United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

August 2, 1989

The Honorable Louis W. Sullivan, M.D.
The Secretary of Health and
Human Services

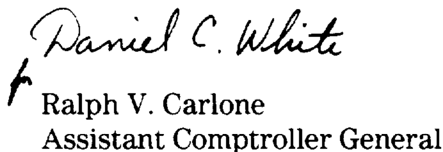
Dear Mr. Secretary:

This report presents the results of our evaluation of the Health Care Financing Administration's management and control over federal funds used to acquire and operate states' automated Medicaid systems. We reviewed this program under our legislative authority to evaluate federal agencies and programs.

This report contains recommendations to you in chapters 2, 3, and 4. As you know, 31 U.S.C. 720 requires the head of a federal agency to submit a written statement of actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of this letter, and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of this letter. We would appreciate receiving copies of these statements.

We are sending copies of this report to the Chairmen of the above Committees; the Administrator of General Services; and the Director, Office of Management and Budget. This report was prepared under the direction of Melroy D. Quasney, Associate Director, who can be reached on (202) 275-4659. Other major contributors are listed in appendix II.

Sincerely yours,



Ralph V. Carlone
Assistant Comptroller General

these functions. By fiscal year 1985, all states, except five exempted by federal law, had installed a HCFA-approved Medicaid system.

Results in Brief

GAO reviewed 129 state requests for federal funds, approved by 6 of HCFA's 10 regional offices, dated from November 1985 through July 1988 to either acquire or enhance automated Medicaid systems. GAO found that because HCFA has not issued guidelines concerning the requirement for states to prepare cost and benefit analyses, HCFA approved 116 of these requests—costing about $119 million—without the means to determine (1) if the projects would be worth their costs, or (2) whether the most cost-effective alternative was selected.

HCFA currently funds approved state enhancements to automated Medicaid systems at the 90-percent rate. GAO noted, however, that federal guidelines provide that automated system enhancements relate to the operation of a system and therefore believes they should be funded at the 75-percent rate.

Principal Findings

Lack of Guidance Lessens Control Over Spending

Federal regulations require states to support their funding requests with cost and benefit analyses and evaluations of alternatives including the use of existing systems. GAO found that from November 1985 through July 1988, HCFA had approved 116 automation requests totaling about $119 million that were not substantiated by federally required cost and benefit analyses or evaluations of alternatives, including the use of existing systems. For example, in the absence of a quantitative benefits analysis, HCFA approved one request for a system with estimated annual operating costs of $4.6 million. The system was to assist in managing a program with $1 million in annual expenditures.

The primary reason states' requests did not contain adequate justification was that HCFA has not placed a high priority on adequately defining the information states must include in automation requests. (See ch. 2.)

Projects Not Monitored, Expected Benefits Not Verified

Although not required by federal regulations or HCFA's instructions, progress reports on approved automation projects can be requested. GAO believes that such reports are necessary in order to monitor (1) a project's status, (2) the need for additional funds to complete a project, and (3) a project's completion date. Because HCFA does not systematically require information on the progress of projects, it does not have information on whether 112 projects costing about $110 million were completed on schedule.

In addition, HCFA generally does not determine whether completed projects are providing expected benefits. Although federal regulations and Office of Management and Budget directives state that completed projects should be reviewed to determine if expected benefits are realized, HCFA has no procedures for performing these post-implementation reviews because it does not believe it has the resources to conduct them. Although HCFA conducted four post-implementation reviews in fiscal year 1987, including one that identified potential savings of about $25.6 million, it has not conducted any further reviews. Therefore, HCFA cannot determine the extent to which approved state automation efforts have achieved expected benefits. (See ch. 3.)

Enhancements Should Be Funded at the 75-Percent Rate

HCFA funds enhancements to state Medicaid systems at the 90-percent funding rate, which is authorized for the acquisition of HCFA-approved automated Medicaid systems. The law authorizes 75-percent funding to operate such approved systems. Federal guidelines, however, provide that enhancements are activities attributable to the operation of an automated system. Therefore, it appears that enhancements, if justified, should be funded at the 75-percent rate. (See ch. 4.)

Recommendations

GAO recommends that the Secretary of Health and Human Services direct the Administrator, Health Care Financing Administration, to

- implement procedures to ensure that states' requests for federal funds are supported by cost and benefit analyses and evaluations of alternatives (see ch. 1),
- implement procedures to monitor states' projects to ensure that they are completed and to determine if projected benefits are obtained (see ch. 2), and
- consider the application of a 75-percent funding rate for enhancements to states' Medicaid systems. (See p. 27).

Agency Comments

The Department of Health and Human Services generally agreed with the report's recommendations. However, the Department did not agree with GAO's recommendation that enhancements to states' Medicaid systems be funded at the 75-percent rate. The Department stated that HCFA-mandated changes should be funded at the 90-percent rate, and proposed that all other changes should be funded at the 50-percent rate. Subsequent to receiving the Department's comments on a draft of this report, HCFA's Director of Medicaid Management told us that the proposal has been modified to continue funding all approved enhancements at the 90-percent rate. The Department did not address the 75-percent rate. GAO continues to believe that enhancements to approved systems are an operations cost and should receive 75-percent funding. The Department's comments are highlighted in the report.

Contents

Executive Summary		2
Chapter 1 Introduction		8
	Medicaid Systems Must Perform Standard Functions to Qualify for Higher Funding	9
	Federal Government's Costs for Medicaid Automated Systems	10
	Objectives, Scope, and Methodology	11
Chapter 2 Better Control Over Federal Funds Needed		13
	Instructions Inadequate for Required Decision-Making Information	13
	Advance Planning Documents Lack Critical Information	15
	Conclusions	18
	Recommendations	18
	Agency Comments and Our Evaluation	19
Chapter 3 HCFA Needs to Monitor and Review States' Improvement Projects		20
	Regional Offices Cannot Determine Projects' Status	20
	Post-Implementation Reviews Not Conducted as Required	22
	Conclusions	23
	Recommendations	23
	Agency Comments and Our Evaluation	23
Chapter 4 Enhanced Funding Rate Should Be Reconsidered		25
	Current Federal Laws and Regulations	25
	Proposed Rule Change	25
	Enhancements Should Be Funded at the 75-Percent Rate	26
	States Oppose HCFA's Proposed Rule Change	26
	Conclusions	27
	Recommendation	27
Appendixes	Appendix I: Comments From the Department of Health and Human Services	28
	Appendix II: Major Contributors to This Report	33
Tables	Table 1.1: HCFA Rates for Funding State Systems	9
	Table 3.1: Additional Funding Requirements	21

