

Lone Star Image System Evaluation

Final Report

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Table of Contents

List of Tables	iii
List of Figures	iii
Acknowledgments.....	v
Executive Summary	vii
1. Background and Project Overview	1
1.1 Background	1
1.1.1 Emergence of Biometrics as a Fraud Detection Tool	1
1.1.2 Fraud Detection Practices in Texas.....	2
1.2 Project Overview	3
1.2.1 LSIS Demonstration.....	3
1.2.2 LSIS Evaluation	4
1.3 Organization of Report	4
2. Impact Evaluation	5
2.1 Research Questions	5
2.2 Methodological Approaches	5
2.2.1 Statistical Methods.....	6
2.2.2 Interviews with Former Recipients.....	6
2.2.3 Time Periods Covered by this Analysis	7
2.2.4 Limitations of this Analysis	7
2.3 Estimated Statistical Impacts of the Demonstration	7
2.3.1 Effect on Caseload Flows	7
2.3.1.1 Food Stamps.....	7
2.3.1.2 AFDC	10
2.3.2 Effect on Size of Caseload	12
2.3.2.1 Food Stamps.....	12
2.3.2.2 AFDC	13
2.4 Perceptions of Public Assistance Recipients	15
2.4.1 Exits from Public Assistance	15
2.4.1.1 Food Stamp Exits.....	15
2.4.1.2 AFDC Exits.....	17
2.4.2 Receptivity to Electronic Imaging	18
2.4.3 Incidence of Fraud and Abuse	19
2.4.3.1 Food Stamps.....	20
2.4.3.2 AFDC	21
2.4.4 Other Client Observations.....	21
2.5 Summary of Impact Findings.....	22
2.5.1 Statistical Results	22
2.5.2 Participant Perceptions.....	23

3. Cost Analysis	25
3.1 Research Questions.....	25
3.2 Methodological Approaches	25
3.2.1 Time Frames.....	26
3.2.2 Limitations of the Cost Report.....	26
3.3 Demonstration Cost Findings	28
3.3.1 Total LSIS Demonstration Costs	28
3.3.2 Benefit Payment Savings	28
3.3.3 Net Operating Loss from the LSIS Demonstration.....	30
3.3.4 Effects of LSIS on Distribution of Federal/State Expenditures.....	30
3.3.4.1 Effects at the State Level	30
3.3.4.2 Effects in the Demonstration Counties	30
3.4 Summary of Cost Findings	32
4. Conclusions.....	33

Appendix A: Methodological Approaches

Appendix B: Detailed Impact Statistical Results

List of Tables

Table 1	Types of Fraud in Texas Public Assistance Programs 1995-1997.....	3
Table 2	Summary of Net Effects of LSIS on Food Stamp Client Flows	9
Table 3	Summary of Net Effects of Pilot on AFDC Client Flows.....	11
Table 4	Food Stamps Caseload Adjusted Net Effect Using Demographically Adjusted and Bias-Compensated Estimation Procedure.....	13
Table 5	AFDC Caseload Adjusted Net Effect	15
Table 6	Client Awareness of Food Stamp Fraud and Abuse	20
Table 7	Client Awareness of AFDC Fraud and Abuse	20
Table 8	Total LSIS Demonstration Costs: July 1996 through May 1997.....	29
Table 9	Direct Effects of Changes in Federal and State Expenditures in the Demonstration Counties.....	31

List of Figures

Figure 1	Food Stamps Case-Flow Diagram.....	8
Figure 2	AFDC Case-Flow Diagram.....	10
Figure 3	Food Stamps Caseload Index Trend	12
Figure 4	AFDC Caseload Index Trend.....	14
Figure 5	Reasons for Food Stamp Exits: Demonstration and Comparison Sites	16
Figure 6	Reasons for AFDC Exits: Demonstration and Comparison Sites	18
Figure 7	Food Stamp Fraud Distribution Reported by Clients n=25	21

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Executive Summary

The Texas Department of Human Services (DHS) has been conducting a welfare reform demonstration project entitled “Lone Star Image System” in Bexar and Guadalupe counties, as required under the provisions of Texas House Bill 1863, enacted by the Texas Legislature in May 1995. This project uses electronic finger-imaging to detect and deter duplicate applications for Aid to Families with Dependent Children (AFDC) and Food Stamp benefits. DHS contracted with the Center for the Study of Human Resources of the LBJ School of Public Affairs at The University of Texas at Austin (CHR) to evaluate the impact of this demonstration on Food Stamp and AFDC caseloads and to estimate the costs and/or savings of this initiative.

Overview of the LSIS Demonstration

DHS began operating the LSIS demonstration in Bexar and Guadalupe counties in late October 1996, with pilot operations scheduled to continue through August 1997. According to the project design, all non-exempt adults, heads of households and minor parents with a dependent child who request Food Stamp or AFDC benefits must comply with an electronic finger-imaging and photographing procedure at the time of application or recertification.

DHS has contracted with North American MORPHO, Inc. to install and operate the imaging equipment in the demonstration offices. The refusal or failure of a non-exempt individual to be imaged results in denial of the application or case. If a match occurs and fraud is suspected, a referral is made to the Office of Inspector General at DHS for investigation. All ten DHS local offices that serve residents of these counties are participating in the demonstration.

Overview of the Evaluation

The evaluation of the LSIS demonstration consists of both impact and cost analyses over the first seven months of its operation. The purpose of the impact analysis is to measure the effect of the LSIS demonstration on Food Stamp and AFDC caseloads and to explain changes in the rates at which persons enter and leave the two programs. The cost analysis examines the cost features of the LSIS demonstration and the potential benefit savings resulting from the program. Findings are based on an analysis of administrative

caseload and cost data from October 1995 through May 1997, as well as interviews with Food Stamp and AFDC recipients who have recently exited from at least one of the programs.

Impact Analysis

Impact Research Questions

The objective of the LSIS pilot is to reduce duplicate receipt of Food Stamp and AFDC benefits. The research questions developed to estimate the effect of duplicate receipt of benefits on caseloads are:

1. What effect has the demonstration had on factors influencing the Food Stamp and AFDC caseload flow, especially the disposition of initial applications for benefits and recertifications?
2. What effect has the finger-imaging demonstration had on the size of the active Food Stamp and AFDC caseloads?

These questions were addressed both through the statistical analysis of Food Stamp and AFDC caseloads over time and interviews with former Food Stamp and AFDC recipients.

The statistical analysis utilized a pre-post/pilot-comparison site research design. Comparison DHS offices were selected by identifying the ‘nearest neighbor’ for each of the ten pilot offices, based on a number of variables that have been shown to affect Food Stamp and AFDC program dynamics. Both unadjusted and adjusted net effects were calculated to measure the effect of LSIS on Food Stamp and AFDC caseload flows. A dynamic simulation model was developed to estimate the effect of LSIS on the size of the caseloads.¹

CHR also interviewed randomly-selected heads of Food Stamp and AFDC cases who failed to recertify for benefits for two consecutive months prior to the interview. Face-to-face interviews were conducted with nearly 200 individuals over a four-month period from four demonstration offices and four comparison offices. Questions were asked to gather information about former recipients’ exits from public assistance and to discern

¹ While researchers used the most powerful available statistical techniques to conduct this analysis, these techniques would not account for caseload changes due to duplicate benefits occurring in other parts of the state.

any effects that electronic imaging may have had on these exits. Researchers also ascertained recipients' receptivity to imaging and their awareness of fraudulent receipt of public assistance benefits.

Key Impact Analysis Research Results

Statistical Results

The Food Stamp and AFDC caseloads in both the pilot and comparison sites were declining steadily from the beginning of the baseline period until May 1997, the last month for which data were available. A dynamic simulation model was developed to estimate how much of this decline was attributable to the LSIS demonstration. Implementation of this statistical model produced a net increase for the Food Stamp caseload of five cases out of 55,000 (0.01 percent), and a net decrease for the AFDC caseload of seven cases out of 18,486 (0.04 percent). Neither of these results was statistically significant. Thus, there is no statistical evidence that any of the observed caseload decline in Bexar and Guadalupe counties occurred because of LSIS.

The effect of LSIS was calculated for nine Food Stamp client flows and 18 AFDC flows affecting the caseloads, including changes in approval and denial status, placement in temporary hold status, or movement to and from other parts of Texas. For Food Stamps, the demonstration caused a statistically significant increase in exits from the active caseload of 1.3 percent. However, this was offset by an increase in caseload entries, many of whom were the same individuals who had exited. Thus, one effect of the demonstration was to induce temporary exits for a significant number of Food Stamp cases. The pilot also increased the flows into and out of hold status, suggesting that Food Stamp cases took longer to process as a result of the imaging requirement. This may have occurred because many Food Stamp cases included more than one adult, each of whom had to visit the DHS office to be imaged.

Of the 18 AFDC caseload flows, only one minor flow changed significantly as a result of the demonstration. The statistical analysis produced no evidence that LSIS had any effect on the major flows in and out of the AFDC caseload.

Recipient Perceptions

Clients reported that most of their exits from welfare were associated with increased earnings and income, client choice (such as missed appointments or deciding that benefits were not worth the effort) or problems with service delivery. Since considerable shares of all exits occur due to client choice or service delivery problems, additional tasks, such as requiring all adults in a household to visit the welfare office to fulfill the imaging requirement, could contribute to dips in the patterns of welfare receipt.

Biometric imaging of public assistance recipients may have three effects: imaging may deter individuals from attempting fraud by caseload duplication, detect caseload duplication by providing an identification match, or influence individuals to defect from public assistance by creating an unacceptable barrier to their continued receipt of benefits. While the interviews did not reveal any detection or deterrence due to duplicate benefits, a small subset of the interview population found imaging unacceptable or burdensome, resulting in a few of them giving up their Food Stamp benefits.

