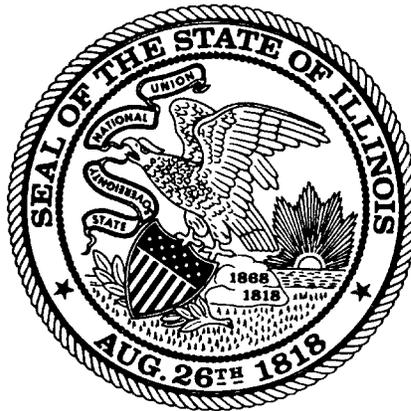# Illinois Department of Public Aid

PAYMENT ACCURACY REVIEW
of the Illinois Medical Assistance Program

A Blueprint for Continued Improvement

AUGUST 1998

Joan Walters	**Robb Miller, CFE**	**George Hovanec, Administrator**
Director	**Inspector General**	**Division of Medical Programs**

August 4, 1998

To the Honorable Jim Edgar, Governor:

Enclosed is the Department's first study of payment accuracy in the Medical Assistance Program. This study was undertaken due to the Department's longstanding commitment to program integrity and the need to establish a baseline against which future payment accuracy initiatives can be measured.

The Department projects its payment accuracy rate to be 95.28% which indicates that our payment system generally works well, that the vast majority of providers are honest, that our many pre-payment edits and reviews are effective and that post-payment surveillance of providers and clients accurately identifies potential problems. This study has reinforced our belief that it is critical to continue developing innovative fraud prevention techniques and technologies. Our research has highlighted both the strengths and weaknesses of the current payment system and has provided the Department with a solid blueprint for continued improvement.

Sincerely,

Joan Walters	Robb Miller, CFE	George Hovanec, Administrator
Director	Inspector General	Division of Medical Programs

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Illinois Department of Public Aid has completed its first study of payment accuracy in the Medical Assistance Program. It is believed to be the first ever review of any state Medical Assistance Program. The agency undertook this effort because of its longstanding commitment to program integrity and the need to establish a baseline against which future payment accuracy initiatives can be measured.

Specific findings of interest include:

- Twenty-nine non-institutional providers were identified through this effort for additional reviews, e.g., peer review, audit or investigation. Twenty-eight of these twenty-nine were already under scrutiny by the Department, suggesting that existing systems and procedures ultimately identify and address most of the errors made.

- Two of the seven clients identified through this effort as potentially abusive of the system had also been targeted for review.

- From smallest to largest dollar impact, the categories of errors identified in this study were inadvertent, agency, and questionable errors.

- Non-emergency transportation is of great concern - well over one-fourth of the dollars paid for this service are estimated to be in error.

This project went far beyond what can normally be accomplished by an automated claims payments system and included client interviews and medical expert reviews. The Department has projected its payment accuracy rate to be 95.28%, plus or minus 2.31%, of total dollars paid. This accuracy rate is higher than either of the two previously published payment accuracy rates for the Medicare program. This effort has highlighted both the strengths and weaknesses of the current payment system and has provided the Department with a solid blueprint for continued improvement.

INTRODUCTION

The Illinois Department of Public Aid (IDPA) has administered the Medical Assistance Program (which includes all Medicaid services) since its inception in 1966. IDPA understands its role as the steward over the single largest component of the state's budget. The agency ensures that Illinois' neediest citizens have access to medical services without sacrificing payment integrity or fostering fraud, waste or abuse. The Department and its 60,000 providers see to the medical care needs of almost 1.5 million persons. Meeting the dual objectives of clients obtaining treatment and paying providers appropriately and timely requires continuous and diligent monitoring of the program.

Assuring payment accuracy has always been a major objective for the Department. The Medicaid Management Information System (MMIS) is one of the country's largest automated claims payment systems[1] and has hundreds of pre-payment edits and safeguards. During FY98, the Department processed approximately 50 million claims and $6 billion through the MMIS. It also monitors providers and clients alike in a post-payment mode to detect unusual patterns of billing or utilization. Hundreds of providers are audited or reviewed for medical quality every year. The behaviors of thousands of clients are analyzed to determine if they are abusing their medical privileges. Thousands of services, ranging from pharmacy orders to hospital stays, are regularly scrutinized in both pre- and post-payment reviews.[2]

While these initiatives illustrate that medical payment accuracy has always been a priority, the Department seeks to continually identify and adopt the most innovative strategies to improve payment accuracy further. Department staff from its Division of Medical Programs (DMP) and Office of Inspector General (OIG) routinely collaborate to identify problem areas and develop strategies to both prevent fraud and abuse and detect it much earlier than has historically been possible. For example, the Medicaid Fraud Prevention Executive Workgroup (MFPEW) is a working committee of expert staff from both units along with information systems personnel. MFPEW meets monthly to identify and evaluate new strategies to improve payment accuracy and program integrity. A number of its recommendations are being implemented and are included in the recommendations in this report.

Another example of the agency's dedication to payment accuracy can be found in the Fraud Science Team (FST), an effort to develop new automated fraud detection routines unlike those currently in place at any public or private health insurer. This multi-disciplinary effort brings together the skills of research scientists, analytical data processing experts, and investigative specialists. FST will apply innovative methodologies and computational technology to the problem of fraud detection.

---

[1] Illinois' MMIS has been certified by the Health Care Finance Administration since 1982.

[2] Explanations of these kinds of activities can be found in Appendix II.

Between historically effective methods and constantly searching out new techniques and technologies, the Illinois Department of Public Aid is committed to the highest levels of medical program integrity.

IDPA AND THE MEDICAID FRAUD CONTROL UNIT

While prevention and early detection is the preferred strategy to ensure payment accuracy and program integrity, it is not by itself sufficient. Suspected cases of health care fraud must be investigated and addressed through the criminal justice system. To accomplish this aim, the Department has established a successful working arrangement with the Illinois State Police, Medicaid Fraud Control Unit (MFCU), which is responsible for the criminal investigation of health care fraud. During FY98, OIG referred 461 cases to MFCU, many of which directly attributed to the collection of $1,349,291 in court ordered restitution.

The Department provides expert witnesses and documentation for all enforcement proceedings and hearings. The Department also assists MFCU in its investigations by providing the following types of information:

- Copies of all records which may be useful in the detection, investigation or prosecution of suspected violations of law in the provision of medical assistance or administration of the State plan.

- Computer printouts, special computer runs or copies of computer data stored by the Department and other hard copy provider information it maintains.

- Access to any records of information kept by a provider of services under the State Medicaid plan to which the Department is authorized.

Similarly, MFCU provides expert witnesses and documentation for the Department's administrative hearings. MFCU also assists the Department by:

- Investigating and referring for prosecution violations of all applicable state laws pertaining to fraud with respect to any aspect of the administration of the provision of medical assistance, or the activities of providers of medical assistance under the Social Security Act.

- Conducting Medicaid investigations and making referrals to the appropriate prosecuting authorities.

- Notifying the Department when overpayments are identified, but criminal or civil litigation is not initiated.

This successful relationship between the MFCU and the Department combined with fraud prevention and early detection, contributes to payment accuracy and program integrity within the Medical Assistance Program.

MEASURING PAYMENT ACCURACY, NOT FRAUD

While the Department's efforts to ensure payment accuracy have been aggressive, until now the Department has never attempted to measure the actual level of payment accuracy. With several new initiatives on the horizon, though, we felt that it was important to establish a payment accuracy baseline against which the impact of future efforts could be gauged. However, it is important to note that this study was designed to measure payment accuracy. It was never intended to measure a fraud rate. Indeed, we are not sure that is even possible.

