of the technology continues to expand. A companion report contains an overview of biometric identification technology, examining the functional capabilities, performance, and applications of the various technologies with a particular focus on finger imaging, the most commonly used and well known.

Telephone interviews of 1-2 hours in duration were conducted in May-June 1998 with representatives of human service agencies in Arizona, California, Connecticut, Illinois, Massachusetts, New Jersey, New York, and Pennsylvania. As part of an earlier task of this study, we conducted site visits to San Antonio, Texas to observe the Lone Star Image System (LSIS) demonstration and to interview State and county agency staff. Information on Texas is based on those visits and interviews. The States interviewed, with the exception of Pennsylvania, have installed biometric identification systems and are requiring applicants to federal and State benefit programs to submit to the new procedures during the eligibility determination process.

The purpose of the interviews was to explore State experiences with biometric identification systems, including factors in the decision-making and planning processes, the dynamics of system start-up and implementation, issues and problems related to system and agency operations, and perceptions regarding the impact of biometric identification procedures on the application and eligibility determination processes. Each of the States participating in the study was asked to provide a description of the critical early events that occurred during the planning phases of their respective projects. In addition, those States that had already implemented systems were asked to describe their implementation experiences.

Results of State Interviews

When finger-imaging technology was first applied to reduce multiple participation fraud in assistance programs, there were many concerns about the performance and reliability of the technology in a social service application, as well as about the potential stigma that a finger-image requirement would place on potential clients. The experience of the eight States that have incorporated finger imaging into the process of applying for welfare assistance suggests that many of these fears were unfounded. Finger imaging has been readily integrated into the human services programs of the affected states. However, despite the positive reaction to finger imaging from the State officials we interviewed, there is still uncertainty regarding the extent to which this technology can reduce multiple participation fraud.

The States planned for implementation of their biometric identification systems in response to a wide variety of factors and considerations idiosyncratic to each State environment. Some States reported that their respective legislative mandates, which prescribed specific dates by which biometric systems were required to be in place, allowed insufficient time for development and planning. The States developed and followed implementation schedules in accordance with internal priorities and considerations. The States uniformly described their implementation processes as largely uneventful, though they encountered a variety of minor implementation issues, most of which were associated with the logistical difficulties of mobilizing and managing such a complex initiative.

Preparing staff for the implementation of the biometric systems, both philosophically and operationally, took different forms, priorities, and levels of effort in the States. At implementation, advance notification to clients and/or the general public about new biometric client identification procedures was considered important by all State representatives. The objective of providing advance notification was to inform and prepare clients for the additional application or recertification step (i.e., to explain the requirement and who is required to submit, and to address client concerns), as well as to accelerate enrollment of the existing caseload. All States prepared informational mailings to clients advising them of the new requirement. Some States reported developing additional outreach media including multilingual (English and Spanish) videos, posters, and brochures for viewing and distribution in the local office. Most of the States also identified various outlets in the community through which they informed the general public in advance about the implementation of biometric client identification procedures.

The States with operating systems reported that implementation of new biometric client identification procedures had a negligible impact on operations at the local office level. In general, States also reported that the problems and obstacles encountered in operating their respective projects are not unlike those encountered in demonstrating any new technology or procedural modification. These States also reported that their systems and procedures were implemented without unexpected difficulty and were rapidly institutionalized. All the States confronted a range of basic physical space and logistical issues, including where to situate the new equipment, how to appropriately alter job descriptions, who to reassign or hire to handle the new procedures, and how to adjust the flow of clients and paperwork most efficiently. However, none reported any particularly noteworthy difficulties. States reported that clients have been cooperative and accepting of the technology.

Finger Imaging and Fraud Reduction

Assessing the ability of finger imaging to reduce fraud is difficult because the amount of fraud caused by duplicate participation in welfare programs is unknown, and because changes in caseload after the introduction of finger imaging cannot be interpreted unambiguously as reduction of fraud. The evaluations of finger imaging systems conducted by six States have produced the following findings.

A small number of duplicate applications (approximately 1 duplicate for every 5,000 cases) have been detected by finger imaging systems. Finger-imaging systems appear to detect more fraud in statewide implementations than in regional pilot systems. Additional matches have been found by interstate comparisons of finger-image data.

Institution of a finger-imaging requirement can produce a significant, short-term reduction in caseload, because some existing clients refuse to comply with the requirement. The number of refusals depends on the implementation procedures and appears to be lower when finger imaging is incorporated into the recertification process.

The most carefully controlled estimate of non-compliance among existing clients suggests that introduction of a finger-imaging requirement reduces participation by approximately 1.3%. However, this estimate reflects both reduced fraud and deterrence of eligible individuals and households.

Finger Imaging as a Deterrent to Legitimate Participants

Clients do have some concerns about finger imaging. Roughly 15% expressed concerns in the State surveys and interviews conducted to evaluate finger-imaging programs. These concerns center on issues of privacy, unjust treatment of poor people, inconvenience, and fear of interagency sharing.
There is little data on which to estimate the size of the deterrence effect. Based on the results from client surveys in five States, a substantial majority of clients had no objection to finger imaging and thought it was a good idea.

There was little evidence that clients discontinued benefits because they were intimidated by the finger-image requirement. Interviews with former clients in Texas found that only two of the 78 former food stamp recipients (both of whom had refused to be imaged) attributed their loss of benefits to finger imaging. Similar interviews in Los Angeles County found that, of those former clients interviewed, no one who refused to be finger imaged expressed a concern with the process.

Cost and Effectiveness of Finger Imaging

Since there is no reliable estimate of the magnitude of duplicate participation in the FSP, there is uncertainty regarding the cost effectiveness of finger imaging. Available data are inadequate to make precise estimates of either the costs or benefits of finger imaging for the FSP. Calculations using the data that are available, supplemented by a number of assumptions, suggest that reduction in caseload covers the costs of finger imaging technology. However, the percentage of the caseload reduction due to decreased multiple participation is unclear.
The analysis makes no assumption about how costs or benefits are allocated among Federal or State agencies. In addition, it does not include the cost required to modify existing software to make it compatible with the finger-imaging system. Finally, it does not take into account that certain cost elements, such as the cost for infrastructure or centralized equipment, may be independent of caseload fluctuation.