Food Stamp and AFDC recipients generally share the widespread public perception that fraud and abuse is a major problem in our welfare system. Nearly three-quarters of the respondents supported electronic imaging as a method to reduce fraud and abuse. However, only small shares of the respondents indicated first-hand knowledge of Food Stamp or AFDC fraud. At most, only one of the 36 examples of fraud of which respondents were aware may have involved duplicate benefits.

The types of fraud most commonly mentioned by respondents were unreported income, misrepresented household composition, and selling Food Stamp benefits. These are the same types of fraud regularly subject to field investigations by the Office of Inspector General at DHS and for which several automated checks are already in place. Electronic imaging would not be effective in detecting the vast majority of these types of fraud.

Cost Analysis

Cost Research Questions

The cost analysis estimated the net savings/loss from operating the LSIS demonstration, as well as the net flow of federal funds into the state of Texas and the flow

of federal and state funds into the demonstration counties as a result of LSIS. The three research questions addressed by this analysis are:

1. To what extent are the added or incremental costs of the LSIS pilot demonstration offset by savings due to reduced participation in the AFDC, Food Stamp and Medicaid programs, computed separately by program and overall?
2. To what extent are federal funds to Texas reduced as a result of LSIS pilot implementation?
3. To what extent are federal and state funds to Bexar and Guadalupe counties (the demonstration sites) reduced as a result of LSIS pilot implementation?

The cost analysis describes the costs resulting from LSIS development, implementation and operations from July 1996 through May 1997. The estimate of benefit savings is derived from the impact analysis dynamic simulation model and encompasses the first seven months of the demonstration program operation from November 1996 through May 1997.²

In addition to these three questions, the original evaluation plan called for an assessment of the costs of implementing this demonstration on a statewide basis. That research question was dropped from the analysis after the Texas Legislature authorized the implementation of biometric imaging on a statewide basis and appropriated a fixed amount of funds to accomplish this. The requisite cost data needed to estimate statewide costs were unavailable at the time this report was prepared.

Key Cost Research Results

The LSIS demonstration cost the state of Texas \$1.7 million for the first seven months of operation, and, excluding development and implementation costs, yielded a net operating loss of \$892,798. Furthermore, since LSIS yielded no net impacts on benefit payments, there was no indication, based on demonstration results, that the initiative would recoup the development and implementation costs of \$805,093.

The demonstration did increase the availability of funds at the state and regional levels. The LSIS pilot resulted in a net inflow of \$270,000 in federal funds to the state of Texas. There was also a net inflow of \$305,734 in state and federal funds to the

² The cost analysis has several limitations, foremost among which are problems relating to data availability. A detailed discussion of limitations is included in the full report.

demonstration counties, resulting in a total positive long-term impact—including economic multiplier effects—of \$859,357 for the economies of these counties. Thus, the demonstration provided some benefit at the regional level by increasing temporary employment opportunities.

Conclusions

In the LSIS demonstration, electronic imaging has failed to produce the expected effects. The demonstration has not reduced caseloads significantly by detecting or deterring duplicate benefits. Instead, it appears to have induced some temporary exits among Food Stamp recipients for whom the process of getting Food Stamps has become more difficult due to the need to have all adults on a case report to a DHS office for imaging. The LSIS demonstration cost the state of Texas \$1.7 million for the first seven months of operation and yielded no savings in benefit payments.

1. Background and Project Overview

The Texas Department of Human Services (DHS) has been conducting a welfare reform demonstration project entitled “Lone Star Image System” in Bexar and Guadalupe counties, as required under the provisions of Texas House Bill 1863, enacted by the Texas Legislature in May 1995. This project uses electronic finger imaging to detect and deter duplicate applications for Aid to Families with Dependent Children (AFDC) and Food Stamp benefits. DHS contracted with the Center for the Study of Human Resources of the LBJ School of Public Affairs at The University of Texas at Austin (CHR) to evaluate the impact of this demonstration on Food Stamp and AFDC caseloads and to estimate the costs and/or savings of this initiative.

1.1 Background

1.1.1 Emergence of Biometrics as a Fraud Detection Tool

There has been a growing public concern that public assistance recipients may be receiving benefits to which they are not entitled. Administrators of public assistance programs traditionally have used a variety of techniques to detect and deter fraud. In the past few years, several localities across the United States have begun experimenting with the use of biometric imaging to detect and deter the duplicate receipt of benefits.³ Los Angeles County’s Automated Fingerprint Image Reporting and Match System (AFIRM), which began using automated biometric imaging for AFDC recipients in 1994, projected savings of \$51 million in the AFDC program alone over a 30-month period. While evaluation findings are not yet available from New York City, which began its operations in Fiscal Year (FY) 1996, officials there expected a \$58 million dollar savings in a single fiscal year.

Based on the projected savings of these early initiatives, in 1995, the Texas Comptroller of Public Accounts recommended that DHS adopt electronic imaging technology in the state’s public assistance programs.⁴ This recommendation was incorporated into House Bill 1863, in which the Texas Legislature instructed DHS to

³ Biometric imaging can include photo and/or finger-imaging.

⁴ Texas Comptroller of Public Accounts. January 1995. *A Partnership for Independence: Public Assistance Reform Options*.

implement an electronic imaging system in two or more counties to test the effectiveness of the system in preventing welfare fraud and duplicate program participation.⁵ The Comptroller's report estimated that first year total net savings in a single county (Harris) could save over one million dollars the first year and close to two million dollars in each successive year with an electronic imaging system built off of the existing Department of Public Safety System.⁶

Despite growing support for the use of electronic imaging technology across Texas and other states, the following factors may reduce the level of benefit savings that Texas can expect to realize from the use of this technology:

- Texas AFDC payments are among the lowest in the nation. Maximum AFDC benefits for a 3-person family in Texas are \$188, compared to nearly \$700 in California and a national average of \$363. AFDC-related benefits deterred or denied through imaging therefore would be much smaller than in states with higher benefit levels.
- Some of the benefit savings attributed to electronic imaging in the early initiatives may have been caused by factors other than imaging. Rather than attempt to sort out the reasons for the declines in caseload, all such caseload declines and resulting benefit savings in these studies were attributed to imaging.⁷
- Texas was aggressively pursuing the detection of fraud in its public assistance programs *prior* to the implementation of this demonstration project. Such existing efforts will be discussed briefly below.

1.1.2 Fraud Detection Practices in Texas

A number of procedures currently are used to monitor fraudulent practices in Texas public assistance programs, including case readings, home visits, and cross-referencing Social Security numbers within the DHS database. In addition, DHS client records are regularly "matched" against several other Texas databases to detect fraud, including Unemployment Insurance wage data, criminal justice records, health data and financial records. According to the DHS Office of Inspector General (OIG), most fraud determinations do not involve receipt of duplicate benefits. Table 1 reports the types and

⁵ DHS. March 1996. "Advance Planning Document for Lone Star Image System."

⁶ Op. Cit., Texas Comptroller of Public Accounts, pp. 169-197.

⁷ Council of Economic Advisors. May 1997. *CEA Technical Report: Explaining the Decline in Welfare Receipt, 1993-1996*. This study found that 40 percent of recent public assistance caseload decline was attributable to economic growth.

dollar amounts of fraud that were uncovered from September 1995 through July 1997. Duplicate caseloads are included in the “Other” category, which accounts for less than 4 percent of fraud determinations. Electronic imaging would be ineffective in detecting or deterring most types of known fraud.

Table 1
Types of Fraud in Texas Public Assistance Programs
1995-1997

Kind of Fraud	Dollar Amount Lost	Occurrences		Detection/ Deterrent Effect of Imaging
		Number	Percent	
Failure to Report Income	\$ 33,739,987	17,169	81.9	None
Failure to Report Resources	3,276,380	691	3.3	None
Household Composition	2,379,061	524	2.5	Limited
Man in the House	1,305,420	165	0.8	None
Multiple Issuance of ATP's/IVC	784,315	1,516	7.2	N/A ⁸
Unreported Child Support	285,950	84	0.4	None
Other	1,504,849	826	3.9	Limited

Source: Texas DHS Office of Inspector General

Although the OIG has not identified duplication of benefits *within* Texas as a major source of fraud, there is some evidence that some persons may be receiving benefits in more than one state. Texas is beginning to match public assistance records with those of bordering states to detect individuals who are receiving benefits in other states. A single match with Oklahoma in April 1997 revealed 605 Texas clients who may be receiving benefits in both states.⁹ The adoption of biometric imaging in Texas alone would not address interstate duplication.

1.2 Project Overview

1.2.1 LSIS Demonstration

DHS began operating the LSIS demonstration in Bexar and Guadalupe counties in late October 1996, with pilot operations scheduled to continue through August 1997.

⁸ Multiple Issuance of ATP's/IVC is no longer used because of Electronic Benefits Transfer (EBT).

⁹ DHS staff, August 1997.

According to the project design, all non-exempt adults, heads of household and minor parents with a dependent child who request Food Stamp or AFDC benefits must comply with an electronic finger-imaging and photographing procedure at the time of application or recertification.¹⁰

DHS has contracted with North American MORPHO, Inc. to install and operate the imaging equipment in the demonstration offices. The refusal or failure of a required individual to be imaged results in denial of the application or case. If a match occurs and fraud is suspected, a referral is made to the OIG at DHS for investigation. All ten DHS offices that serve residents of these counties are participating in the demonstration.

1.2.2 LSIS Evaluation

The evaluation of the LSIS demonstration consists of both impact and cost analyses over the first seven months of its operation. Although the original evaluation plan also called for an assessment of the costs of implementing this demonstration on a statewide basis, that research question was dropped from the analysis.¹¹ This report's findings are based on an analysis of administrative caseload and cost data from October 1995 through May 1997, as well as interviews with Food Stamp and AFDC recipients.

1.3 Organization of Report

This report is organized into three major sections and two appendices. The first section discusses the project's background and gives an overview of the demonstration and its evaluation. Sections two and three present findings from the impact and cost analyses, respectively, and discuss the policy implications of these findings. Appendix A includes detailed descriptions of the methodologies used in this research, while Appendix B contains detailed statistical results from the impact analysis.