We recognized that we did not have the resources to even try to identify every possible way that a large health care system can be defrauded. There are literally hundreds of schemes that we know about and possibly many others that, given the inherently surreptitious nature of fraud, have yet to surface. Establishing a fraud rate would have required, at a minimum, conducting a criminal investigation on each service in the sample. Even then, we would not have been certain that every potentially fraudulent claim would be detected or that we could establish intent. As it were, this study was a landmark effort going far beyond what any automated payment system can effectively do and still ensure that provider payments are made in a timely manner.

FIRST EVER PAYMENT ACCURACY REVIEW

IDPA has now completed its first payment accuracy review. We believe it is the first ever payment accuracy review of any state Medical Assistance Program. The agency has determined that its payment accuracy rate (adjusting for both overpayments and underpayments[3]) is 95.28%, plus or minus 2.31%. To better understand the meaning of this information, an explanation of the process would be helpful.

A statistically valid, stratified random sample of 599 medical services adjudicated, processed and approved for payment, during January 1998 was fully reviewed through a four-part process.[4] The sample excluded services provided through other state agencies, from providers of long term care, from hospitals and other entities owned and operated by the Cook County Bureau of Health Services, Medicaid / Medicare crossover claims, managed care and capitated payments. The universe of services was stratified into three groups, or strata, prior to the sampling: 1) physician and

---

[3] The overpayment rate was 4.81% and the underpayment rate was 0.09%.

[4] 600 services were in the original sample but one was dropped because it was a managed care gatekeeper payment which was erroneously selected. All corresponding services in the January payment month were identified and excluded from the universe that was utilized in the weights for calculating the error rate.

The first level review involved staff conducting face to face interviews with the clients who were supposed to have received the services to determine if the services were actually rendered. The second level of review entailed an examination of the medical records for each claim in the sample to determine whether the payment was commensurate with the services provided. The third level involved a subsequent analysis of the same medical records to determine if the service was of acceptable quality and to a certain extent, if it appeared to be medically necessary and appropriate. The final level of scrutiny was a contextual analysis of the claim in the sample to determine whether the service provided made sense, when compared with other services provided to the same client during one week prior to and following the date of service of the service in the sample. A more detailed explanation can be found in Appendix V.

pharmacy services; 2) inpatient hospital and hospice services; and 3) all other types of services, including outpatient hospital services, Healthy Kids services, nursing services, non-emergency transportation, clinic services, medical equipment, prosthetics and medical supplies among others.

Each service was categorized as either having been paid correctly or in error. Those identified as being in error were further categorized as *agency error* (the Department approving payment in unintentional violation of its own policy), *inadvertent error* (apparent billing mistake) or *questionable error* (the provider's intention to bill correctly is very doubtful but no intent was proven). The original assignment of an error to one of these categories was, admittedly, somewhat subjective. However, the final decision was based on expert review and senior staff assessment.

FOLLOWING UP ON ERRORS

The payment accuracy review identified 96 out of 599 services as having been paid in error. Staff felt the nature of the error was serious enough in 29 of those cases to refer the provider for additional reviews. These could include post-payment audits, medical quality assurance peer reviews, or a referral for a criminal investigation by the MFCU. Seven of the clients involved in the error services were suspected of improper medical utilization. They were referred to the Department's Recipient Restriction Program where, if those doubts turn out to be justified, the clients would be restricted to using only one physician and pharmacist.

As we noted in the introduction, the Department continuously monitors all of the services it pays for to detect inappropriate billings or client utilization. As a consequence, it is not surprising that 28 out of the 29 suspect non-institutional providers in this study had already been independently identified as potentially problematic. These analyses came out of a screening the Department regularly conducts of 15 to 18 months of paid claims data for unusual or exceptional patterns of behavior compared to similar providers in the same geographic area. For these 28 providers, some type of follow up was already in progress before they were identified in the payment accuracy review project. Most of the inappropriate payments made to these providers would likely be eventually identified through post-payment audits. Likewise, two of the seven clients had also been targeted by the Recipient Restriction Program.

ERROR RATES BY CATEGORY OF ERROR

As a percentage of the misspent funds identified in this study, the smallest error category was inadvertent error. These errors were responsible for 21.9% of the misspent funds and 35.6% of the service error rate. Classifying these as errors is somewhat misleading in that, by and large, they represent legitimate service to our clients. For example, the documentation for one of the transportation services we reviewed indicated that the client's destination was a different medical provider's address than one listed on the prior approval form.

Based on our examination of each inadvertent error, we believe that those services identified as inadvertent were actually provided to the client by the provider who billed the Department. In some cases we think the provider unintentionally billed for a similar service with a higher reimbursement level. In the rest, the reimbursement level was correct but some element of the required documentation was missing or incomplete.

The next largest category was agency error. These errors were responsible for 23.4% of the misspent funds but only 6.3% of the service error rate. We believe the explanation for this can be found in a single hospital stay that was incorrectly prior approved for payment. By itself, this single observation accounts for 19.2% of the inaccurate payments. Another agency error reflected a technical violation of policy but good customer service. It involved incontinence supplies that were prior approved for a kidney transplant patient even though a written physician order could not be found in the records maintained by the Department, the medical supply company, or the patient's physician.

The largest category of services causing inaccurate payments was, not surprisingly, the questionable errors. Questionable errors constitute 54.7% of all inaccurate payments and 58.1% of the service error rate. Although we believe that many of the inaccurate payments represent likely intentional fraud, it is important to remember that this project did not intend to establish a fraud rate. While we doubt we could definitively establish fraudulent intent for each of them, we strongly question the legitimacy of these payments. For example, one provider contacted did not respond to numerous requests for documentation of the selected service. During the client interview, the client stated that he did not receive the service that was billed for.

It is telling that the majority of the inaccurate payments fell into this category. It illustrates how difficult it is to prevent paying inappropriate claims in a health care delivery system as vast as the Medical Assistance Program, which pays more than 50 million claims annually. Few, if any, of the questionable errors could be identified before payment in today's claims processing environment without substantial manual intervention. As we noted earlier, however, existing post-payment review procedures often correctly identify problematic providers.

NON-EMERGENCY TRANSPORTATION OF GREAT CONCERN

This study established that most provider types are billing appropriately and correctly most of the time. However, there is one type of service that is troubling. The majority of the services representing questionable errors occurred in the narrow area of non-emergency transportation. This type of service can be provided by taxis, medicars, non-emergency ambulances or even private vehicles.

Of the $37.2 million spent for non-emergency transportation services included in our study's universe, $11.55 million (31%) are estimated to be in error. Department staff and state and federal law enforcement agencies have all been concerned about this type of service for some time.

Non-emergency transportation is problematic because it is difficult to determine whether the provider or the client or both are responsible for the misspent funds. It is one of the few areas where clients can easily defraud the system. It is difficult, if not impossible, for the honest transportation provider to be sure that the client is using the service to obtain legitimate medical care rather than other, non-medical personal reasons, such as shopping or employment. A number of the recommendations in this report center on non-emergency transportation.

CALCULATING FISCAL IMPACT

Since the sample was stratified, a three-step process was employed to calculate the payment accuracy rate. This process is described in Appendix IV and the formulas that were utilized are also presented. To account for sampling variability, upper and lower bounds for the estimate were calculated and presented along with the accuracy rates in Table I of Appendix VII. Because this study looked only at services paid in one month, we annualized the estimated misspent funds by multiplying the dollar loss for January 1998 by 12.[5]

The following table depicts the effect each category of error had on payment accuracy in terms of both percentages and annualized dollars.

Category of Error	Percent Distribution Dollars in Error	Annualized Dollars	Percent Distribution Services in Error	Annualized Services
Questionable	54.7%	$62,112,967	58.1%	2,856,940
Inadvertent	21.9%	$24,875,564	35.6%	1,750,552
Agency	23.4%	$26,490,253	6.3%	309,789
Total	100.0%	$113,477,782	100.0%	4,917,281

---

[5] To ensure that we had sufficient sample sizes in each of the three strata, we over-sampled the services in some strata and under-sampled the services in others. The method used to calculate the payment accuracy rate accounts for this disproportionate sampling, since it dollar-weights the payment accuracy rates calculated for the three strata to arrive at the estimate of the dollars paid correctly.