Figure

Figure 1.1: Federal Cost for Medicaid Automated Systems for Fiscal Years 1981-1987 10

Abbreviations

ADP	automated data processing
GAO	General Accounting Office
HCFA	Health Care Financing Administration
IMTEC	Information Management and Technology Division

Introduction

The Medicaid program, which became effective on January 1, 1966, is a federally aided, state-administered medical assistance program that served about 23 million low-income people in fiscal year 1987.[1] Fiscal year 1987 Medicaid program expenditures (costs to provide medical services) totaled about $48 billion, of which the federal government paid about $26 billion and the state paid about $22 billion. At the federal level, the Health Care Financing Administration (HCFA), Department of Health and Human Services, is responsible for administering the Medicaid program, establishing policy, developing operating guidelines, and ensuring states' compliance with Medicaid regulations.

HCFA and the states rely extensively on automated systems to administer and manage the multi-billion dollar Medicaid program. To this end, HCFA approves, through its 10 regional offices, federal funds to states to acquire, enhance, and operate states' Medicaid-related computer systems.

The 1965 amendments to the Social Security Act (which established the Medicaid program), authorized HCFA to pay 50 percent of the states' costs to administer the Medicaid program, which included the states' costs to acquire and operate automated systems (sec. 121 of P.L. 89-97). However, to encourage states to acquire and make greater use of automated systems to administer the Medicaid program, the Congress, in its 1972 amendments to the Social Security Act (sec. 235 of P.L. 92-603), authorized HCFA to pay (1) 90 percent of states' costs to acquire automated claims processing and information retrieval systems, and (2) 75 percent of states' costs to operate such systems. The Congress authorized these higher rates expecting that states' use of automated systems would result in the more efficient, economical, and effective administration of the Medicaid program. In addition, House report No. 92-231 on the 1972 amendments stated that enhanced funding also would lead to reduced program costs. When HCFA issued regulations implementing the amendments, it provided that states could also obtain 90-percent funding for enhancements to their systems. (Enhancements to software systems are changes to operational systems for incorporating new features such as additional user requirements or more advanced technology.)

[1] Fiscal year 1987 was the latest year for which this information was available at the time we prepared this report.

Medicaid Systems Must Perform Standard Functions to Qualify for Higher Funding

In 1974, HCFA defined a set of standard functions for states to incorporate into their Medicaid Management Information Systems. The functions include

- processing medical assistance claims,
- providing state Medicaid officials with information necessary to manage Medicaid payments,
- identifying provider and recipient abuse, and
- ensuring that (1) persons receiving Medicaid benefits are eligible for those benefits; (2) Medicaid claims are processed accurately and on time; and (3) data necessary to manage and monitor the Medicaid program is captured and reported.

In 1974, HCFA restricted the availability of the 90-percent and 75-percent funding rates to systems that implement the standard functions. The 50-percent HCFA funding rate is still available to states for acquiring and operating systems that do not include these functions, or for additional automated systems, such as office automation systems that support the Medicaid program. Table 1.1 shows the HCFA funding rates available throughout a system's life cycle for Medicaid Management Information Systems and other Medicaid automated support systems.

Table 1.1: HCFA Rates for Funding State Systems

	Acquire and enhance	Operate
Medicaid Management Information Systems	90 percent	75 percent
Other Medicaid Automated Systems	50 percent	50 percent

In 1980, the Congress amended the Social Security Act (P.L. 96-398) to require states to acquire approved Medicaid Management Information Systems by the end of fiscal year 1982, or have the 90-percent and 75-percent funding rates permanently reduced.[2] Five states were exempted from this requirement.[3]

Before 1983, states' requests for the 90-percent and 75-percent funding rates to acquire, enhance, and operate automated systems were approved at HCFA's headquarters. In June 1983, HCFA delegated this authority to its 10 regional offices.

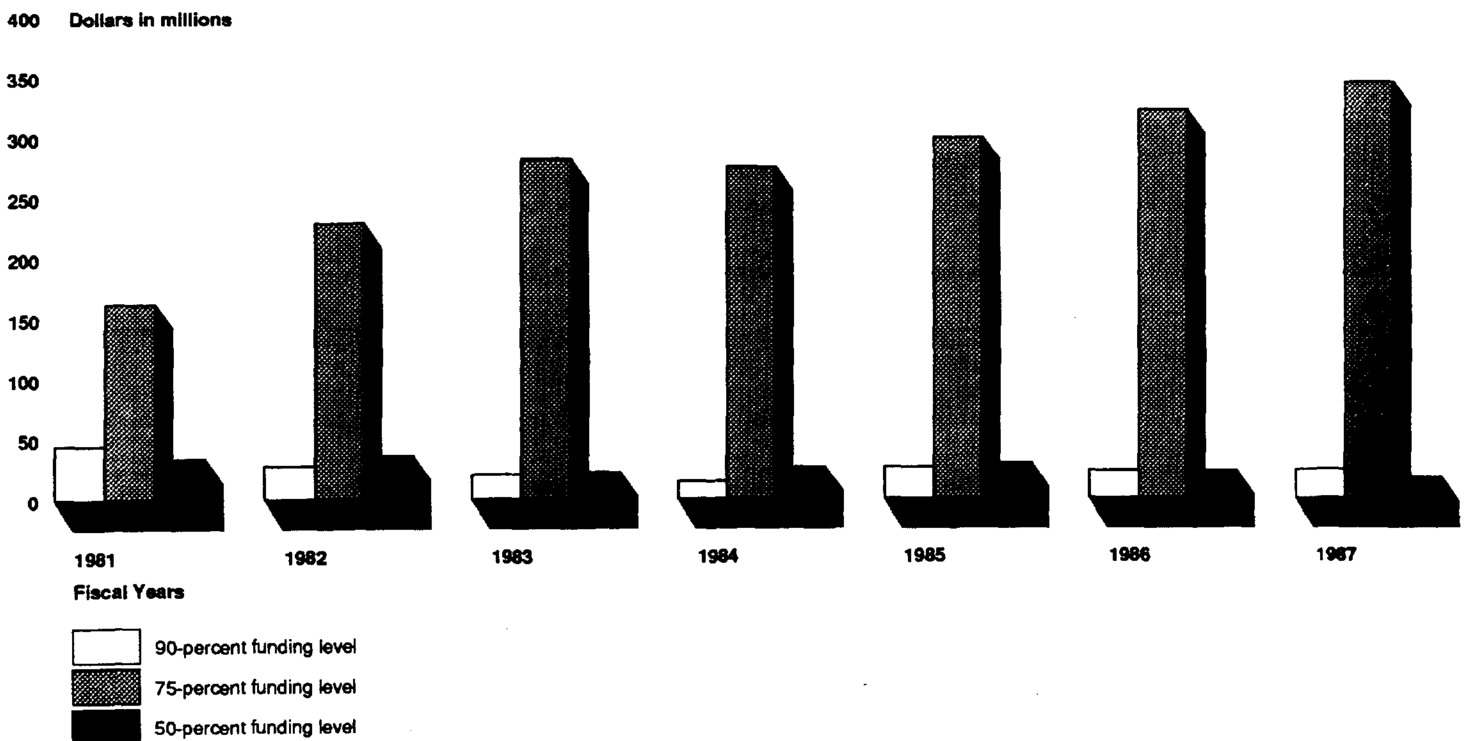
[2]The Congress subsequently extended this deadline to the end of fiscal year 1985.