¹⁰ Persons may be exempted from this requirement for the following reasons: religious objections, being certified outside of a DHS office, physical inability to be imaged, or equipment failure.

¹¹ The Texas Legislature authorized the implementation of biometric imaging on a statewide basis and appropriated a fixed amount of funds to accomplish this in May 1997. The requisite cost data needed to estimate statewide costs were unavailable at the time this report was prepared.

2. Impact Evaluation

The purpose of the impact evaluation is to measure the effect of the LSIS demonstration on Food Stamp and AFDC caseloads. While the major portion of this analysis is statistical in nature, interviews with former Food Stamp and AFDC recipients augment the findings from the statistical analysis. Results from both portions of the impact analysis are presented below.

2.1 Research Questions

The objective of the LSIS pilot is to reduce duplicate receipt of Food Stamp and AFDC benefits. Such duplication cannot be observed directly because some persons will not apply or reapply for benefits if they realize that they might be detected. Therefore, a number of measurable and observable manifestations must be used to estimate fraud of this type. The research questions developed to estimate the effect of duplicate receipt of benefits on caseloads are:

1. What effect has the demonstration had on factors influencing the Food Stamp and AFDC caseload flow, especially the disposition of initial applications for benefits and recertifications?
2. What effect has the finger-imaging demonstration had on the size of the active Food Stamp and AFDC caseloads?

2.2 Methodological Approaches¹²

The impact analysis utilizes a pre-post/pilot-comparison site research design. Comparison DHS offices were selected by identifying the 'nearest neighbor' for each of the ten pilot offices, based on a number of variables that have been shown to affect Food Stamp and AFDC program dynamics. Certain offices were excluded from consideration as comparison sites if they were likely to be affected by state or federal welfare reform legislation in ways dissimilar to Bexar or Guadalupe counties.

¹² For a more complete description of the methodologies used for the impact analysis, see Appendix A.

2.2.1 Statistical Methods

Several statistical methods were used to interpret the available caseload and demographic data. First, differences between the baseline and pilot periods and the pilot and comparison sites, known as *unadjusted net effects*, were calculated for a number of variables describing Food Stamp and AFDC caseload flow. These variables include: movement between approved or denied applications for benefits or those placed in hold status while awaiting further documentation, and moves into or from other DHS offices throughout the state. For most measures, regression analysis also was used to adjust the unadjusted net effects for any remaining confounding effects between the pilot and comparison offices, thus producing *adjusted net effects*.

To estimate the effect of LSIS on the size of the Food Stamp and AFDC caseloads over time, demographically-adjusted simulated pilot site LSIS caseloads were compared to simulated non-LSIS pilot site caseloads. A dynamic simulation model was developed to project these simulated caseloads based on the actual beginning caseload at the end of the baseline period and estimated demographically-adjusted inflow and outflow rates. The estimated differences between the LSIS and non-LSIS simulated caseloads in the pilot site were used to compute the adjusted net effects on caseloads.¹³

2.2.2 Interviews with Former Recipients

Researchers interviewed randomly selected heads of Food Stamp or AFDC caseloads who failed to recertify for benefits for two consecutive months prior to the interview. Samples were drawn from four demonstration offices in Bexar and Guadalupe counties and from four comparison offices in non-demonstration counties. Face-to-face interviews were conducted with a total of 196 individuals over a four-month period. Questions were asked to gather information about their experiences with and exits from public assistance, and to discern any effects electronic imaging may have had on these events. The interviews provided contextual data to help explain the influences of the LSIS demonstration on client behavior that may have resulted in caseload changes. Researchers also ascertained recipients' receptivity to imaging and their awareness of fraudulent receipt of public assistance benefits.

¹³ The need to use simulated instead of actual caseloads to perform this net effect computation is explained in Appendix A.

2.2.3 Time Periods Covered by this Analysis

The period of study for the impact analysis includes the first seven months during which public assistance applicants were imaged (October 24, 1996 through May 23, 1997) and a comparable seven-month baseline period prior to the beginning of the project (October 24, 1995 through May 23, 1996). Participant interviews were conducted with randomly-selected heads of Food Stamp or AFDC caseloads who failed to recertify for benefits between November 1996 and January 1997.

2.2.4 Limitations of this Analysis

While the statistical procedures applied were the most powerful that could be adopted to answer the research questions, the following factors may limit the completeness of this analysis:

1. The effect of the pilot may be smaller than the effect resulting from statewide implementation because duplicate recipients in the pilot offices could have their duplicate accounts located in counties outside the pilot area.
2. While appropriate statistical procedures were used to select DHS offices for the comparison sites that were most similar to the demonstration offices, differences between the offices will invariably remain that could have an effect on changes in client caseloads.

2.3 Estimated Statistical Impacts of the Demonstration

2.3.1 Effect on Caseload Flows

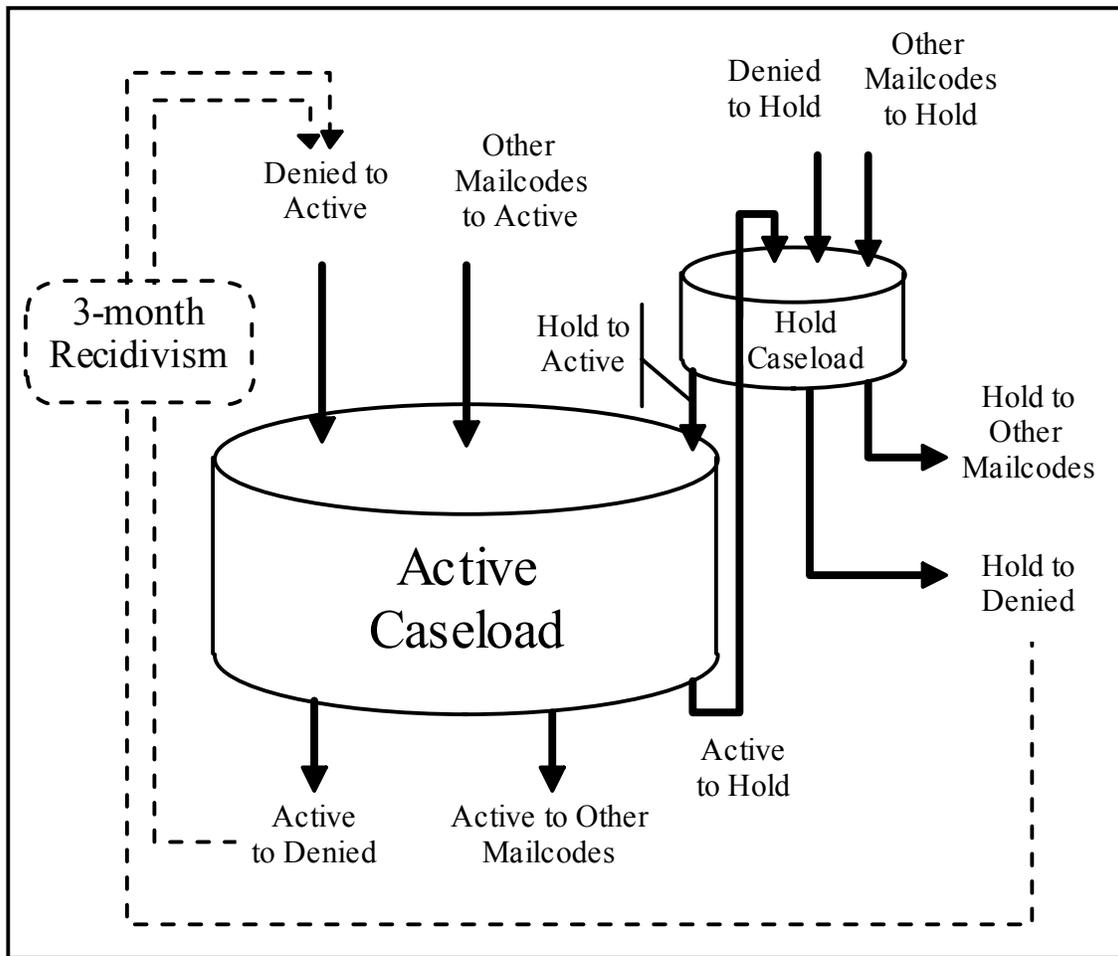
2.3.1.1 Food Stamps

To determine the effects of the LSIS demonstration on factors influencing the caseloads, it is necessary to understand that, in any given month, a case can be in one of several statuses. For Food Stamps cases, possible statuses include: 1) *active*, meaning that benefits were received for that month; 2) *on hold*, representing cases for which benefits were temporarily suspended; 3) *denied*, for cases not currently receiving assistance; or 4) *in another mail code*, for cases receiving benefits elsewhere in Texas, but not in a pilot or comparison office.¹⁴

¹⁴ See Appendix A for a complete description of the case-flow models.

Case-flow models were created by a series of algorithms that detect whether and how the status of individual cases change from one month to the next. For example, a Food Stamps case that is active in one month could be in one of four statuses in the following month: 1) remain active; 2) be placed on hold; 3) be denied; or 4) be transferred to another office. The case-flow diagram in Figure 1 illustrates the different statuses and the paths by which cases can move between them.

Figure 1
Food Stamps Case-Flow Diagram



The unadjusted net effect of the demonstration was calculated for each of these flows. When possible from the available data, these net effects were adjusted to account for differing demographic characteristics of recipients at each office. Table 2 summarizes

the estimated net effects of the demonstration on Food Stamp client flows.¹⁵

From Table 2, it may be observed that the pilot caused a significant increase (1.3 percent) in exits from the active caseload to denied status. This increase in exits is one of the expected outcomes of the pilot. However, the increase in exits was offset by an increase in entries. An analysis of recidivism suggests that much of the increase in the denied-to-active flow may be attributed to the same individual cases that caused the increased flow from active-to-denied.¹⁶ It appears that one effect of the demonstration was to cause temporary exits for a number of Food Stamp cases; after a month or two, however, many of these households returned to the rolls.