The following table is provided for comparison to the total universe of annualized dollars and services that were included in the sample.

	Dollars	**Services**[6]
Annualized Universe	$2,405,096,844	36,236,412

Overall, a payment accuracy rate of 95.28% represents the correct expenditure of approximately $2.3 billion on an annualized basis for those services included in the study's universe.[7] While the inappropriate expenditure of any funds is unacceptable, Illinois' accuracy rate does appear to be higher than Medicare. The United States Department of Health and Human Services has estimated that Medicare's payment accuracy rate is as high as 89% and 86% in two recent studies.[8] The Department's pre- and post-payment claims review activities cost avoid and recover overpayments of at least $113.5 million annually.[9]

LOOKING TO THE FUTURE

The payment accuracy review project has targeted several areas needing improvement. It has shown us that, while many of the errors in the questionable category are very difficult to prevent, we can strengthen our techniques to earlier detect them after payment. The study has illuminated the need for continually enhancing provider enrollment and education as well as closely examining policies and procedures. It also reminds us of how critical it is to continue our close working relationship with state and federal law enforcement agencies specializing in health care fraud.

We believe that payment accuracy can and will be further increased through a number of ongoing and planned initiatives.[10] These include:

- Automating the prior approval system for non-emergency transportation, including the ability to ensure that the transportation will be used only for authorized medical services.
- Considering contracting in Cook County for non-emergency transportation instead of continuing to allow any willing provider to participate in this program.

---

[6] Note that frequently multiple services are submitted by a provider for payment on a single claim form.

[7] The overall service accuracy rate is 86.43%, + or -3.5%.

[8] It is important to note one major difference between our project and that conducted by HHS to estimate the payment accuracy in the Medicare program. Approximately 40% of the errors identified by HHS were medical necessity errors. In our study, medical necessity determinations were not central to the review process because we felt it would be difficult to judge whether such medical necessity and quality of care concerns would justify a recoupment of payments. We did forward cases that warrant further quality of care review to the Department's medical peer review program.

[9] These pre- and post-payment activities are described in Appendix II. In addition, pilot implementations of two integrity initiatives described in Appendix III have also resulted in identifiable savings: the Fraud Prevention Investigation Initiative and the Long Term Care Asset Discovery Initiative.

[10] A more detailed examination of these initiatives and why we believe they will be effective can be found in Appendix III.

- Developing improved payment edits (including considering the acquisition of commercially available code review software) to supplement the Department's existing edits.
- Unifying the several existing payment databases into a single system to allow identification of improper billings across provider types prior to payment.
- Creating a data warehouse to provide analysts and administrators with a decision support system, data mining tools and an executive information system.
- Ensuring that every claim for payment stands a non-zero chance of being subject to a pre-payment fraud examination.
- Continuing the Fraud Science Team's efforts to prevent or earlier detect fraudulent claims.
- Enhancing the post payment surveillance utilization review system.
- Restricting clients who abuse non-emergency transportation to a single pre-selected provider.
- Developing a system to suspend the eligibility of clients who intentionally violate Medicaid regulations.
- Implementing improved non-emergency transportation audit protocols.
- Initiating several electronic data interchanges, which will reduce the extent of "doctor-shopping" by clients, improve the Department's surveillance capabilities, and decrease the incidence of inadvertent billing errors by providers.
- Developing applicant surveillance efforts, to identify and investigate suspicious applications for medical assistance prior to offering of assistance.
- Developing an improved record matching and follow up process to more rapidly determine when a client has died to avoid making payments for post-mortem dates of service.
- Implementing biometric techniques to ensure that only persons entitled to assistance receive it and to conclusively establish client identity.

CONCLUSION

The Department of Public Aid has a longstanding commitment to payment accuracy and program integrity. It keeps itself in a constant learning environment to better understand the changing nature of fraud and abuse. At the same time, we realize the constraints under which any large automated payment system must operate. No existing automated payment system could routinely ferret out all of the payment errors this review identified. It is our steadfast goal, however, to improve the payment system to prevent many of these errors in the future or to detect them much sooner than is currently possible.

We have identified several of the initiatives already underway or being planned that will help us in the future. Many of them go far beyond the safeguards presently in place at other large public and private health insurers. This study has reinforced our belief that it is critical to continue developing innovative fraud prevention techniques and technologies.

A 95.28% accuracy rate tells us that:

• Our payment system generally works well.
• The vast majority of providers are honest.
• Our many pre-payment edits and reviews are effective.
• Post-payment surveillance of providers and clients accurately identifies potential problems.

Twenty-nine non-institutional providers were identified through this effort for additional reviews, e.g., peer review, audit or investigation. Twenty-eight of the twenty-nine were already under scrutiny by the Department, suggesting that existing systems and procedures ultimately identify and address most of the errors made.

The payment accuracy rate project has successfully identified specific problem areas upon which we can focus. At the same time, it is vital to remember that the primary mission of the Medical Assistance Program is to provide critical medical services to Illinois' neediest citizens. We must recognize that a fraud-proof payment system would undoubtedly decrease medical access and cause a deterioration in customer service for those who can least provide for themselves. Managing the Medical Assistance Program is a continuous balancing act in which demands for increased program integrity must be carefully weighed against the medical needs of the customer.

This report is by no means the end of the payment accuracy review project. On the contrary, it is just another major step in our continuing efforts to provide quality service to our customers without sacrificing the integrity of the payment system. The payment accuracy project has created a blueprint for achieving the highest possible standards of program integrity without detracting from our primary responsibility to the nearly 1.5 million residents of Illinois who rely on the Illinois Department of Public Aid to properly administer the Medical Assistance Program.

APPENDIX I:
OVERVIEW OF THE MEDICAL ASSISTANCE PROGRAM

The Department of Public Aid's Medical Assistance Program pays for medically necessary services performed by providers for people who receive cash assistance and for those who are ineligible for cash assistance but who cannot afford medical care. The Department administers the program under the Illinois Public Aid Code and Titles XIX and XXI of the Social Security Act.

During FY98, the Illinois Department of Public Aid's Medical Assistance Program provided essential medical care through 60,000 providers to nearly 1.5 million eligible clients. This represents one in eight Illinois residents monthly with annual expenditures totaling approximately $6 billion.

The medically eligible include 650,000 children under age 19 and 60,000 long term care residents. Nearly one-half of Illinois' public assistance clients receive only medical assistance.

To be eligible for Medical Assistance, individuals must meet the financial and other eligibility requirements of the program. Individuals eligible for Illinois Medical Assistance are:

- Those living in households in which at least one parent is absent, dead or incapacitated (unable to work) or a two-parent household where neither parent is incapacitated, but one parent is unemployed.

- Children under 18 years of age who meet the countable income requirements but do not meet some other basic requirements for medical assistance.

- Pregnant women living in households with countable income at or below 133% of the federal poverty income guidelines.

- Eligible children living in two specific groups of low-income households.

- Children born on or after October 1, 1983, and those under six years of age in households with countable income at or below 133% of the federal poverty income guidelines.

- Other eligibles are persons 65 years of age or older; persons who are blind; and persons who are disabled; children whose care is subsidized by the Department of Children and Family Services and are wards of the state; and uninsured kids, under the age of 19, in families earning less than 185% of the federal poverty level (KidCare).

APPENDIX II: DEPARTMENT OF PUBLIC AID
PRE- AND POST-PAYMENT CLAIMS REVIEW ACTIVITIES

The Department of Public Aid historically has relied on a wide range of pre-payment and post-payment claims review activities to protect the Medical Assistance Program from abuse. These activities are described below. (Refer to Appendix III for a description of newly initiated or planned activities to improve the Department's payment accuracy).