[3]Because of their low populations or program costs, five states—Alaska, Arizona, Delaware, Rhode Island, and Wyoming—are exempted by federal law from the need to acquire, enhance, and operate HCFA-approved Medicaid systems.

Federal Government's Costs for Medicaid Automated Systems

In fiscal year 1987, the federal government paid about $370 million for states to acquire, enhance, and operate automated Medicaid systems at the 90-percent and 75-percent rates. Also, in fiscal year 1987, the federal government paid the states about $17 million at the 50-percent rate to acquire, enhance, and operate other Medicaid automated systems that did not meet the Medicaid Management Information System requirements. Figure 1.1 shows the growth in HCFA payments to support, at the 50-percent, 75-percent, and 90-percent funding rates, states' Medicaid systems between fiscal years 1981 and 1987. HCFA expenditures for these years totaled about $2.3 billion.

Figure 1.1: Federal Cost for Medicaid Automated Systems for Fiscal Years 1981-1987



Since enactment of the public law authorizing the higher funding rates, states have made substantial use of automated systems to administer the Medicaid program. By fiscal year 1985, 45 states and the District of Columbia had acquired systems that met HCFA's Medicaid Management Information Systems requirements. Further, states have continued to

request 90-percent federal funding to either acquire new Medicaid Management Information Systems or enhance their existing systems. Federal expenditures for these efforts during fiscal years 1985 through 1987, the period of our review, were about $72 million. In addition, federal expenditures at the 75-percent rate during this period to operate states' systems were about $969 million. During this same period, states also claimed about $68 million in federal funds at the 50-percent federal funding rate to acquire and operate other Medicaid automated systems.

Objectives, Scope, and Methodology

Because of the continuing large federal cost to support states' Medicaid automated systems, our objective was to determine whether HCFA, through its regional offices, required states to follow federal Medicaid regulations related to (1) preparing economic analyses to show if expected benefits were worth the estimated automation costs, (2) evaluating alternative automation solutions and selecting the most cost-effective approach, and (3) tracking and reporting costs to ensure that projects were completed within approved federal funding levels. We also wanted to determine if HCFA was reviewing completed projects to determine whether planned objectives and benefits were achieved. During our review, HCFA proposed eliminating 90-percent funding for state-initiated enhancements of their systems. Consequently, we also evaluated this proposal to eliminate the 90-percent funding rate for enhancements.

Our work was performed at HCFA's central office in Baltimore, Maryland; and at six of its regional offices, located in Atlanta, Georgia; Chicago, Illinois; Denver, Colorado; Kansas City, Missouri; New York, New York; and Philadelphia, Pennsylvania. Our selection was based on the following:

- These regions are responsible for approving funding requests for over 60 percent of the states (31 states and the District of Columbia).
- The states within these regions claimed about 75 percent ($49 million) of the 90-percent enhanced funding claimed by all states during fiscal years 1985 through 1987. We chose the 90-percent funding level because of our objective to evaluate HCFA's review of the states' acquisition process.

In order to assess the headquarters' management and control of states' requests for federal funding of automation activities, we interviewed officials concerning (1) federal and agency procedures for determining projected costs and benefits for federally mandated system requirements, (2) HCFA's role in implementing the higher funding rates for

states' systems, and (3) reasons for proposing the elimination of the 90-percent funding rate for enhancements of states' operational systems. We also reviewed federal and agency regulations, policies, and guidelines on (1) conducting cost and benefit and alternative analyses for automation projects, and (2) monitoring and evaluating the completion and impact of automation projects.

To assess the regional office management and control of federal funding of automation projects, we

- evaluated regulations regarding the management and oversight of state Medicaid systems;
- reviewed all state requests for federal funds to acquire automation resources that were submitted to or approved by the six regions between November 1985 and July 1988 (a total of 144 requests were submitted, of which the regional offices approved 129);
- reviewed cost expenditure reports submitted by the states to receive federal funds to acquire, enhance, and operate automated systems and the regional offices' procedures for monitoring the projects to ensure successful completion within approved budgets; and
- interviewed regional office staff on (1) requirements for states to share existing software, prepare economic analyses, and report savings the states and federal government have realized from completed projects, and (2) regional audit methodologies for tracking system enhancements to ensure that enhancements were completed within approved budgets.

We conducted our review from January through December 1988 and selectively updated this review work through June 1989. This review was conducted in accordance with generally accepted government auditing standards.

Better Control Over Federal Funds Needed

HCFA has not adequately defined the information states must submit on costs, benefits, and alternatives, including systems already in existence, to justify their acquisition of automated Medicaid systems. Although higher funding rates authorized by the Congress have encouraged states to acquire, enhance, and operate automated Medicaid systems, the extent to which the costs of these systems have resulted in the benefits expected from the higher funding levels is uncertain. It is also uncertain whether states have acquired appropriate systems at the least possible cost. This uncertainty exists because HCFA has not placed a high priority on obtaining the information needed to adequately evaluate states' plans for automated systems.

We found that of 129 funding requests approved by regional offices, 116 were not supported by critical decision-making information suggested by federal guidelines, such as total life-cycle costs, quantitative or non-quantitative benefits, or evaluation of alternatives. The estimated acquisition costs for these projects ranged from $9,000 to over $7 million, and totaled about $119 million.