Table 2
Summary of Net Effects of LSIS on Food Stamp Client Flows

Flow	Adjusted or Unadjusted	Net Effect of Pilot (Percent change in case flow)
Denied-to-Active	Unadjusted	10.93
Denied-to-Hold	Unadjusted	-3.48
Other Mail Codes-to-Active	Unadjusted	-1.36
Active-to-Denied	Adjusted	1.32*
Active-to-Hold	Adjusted	-0.13*
Active-to-Other Mail Codes	Adjusted	-0.17*
Hold-to-Active	Adjusted	-3.67*
Hold-to-Denied	Adjusted	3.70*
Hold-to-Other Mail Codes	Adjusted	-0.015

Source: Appendix B, Tables B-1 and B-3

Note: *Indicates statistical significance at the .01 confidence level.

The pilot also induced significant changes in the number of cases flowing into and out of Hold status. Significantly increased flow rates occurred for hold-to-denied, while active-to-hold and hold-to-active decreased significantly. These effects suggest that Food Stamp cases took longer to process due to the finger-imaging requirement. This could have been caused by the provision requiring all adults on a Food Stamp case to report to a local DHS office for electronic imaging.

Finally, the results indicate that persons did not move away from Bexar or

¹⁵ Complete calculations may be found in Appendix B, Tables B-1 and B-3.

¹⁶ 'Denied' includes all cases not currently receiving assistance. See Appendix A for a complete description of the case-flow models.

Guadalupe counties to avoid imaging. In fact, significantly fewer persons moved away from these counties in the demonstration period than expected.

2.3.1.2 AFDC

While the flows in and out of the AFDC caseload are similar to those for Food Stamps, modeling these flows is more complex due to the possibility of an AFDC case receiving *medical assistance only (MAO)*. MAO cases are active AFDC cases, but are modeled separately from other AFDC cases because they do not receive cash benefits. The resulting case flow model is displayed in Figure 2.

Figure 2
AFDC Case-Flow Diagram

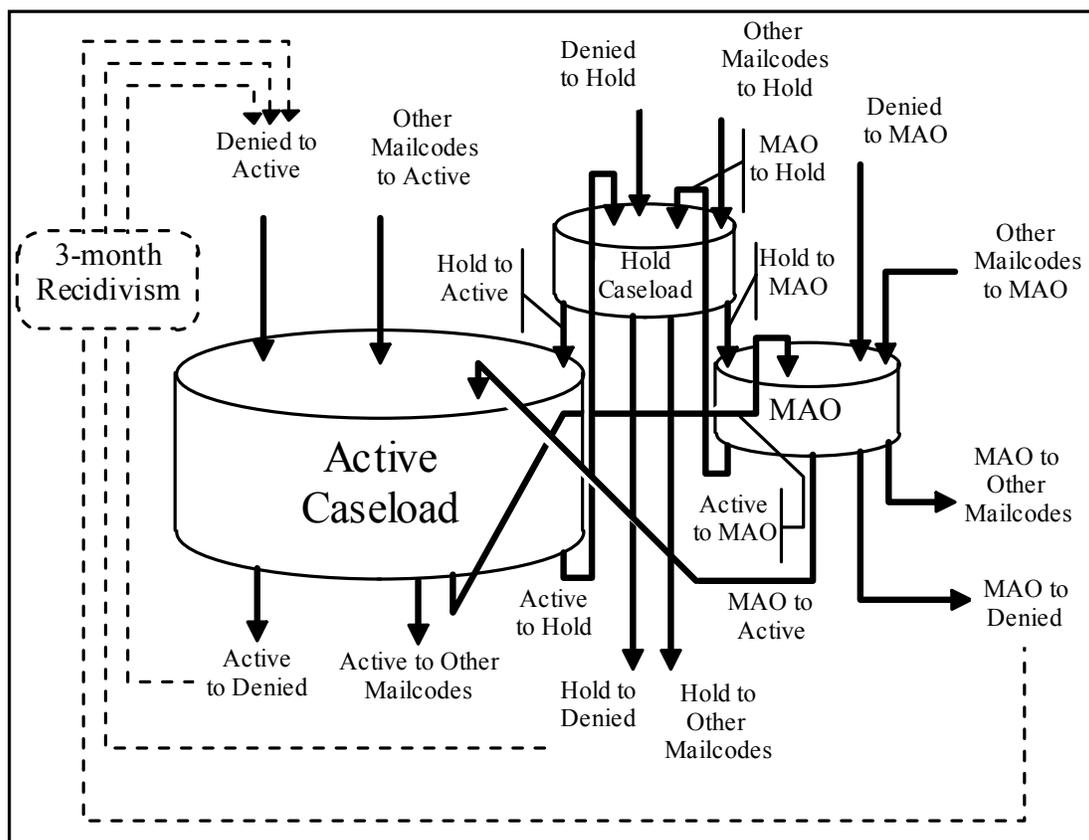


Table 3 summarizes the estimated net effects of the pilot on AFDC client flows.¹⁷

¹⁷ Complete calculations are contained in Appendix B, Tables B-2 and B-4.

Only one of the net impact estimates for AFDC flows was statistically significant, and it was associated with one of the minor flows. There is no statistical evidence that LSIS had any effect on the major flows into and out of the active AFDC caseload. Some possible reasons for the difference between Food Stamp and AFDC flows may be a more compelling need for public assistance on the part of AFDC clients compared to Food Stamp clients, or the fact that most AFDC cases had only one adult who needed to visit the DHS office to be imaged.¹⁸

Table 3
Summary of Net Effects of Pilot on AFDC Client Flows

Flow	Adjusted or Unadjusted	Net Effect of Pilot (Percent change in case flow)
Denied-to-Active	Unadjusted	1.08
Denied-to-Hold	Unadjusted	5.42
Denied-to-MAO	Unadjusted	16.10
Other Mail Codes-to-Active	Unadjusted	14.46
Other Mail Codes-to-Hold	Unadjusted	0.00†
Other Mail Codes-to-MAO	Unadjusted	0.00†
Active-to-Denied	Adjusted	0.28
Active-to-Hold	Adjusted	-0.20
Active-to-MAO	Adjusted	0.27*
Active-to-Other Mail Codes	Adjusted	0.004
Hold-to-Active	Adjusted	0.50
Hold-to-Denied	Adjusted	0.56
Hold-to-Other MAO	Adjusted	0.52
Hold-to-Other Mail Codes	Adjusted	0.02
MAO-to-Active	Adjusted	-0.12
MAO-to-Denied	Adjusted	-0.87
MAO-to-Hold	Adjusted	-0.07
MAO-to-Other Mail Codes	Adjusted	-0.003

Source: Appendix B, Tables B-2 and B-4

Notes: †Flows from other mail codes to hold and denied were so small that estimates of net effect were unreliable. Effects of zero were assumed.

*Indicates statistical significance at the .01 confidence level.

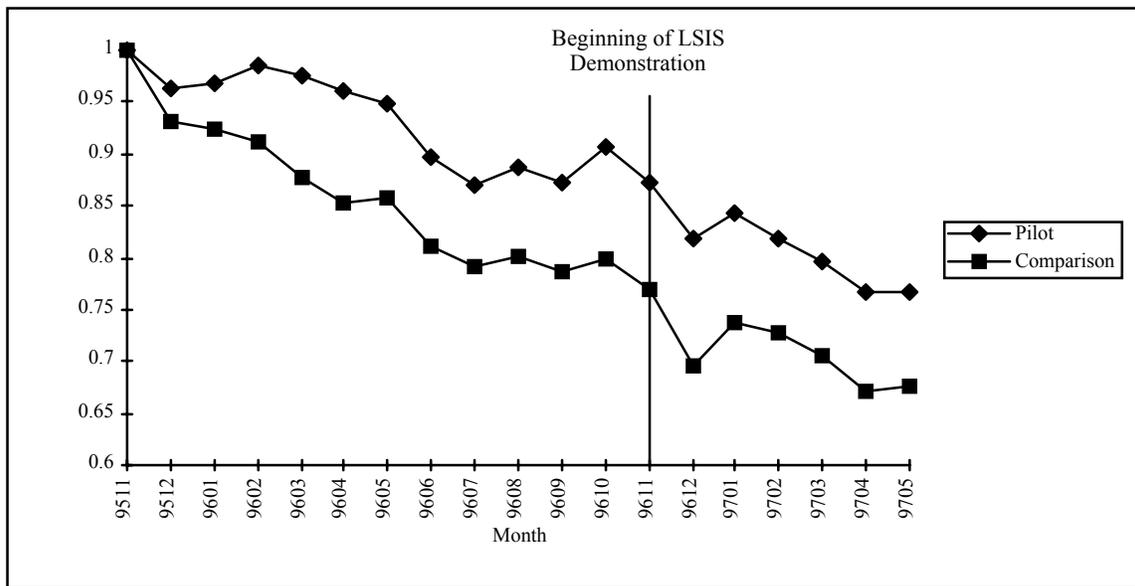
¹⁸ The standard of need for Food Stamp households equals 155 percent of poverty, compared to 20 percent of poverty for AFDC families.

2.3.2 Effect on Size of Caseload

2.3.2.1 Food Stamps

Since the primary stated purpose of the LSIS demonstration was to eliminate duplicate cases, one variable of interest in this pilot is the size of the active caseload. Figure 3 graphs the monthly Food Stamp caseload in the pilot and comparison sites from the beginning of the baseline period through May 1997. Values on the vertical axis were indexed to “1” in November 1995 to facilitate comparison of trends between the pilot and comparison sites. As can be easily seen from this graph, the Food Stamp caseloads were steadily declining in both the pilot and comparison sites from the beginning of the baseline period until May 1997, the last month for which data were available.