Pre-payment claims editing (both automated and manual review) - A wide range of automated edits are employed to identify and reject inappropriate billings or to reduce payments for upcoding, billing errors or payment policy violations. While a precise estimate of the savings resulting from these edits is not available, they are believed to prevent hundreds of millions of dollars per year in payments for inappropriate services. In addition, up to 50,000 services are suspended each week and reviewed manually by a team of registered nurses. During FY98, the efforts of this team saved the Department $26 million.

Pre- and Post-payment medical necessity review of certain high-cost hospital stays - Savings in excess of $25 million result annually from the Department's effort to ensure that payments are made only for medically necessary inpatient hospital admissions and days of care, inpatient and outpatient observation services, and care provided in Ambulatory Surgical Treatment Centers. Specifically, the Department and its medical review contractor examine the following: (1) all inpatient psychiatric care provided to children, adolescents and adults; (2) inpatient care billed with diagnosis codes which, on postpayment review, have historically exhibited high nurse reviewer referral rates, indicating questionable admissions or lengths of stay; (3) ambulatory care involving procedures performed on an inpatient basis that have been determined safe for performance in an outpatient setting; and (4) cases involving inpatient stays of one day, excluding normal deliveries and rehabilitation care; and (5) a random sample of paid inpatient and outpatient observation services, two-day stays and care provided in Ambulatory Surgical Treatment Centers. In total, approximately 25% of all inpatient claims are reviewed.

Prior approval for many pharmaceuticals, medical equipment items, and medical supplies - Prior approval reduces the utilization of unnecessary or inappropriate medications, supplies, equipment or services. Through the use of professional medical consultants, prior authorization requests are reviewed and evaluated. The prior approval process was established in the early 1980's to require a mandatory advance approval for the use of expensive medications, medical equipment and supplies and care provided by Home Health Agencies. These requests are to be used in lieu of hospitalization to maintain a patient on an outpatient basis or to prevent a higher level of care. During FY98, the Department received prior approval requests for 1,051,334 prescriptions, 62,988 medical equipment and supply items and 11,121 requests for care provided by Home Health Agencies.

Prospective (prepayment) and Retrospective (post-payment) Drug Utilization Review (DUR) - The Department designed and implemented an electronic, point-of-sale system for submitting prescription bills in 1992. Point-of-sale processing allowed for the implementation of prospective and retrospective drug use review. Prospective edits prevent inappropriate early refills and screen clients for potential drug therapy problems such as therapeutic duplication, drug-disease contraindications, drug-drug interactions, incorrect dosage or duration problems and possible clinical abuse/misuse. Early refill edits were expanded during FY97 to include long term care residents. The cost savings for the Refill-Too-Soon (RTS) program during FY98 may have been as high as $27.6 million.

Retrospective review examines all patient services (hospital, physician, clinic, etc., as well as drugs) over time using predetermined medical standards and reports on potentially inappropriate health outcomes for follow-up. Department physicians and pharmacists contact providers for educational interventions as a part of this follow-up. While Department specific savings for retrospective DUR are not available, a wide body of literature suggests that these programs significantly reduce health care utilization.

Recipient Monitoring and Restriction for Overutilization - The Recipient Restriction Program (RRP) restricts clients to a primary care physician and/or pharmacy Primary Care Provider to provide appropriate utilization of medical services. A client may be a candidate for RRP when his or her profile identifies multiple physician visits or excessive pharmaceutical services which may constitute abuse or be a quality of care issue. When overutilization has been determined and a restriction is warranted, the initial restriction is for one year. After the first year, if overutilization is identified through the re-evaluation process, the client is restricted to a single provider for 24 months. Except for emergency services, restricted clients may only receive medical services from their primary care providers without a referral. The program not only improves the quality of care our clients receive, but also saved the State $16.2 million in FY97 based on expenditures for 2,621 restricted clients.

Surveillance Utilization Reviews - The Department's Surveillance and Utilization Review System (SURS) provides a comprehensive statistical profile of health care services and utilization patterns for Medicaid providers and clients. SURS is used to identify potential instances of inappropriate utilization of the Medicaid Program by providers and clients, to monitor clients whose medical services have been restricted due to over-utilization, and to provide information indicating the existence of any potential defect in level of care or quality of service. This subsystem of the Department's Medicaid Management Information System (MMIS) develops statistical profiles for each peer group based on provider and client demographic and medical characteristics. SURS then evaluates each participant's profile against the appropriate peer group profile. In FY98, 2,044 providers and clients who deviated significantly from their peer group norm were analyzed.

Provider Audits - The Department monitors and evaluates the fiscal reliability of providers' reimbursements by enforcing Department policies and recovering overpayments. In FY98,

230 field audits and 49 desk audits of Medicaid providers were conducted and $13,096,228 were collected.

Of the 279 providers audited, the Department recommended termination for 71 practitioners, 4 laboratories, 2 pharmacies, 1 medical transportation company and 1 hospital.

Provider Peer Reviews - The Department also monitors the quality of care and the utilization of services rendered by medical practitioners. 427 peer reviews were conducted during FY98. 366 physicians, 29 HMOs, 7 dentists, 6 podiatrists, 5 audiologists, 5 optometrists, and 9 others, e.g. hospitals and dialysis centers were reviewed. Sixty of the peer reviews required presentation to the Medical Quality Review Committee due to the seriousness of the identified concerns. The Committee recommended 25 terminations, 3 suspensions, 3 denials of reinstatement and 6 reinstatements. The other 23 cases resulted in a letter identifying the concerns and re-evaluation at a later date.

Medicaid Fraud Prevention Executive Workgroup (MFPEW) - The Medicaid Fraud Prevention Executive Workgroup is a cooperative partnership among the Division of Medical Programs, the Office of Inspector General and the Bureau of Information Systems. This workgroup extends the Department's commitment to eliminating fraud and abuse in the Medical Assistance Program. The multi-disciplinary workgroup evaluates edits and payment processes associated with the MMIS to identify and recommend improvements. Significant accomplishments to date include:

- Adding selected DRGs for pre-pay review
- Identifying new pre-pay edits
- Developing new procedures to monitor returned or undeliverable mail to providers
- Refining the Refill-Too-Soon project
- Following up on providers with expired licenses
- Studying best practices for monitoring providers

Office of Inspector General Reports - Pursuant to Public Act 88-554, the Department's Office of Inspector General publishes a quarterly report which summarizes the results of enforcement efforts such as collection of restitution amounts, provider sanctions, audits of medical providers and medical abuse investigations. The OIG has also published several other reports relating to fiscal integrity.

APPENDIX III:
DEPARTMENT OF PUBLIC AID PROGRAM INTEGRITY INITIATIVES

While Appendix II lists existing safeguards the Department has historically relied upon, it does not describe a number of more recent initiatives that are underway or planned for to improve payment accuracy. Many of these initiatives are expected to result in state-of-the-art payment safeguards that are presently not in operation in any public or private health insurer.

Automating Prior Approval Requests for Non-Emergency Transportation
Non-emergency transportation typically requires the prior approval of Department of Human Services' local office staff. In prior approval systems for drugs and medical supplies that are operated out of the Department's central office, an automated system is used to enter this information and link it to incoming claims. Drug claims lacking a required prior approval are rejected for payment. While a system for non-emergency transportation could provide similar functions by linking local office staff to the Department's central office, it is also expected to do more. Our vision is that it will help local office staff verify appointments and capture data to assist Department staff with surveillance efforts. A number of options for obtaining this system are under consideration, including obtaining the system from a vendor through a competitive procurement.