Instructions Inadequate for Required Decision-Making Information

Federal regulation 45 CFR 95.611 requires states to obtain prior approval before claiming either the 90-percent, 75-percent, or 50-percent federal funding rate for automated Medicaid Management Information Systems. Before claiming either the 90-percent or 75-percent rate, states are required to obtain prior approval regardless of the cost. At the 50-percent rate, states are required to obtain prior approval if the estimated costs will exceed $200,000 in 1 year or $300,000 in total, or if the states plan to acquire automated services non-competitively and the estimated cost will exceed $25,000. To obtain prior approval, federal regulations require states to have HCFA approve an Advance Planning Document showing (1) the need for and the objectives of the automated system; (2) alternative considerations, including the use of an existing system and an explanation of why using an existing system is not possible; and (3) a cost and benefit analysis. However, HCFA's implementing instructions do not adequately define the information necessary to comply with these regulations.

Guidance on preparing the type of information required in Advance Planning Documents is available from the National Bureau of Standards.[1] The Bureau's Federal Information Processing Standards Publication Number 64 provides guidelines to federal agencies for preparing

[1]The National Bureau of Standards is now the National Institute of Standards and Technology.

cost and benefit analyses and evaluating alternatives for automated data processing systems.[5] Publication 64 states that the purpose of the analysis is to provide managers, users, designers, and auditors with adequate cost and benefit information to analyze and evaluate alternative approaches for acquiring and operating automated systems.

The publication further states that for a cost and benefit analysis to be an effective decision-making tool, it should include (1) complete life-cycle costs consisting of the non-recurring cost to acquire and install the proposed system and the recurring costs to maintain and operate the system, (2) system benefits expressed in quantitative and non-quantitative terms, and (3) cost and benefit evaluations of alternatives, such as developing systems in-house versus using contractor services.

HCFA's instructions (State Medicaid Manual, Part 11, July 1986) on approving Advance Planning Documents state that the documents will include a statement on costs, including a cost and benefit statement appropriate to the scope and cost of the project. HCFA, however, has not specifically defined the information that should be included in the cost and benefit statement, or the criteria to be used in determining what information is appropriate to the scope and cost of the project.

In July 1987, HCFA sent to its regional offices proposed instructions for states to use in preparing cost and benefit analyses that would require essentially the same data and analyses recommended by Publication 64. HCFA proposed these instructions in recognition that a comprehensive cost and benefit analysis is important in selecting the most cost-beneficial approach from several alternatives to develop and enhance an automated system. HCFA's proposed instructions pointed out that a cost and benefit analysis was needed in an Advance Planning Document to determine that the proposed system would be cost effective.

HCFA requested that its regional offices comment on whether the proposed instructions would (1) assist the states, (2) be used by the states, and (3) help the regional offices in reviewing the Advance Planning Documents. Several regional offices responded that they believed states would object to preparing the extensive cost and benefit analyses required by the instructions because of the cost and time it would take

[5]National Bureau of Standards, Guidelines for Documentation of Computer Programs and Automated Data Systems for the Initiation Phase, Aug. 1, 1979.

to prepare the analyses. HCFA's Director, Office of Medicaid Management, told us that he has not taken any action to issue final instructions because this has not been a high-priority project.

Advance Planning Documents Lack Critical Information

We found that because HCFA instructions do not adequately define information to be included in the states' requests, the 116 approved requests for acquiring, enhancing, and operating Medicaid systems were not supported by cost and benefit analyses showing either total life-cycle costs, specific benefits, or evaluations of alternatives. This information is needed if HCFA is going to make sound management decisions relative to states' requests for federal funds.

Total Life-Cycle Costs Should Be Identified

If HCFA required states to follow Publication 64 provisions, states would be required to identify total life-cycle costs and to use them to demonstrate that total system benefits justify total system costs. Life-cycle costs consist of the costs to acquire and install an automated system (non-recurring), and the costs to maintain and operate the system (recurring) during its expected useful life.

We found that the elements of the total life-cycle costs, such as computer operations costs and software maintenance costs, were not identified in 83 of the 116 Advance Planning Documents. The 83 planning documents identified the non-recurring costs to acquire and/or develop the systems, but did not identify the recurring costs to operate and maintain the systems. The non-recurring costs of the 83 projects totaled $25 million and ranged from about $10,000 to about $2 million. We could not determine whether identifying recurring costs in the 83 projects would have shown any of them not to be cost effective, because we had no basis for estimating what the recurring costs would be; however, such costs can be substantial.

One Advance Planning Document, for example, identified that recurring costs to operate the system would be about $4.6 million annually, while the cost to develop the system was about $1.8 million. Further, during fiscal year 1987, the federal government paid about 14 times as much to operate Medicaid systems as it did to acquire them.

Benefits Should Be Identified

Publication 64 states that benefits should be identified. It illustrates how expressing benefits in quantitative terms, such as reduced program costs or increased productivity, helps decisionmakers determine

whether proposed projects will be worth their costs. Furthermore, such information can aid managers in determining whether completed projects have provided the desired results.

The six regional offices approved 57 projects with planning documents that did not cite any benefits in the cost and benefit analyses. The estimated costs of the 57 projects totaled about $23 million and ranged from $20,000 to $6.4 million. Not comparing costs with benefits can result in projects being approved that are not the most cost-effective solution.

One approved project with a planning document that did not identify benefits was a request to develop a medically needy system. The estimated development cost was about $1.8 million and the estimated annual operating cost was about $4.6 million. According to a HCFA report, the state's current annual operating cost for this system, which is used to control about $1 million in yearly program expenditures, is about $10 million. In contrast to the state's position, federal regulations require states to cost-justify the use of automated systems in support of their Medicaid programs. Considering the substantial estimated cost to develop and operate the system, the regional office should have required the state to prepare a cost and benefit analysis, as required by federal regulations, showing how benefits derived from this system justified its costs.

In addition to approving the 57 projects that did not identify specific benefits, HCFA approved 22 additional projects that identified only non-quantitative or intangible benefits, such as improved employee morale, better management decisions, improved relations with health care providers, or increased services to recipients. These projects did not identify any quantitative benefits needed to effectively compare costs and benefits. The costs of the 22 projects ranged from about $23,000 to about $39 million, with a total cost of about $71 million. Federal guidelines illustrate that benefits expressed in non-quantitative terms, such as improved provider relations, do not constitute the specific information needed to evaluate whether planned projects would be worth the costs.