Figure 3
Food Stamps Caseload Index Trend



Source: DHS client files

Public assistance caseloads have been declining both in Texas and throughout the United States. The purpose of this evaluation is to ascertain which portion of the decline in the demonstration counties is attributable to LSIS. It is not appropriate to simply compute the net effect on changes in caseloads (as used above for caseload flows) because of the differing rates of caseload decline between the pilot and comparison sites during the

baseline.¹⁹ Instead, hypothetical pilot site caseloads for Food Stamps and AFDC were produced by dynamic simulation to estimate how large the caseloads would have been during the demonstration period if LSIS had not been implemented. These hypothetical non-LSIS caseloads were compared to hypothetical LSIS caseloads for the pilot sites that were adjusted for demographic differences. Computation of the adjusted net caseload effect using these two hypothetical caseload time series is shown in Table 4.

The result of this procedure produces a net impact of only five cases out of 55,000 cases, or only one-hundredth of one percent. This impact is tiny compared to the normal ups and downs of the caseload, and is both statistically insignificant and of the wrong sign. Thus, none of the decrease in the size of the Food Stamp caseload in the demonstration sites is attributable to LSIS.

Table 4
Food Stamps Caseload Adjusted Net Effect
Using Demographically Adjusted and Bias-Compensated Estimation Procedure

	Pilot Sites with Demographically Adjusted LSIS	Pilot Sites with No LSIS	Estimated Net Effect
Average Caseload Nov. 95 to May 96 (Baseline)	55,583	55,583	
Average Caseload Nov. 96 to May 97 (Pilot)	47,107	47,102	
Pilot-Baseline Difference	-8,476	-8,481	
Pilot-Baseline Difference as a Percent	-15.25%	-15.26%	+0.01%

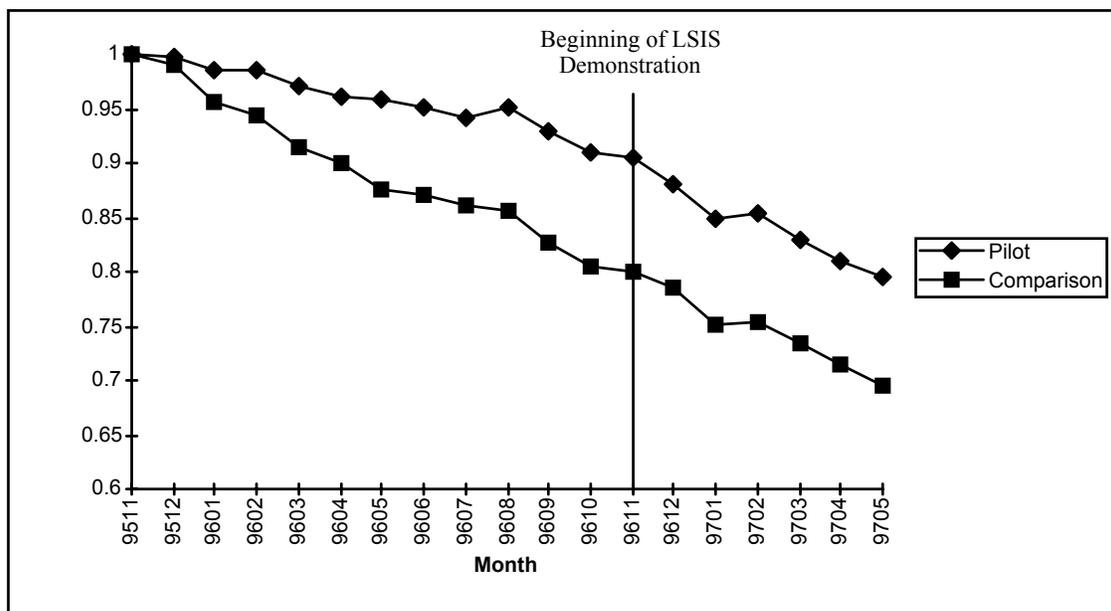
Source: Food Stamps Dynamic Simulation Model

2.3.2.2 AFDC

The AFDC caseload trends displayed in Figure 4 indicate that, like the Food Stamp caseloads, AFDC caseloads were steadily declining in both the demonstration and comparison sites throughout the study period. A similar procedure, as described in the Food Stamp section above, was used to determine whether any of this caseload decline was attributable to the introduction of biometric imaging in the demonstration sites.

¹⁹ Because the caseloads were declining at a faster rate in the comparison sites than in the demonstration sites during the baseline period, use of this approach would have produced a positive net effect on caseload without the adoption of any policy changes. The statistical approach used to adjust for this phenomenon is described in Appendix A.

Figure 4
AFDC Caseload Index Trend



Source: DHS client files

As was the case with Food Stamps, the estimated net effect of the LSIS demonstration is tiny—seven cases out of 18,486, or only four hundredths of one percent—and statistically insignificant. While the estimated effect is negative, one should not assume that LSIS had an effect on reducing the AFDC caseload. The negative sign probably results from normal statistical variation in procedures of this type rather than an observed effect on reducing the AFDC caseload.²⁰ In summary, there is no evidence that any of the observed AFDC caseload decline in Bexar and Guadalupe Counties occurred because of LSIS implementation.

²⁰ An additional factor that could have influenced this calculation was the June 1996 implementation of AFDC time limits in Bexar County (the first in the state), which could not be fully adjusted for in the selection of comparison sites.

Table 5
AFDC Caseload Adjusted Net Effect

	Pilot Sites with Demographically Adjusted LSIS	Pilot Site with No LSIS	Estimated Net Effect
Average Caseload Nov. 95 to May 96 (Baseline)	18,486	18,486	
Average Caseload Nov. 96 to May 97 (Pilot)	16,128	16,135	
Pilot-Baseline Difference	2,358	2,351	
Pilot-Baseline Difference as a Percent	-12.76%	-12.72%	-0.04%

Source: AFDC Dynamic Simulation Model

2.4 Perceptions of Public Assistance Recipients

CHR interviewed persons who had recently left Food Stamps or AFDC to determine reasons for the statistical patterns of exits from public assistance. Interviewers also probed former recipients' receptivity to imaging and their knowledge of fraud in public assistance programs.

2.4.1 Exits from Public Assistance

The 96 individuals who were interviewed at the four demonstration sites accounted for 78 recent exits from Food Stamps and 33 exits from AFDC or AFDC and Food Stamps. The 100 individuals who were interviewed at the four comparison sites accounted for 76 recent exits from Food Stamps and 39 recent exits from AFDC or AFDC and Food Stamps.

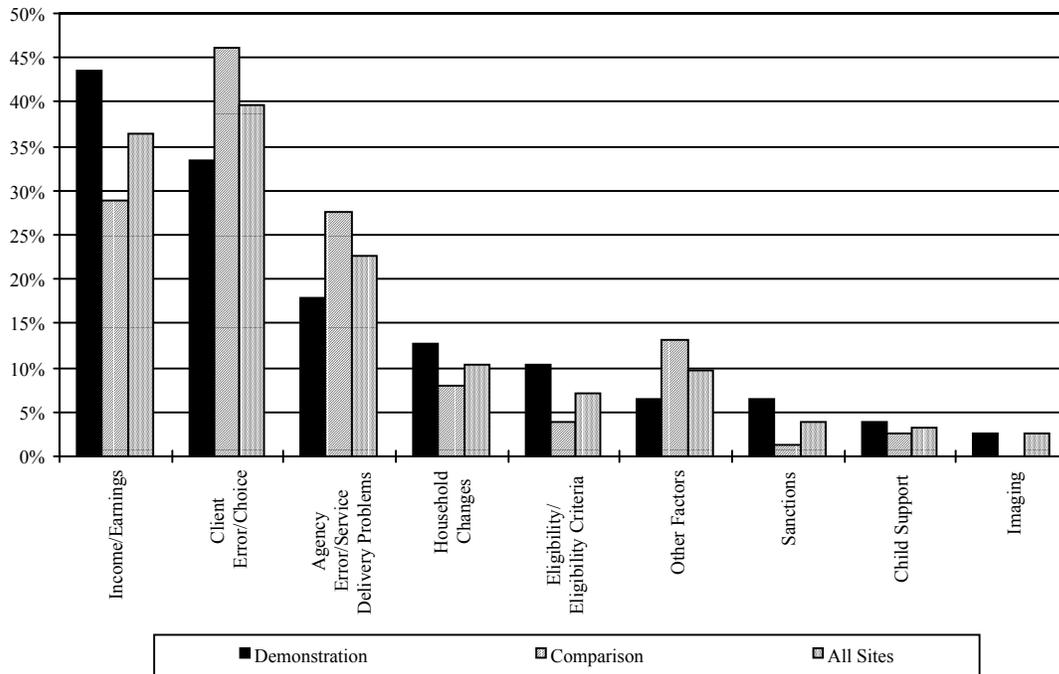
2.4.1.1 Food Stamp Exits

Figure 5 displays the reasons recipients left the Food Stamp rolls at both the demonstration and comparison sites. To explain the Food Stamp exits at the demonstration sites, respondents commonly cited changes in income due to employment or increased earnings (44 percent); or actions of their own doing, such as missed appointments or feeling "benefits were not worth the effort" (33 percent). Fewer than 3 percent cited electronic imaging as a reason for their exit from Food Stamps.

Respondents in the comparison sites provided similar explanations for their Food Stamp exits, most commonly citing client error/client choice (46 percent); changes in

income due to employment or increased earnings (29 percent); and agency error or problems with service delivery (28 percent).

Figure 5
Reasons for Food Stamp Exits: Demonstration and Comparison Sites



Source: Interviews with Food Stamp recipients

Note: These distributions were based on 78 recent exits from Food Stamps in the demonstration sites and 33 in the comparison site.

Two former Food Stamp recipients in the demonstration sites attributed their exit from public assistance primarily to imaging.²¹ In each case the individual refused to be imaged, resulting in the loss of Food Stamp benefits.

