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REPORT BY THE U.S.

General Accounting Office

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Improvements The Department Of Health, Education, And Welfare Has Made In Its Payroll System

This report highlights actions the Department has taken to improve its payroll system which pays about 160,000 employees over \$2.9 billion annually.

The report also discusses HEW's history of not fully and effectively implementing agreed to actions to correct deficiencies in its payroll operations and recommends actions to prevent this condition from recurring in the future. These recommended actions provide for:

- Increased participation by HEW internal auditors in reviewing and monitoring systems.
- Establishment of computerized edits adequate to control propriety and validity of data.
- Assurance that the computerized edits cannot be improperly bypassed.
- Close monitoring and review of system improvements by HEW management.



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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

DIVISION OF FINANCIAL AND
GENERAL MANAGEMENT STUDIES

B-164031

The Honorable Joseph A. Califano, Jr.
The Secretary of Health,
Education, and Welfare

Dear Mr. Secretary:

This report recognizes recent actions taken by your Department to improve its centralized payroll system through which about 160,000 employees are now paid about \$2.9 billion annually. It also discusses actions that should be taken to properly control data affecting payments to employees and to ensure prompt completion of system design changes that are underway. Appendix I contains details of the completed and needed actions which are summarized below.

The completed actions relate to many recommendations for improving the system that were made by us, by the Department's internal auditors, and by a blue-ribbon panel formed to evaluate the system's problems. The recommendations were included in reports issued over a 5-year period--May 1972 to September 1977--and were applicable to system elements controlling pay to the Department's civilian and military employees.

In inquiring into actions taken on the reports' recommendations, we noted that the Department had made a number of system improvements that should provide for more prompt and accurate payments to employees. Specifically, we noted:

- Positive action had been taken on most of the approximately 50 recommendations we made between August 1976 and September 1977, including actions to improve internal controls over time and attendance reports, pay adjustments, supplemental payments, and returned checks. (See app. I, pp. 6-10.)
- Two significant system changes had been made to comply with two major blue-ribbon panel recommendations. One change created a single data base rather than separate bases containing payroll

and personnel information on employees for use by the personnel and payroll systems. The other change transferred the responsibility for input and correction of data affecting employees' pay to HEW field offices which are more readily accessible to the employees. (See app. I, pp. 16-19.)

--Another action taken to provide more prompt and accurate payment to employees involved streamlining and automating many functions of the military pay subsystem which relates to Public Health Service employees. Also, HEW employees' payroll checks will now be issued by the Treasury disbursing center in the employees' work areas. (See app. I pp. 19-21.)

We believe the actions described above clearly indicate that HEW's management is currently emphasizing the need to improve its payroll system. However, it should be noted that other efforts to improve the system's operations have often been started but not completed, and serious problems with the system have continued.

Furthermore, we noted that actions had not been completed on our past recommendations to (1) control multiple pay records so that duplicate payments will not be made to experts and consultants, (2) subject military officers' pay to entitlement controls that establish eligibility for pay, and (3) record salary overpayments as accounts receivable so that collections can be properly controlled. (See app. I, pp. 13-16.)

In 1977 your Department essentially started operating a revised system with the implementation of the common data base and decentralization of responsibility for input of pay entitlement data. The revised system provides an operating method which can potentially improve efficiency and timeliness in the payroll operation. However, the revised system needs stronger edit features to control the validity and propriety of data entered into the automated portions of the system. Also, the new method contains features which could permit existing edits to be bypassed without authorization. Moreover, HEW has often prematurely abandoned past efforts to improve its payroll operation. Because of these conditions, we are recommending that you:

--Instruct the Inspector General's office to review the system on a cyclical basis for adherence to established policies and procedures and assist in developing needed edits.

- Ensure that adequate edits are established to control the propriety and validity of data entered into the combined payroll/personnel data system.
- Take actions to ensure that the system edits cannot be improperly bypassed.
- Establish a system to provide for close monitoring and review of progress made in implementing improvements to the payroll system.

System changes to implement these recommendations should be documented in the design submitted to the Comptroller General for approval. Section 112(b) of the Budget and Accounting Procedures Act provides for Comptroller General approval of executive agencies' accounting systems. HEW's statement of principles and standards for its accounting systems was approved in April 1970, and it plans to submit the central payroll design for approval in June 1980.

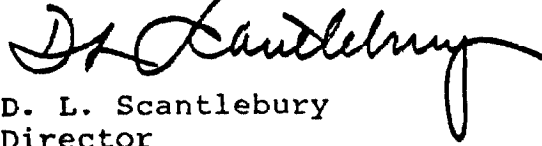
We discussed the report's contents with the Department officials responsible for the payroll operation, including the director of the employee systems center. They generally concurred with the positions taken in the report and with our recommendations for management actions to ensure completion of planned improvements to the system.