Although it may not always be possible to express potential benefits in monetary terms, we believe these types of benefits can often be expressed in other quantitative terms that would provide more specific information to decisionmakers. For example, several cost and benefit statements we reviewed cited improved provider relations as justification for doing the project. We believe that aspects of this type of benefit could be quantified by stating that the proposed new system is expected

to increase the number of providers participating in the state's Medicaid program by 20 percent annually, thereby improving the availability and quality of care to Medicaid recipients. Showing this type of benefit in quantitative terms provides better information for both HCFA and state officials on whether the cost of the project is worth the benefits to be obtained.

The Director of HCFA's Office of Medicaid Management told us that the 1972 amendments provide that states only have to show that their Medicaid systems, and enhancements to these systems, are likely to result in the improved administration of their Medicaid programs. Accordingly, the Director said it is difficult for HCFA to challenge a state's assertion that non-quantitative benefits will likely provide improved program efficiencies. However, the law gives HCFA the responsibility to determine whether proposed systems and enhancements will likely result in the more efficient, economical, and effective administration of a state's Medicaid program, and we believe that such determinations can best be made when the expected benefits have been quantified to the maximum extent practicable. We recognize, however, that because HCFA has not issued any specific guidelines on cost and benefit analyses, it would not have been in a firm position to question the adequacy of such an analysis provided by a state.

Alternatives Should Be Evaluated

Publication 64 also states that cost and benefit analyses should include evaluations of potential alternatives to ensure that the most cost-effective solution is selected. Ninety-eight of the 116 approved projects (costing about $109 million) did not include evaluations of alternatives such as adapting systems developed by other states, or installing manual systems.

Although federal regulations state that the use of existing systems should be included in the consideration of alternatives, regional officials told us that HCFA's current instructions do not require that states include an evaluation in their Advance Planning Documents of using other states' systems.

Regional officials also said that states often contend that adapting other states' systems generally would not be cost effective because substantial differences among the states' Medicaid programs probably would result in greater costs to modify an existing system than to develop a new system. A state official also told us, however, that states should be able to reduce costs by reviewing other states' system design and development

approaches before beginning their own design efforts. Also, we noted that a post-implementation review HCFA conducted in fiscal year 1987 recommended that a new subsystem developed by one state should be considered for use by other states. Further, in one instance cited by a state official, the state's cost to adapt another state's system was about $500,000 less than the estimated cost to develop a new system.

We found states were developing similar systems to support the same functions at substantially varying costs. For example, seven states developed eligibility verification systems at costs ranging from about $180,000 to about $6 million. One state's Advanced Planning Document included an evaluation of using an existing system, but other states' planning documents did not.

Conclusions

The Congress intended the higher funding for the states' acquisition and operation of automated systems to result in improved administration of their Medicaid programs. Federal Medicaid regulations require cost and benefit analyses and evaluations of alternatives as decision-making tools before approving federal funds for the acquisition and development of automated systems. Federal guidelines state such analyses and evaluations are essential to ensure that expenditures of federal dollars will be justified by the expected benefits. Because HCFA has not issued specific instructions defining the information that states should include in cost and benefit analyses, states have often submitted inadequate analyses to support their requests for federal funds. As a result, HCFA had no adequate basis for determining whether the $119 million approved for 116 projects would result in the expected benefits of the Congress' higher funding provisions.

Furthermore, because HCFA does not require states to evaluate system alternatives, such as adapting existing systems, HCFA may be incurring unnecessary system acquisition, enhancement, and operational costs.

Recommendations

We recommend that the Secretary of Health and Human Services direct the Administrator, Health Care Financing Administration, to amend the State Medicaid Manual, Part 11 to include (1) the regulatory requirements for states to prepare and submit cost and benefit analyses with all requests for federal funding of automated systems, (2) guidelines for preparing cost and benefit analyses recognizing that the effort expended in performing such analyses should be commensurate with the estimated costs of proposed projects, and (3) a requirement for states to

evaluate system alternatives, including reviewing systems already developed or planned by other states, and submit these evaluations with requests for funding of automated systems.

Agency Comments and Our Evaluation

The Department stated it did not necessarily agree that additional guidance for preparing cost and benefit analyses was required, but said it will review its existing guidelines at the same time that it reemphasizes to the states the requirement that alternatives be evaluated. The Department concurred with the need to quantify benefits, but stated some benefits are intangible and difficult to substantiate and quantify. For example, staff cost avoidance is one such intangible benefit frequently cited by states. The Department said it would welcome our suggestions on how to evaluate intangible benefits in concrete form.

As discussed herein, we believe HCFA's existing guidelines are not adequate and additional guidance is still needed. As stated on page 16 of this report, we also recognize that it may not always be possible to express benefits in monetary terms, but believe intangible benefits can often be expressed in other quantitative terms. The example cited by the Department is one such case where benefits can be expressed in both quantitative and monetary terms. For example, a state can show that if claims increase 20 percent annually, ten additional staff will be needed at an annual cost of $200,000. As an alternative, the state might be able to upgrade its automated claims processing system at a one-time cost of $100,000. If the upgrade were approved, the state could avoid hiring the additional staff and save $100,000 during the first year.

HCFA Needs to Monitor and Review States' Improvement Projects

In addition to not obtaining appropriate information for making funding decisions on Medicaid Management Information System projects, HCFA does not systematically obtain information on the progress of approved state projects, and once completed, whether the projects are meeting their intended objectives. According to HCFA officials, the regional offices did not obtain this information because federal regulations do not require that progress or completion reports be obtained from the states. These officials also said that HCFA does not have the resources to review completed projects to determine if they are working as intended and have resulted in more efficient, economical, and effective administration of a state's Medicaid program. As a result, HCFA has no assurance that approved projects were in fact completed or that the costs for completed projects resulted in the expected benefits being achieved.

Department of Health and Human Services regulations and HCFA's instructions require states to submit an amended Advance Planning Document (that should include an updated cost and benefit analysis) when additional federal funds are needed to complete approved projects. However, these regulations and instructions do not require states to submit progress reports, including updated cost and benefit analyses if appropriate, unless requested by a regional office or unless additional federal funds are requested. Because HCFA does not require periodic progress reports, it may not be aware that some projects are going to cost more than was initially approved until after states have spent all approved funds and have not completed the projects. Accordingly, HCFA does not have the information to determine whether approved projects should continue given their increased costs, or whether the projects should be redirected or cancelled.