Considering Contracting For Non-Emergency Transportation
Would the Department save money and reduce its vulnerability to fraud, abuse, and billing errors in non-emergency transportation by contracting with a single entity to both administer and deliver medical transportation services? That is a question the Department is currently considering. At present, essentially any transportation provider can participate in this fee-for-service program. While the program is administered by the Department, many of the day-to-day decisions are the responsibility of DHS local offices -- the same offices that are facing aggressive timetables for reducing the state's welfare rolls through job placements. A single entity or consortium of firms that specialize in the management and delivery of transportation may provide a more attractive option.

Developing Improved Payment Edits
As Appendix II indicates, the Department has numerous edits in place that are believed to save hundreds of millions of dollars annually. Their effectiveness, however, has not resulted in complacency. The Department recognizes that fraud and abuse is a dynamic phenomenon and that continual improvement of the edits is essential. A workgroup has recently been appointed to examine the advantage and disadvantages of using commercial code review system, or automated pre- and postpayment edits, that would supplement the Department's existing edits. This workgroup will assess the merits of issuing a procurement to allowing interested vendors to demonstrate the net savings the Department can achieve.

Creating A Unified Claims History Database to Improve Editing and Surveillance
Presently, institutional, pharmacy, and other non-institutional claims are processed separately and stored in different history databases. An initiative is now underway to create a unified claims processing system. This will facilitate the Department's editing and surveillance initiatives by allowing more sophisticated prepayment claims review routines to be employed.

Creating A Data Warehouse
The Department has secured enhanced federal funding to procure a data warehouse, which will provide analysts and administrators with a decision support system, data mining tools, and an executive information system. The data warehouse will greatly improve the efficiency and ease with which data are accessed. The tools included within are expected to be of great benefit for program administration, budgeting and fraud detection. It will support audit and investigative work as well.

Ensuring That Every Claim Faces Risk of Review
While claims editing to detect billing problems is common in the health insurance industry, few insurers or health plans conduct any prepayment fraud examination. Fewer still ensure that every claim for payment stands a non-zero chance of being subject to a pre-payment fraud examination. Doing so is expected to provide several benefits. First, it will deter some fraud perpetrators from submitting improper claims in the first place. Second, it will help us identify, on a continuous basis, where the errors are and how surveillance efforts can be better targeted. Third, it will provide us with invaluable data for the development of advanced fraud detection routines such as those to be undertaken by the Fraud Science Team (FST).

Continuing the Fraud Science Team Effort
The Department recognizes that the nature of health care fraud is constantly changing. Determined fraud perpetrators will adopt new schemes once edits are put in place to stop existing questionable activity. To address this, the Department has established the Fraud Science Team (FST), an ongoing effort to develop state-of-the-art automated detection routines to prevent or earlier detect Medicaid fraud. This project is believed to be among the first effort nationally to develop and implement an extensive set of automated fraud detection routines within a large health care claims processing systems.

FST will identify known fraud schemes and significant Department vulnerabilities, develop computerized fraud detection routines to identify fraud schemes, run these computer programs against the claims database, determine which of these routines hold the greatest promise, and implement them within the Department's operational claims review systems.

Enhancing Post Payment Surveillance Utilization Review
The Department is in the process of upgrading its Surveillance Utilization Review System (SURS), the current system used to identify providers and clients who warrant additional scrutiny. The new system will have several important advantages over the existing one. It will operate off a local area network, rather than the Department's mainframe computer system. This will reduce data processing costs substantially and allow profiling and analysis to occur on an on-going basis rather

than the current quarterly schedule. It will also allow the Department to make analytical comparisons that were previously unavailable, have greater flexibility in changing parameters, and to provide real-time updates of profiling criteria, all of which will facilitate the investigation and detection of new fraud schemes and perpetrators. The new system will improve our ability to surveil managed care organizations and assess care delivered under managed care arrangements. Finally, it will increase the range of data available to the Department and thus increase the scope and performance of our surveillance efforts.

Restricting Clients who Abuse Non-Emergency Transportation
Repeated abuse of non-emergency transportation services by a client cannot be tolerated.   Efforts will be underway shortly to examine clients' medical transportation use more closely. Clients who are using this service inappropriately will be restricted to a single transportation provider. The Recipient Restriction Program's ongoing success in reducing unnecessary utilization by restricting clients to a single pharmacy or physician suggests that this measure will reduce our vulnerability in this area.

Suspending Client Eligibility and Provider Payments
In the Spring 1998 session, the General Assembly passed Senate Bill 1711 with enactment into law pending the Governor's signature. The legislation would allow the Department to suspend the eligibility of clients who are convicted of public assistance fraud after their first such offense. Currently, a second conviction is required before eligibility can be suspended. The legislation would also allow the Department to suspend payments to providers who have been indicted for health care fraud. This legislation is expected to be a valuable tool for the Department in addressing fraud committed by both clients and providers.

Implementing Improved Non-Emergency Transportation Audit Protocols
Improvements to our audit process in this area will result in additional recoveries. Through this review and previous work on this issue, we recognize the value of documenting that the client visited the provider of an approved medical service on the same day that the transportation service was rendered. On a regular basis we expect to review electronic claims or contact the site of medical care to verify that the client did receive care on the day of the trip. We will also consider changes in policy to require transportation providers to use a common trip ticket form, since the forms used by some providers lack a place for signatures or other key information. Doing so will allow for increased accountability which will encourage program compliance.

Implementing Electronic Data Interchange and Associated Safeguards
For the past few years, the Department has been planning and implementing an electronic data interchange system referred to as Recipient Eligibility Verification (REV). When complete, REV will include several additional payment safeguards that collectively will reduce the extent of "doctor-shopping" by clients, strengthen the Department's prior approval systems, improve its surveillance capabilities, and decrease the incidence of inadvertent billing errors by providers.

Fraud Prevention Investigations

Fraud Prevention Investigations prevent ineligible applicants from becoming enrolled in any welfare program, including the Medical Assistance Program. Based on established criteria, applicants are referred for investigation. Those who are found to be ineligible are denied assistance. A pilot test of the initiative found it to be highly cost effective, saving $12 for every dollar the Department spent. 63% of the applications referred were ineligible which resulted in total net savings of $3.6 million in FY97, including $1.7 million in medical program dollars. The Department is reviewing the data collected through the project to identify additional criteria for improved targeting.

Long Term Care Asset Discovery Initiative
The Long Term Care Asset Discovery Initiative identifies applicants who fail to reveal all assets prior to enrollment. Identifying erroneous applications submitted on behalf of these individuals can result in substantial savings. Available evidence suggests this project holds significant potential. An initial demonstration pilot resulted with over $800,000 in savings while a second expanded pilot resulted with $3.1 million in savings and cost avoidance. A statistical analysis of the data from the expanded pilot will be performed to identify additional criteria for improved case targets.

Developing an Improved Death Match Process
Because of improvement in our information processing and our collaboration with federal and other state agencies, DPA and DHS will be moving forward to adopt a fully automated consolidated death match process. This process will enable the Department to more rapidly determine that a client has died and avoid payments for post-mortem dates of service.

Implementing Biometric Safeguards
Illinois is one of the first states to test biometric identification measures to reduce the incidence of welfare fraud. Several biometric techniques, such as electronic fingerprinting, retinal identification, and photo identity cards, are being explored and tested to determine which are most successful in ensuring that only entitled persons receive assistance. Biometric measures hold great promise not only in their ability to identify persons who have enrolled more than once under a false name, but also in their ability to deter persons from attempting to commit such fraud in the first place. It also could quickly identify fugitive felons who are ineligible for certain benefits as well as persons incarcerated in the Illinois Department of Corrections.

APPENDIX IV: SAMPLING AND ESTIMATION METHODOLOGY

In the two sections that follow, this appendix describes how the Payment Accuracy Review sample was selected and how the payment and service accuracy rates were estimated.