- A working mother with three children perceived imaging as an insult to her dignity, the final event in a series of struggles with her employer, DHS scheduling and child care. She refused to be imaged, and some \$135 in monthly Food Stamp benefits were denied. Subsequently, she could no longer afford child care and quit her job. At the time of the interview, she was upset and uncertain about her future.

²¹Clients were asked an open-ended question about why they had stopped receiving Food Stamp or AFDC benefits. Researchers categorized responses and tabulated results. About three-quarters of the respondents gave explanations that fit a single category; the remainder gave responses that fit more than one category.

- The 18 year-old son of an elderly retired woman felt that they should not be “treated like criminals” and refused to be imaged. Instead he pledged to replace the lost benefits through earnings from employment while he was continuing his education.

In addition to these individuals who refused to be imaged, three additional individuals clearly associated imaging with their lost or reduced benefits.²²

- Two young adults living at home allowed their Food Stamp benefits to lapse, in part because they believed other adults in their household would refuse to be imaged.²³
- A working mother, who had difficulty leaving work for imaging and recertification, also let benefits lapse.²⁴

Electronic imaging apparently did deter a small number of Food Stamp recipients from receiving benefits to which they are entitled. Interviews provided no information suggesting that imaging was associated with detecting or deterring caseload duplication.

2.4.1.2 AFDC Exits

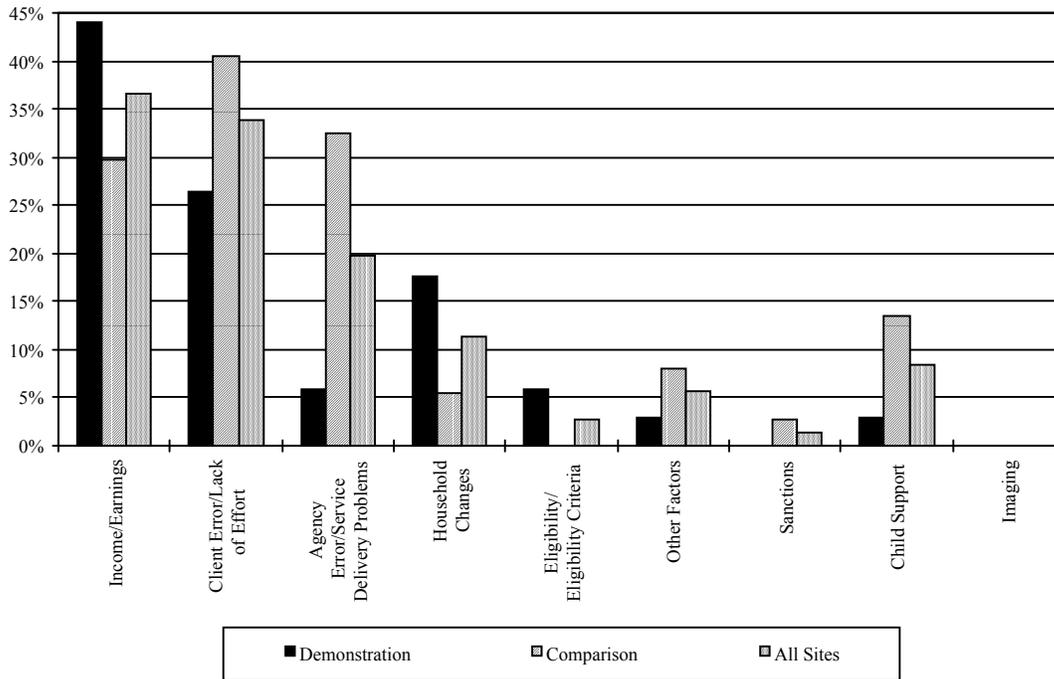
No respondents in the demonstration sites identified electronic imaging as a reason for their exit from AFDC. Most of the exits were attributed to employment entry or increased earnings (44 percent) and client error/lack of effort (26 percent). These reasons for exit were similar to those reported in the comparison sites, where respondents most commonly cited client error/choice (41 percent); agency error/problems with service delivery (32 percent); and employment entry/increased earnings (30 percent). The remaining reasons for exits in both sites were dispersed over a number of other categories, as shown in Figure 6.

²²Respondents were asked whether their Food Stamp/AFDC benefits, or the benefits of anyone they knew, were affected by imaging. If individuals responded positively, they were asked to explain how imaging affected benefits.

²³A change in the eligibility criteria during the Fall of 1996 considered young adults living at home to be part of the larger household, not an independent household. The change was brought to the attention of the clients during recertification and was coincident with their first exposure to electronic imaging.

²⁴An elderly couple also (incorrectly) believed their Food Stamp benefits were reduced because they had been called-in for electronic imaging. Actually, their benefits were reduced because their SSI had increased since their last recertification.

Figure 6
Reasons for AFDC Exits: Demonstration and Comparison Sites



Source: Interviews with AFDC recipients

Note: These distributions were based on 33 recent exits from AFDC in the demonstration sites and 39 in the comparison sites.

2.4.2 Receptivity to Electronic Imaging

The majority of respondents across all sites — demonstration and comparison alike — supported the idea that electronic imaging should be required of public assistance recipients. Support was slightly higher in the demonstration sites. Among those respondents who had an opinion one way or the other (some were ambivalent), 79 percent in the demonstration sites and 67 percent in the comparison sites supported electronic imaging.²⁵ More than 80 percent of the respondents who indicated support for imaging did so because they thought imaging might help to reduce fraud and abuse; just under 15 percent of the same group also supported imaging because it provided an accurate form of

²⁵ DHS conducted a written survey and face-to-face interviews with clients in DHS waiting areas in the ten demonstration offices and found an even higher level of client support. Ninety percent of the 2,341 individuals who completed the survey card thought that finger-imaging is a “good idea.” Ninety-six percent of the 49 individuals interviewed in the DHS waiting area thought that finger-imaging is a “good idea.” Only 2 percent of each group thought that imaging is a “bad idea.” (DHS, 1997).

client identification.²⁶ Several of these respondents implied that reducing fraud would save money and preserve benefits for those who truly need them.

Twenty-one percent of respondents in the demonstration sites and 33 percent in the comparison sites did not think that electronic imaging should be required of public assistance recipients. Approximately 60 percent of these respondents did not support electronic imaging largely because they felt that it was an unnecessary intrusion into their personal lives; nearly 40 percent of this group felt that imaging would not be effective in reducing fraud or abuse.²⁷ Imaging specifically offended the religious beliefs of four percent of this group, all of whom resided in the comparison sites.

Across all sites, approximately 22 percent of the respondents confused or associated imaging with Electronic Benefits Transfer (EBT) and the Lone Star card.²⁸ Larger shares of persons interviewed in the demonstration sites (24 percent) made this association than those interviewed in the comparison sites (19 percent).

2.4.3 Incidence of Fraud and Abuse

During the interview, researchers elicited information from clients about their knowledge of fraud or abuse in public assistance programs. Respondents were asked whether they knew anyone who really didn't need, but was receiving, Food Stamps or cash assistance. The purpose of this line of questioning was to get recipients' impressions of duplication as well as other types of fraud or abuse. Researchers afterward distinguished between generalized perceptions of fraud and first-hand knowledge of such abuse.

Table 6 and Table 7 indicate that 44 percent of all respondents thought that they knew someone undeservedly receiving Food Stamp benefits, and 30 percent were aware of someone undeservedly receiving AFDC benefits. Most of this awareness, however, was very generalized. Much smaller shares of these respondents — 13 percent regarding abuse of Food Stamps and 6 percent regarding abuse of AFDC — offered more detailed information about specific instances of fraud or abuse.

²⁶These shares are consistent across all sites and within the demonstration and comparison sites.

²⁷The shares of reasons given varied between sites: whereas more than half (52 percent) of non-supportive group in the demonstration sites thought imaging was intrusive and/or not effective, two-thirds of this group (69 percent) in the comparison sites thought imaging was intrusive and just over one quarter (27 percent) thought it would not be effective in combating fraud.

²⁸The posters, brochures and videos developed as part of the marketing campaign for LSIS in the demonstration sites associated electronic imaging with the Lone Star (EBT) card.

Table 6
Client Awareness of Food Stamp Fraud and Abuse

	Demonstration		Comparison		All Sites	
	# Respondents	Percent	# Respondents	Percent	# Respondents	Percent
Any Awareness	46	48%	39	39%	85	44%
General	34	35%	26	26%	60	31%
Specific	12	13%	13	13%	25	13%
Total Respondents	96	100%	99	100%	195	100%

Table 7
Client Awareness of AFDC Fraud and Abuse

	Demonstration		Comparison		All Sites	
	# Respondents	Percent	# Respondents	Percent	# Respondents	Percent
Any Awareness	33	34%	25	25%	58	30%
General	26	27%	21	21%	47	24%
Specific	7	7%	4	4%	11	6%
Total Respondents	96	100%	100	100%	196	100%

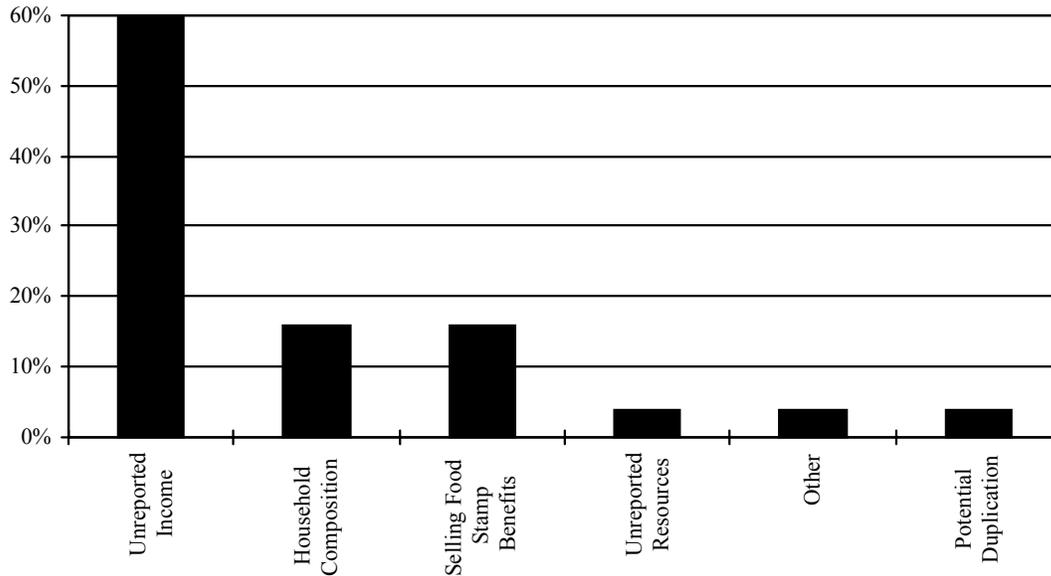
Source: Interviews with Food Stamp and AFDC recipients