Regional Offices Cannot Determine Projects' Status

Our review showed the six regional offices did not request progress reports for 100 of the 129 approved projects we reviewed. For the 29 projects where progress reports were requested, we could locate evidence that progress reports were submitted for only four of these projects. An official from one region told us that he did not believe he could actually require states to submit progress reports because HCFA's instructions do not specifically state that progress reports are required. Although the instructions do not state that progress reports are required for all projects, the instructions do state that regions can require such reports. An official from another region said he did not require progress reports because HCFA has not established any official policy on whether progress reports should be required for all projects or, for example, only for projects costing $100,000 or more.

Because HCFA does not require progress reports, we could not determine whether the majority of the projects were completed within approved budgets or whether additional funds were required. However, we did identify eight projects that required additional federal funds ranging from about $21,000 to about $1.4 million for completion. Table 3.1 shows for each project (1) initial costs approved, (2) amount of additional federal funds required, and (3) quantitative benefits, if shown.

Table 3.1: Additional Funding Requirements

Project number	Initial funds approved	Additional funds approved	Quantitative benefits shown
1	$912,520	$1,400,000	$2,300,000 annually
2	455,400	50,100	375,000 annually
3	171,783	164,394	none
4	364,202	712,180	none
5	330,600	439,157	$9.5–$12.8 million
6	3,833,199	659,249	none
7	76,672	20,995	none
8	78,028	25,900	none
Total	$6,222,404	$3,471,975	

The regional officials approved all the states' requests for the additional funds.

We also found that because of the absence of specific instructions, the six regional offices generally were not requiring states to provide dates when they completed approved projects, and the actual costs of the projects. According to data shown in the states' Advance Planning Documents, 119 of the 129 approved projects we reviewed were scheduled to be completed at the time of our review. We could not determine, however, through our review of the regional offices' files, whether 112 of these projects, with total estimated costs of about $110 million, had been completed, or their actual costs. For the remaining seven projects, we could determine that the projects had been completed; however, for five of the seven, we could not determine their actual costs.

HCFA's Director, Office of Medicaid Management, told us that because federal regulations do not require progress or completion reports, HCFA has not issued instructions requiring such reports. We believe that such reports are necessary. Without such reports, HCFA is unable to determine a project's status, its completion date, and, in the case where a project requires additional funds for completion, whether the project would still be cost effective considering the investment of the additional funds.

Post-Implementation Reviews Not Conducted as Required

Federal regulation 45 C.F.R. 95.621 requires that HCFA conduct post-implementation reviews of states' automation systems to determine the adequacy of these systems, to ensure that these systems are used for purposes consistent with proper and efficient Medicaid program administration, and to ensure that objectives for which federal funding was approved are being accomplished.

In addition, in its report Management of the U.S. Government, Fiscal Year 1986, the Office of Management and Budget stated that the government's investments in information systems must be treated in a business-like manner, and the gains from automated projects should be verified. In this vein, the Office of Management and Budget criticized HCFA because it did not review completed projects to verify that projected benefits were obtained. HCFA, in response to the Office of Management and Budget's criticism, developed procedures for conducting post-implementation reviews and conducted four such reviews during fiscal year 1987. Two of the post-implementation reviews indicated that substantial benefits had resulted from new subsystems and technology, and these benefits could possibly be realized by other states.

For example, one review showed that a state had achieved about $25.6 million in program and administrative savings from a new on-line, centralized Medicaid data base system. The review team believed other states could possibly realize similar benefits by installing their own centralized data bases. Another review identified a new subsystem a state had developed that should be considered for use by other states because of the potential savings of about $5 million. However, because HCFA has not placed a priority on requiring states to evaluate using existing systems, it has not required states to consider using this system.

Federal regulations and Office of Management and Budget guidance require post-implementation reviews to be conducted. In 1987, HCFA recognized the importance of conducting these reviews and allocated the resources for them. However, it did not conduct any post-implementation reviews during fiscal year 1988 and has not issued instructions that require the regions or states to conduct post-implementation reviews. The Director, Office of Medicaid Management, told us that HCFA has not conducted or directed further reviews because neither its central office nor regional offices have the resources (personnel and funds) needed to review all states' projects funded at the higher federal rates.

Conclusions

Without progress reports, HCFA is unable to monitor approved state Medicaid automation projects to determine if the projects are being completed on schedule and within budget, or whether additional federal funds will be required. If additional funds are required, HCFA should be in a position to determine if such funds will still yield cost-effective results or if projects should be redirected or cancelled.

Without conducting post-implementation reviews, HCFA is unable to determine if completed projects are providing projected benefits. In addition, it cannot determine if such projects could be useful in other state Medicaid programs.

By not requiring progress reports or conducting post-implementation reviews, there is no assurance that the government is realizing cost-effective returns on its $110-million investment in automated Medicaid systems.

Recommendations

We recommend that the Secretary of Health and Human Services direct the Administrator, Health Care Financing Administration, to amend HCFA State Medicaid Manual, Part 11 to (1) require states periodically to notify the regional offices of the status of approved projects in order to facilitate review of the progress and completion of these projects, and (2) require regional offices to conduct post-implementation reviews of completed projects in order to determine if projected benefits are being achieved, and identify systems that could provide benefits to other states.

Agency Comments and Our Evaluation

The Department concurred that large projects should be periodically monitored and the completion of all projects should be ensured. HCFA is revising the State Medicaid Manual, Part 11, to require states to notify HCFA that projects have been successfully completed. The Department, however, stated that because benefits often accrue over several years, it was skeptical about the payoff of committing significant resources to a post-project evaluation. Further, the Department stated that there was no federal authority to recover federal funding if benefits failed to materialize, and would welcome any assistance we could provide regarding the conduct of post-implementation reviews.

We believe that effective post-implementation reviews can be conducted even when benefits accrue over several years. We also continue to believe that another purpose of conducting such reviews would be to

provide insights as to whether newly installed system innovations in one state could be beneficial to other states. For example, a state could make a minor modification to an automated system that would result in sizable benefits. Such a modification may be useful to other states. Also, although the Department may not be able to recover funds for projects when projected benefits do not materialize, a post-implementation review could identify corrective actions a state could take to obtain a portion or all of the projected benefits. Therefore, we believe that HCFA should adopt the post-implementation procedures it developed in 1987. These procedures identify the basic cost and benefit data that can be used to evaluate automated systems.