Sampling
We measured the percent of accurately paid dollars for Department of Public Aid funded Medical Assistance Program services by conducting a stratified random sample of services paid during a one-month period, January 1998. In addition to services paid for by other agencies, the following services were also excluded from the universe: long term care services, services provided to Medicare/Medicaid Crossover clients, zero dollar paid services, capitation payments to HMOs, and services billed by hospitals and other providers owned by the County of Cook. As a consequence of these exclusions, the results may not be comparable to those produced by other state Medical Assistance Programs.

In general, the unit of analysis was the service submitted by a given provider on behalf of a given client. (Because FQHCs, Rural Health Clinics, and Encounter Rate Clinics were paid for by the visit, regardless of the number of services provided during that visit, the unit of analysis for these providers was the claim). While we determined the payment accuracy rate by examining the dollars appropriately paid for a procedure code associated with a service, we examined services submitted both before and after the applicable date of service to make the payment accuracy determination within the context of the other services provided. The context services were not considered in the payment accuracy rate. They were only used to help determine the correctness of the selected service.

The universe and sample observations were divided into the following three strata:

> Stratum 1 - Physician and pharmacy services (which contained 200 sample observations)

> Stratum 2 - Inpatient hospital and hospice services (which contained 100 sample observations)

> Stratum 3 - All other services that were included in the study (which contained 300 sample observations)

Estimation
We used the ratio estimator method for stratified random sampling as the basis for estimating the payment accuracy rate and confidence limits, as discussed on page 164 of William G. Cochran's *Sampling Techniques* (Third Edition, 1977). We calculated this rate using the following steps. First, dollars for services included in the sample which were paid correctly were totaled by stratum and divided by the total payments for all services in the sample. This resulted in payment accuracy rates for each of the three strata. Second, each of the accuracy rates for the three strata were weighted by multiplying the payments made for services in the corresponding universe stratum and summed to

arrive at an overall estimate of the payments that were made correctly. Third, this estimate of the correct payments was divided by the total payments made for all services included in the universe to determine the payment accuracy rate estimate.

Confidence limits were calculated for the payment accuracy rate at the 95% confidence level. The standard deviation of the estimated correct payments was multiplied by 1.96 and subtracted (added) from the point estimate for correct payments to arrive at the lower-bound (upper-bound) estimate. These lower- and upper-bound estimates were divided by the total payments made for all services included in the universe to determine the upper- and lower-bound payment accurate rates.

The service accuracy rate was estimated using the following two steps. First, the number of correctly paid services in each stratum were divided by the total number of services in the stratum to produce stratum service accuracy rates. Second, each of the resulting stratum service accuracy rates were weighted (by multiplying the corresponding ratio of the number of universe services in that stratum to the total number of universe services across all strata) and summed to arrive at an overall service accuracy rate estimate. Confidence limits at the 95% confidence level were calculated in the standard manner to identify lower- and upper-bound service accuracy rate estimates.

The formulas used to perform the above-described operations, along with terms defined for quantities specifically calculated in this study, are presented below.

Let

$\hat{P}$ = estimated payment accuracy rate

$\hat{Y}$ = estimate of dollar value of accurate payments

X = known dollar value of total payments in the universe

X_h = known dollar value of total payments in the universe for stratum h

y_h = sample estimate of the dollar value of accurate payments for stratum h

x_h = sample estimate of the dollar value of the total payments for stratum h

The formula for the **payment accuracy rate** estimate is as follows:

$$\hat{P} = \hat{Y} / X$$

where

$$\hat{Y} = \sum_{h=1}^{3} (y_h / x_h) X_h$$

(The above formula is equation 6.44 from Cochran, found on page 164.)

The **upper- and lower-limits** are calculated using the 95% confidence interval and the following formulas:

$$\hat{P}_{\text{lower limit}} = \hat{Y}_{\text{lower limit}} / X$$

$$\hat{P}_{\text{upper limit}} = \hat{Y}_{\text{upper limit}} / X, \text{ where}$$

$$\hat{Y}_{\text{lower limit}} = \sum_{h=1}^{3} (y_h / x_h) X_h - 1.96s$$

$$\hat{Y}_{\text{upper limit}} = \sum_{h=1}^{3} (y_h / x_h) X_h + 1.96s, \text{ and}$$

$$s = \sqrt{s^2} = \sqrt{\sum_{h=1}^{3} s_h^2}$$

$$s_h^2 = A_h B_h, \text{ where}$$

$$A_h = [(N_h^2 (1 - f_h)) / (n_h (n_h - 1))] \text{ and } B_h = [\sum y_{hi}^2 + R_h^2 \sum x_{hi}^2 - 2R_h \sum y_{hi} x_{hi}]$$

where $f_h = n_h / N_h$ and $R_h = y_h / x_h$

(The formula for s_h^2 used above is equation 6.10 on page 155 of Cochran.)

The formula for the **service accuracy rate** or case accuracy rate estimate is as follows:

Let:

$\hat{c}$ = the estimated service or case accuracy rate
a_h = the number of accurate services or cases in stratum h
n_h = the total number of services in stratum h (the sample size for stratum h)
c_h = the service accuracy rate for stratum h $= a_h / n_h$

The formula for the service or case accuracy rate is

$$\hat{c} = \sum_{h=1}^{3} (N_h / N)(a_h / n_h)$$

(This formula is equation 5.52 on page 107 of Cochran.)

The **upper- and lower-limits** for this rate are calculated using the 95% confidence interval and the following formulas:

$$\hat{c}_{\text{lower limit}} = \hat{c} - 1.96s$$
$$\hat{c}_{\text{upper limit}} = \hat{c} + 1.96s, \text{ where}$$

$$s = \sqrt{s^2} = \sqrt{\sum_{h=1}^{3} s_h^2}, \text{ where}$$

$$s_h^2 = (1 - f_h)([c_h(1 - c_h)][N_h / N]^2 / [n_h - 1])$$

(This formula is equation 5.56 on page 108 of Cochran.)

APPENDIX V:
PAYMENT ACCURACY REVIEW PROCESS

The payment accuracy project relied on a four-part review process to determine the accuracy of the services selected for review and included in the sample. Specific components of this process include client interviews, medical record reviews, and a contextual claim analysis, which was undertaken to determine whether the selected service was appropriate when analyzed in the context of the other services billed for that client during the surrounding two weeks. The information gathered through this process was then examined by a multi-disciplinary team of Department experts to determine whether payments made for the service were to be considered erroneous.[11]

The subsections that follow describe each component of the review process and the role of the Department Expert Review Team.

Client Interview
This project used a five-page questionnaire containing questions regarding the receipt of the selected service as well as other, more general medical information surrounding the selected service. The questionnaire was revised for this project to include several items initially raised during training for the field interview phase of the project.

A 25-case test study reflecting the overall sample was completed in April. Minor changes were made to the instrument and the remaining 575 cases were distributed to investigators. In the end, investigators were able to contact 585 of the clients or their representatives in the sample. All client interviews were completed by May 8, 1998.

Although the client interview was an integral step in the payment accuracy review process, it was occasionally fruitless. There were several cases where the client would be unlikely to know whether the service was rendered or not. This included instances of caretaker relative answering the questions, or the service was such (lab, for example) that the client would be unaware of it. There were also some clients who may not have been in full control of their mental faculties during the interview.