2.4.3.1 Food Stamps

Figure 7 portrays the distribution of different types of fraud and abuse in the Food Stamp program cited by the respondents. Among the 25 specific instances of possible Food Stamp abuse cited by respondents across all sites, the vast majority (60 percent) were cases where unreported income was the primary type of fraud.²⁹ Misrepresenting household composition — particularly collecting benefits for children not present in the home — and selling Food Stamp benefits each were associated with 16 percent of the examples provided. Only one respondent identified a potential example of duplication — a person who had two Lone Star cards with different names. Whether the individual bought the card on the black market or falsified an identity to receive benefits was not determined. One instance involved unreported resources and one “Other” referred to a case where an individual falsified residency.

²⁹ One of these cases also involved unreported resources.

Figure 7
Food Stamp Fraud Distribution
Reported by Clients
n=25



Source: Interviews with Food Stamp and AFDC recipients

2.4.3.2 AFDC

The 11 instances of AFDC fraud and abuse in the AFDC program identified by respondents consisted solely of unreported income (73 percent) and misrepresentation of household composition (27 percent). The latter again largely involved collecting benefits for children not present in the home. Respondents provided no anecdotal evidence regarding the incidence of caseload duplication in the AFDC program.

The instances of fraud and abuse in public assistance programs cited by the present and former recipients correspond to the patterns of deceptive practices regularly pursued by the OIG at DHS.

2.4.4 Other Client Observations

Interview participants across all sites also were given opportunities to talk about

individuals and families with unmet needs, to present their perceptions of welfare reform and to make recommendations to improve public assistance. Participant comments in these areas suggest that:

- Recipient experiences with fraud and abuse are much less common than their experiences with unmet human needs;
- Welfare reform is interpreted by recipients as an effort to reduce fraud and encourage work that is based, in part, on inaccurate perceptions of the public assistance population;
- Recipients are much more concerned about improving the way services are delivered than they are about reducing fraud and rarely recommended current or proposed welfare reform initiatives (e.g., fill-the-gap, budgeting, family caps or time-limited benefits) as ways of improving public assistance.

2.5 Summary of Impact Findings

2.5.1 Statistical Results

The Food Stamp and AFDC caseloads in both the pilot and comparison sites were declining steadily from the beginning of the baseline period until May 1997, the last month for which data were available. A dynamic simulation model was developed to estimate how much of this decline was attributable to the LSIS demonstration. Implementation of this statistical model produced a net increase for the Food Stamp caseload of five cases out of 55,000 (0.01 percent), and a net decrease for the AFDC caseload of seven cases out of 18,486 (0.04 percent). Neither of these results was statistically significant. Thus, there is no statistical evidence that any of the observed caseload decline in Bexar and Guadalupe counties occurred because of LSIS.

The effect of LSIS was calculated for nine Food Stamp flows and 18 AFDC client flows affecting the caseloads, including changes in approval and denial status, placement in temporary hold status, or movement to and from other parts of Texas. For Food Stamps, the demonstration caused a statistically significant increase in exits from the active caseload of 1.3 percent. However, this was offset by an increase in caseload entries, many of whom were the same individuals who had exited. Thus, one effect of the demonstration was to induce temporary exits for a significant number of Food Stamp cases. The pilot also increased the flows into and out of hold status, suggesting that Food Stamp cases took

longer to process as a result of the imaging requirement. This may have occurred because many Food Stamp cases included more than one adult, each of whom had to visit the DHS office to be imaged.

Of the 18 AFDC caseload flows, only one minor flow changed significantly as a result of the demonstration. The statistical analysis produced no evidence that LSIS had any effect on the major flows in and out of the AFDC caseload. This could be due to a more compelling need for public assistance on the part of AFDC clients compared to Food Stamp clients, or the fact that most AFDC cases included only one adult needing to be imaged.

2.5.2 Participant Perceptions

Clients reported that most of their exits from welfare were associated with increased earnings and income, client choice (such as missed appointments or deciding that benefits were not worth the effort) or problems with service delivery. Since considerable shares of all exits occur due to client choice or service delivery problems, additional tasks, such as requiring all adults in a household to visit the welfare office to fulfill the imaging requirement, could contribute to dips in the patterns of welfare receipt.

Biometric imaging of public assistance recipients may have three effects: imaging may deter individuals from attempting fraud by caseload duplication, detect caseload duplication by providing an identification match, or influence individuals to defect from public assistance by creating an unacceptable barrier to their continued receipt of benefits. While the interviews did not reveal any detection or deterrence due to duplicate benefits, a small subset of the interview population found imaging unacceptable or burdensome, resulting in a few of them losing Food Stamp benefits.

Food Stamp and AFDC recipients generally share the widespread public perception that fraud and abuse is a major problem in our welfare system. Nearly three-quarters of the respondents supported electronic imaging as a method to reduce fraud and abuse. However, only small shares of the respondents indicated first-hand knowledge of Food Stamp or AFDC fraud. At most, only one of the 36 examples of fraud of which respondents were aware may have involved duplicate benefits.

The types of fraud most commonly mentioned by respondents were unreported income, misrepresented household composition, and selling Food Stamp benefits. These

are the same types of fraud regularly subject to field investigations by the OIG at DHS and for which several automated checks are already in place. Electronic imaging would not be effective in detecting the vast majority of these types of fraud.

3. Cost Analysis

This section presents an analysis of the cost features of the LSIS demonstration and the potential benefit payment savings resulting from the demonstration. The cost analysis estimates the net savings/loss from operating the LSIS initiative, as well as the net flow of federal funds into the state of Texas and the flow of federal and state funds into the demonstration counties as a result of LSIS. The cost analysis complements and applies results from the LSIS impact report.

3.1 Research Questions

This cost analysis addresses three research questions:

1. To what extent are the added or incremental costs of the LSIS pilot demonstration offset by savings due to reduced participation in the AFDC, Food Stamp and Medicaid programs, computed separately by program and overall?
2. To what extent are federal funds to Texas reduced as a result of LSIS pilot implementation?
3. To what extent are federal and state funds to Bexar and Guadalupe counties (the demonstration sites) reduced as a result of LSIS pilot implementation?

In addition to these three questions, the original design of the cost analysis called for CHR to estimate the cost of replicating the demonstration model statewide. This task has been eliminated with the approval of DHS, since Texas has already decided to implement biometric imaging technology statewide and the Texas Legislature has appropriated funds to do so. Information regarding the basic features of the statewide rollout plan, including its geographic coverage and implementation schedule, were unavailable at the time this report was prepared.

3.2 Methodological Approaches

The cost analysis combines several data sources and methodologies to address the three main research questions. To address question one, CHR compared estimated savings from AFDC, Food Stamps, and Medicaid benefit payments (termed “gross benefit savings”) to the estimated costs of developing, implementing and operating the LSIS pilot

project. The objective was to determine the *net savings or loss* as a result of the demonstration. Incremental costs of LSIS include payments to the vendor (North American MORPHO, Inc.), as well as DHS personnel costs, regional service delivery, and other startup costs. These costs were estimated using a combination of budgeted DHS cost figures, actual DHS expenditures, and CHR calculations based on DHS staff time-use surveys. Benefit expenditure changes were estimated based on estimated caseload effects prepared for the impact analysis. Net cost/savings results are presented as an aggregate figure and also disaggregated into state and federal shares based on the appropriate state/federal matching rate for benefit payments and program administration in Food Stamps and AFDC.

Research questions two and three required the analysis of the net flow of state and federal funds to the state of Texas and the demonstration counties. Distributional changes were estimated by identifying new funds used for LSIS, the redirection of existing funds and the location of the expenditure. The net flow also depended on the relative state/federal shares of various funding streams affected by the LSIS demonstration. Expenditure inflows and outflows for the demonstration counties are presented as state and federal shares based on the current state/federal matching rates.

3.2.1 Time Frames

The cost analysis focuses on the costs and savings resulting from LSIS development, implementation and operations from July 1996 through May 1997. The estimates of savings from reductions in AFDC, Food Stamps, and Medicaid benefit payments encompass the first seven months of the demonstration program operation from November 1996 through May 1997. The cost estimates also include this operating period as well as the development and implementation period from July 1996 through October 1996.

3.2.2 Limitations of the Cost Report

The cost analysis has several limitations, foremost among which are problems relating to data availability. First, the analysis relies on a combination of budgeted, estimated and actual DHS costs for LSIS development, implementation and operation (see Table 8). For example, DHS state office direct personnel implementation costs and system

software costs are only budgeted, not actual expenditures. Alternatively, state office costs for program operation are based on actual expenditures. Since regional DHS direct delivery personnel costs were not available, they were estimated based on median performance-time estimates of key functions for relevant job classifications. Some of the key functions for which costs were estimated were performed by temporary clerical staff for which CHR was provided an actual expenditure figure. Therefore, clerical costs estimated from the staff time surveys were attributed to the temporary staff cost figure.