Enhanced Funding Rate Should Be Reconsidered

HCFA, in August 1988, proposed rescinding the availability of 90-percent federal funding for states to enhance their automated Medicaid systems, unless the enhancements are required by HCFA. This would result in state-initiated enhancements being funded at the same rate as general administrative costs—50 percent. The Director of HCFA's Office of Medicaid Management told us that HCFA proposed this change because it believed that existing legislation authorizing higher funding levels did not specifically provide for 90-percent federal funding for states to improve or enhance their Medicaid systems, but only to acquire the systems.

Federal guidelines show, and we agree, that enhancements to an existing system relate to the operation of a system. We therefore believe that costs relating to enhancements should be considered as operational costs. Existing legislation authorizes operational costs to be funded at the 75-percent rate. Consequently, it would appear that approved enhancements, whether required by HCFA or initiated by the states, should be funded at the 75-percent rate.

Current Federal Laws and Regulations

Public Law 92-603 authorizes HCFA to pay 90 percent of the states' costs attributable to the acquisition of HCFA-approved automated Medicaid systems. The law also authorizes HCFA to pay 75 percent of the states' costs attributable to the operation of such approved systems. However, the law does not define, and the legislative history does not discuss, those costs (activities) that are attributable to the acquisition, and those that are attributable to the operation of a system. HCFA therefore has discretion in deciding what costs are attributable to the acquisition versus the operation of a system. HCFA has issued regulations and instructions that define what costs or activities states can claim at the 90-percent and 75-percent funding rates. The regulations and instructions state that enhancements to state Medicaid Management Information Systems can be claimed at the 90-percent rate.

Proposed Rule Change

According to a HCFA official, 90-percent funding was originally authorized for system enhancements because HCFA believed states would need 90-percent funding to keep their systems from becoming obsolete. In 1988, HCFA proposed a change in its regulations to delete the word "enhancements," and eliminate 90-percent federal funding for this activity, unless the enhancements are required by HCFA. In addition, the proposal specifically provides that state-initiated enhancements to their

Medicaid Management Information Systems would only be approved at the 50-percent funding rate.

Enhancements Should Be Funded at the 75-Percent Rate

As indicated above, the law authorizes two higher funding levels—90-percent federal funding for approved states' costs attributable to acquiring automated Medicaid systems, and 75-percent federal funding for approved states' costs attributable to the operation of the systems.

In 1984, the National Bureau of Standards issued Federal Information Processing Standards Publication 106, Guidelines on Software Maintenance, which states that enhancements are normal maintenance activities attributable to the operation of systems after they have been installed.

Publication 106 states further that enhancements are part of those activities that are required to keep a system operational after it is placed into production. Enhancements are defined to include changes made to an operational system to meet evolving or expanding user needs, such as changes in laws and regulations, or changes to improve software performance and maintainability. We agree with this definition and accordingly believe that enhancements to states' automated systems are activities attributable to the operational phase of a system and should be considered operational costs. Therefore, we believe that enhancements should be funded at the 75-percent federal funding rate, and not 90 percent, as now authorized by current HCFA regulations, nor 50 percent, as HCFA proposed.

States Oppose HCFA's Proposed Rule Change

In August 1988, HCFA announced in the Federal Register (Vol. 53, No. 155; Aug. 11, 1988) its intention to rescind 90-percent federal funding for state-initiated enhancements to their Medicaid Management Information Systems. By October 17, 1988, HCFA received responses from 19 states and 3 private organizations involved in the Medicaid program. All respondents opposed the proposed rule change. The State Medicaid Directors' Association and several states believe the proposed rule change will result in increased federal and state expenditures because states will not be able, at the 50-percent funding rate, to afford acquiring and using new technologies to make their systems more efficient. Accordingly, the association and states believe existing systems will become technologically obsolete, resulting in increased maintenance and operations costs to both the states and the federal government.

Conclusions

The law authorizes 75-percent funding for states' costs attributable to the operation of their approved Medicaid systems, and federal guidelines state that enhancements are activities attributable to the operation of a system. Therefore, we believe that 75-percent federal funding should be provided to states for approved enhancements to their systems.

Agency Comments and Our Evaluation

In commenting on our draft report, the Department stated that it continued to support the proposed regulatory changes rescinding the 90-percent funding rate for enhancements. The Department, therefore, indicated that it would promulgate its proposal reducing that rate to a 50-percent matching rate. The Department did not address the appropriateness of a 75-percent federal funding level for enhancements. Subsequent to receiving the Department's comments, the Director of HCFA's Office of Medicaid Management told us that HCFA's proposed regulatory changes have been modified to provide for continued 90-percent federal funding for enhancements, whether or not the enhancements are state-initiated or federally mandated.

We recognize that the Department has the discretion to decide whether a 90-percent versus 75-percent funding rate should be used for system enhancements. This is because of the absence of a statutory definition or other legislative indication of whether enhancement costs are attributable to the acquisition or the operation of a automated Medicaid system. We continue to believe, however, that a 75-percent funding rate for enhancements is more appropriate and federal guidelines treat enhancements (changes) to an automated system as activities attributable to the operation of the system. This is to be distinguished from the acquisition of an automated system, which relates to the initial activities leading up to the actual installation of the system.

Recommendation

We recommend that the Secretary of Health and Human Services direct the Administrator to consider the application of a 75-percent federal funding rate for enhancements to states' Medicaid systems.

Comments From the Department of Health and Human Services

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of Inspector General

Washington D.C. 20201

5 1989

Mr. Ralph V. Carlone
Assistant Comptroller General
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Carlone:

Enclosed are the Department's comments on your draft report, "ADP Systems: Better Control Over States' Medicaid Systems Needed." The enclosed comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

The Department appreciates the opportunity to comment on this draft report before its publication.

Sincerely yours,

Richard P. Kusserow
Inspector General

Enclosure

Comments of the Department of Health and Human Services on the General Accounting Office Draft Report, "ADP Systems: Better Control Over States' Medicaid Systems Needed"

Overview

GAO's report reflects the results of its review of the Health Care Financing Administration (HCFA) regional office procedures for reviewing and approving State requests for Medicaid administrative funding to design, develop, and install Medicaid Management Information Systems (MMIS) and related enhancements.

Specifically, GAO's review concentrated on determining whether HCFA required States to:

1. prepare a sufficiently comprehensive economic analysis to demonstrate whether benefits justified the Medicaid investment of funds to execute the project;

2. evaluate alternative data processing solutions and select that solution determined to be the most cost-effective; and

3. track and report costs and progress to ensure that total project costs were consistent with approved estimates.