Medical Record Review
With prior notice to the provider, auditors and staff nurses reviewed the full medical record for each of the 599 clients on whose behalf payments were made. To diminish the likelihood the provider would retroactively falsify the medical records, we also requested the files on 49 additional clients served by that provider. Where applicable, medical records of the prescribing provider were also reviewed to confirm that the service was actually and properly ordered. In the case of transportation services, records were requested from the provider listed on the transportation provider's dispatch

---

[11] For erroneous services, these experts also determined whether the provider was overpaid or underpaid and whether the error appeared to be a questionable, inadvertent, or agency error. The team also recommended follow up action for 29 of the providers and 7 of the clients.

log or trip tickets. We also checked DHS local office records for prior approval. Below is a list of the documents requested from each of the provider types subject to review during this project:

Practitioners/FQHC/Rural Clinics Medical records Schedule of Usual and Customary Charges	Hospitals (Inpatient/Outpatient) Medical records Schedule of Usual and customary charges Hospital Based Physician/s Contracts
Pharmacy Drug Prescription Daily Dispensing Log Schedule of Usual and Customary Charges	Home Health Agencies Medical record Physician order Schedule of Usual and Customary Charges Prior approval form
Durable Medical Equipment/Supplies Physician order/certificate of need Purchase/delivery invoice Prior approval form Schedule of Usual and Customary Charges	Medical Transportation Trip ticket Dispatcher's log Prior approval form Schedule of Usual and Customary Charges
Hospice Medical record Physician Certification Schedule of Usual and Customary Charges	Independent Laboratory Physician lab order Test result Schedule of Usual and Customary Charges

The auditors verified that the required documentation listed above was maintained. They also substantiated the accuracy of the claims paid based on the records reviewed. Failure by the provider to maintain any of the above records was considered a violation of Department's policy. Therefore, if the record information was not available, the respective claim was considered discrepant.

Provider records were verified through a comparison of the procedure codes documented on the billing statement and those documented in the medical records. Where an improper procedure code billing was found, the appropriate procedure code was determined to identify the cost of the discrepant billing. Only the overpayment was considered discrepant.

All selected hospital inpatient records were reviewed by LexiCode, a South Carolina company specializing in DRG code validation. LexiCode reviewed the DRG code billed to the medical necessity of the admission and length of stay of those claims paid on a per diem basis. Discrepancies were noted and subsequently evaluated by the expert review team.

For medical transportation providers, the review also included the accuracy of the mileage billed. Our staff drove the trip from point of origin to the destination, verifying the milage. Any excess miles billed were considered discrepant.

Providers' schedules of usual and customary charges were examined to ensure that the charges to and the payments received from the Department were no more than the charges to and the payments received from the general public.

Staff nurses evaluated the presence of documentation; adequacy of visit content; appropriateness of the utilization of services and whether services were properly billed. The referring practitioner records were also evaluated to determine if referred services were appropriate. If any services were suspected to be of insufficient medical quality, the nurses would document those concerns. All of the medical records were reviewed to verify the accuracy of the procedure codes billed as documented in the medical records. Any improper procedure code billing found was identified as discrepant and flagged for further evaluation.

Hospital outpatient per diem claims were reviewed to determine whether the claim for emergency room service was true emergency or the appropriate Hospital Ambulatory Reform procedure was billed. Any emergency room claim potentially in error was referred to one of the Department's Board Certified emergency room physicians for review and determination. Payment for any claim determined by the physician consultant not to be a true emergency was reduced to the appropriate fee-for-service rate and only the overpayment considered discrepant.

The HFSN evaluated non-emergency transportation services to verify the documentation supporting the actual trip and its prior approval. Records from other medical providers (such as nursing homes and emergency rooms) were reviewed to determine that such transportation would have been appropriate.

Contextual Claims Review
A team of policy and billing experts reviewed each of the services in the sample. They also reviewed all other services paid on behalf of the clients during the one week before and following the date of service for the service in the sample. The purpose of this review was to determine if the sample service corresponded with other paid services in the period. Reviewers used a survey instrument developed for this study to record information pertinent to the services they examined. In addition to the paid claims information, team members utilized the Department's MMIS inquiry screens to determine physicians' specialties, other paid services and prior approval information to assist in their analysis.

Any case questioned by a member of the Contextual Review Team was flagged. A smaller review team of two Bureau of Comprehensive Health Services (BCHS) and one Bureau of Claims Processing (BCP) staff met to discuss and evaluate each of these identified cases. This secondary review was performed to verify that further review was necessary and that all information needed for the review was noted on the survey instrument. Clerical staff performed a quality control check of each survey instrument to ensure that it was completed in its entirety.

Final Analysis-Expert Review Team

The medical record and contextual services reviews were both subject to two levels of review before being submitted to the project director. If the service was questioned by any of the four reviewers (investigator, auditor, nurse, policy/billing expert), then it was submitted for a third level of scrutiny by the expert review team. The team was comprised of physicians, pharmacists, registered nurses, senior management from the audit and peer review sections, senior management from the Office of Inspector General and senior program and policy staff from the Division of Medical Programs.

The expert review team examined each service and the suspected discrepancy. The team discussed the policy and medical implications of the potential error. Using its collective expertise, as well as other ancillary information available, the team determined whether the service was paid accurately. If the service was not paid accurately, then it was classified into one of 16 categories of error with a corresponding over- or under-payment. The team based its decisions on existing Department policy at the time the service was rendered.

A second expert review team made the final determination of whether in fact the services were in error and if the categories of error were properly classified. This review team consisted of the Medical Program Administrator, Inspector General, Deputy Inspector General, Project Director, Project Research Manager, Chief of the Bureau of Comprehensive Health Services (BCHS), Billing Manager for BCHS, and the Pricing Unit Supervisor for the Bureau of Claims Processing.

APPENDIX VI:
SUMMARY OF PROVIDER AUDIT OVERPAYMENT AND RESTITUTION
RECOVERIES

The Department continually pursues dollars lost through fraud and abuse committed by providers and clients. The providers and clients pay restitution as a result of; 1) fraud convictions, 2) provider criminal investigations and 3) civil settlements. The Department also performs audits of providers and collects overpayments. These monies are returned to the state's General Revenue Fund. The following table represents restitution and overpayment monies collected during the last five state fiscal years.

Fiscal Year	*Provider Audit Overpayment Recoveries*	*Provider Restitution*	*Client Restitution*	*Total*
1994	$8,437,517	$285,929	$0	$8,723,446
1995	$14,370,254	$92,520	$0	$14,462,774
1996	$16,071,059	$3,002,642	$0	$19,073,701
1997	$15,235,441	$1,553,720	$0	$16,789,161
1998	$13,096,228	$1,349,291	$33,977	$14,479,496
Total	$67,210,499	$6,284,102	$33,977	$73,528,578

APPENDIX VII:
STUDY RESULTS AND STATISTICAL SUMMARIES

This Appendix presents the results of the Payment Accuracy Review (PAR) project in tabular form. It includes:

Table 1   Dollar Error Rates by Stratum

Table 2   Dollar Rate Error Percentage Distributions and Projected Error Dollars by Category of Error

Table 3   Dollar Error Distribution by Stratum, Error Type and Category of Error

Table 4   Number of Services in Error per Thousand by Error Type and Category of Error

When reviewing Tables 2 - 4, it is important to remember that the entire sample contains only 600 observations and the specific breakdowns shown may in some instances be based on only a few observations. As a result, detailed breakdowns should be interpreted with care.