Second, net cost/savings figures provided here do not factor in any impact imaging may have had in deterring legitimate eligibles. Interviews with public assistance recipients, conducted as part of this evaluation, indicated that electronic imaging had a minor deterring effect on households who appeared otherwise eligible. To the extent that LSIS deters those who were legitimately eligible for benefits, a portion of the savings reported may be more appropriately reflected as a cost.

Third, correct allocation of certain costs was difficult. For example, the cost of system software was provided by DHS only as an aggregate budgeted figure with no indication of the time frame over which it could be amortized to more accurately reflect costs in each period. Therefore, the entire software cost amount was included as part of the implementation cost during the demonstration period. Also, a portion of the LSIS development and implementation costs could be allocated to costs of a statewide roll-out of electronic imaging, but these costs were not provided separately by LSIS project staff.

Last, vendor payments to MORPHO during the demonstration may understate the cost of purchasing these services on an ongoing basis. According to MORPHO's stated intentions in their proposal to DHS, they expected to recoup developmental and implementation costs incurred in the demonstration by increasing the per-image fee during statewide implementation.

One important result of the limitations listed above, and of the cost allocation decisions made by CHR researchers, is that the operating costs of the LSIS demonstration that are presented in this report are lower-bound estimates of the actual costs of operating LSIS. Consequently, the net operating loss figure presented in this report is a low range estimate of the net loss incurred as a result of the demonstration.

3.3 Demonstration Cost Findings

3.3.1 Total LSIS Demonstration Costs

The cost analysis indicates that developing and operating an electronic imaging program for Food Stamp and AFDC recipients in the demonstration sites has cost \$1.7 million over the first seven months. Table 8 lists these costs, and the far right column of the table lists the source of the data item (i.e., budgeted, estimated or actual). LSIS implementation costs, which include state office and regional office costs from July 1996 through September 1996, account for \$805,093 of the total demonstration costs; system software accounts for about 70 percent of this figure. LSIS operating costs were \$892,798 from November 1996 through May 1997. Regional service delivery costs and vendor costs accounted for 70 percent of total operating expenses. Payments to the vendor for finger-imaging amounted to \$225,798 for the demonstration, most of which was expended during the first three months of operation. Temporary staff was also a significant service delivery expense during the demonstration, totaling \$272,068.

3.3.2 Benefit Payment Savings

Using the impact study estimates from the demographically adjusted and bias-compensated model estimation procedure, it appears that LSIS may be associated with very small and statistically insignificant changes in both the Food Stamp and AFDC caseloads. The most reasonable interpretation from these impact estimates would be that the LSIS demonstration has caused no measurable reduction in caseloads. Consequently, there are no benefit payments savings as a result of the LSIS demonstration.

Table 8
Total LSIS Demonstration Costs:
July 1996 through May 1997

LSIS Demonstration Costs	Costs as of May 31, 1997	Source of Data
I. DHS Implementation Costs		
a. State Office Costs		
1. Direct Personnel	\$96,472	Budgeted
a. Salary	\$76,275	
b. Fringe Benefits	\$20,197	
2. System Software	\$586,000	Budgeted
3. Overhead	\$31,750	Budgeted
4. Imaging Consultant	\$20,000	Budgeted
5. Training, Supplies, Other	\$19,150	Budgeted
State Office Subtotal	\$753,372	
b. Regional Costs		
1. Supervisor (planning)	\$11,490	Estimated
2. Regional Supervisor (planning)	\$6,566	Estimated
3. Client Mailings	\$21,375	Actual
4. Electrical and Services	\$9,590	Actual
5. Security	\$2,700	Actual
Regional Subtotal	\$51,721	
Total Implementation Costs	\$805,093	
II. LSIS Operating Costs		
a. State Office Costs		
1. Direct Personnel	\$173,678	Actual
a. Salary	\$141,400	
b. Fringe Benefits	\$32,278	
2. Overhead	\$65,835	Budgeted
3. Training, Supplies, and Other	\$36,678	Actual
State Office Subtotal	\$276,191	
b. Regional Costs		
1. Direct Delivery Staff		
a. Temporary Staff (clerical/other)	\$272,068	Actual
b. Regional Supervisor (ongoing)	\$26,263	Estimated
c. Workers (imaging)	\$13,125	Estimated
d. Supervisor (imaging)	\$65,657	Estimated
e. Supervisor (exceptions)	\$13,984	Estimated
Regional Costs Subtotal	\$391,097	
c. DHS Payments to Vendor		
1. Demonstration fee	\$225,509	Actual
Total LSIS Operating Costs	\$892,798	
Total LSIS Demonstration Costs	\$1,697,891	

3.3.3 Net Operating Loss from the LSIS Demonstration

Excluding estimated start-up expenditures — i.e., development and early implementation expenses — from LSIS costs, the seven-month LSIS demonstration resulted in a net operating loss of \$892,798. Since the initiative incurred an operating loss, there was no indication, based on demonstration results, that it would progress toward recouping the development and implementation costs of \$805,093.

It should be noted that this net operating loss figure has been computed very conservatively, as a result of the data limitations mentioned above and due to the conservative cost accounting assumptions made by CHR researchers. For example, in the operating loss figure, none of the state's development and early implementation costs are counted against the benefit reductions, and all LSIS software costs are counted as development rather than operating costs. If the development and implementation costs were included, the total net loss from the LSIS demonstration through the first seven months of operation would be \$1,697,891, with no savings attributable to detecting or deterring fraud. In fact, during the first seven months of operation, the electronic imaging system detected only one instance of caseload duplication. The problem was resolved without the denial of benefits, meaning there were no associated benefit payment savings.

3.3.4 Effects of LSIS on Distribution of Federal/State Expenditures

3.3.4.1 Effects at the State Level

A total of \$540,000 in new funds (50/50 state and federal) was made available for developing and conducting the LSIS demonstration, all of which was expended at the DHS state office level. Regional LSIS expenditures are being funded through the diversion of existing program resources, i.e., a combination of regular AFDC, Food Stamp and Medicaid administrative dollars. Therefore, the primary state-level cost distribution effects of this demonstration are a result of the \$540,000 in new funds made available, of which \$270,000 were federal.

3.3.4.2 Effects in the Demonstration Counties

Since regional expenses were largely met by diverting existing resources, new resource flows to the demonstration counties are comprised solely of incremental LSIS

costs that presumably would not have been expended locally in the absence of the demonstration. New resource flows to Bexar and Guadalupe counties associated with LSIS totaled \$305,734 through May 1997, mostly attributed to the costs of temporary staff, and to a lesser extent infrastructure improvements and additional service delivery expenses. These added expenditures are equally split between state and federal sources. There were no expenditure outflows from these two counties since there were no benefit payment savings as a result of LSIS. (Table 9)

Table 9
Direct Effects of Changes in Federal and State Expenditures in the Demonstration Counties

Net Flow of State/Federal Expenditures in the Demonstration Counties	Federal Expenditures	State Expenditures
I. Expenditure Inflows		
a. Client Mailings	\$10,688	\$10,688
b. Electrical and Services	\$4,795	\$4,795
c. Security	\$1,350	\$1,350
d. Temporary Staff	\$136,034	\$136,034
Total Expenditure Inflows	\$152,867	\$152,867
II. Expenditure Outflows		
a. Food Stamps	\$0	\$0
b. AFDC	\$0	\$0
c. Medicaid	\$0	\$0
Total Expenditure Outflows	\$0	\$0
Net Flow of State/Federal Expenditures	\$152,867	\$152,867

The total impact, including direct and indirect effects, of this inflow of funds into the demonstration counties can be estimated using basic economic multiplier analysis. The multiplier is a ratio used to calculate the total change in economic activity caused by direct changes in any individual sector. The expenditure inflow of \$305,734 during the demonstration period will result in a long term (10 to 20 years) total impact of \$859,357 to the demonstration counties.

However, three points should be noted with regard to this estimate. First, this

estimated effect is expected to accumulate over the long term; it is not an immediate impact during the demonstration period. Second, this impact estimate cannot be projected onto any other program design that did not include temporary staff or additional permanent staff at the regional office level. Third, this is only a partial analysis of multiplier effects, since the negative side of the net impact caused by tax payments could not be analyzed due to data limitations. A complete analysis would include a net effect of the tax impact and the expenditure impact. However, this partial multiplier analysis should reliably indicate the positive impact of the state government revenues for LSIS on the private sector economy of the demonstration counties.

3.4 Summary of Cost Findings

This analysis indicates that the LSIS demonstration cost the state of Texas \$1.7 million for the first seven months of operation, and, excluding development and implementation costs, yielded a net operating loss of \$892,798. Furthermore, since LSIS yielded no net impacts on benefit payments, there was no indication that the program would progress toward recouping the development and implementation costs of \$805,093.

The demonstration did increase the availability of funds at the state and regional levels. The LSIS pilot resulted in a net inflow of \$270,000 in federal funds to the state of Texas. There was also a net inflow of \$305,734 in state and federal funds to the demonstration counties, resulting in a total positive long-term impact—including economic multiplier effects—of \$859,357 for the economies of these counties. Thus, the demonstration provided some benefit at the regional level by increasing temporary employment opportunities.

The results of the cost analysis must be interpreted in light of the data limitations and costs allocation decisions made by CHR researchers. Since actual expense data were often not available, the CHR research team in each instance made lower bound cost estimates in order not to overestimate the cost of the pilot program. This has likely led to an underestimate of the actual cost of operating the LSIS program, and consequently to an underestimate of the net loss resulting from the demonstration. Since important information with regard to statewide implementation was not available, a detailed analysis of statewide LSIS replication costs was not prepared.

4. Conclusions

In the LSIS demonstration, electronic imaging has failed to produce the expected effects. The demonstration has not reduced caseloads significantly by detecting or deterring duplicate benefits. Instead, it appears to have induced some temporary exits among Food Stamp recipients for whom the process of getting Food Stamps has become more difficult due to the need to have all adults on a case report to a DHS office for imaging. The LSIS demonstration cost the state of Texas \$1.7 million for the first seven months of operation and yielded no savings in benefit payments.