In addition, GAO evaluated whether HCFA was conducting postcompletion reviews of projects to determine if projected benefits were achieved.

See comment 1.

We note that GAO makes repeated reference to the statutory goal of MMIS enhanced funding as reduced Medicaid program costs. The statute identifies more efficient, economical, and effective operation of the Medicaid program as the goal of enhanced Federal financial participation. Medicaid program costs may not be reduced if benefits or eligibility are expanded, or if claims are more efficiently processed.

We believe, however, that the report has considerable merit because it draws attention to the difficulties associated with cost/benefit analysis. We are cognizant of many of the problems cited and have already taken steps to address some of the more critical issues. We have, for example, in the revised version of 45 CFR Part 95.605, provided more explicit statements regarding content requirements of advance planning documents (APDs). We have convened a central office/regional office work group to review existing guidelines for review and approval of APDs.

Because of the short time frame for review, we have not been able to conduct a thorough analysis of the report; nor have we had the opportunity to allow our regional offices to complete their review and prepare comments. However, our preliminary discussions with regional staff indicate that over the 1985 to 1988 time frame there has been steady improvement in handling State requests. We would like to obtain GAO's work papers to determine if its findings reflect this performance improvement trend.

Page 2

GAO Recommendation

That the Secretary of Health and Human Services direct the Administrator of HCFA to amend the State Medicaid Manual, part 11 to include (1) requirements for States to prepare and submit cost and benefit analyses with all requests for Federal funding of automated systems, (2) guidelines for preparing cost and benefit analyses recognizing that the effort expended in performing such analyses should be commensurate with the estimated costs of proposed projects, and (3) a requirement for States to evaluate system alternatives, including reviewing systems already developed or planned by other States, and submit these evaluations with requests for funding of automated systems.

Department Comment

GAO summarizes Federal regulations as requiring States to show: (1) the need for and objectives of the proposed automated system, (2) alternative considerations, and (3) a cost and benefit analysis. GAO also suggests that HCFA's instructions do not adequately define the information requirements necessary to implement these regulations. GAO discusses at length the issue of expressing potential benefits in monetary terms.

Now on p. 19.

While we concur with the need to quantify benefits, some benefits are intangible and difficult to substantiate or validate. Staff cost avoidance, for example, is one such intangible benefit frequently cited by States. We would welcome GAO suggestions on how to evaluate intangible benefits in a concrete fashion.

GAO recommends that HCFA provide additional guidance to States in the area of cost/benefit analysis. We do not necessarily agree that additional guidance is required, but will review the existing guidelines at the same time that we reemphasize to the States the requirement that alternative solutions be considered and the most cost-effective selected.

GAO Recommendation

That the Secretary of Health and Human Services direct the Administrator of HCFA to amend HCFA State Medicaid Manual, Part 11 to (1) require States to periodically notify the regional offices of the status of approved projects in order to facilitate review of the progress and completion of these projects, and (2) require regional offices to conduct postimplementation reviews of completed projects in order to determine if projected benefits are being achieved and identify systems that could provide benefits to other States.

Department Comment

Now on pp. 23-24.

We agree with GAO that larger projects should be monitored periodically. Similarly, we agree that those projects of lesser magnitude should be monitored for completion. HCFA already requires periodic status reports in Part 11 of the HCFA State Medicaid Manual, revision 8 (July 1986).

Page 3

HCFA is also currently revising Part 11 and adding the following wording: "at a bare minimum, you should advise the pertinent regional office, in writing, that a project has been successfully completed, and if it has been completed on schedule and at the estimated cost."

Regarding GAO's recommendation for postimplementation reviews, we have several concerns. Benefits of a project often accrue for years after completion of the project. While some insights may be gained from reviewing the experience of a project, we are skeptical about the payoff from a significant commitment of resources to a postproject evaluation.

We would welcome any assistance GAO could provide regarding the conduct of postimplementation reviews, given the difficulty of quantifying the benefits and the protracted period during which the expected benefits accrue. However, it should be noted that there is no Federal authority to recover funding where the projected benefits fail to materialize. This is because the Medicaid statute mandates that the Secretary pay States 90 percent of their costs attributable to design, development, or installation of such MMIS's as the Secretary determines are likely to provide more efficient, economical, and effective administration of the Medicaid Plan (section 1903(a)(3) of the Social Security Act). There is no funding requirement that the systems actually achieve such benefits.

GAO Recommendation

That the Secretary of Health and Human Services direct the Administrator to revise proposed regulation changes to rescind 90-percent Federal funding for enhancements to States' Medicaid systems. The proposed regulation should state 75-percent funding is available for approved enhancements.

Department Comment

Now on p. 27.

We continue to support the proposed regulatory changes published in the Federal Register in August 1988. All federally mandated changes must be funded at the 90 percent enhanced matching rate. This is because the statute specifically directs that this enhanced funding level be paid for design, development or installation of systems which the Secretary determines are likely to provide more efficient, economical and effective Medicaid administration. Obviously, when HCFA or the Department mandate a change to a State's MMIS, whether in response to a legislative amendment or independently, the Secretary has implicitly found that the installation of such an enhancement meets the statutory test for the 90 percent match. We differ from the GAO's recommendation on funding of "user-required" system changes. We do not believe other changes of interest to States, but not federally mandated, should receive enhanced rates.

The following are GAO's comments on the Department of Health and Human Services' letter dated May 15, 1989.

GAO Comments

1. The Department, in an overview statement, said we make repeated reference to the statutory goal of enhanced funding being reduced Medicaid program costs. The Department pointed out that the law identifies more efficient, economical, and effective operation of the Medicaid program as the goal of the higher funding rates and that Medicaid program costs may not be reduced if benefits or eligibility are expanded, or if claims are more efficiently processed.

We recognize that the law authorizes higher funding levels only if such funding is likely to result in the administration of the Medicaid program in a more efficient, economical, and effective manner. In our view, however, the Congress' use of the term "economical" suggests that it expected that investing in automation would lead to reduced costs and indeed House Report No. 92-231 states that the higher funding rates will aid states in realizing efficient and effective administration of the program, and will reduce program costs.

Major Contributors to This Report

Information Management and Technology Division, Washington, D.C.

Douglas D. Nosik, Assistant Director
Theodore C. Gearhart, Assistant Director
Ruth Baskerville, Evaluator
John M. Resser, Evaluator
Janet Eackloff, Reports Analyst

Kansas City Regional Office

John Mollet, Evaluator-in-charge
Janet Chapman, Evaluator