PAYMENT ACCURACY REVIEW - TABLE 1
Dollar Error Rates by Stratum

	Rate & Confidence Interval			*January 1998*		*Projected Annual Loss*
				Universe Dollars	*Error Dollars*	
Stratum 1 - Physician and Pharmacy Services	5.76%	±	4.21%	$70,194,715	$4,040,349	$48,484,194
Stratum 2 - In-patient Hospital and Hospice Services	2.97%	±	3.26%	$93,707,481	$2,787,250	$33,446,996
Stratum 3 - All Other NIPS and Outpatient Hospital Services	7.20%	±	5.07%	$36,522,541	$2,628,883	$31,546,593
Total	4.72%	±	2.31%	$200,424,737	$9,456,482	$113,477,782

The stratified random sample was selected from January 1998 adjudicated payments, excluding long term care, managed care capitations, Cook County inpatient, most Cook County outpatient services, Medicare cross-over payments and payments made by other Illinois departments (waiver agencies). The remaining universe was separated into three strata and services were selected from these strata utilizing simple random sampling at different probabilities for selection among the strata. Stratum 1 contained physician and pharmacy services; 200 services were selected. Stratum 2 contained hospital inpatient and hospice services; 100 services were selected. Stratum 3 contained all other non-institutional providers (NIPS) services and outpatient hospital services; 300 services were selected. Each selected service was reviewed through a multistage process. This process was completed and findings were determined on all but one selected service which was discarded from the sample and listed in error. The discarded service was a capitated managed care gatekeeper service which was erroneously selected in Stratum 3. All like services in the January payment month were identified and excluded from the universe that was utilized in the weights for calculating the error rate.

The confidence interval for the payment error rate is calculated at 95% confidence. There is a 95% probability that the actual error rate for the population is 4.72% ± 2.31%, or that the true error rate lies within the range 2.41% to 7.03%. The projected annual loss is calculated by multiplying three quantities: 1) the error rate, 2) the January 1998 universe dollars that were subjected to sampling and 3) 12 (for 12 months in the year).

The payment error rate is the net of overpaid and underpaid dollars. There were two under payments to hospitals for inpatient services which were caused by billing the wrong DRG (Diagnosis Related Group) code (down coding).

PAYMENT ACCURACY REVIEW - TABLE 2
Dollar Rate Error Percentage Distributions and Projected Error Dollars by Category of Error

Category of Error	*Stratum 1*		*Stratum 2*		*Stratum 3*		*Total*	
	Percentage Distribution	*Annual Dollars*	*Percentage Distribution*	*Annual Dollars*	*Percentage Distribution*	*Annual Dollars*	*Percentage Distribution*	*Annual Dollars*
Questionable	57.53%	$27,892,957	41.19%	$13,776,818	64.80%	$20,442,192	54.73%	$62,111,967
Inadvertent	34.87%	$16,906,438	-6.45% *	($2,157,331)	32.10%	$10,126,456	21.92%	$24,875,564
Agency	7.60%	$3,684,799	65.26%	$21,827,510	3.10%	$977,944	23.35%	$26,490,253
Total	100.00%	$48,484,194	100.00%	$33,446,996	100.00%	$31,546,593	100.00%	$113,477,782

Questionable - Questions were raised about the intentions of the provider to bill accurately - no intent has been proven however.

Inadvertent - Apparent billing mistakes (two of these errors resulted in underpayments).

Agency - Errors caused by the Department in approving services or adjudicating claims (there were four of these errors in the sample).

* The inadvertent errors in Stratum 2 were underpayments.

PAYMENT ACCURACY REVIEW - TABLE 3
Dollar Error Rate Distribution by Stratum, Error Type and Category of Error

			Category of Error			
Code	Error Type		Questionable	Inadvertent	Agency	Total
Stratum 1						
E01	Unbundling/fragmentation		3.74%			3.74%
E04	Duplicate billing by different providers		0.69%			0.69%
E10	Non-covered services		4.95%			4.95%
E13	Recipient should not have been covered at the time				1.28%	1.28%
E14	No physician prescription or order		14.55%			14.55%
E16	Services not documented		3.66%	9.65%		13.31%
E21	Service performed by mid-level practitioner		16.48%			16.48%
E33	Upcoding		13.46%			13.46%
E34	Edit problem/computer error				6.32%	6.32%
E38	Incomplete documentation			25.22%		25.22%
Stratum 1 Total			57.53%	34.87%	7.60%	100.00%

30

PAYMENT ACCURACY REVIEW - TABLE 3
Dollar Error Rate Distribution by Stratum, Error Type and Category of Error

			Category of Error			
Code	Error Type		Questionable	Inadvertent	Agency	Total
Stratum 2						
E33	Upcoding		41.19%		65.26%	106.45%
E42	Down-coding			-6.45%		-6.45%
Stratum 2 Total			41.19%	-6.45%	65.26%	100.00%

PAYMENT ACCURACY REVIEW - TABLE 3
Dollar Error Rate Distribution by Stratum, Error Type and Category of Error

Code	Error Type	Category of Error			Total
		Questionable	*Inadvertent*	*Agency*	
Stratum 3					
E01	Unbundling/fragmentation	0.58%			0.58%
E14	No physician prescription or order		0.63%	3.10%	3.73%
E16	Services not documented	1.95%	25.16%		27.10%
E17	Prior approval required but not obtained	1.35%	2.85%		4.20%
E19	Billed for a non-covered service, e.g., phone call	5.61%			5.61%
E22	Provider did not provide any service	22.87%			22.87%
E23	Client did not receive the listed service	1.12%			1.12%
E24	Provider did not provide listed service	0.72%			0.72%
E33	Upcoding	30.61%			30.61%
E38	Incomplete documentation		3.46%		3.46%
Stratum 3 Total		64.80%	32.10%	3.10%	100.00%

PAYMENT ACCURACY REVIEW - TABLE 3
Dollar Error Rate Distribution by Error Type and Category of Error (All Strata Combined)

Code	Error Type	Category of Error			Total
		Questionable	*Inadvertent*	*Agency*	
E01	Unbundling/fragmentation	1.76%			1.76%

PAYMENT ACCURACY REVIEW - TABLE 3
Dollar Error Rate Distribution by Error Type and Category of Error (All Strata Combined)

| Code | Error Type | Category of Error | | | Total |
		Questionable	Inadvertent	Agency	
E04	Duplicate billing by different providers	0.29%			0.29%
E10	Non-covered services	2.11%			2.11%
E13	Recipient should not have been covered at the time			0.55%	0.55%
E14	No physician prescription or order	6.22%	0.17%	0.86%	7.25%
E16	Services not documented	2.10%	11.12%		13.22%
E17	Prior approval required but not obtained	0.38%	0.79%		1.17%
E19	Billed for a non-covered service, e.g., phone call	1.56%			1.56%
E21	Service performed by mid-level practitioner	7.04%			7.04%
E22	Provider did not provide any service	6.36%			6.36%
E23	Client did not receive the listed service	0.31%			0.31%
E24	Provider did not provide listed service	0.20%			0.20%
E33	Upcoding	26.40%		19.24%	45.64%
E34	Edit problem/computer error			2.70%	2.70%
E38	Incomplete documentation		11.74%		11.74%
E42	Down-coding		-1.90%		-1.90%
	Total	54.73%	21.92%	23.35%	100.00%

PAYMENT ACCURACY REVIEW - TABLE 4
Number of Services in Error per Thousand by Error Type and Category of Error (All Strata Combined)

| Code | Error Type | Category of Error | | | Total |
		Questionable	Inadvertent	Agency	
E01	Unbundling/fragmentation	4.59			4.59
E04	Duplicate billing by different providers	3.83			3.83
E10	Non-covered services	3.83			3.83
E13	Recipient should not have been covered at the time			3.83	3.83
E14	No physician prescription or order	11.48	0.76	0.76	13.00
E16	Services not documented	6.11	21.40		27.51
E17	Prior approval required but not obtained	0.76	2.28		3.04
E19	Billed for a non-covered service, e.g., phone call	0.76			0.76
E21	Service performed by mid-level practitioner	3.83			3.83
E22	Provider did not provide any service	23.57			23.57
E23	Client did not receive the listed service	0.76			0.76
E24	Provider did not provide listed service	0.76			0.76
E33	Upcoding	18.61		0.07	18.68
E34	Edit problem/computer error			3.83	3.83
E38	Incomplete documentation		23.70		23.70
E42	Down-coding		0.14		0.14
	Total	78.89	48.28	8.49	135.65