As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on 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 the report 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 the report.

We are sending copies of this report to the above four committees and to Congressman Mario Biaggi, by agreement, because of his interest in HEW's payroll system. We are also sending copies to the director of the employee systems center and the assistant inspector general for audit.

We appreciate the courtesy and cooperation extended to our representatives during our audit. We would appreciate your comments and advice on any actions taken or planned on matters discussed in this report.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "D. L. Scantlebury".

D. L. Scantlebury
Director

STATUS OF ACTIONS TO IMPROVETHE AUTOMATED PAYROLL SYSTEM

In 1963, the Department of Health, Education, and Welfare centralized its payroll system in Washington, D.C. The centralized system provided for a single activity to handle all aspects of paying HEW employees, including receiving time and attendance reports, preparing input documents to effect payments, maintaining pay entitlement data, and preparing magnetic tapes for the Treasury to use in issuing checks. The system provided for all HEW employees--both civilian and military (Public Health Service)--to be paid through the system and for all checks to be issued by the Treasury's regional disbursing center in Washington, D.C. Over the years this system has been expanded and now pays over \$2.9 billion to about 160,000 employees annually.

The centralized system started with great expectations. HEW had anticipated that the system, with automated data processing capabilities, would eliminate the complexities and inefficiencies that existed in its manual and decentralized system operating from over 70 locations in the United States and overseas. The centralized system, however, was plagued with problems since processing its first payroll check in March 1963, and for years it could not be relied upon to pay HEW employees promptly or accurately.

We first reported on problems with the centralized system in a January 17, 1969, report, "Need for Improvements in the Automated Central Payroll System of the Department of Health, Education, and Welfare" (B-164031). The report discussed many weaknesses in basic system controls to ensure accurate payments to employees and to prevent fraudulent or otherwise improper payments. By 1972, the system had developed a history of not paying HEW employees properly, and many times employees had difficulty getting their pay corrected. As a result, many employees resorted to asking their elected representative in the Congress to help resolve their problems. This situation also had a severe impact on payroll employees' morale.

In 1972, dissatisfaction with the system culminated in the Secretary of HEW appointing a blue ribbon panel of distinguished interagency personnel familiar with payroll and accounting systems to study the system and make recommendations to improve it. In its evaluation, the panel considered recommendations made in previous reports by us and by HEW internal auditors. In May 1972 the panel issued its report which contained six comprehensive recommendations for improving the

payroll operation. Two of the panel's most significant recommendations were to (1) establish a common automated data system to serve both payroll and personnel needs and (2) decentralize responsibility for submission of employee payroll data to HEW's field personnel offices.

Between August 1976 and September 1977, GAO issued a series of four reports discussing continuing weaknesses that could prevent prompt and accurate payments to employees. Included were (1) inaccuracies in time and attendance reporting, (2) uncontrolled payments to experts and consultants, and (3) illegible or missing payroll records. These reports contained over 50 recommendations calling for strengthening or installing basic operating controls needed in all automated payroll systems.

This report specifically discusses HEW's actions on recommendations made in the blue ribbon panel's 1972 report and in the GAO reports issued since August 1976. It shows that HEW has effectively implemented most of these recommendations and also has initiated other actions to improve its payroll operation. However, the report also points out that HEW management must ensure that improvements already made remain in effect and that the system reaches a satisfactory level of performance.

ACTIONS TAKEN ON GAO RECOMMENDATIONS TO STRENGTHEN CONTROL OVER PAYROLL PROCESSING

On September 22, 1977, we issued the report, "Need to Apply Adequate Control Over the Centralized Payroll System," (FGMSD-77-51). The report advised the Secretary of Health, Education, and Welfare of serious weaknesses in his Department's payroll system that prevented timely and accurate payments to employees. The weaknesses had resulted in inaccurate time and attendance reports, erroneous supplemental payments, unregulated payments to experts and consultants, uncontrolled temporary pay records, and illegible microfilm copies of pay records. Our report contained 21 recommendations to correct these weaknesses.

As discussed below, HEW fully concurred with the report's findings and conclusions and has made substantial progress toward implementing our recommendations to correct the deficient conditions in the payroll system.

Time and attendance reporting improved

Between January 1969 and September 1977, several reports were issued by HEW internal auditors and by us containing recommendations to improve HEW's practices for reporting its employees' time and attendance.

Our report noted that many recommendations had not been effectively implemented and, as a result, little improvement had been made since these problems were first reported. The report specifically commented that a 10-percent error rate existed in time and attendance reports in 1970 and that the error rate remained high in 1977--an estimated 8.8 percent.

We reported that the primary cause of errors was poor supervision and training of HEW's timekeepers, and we recommended that actions be taken to train and properly supervise timekeepers. In commenting on our report, HEW agreed to take specific actions that would improve the quality of timekeepers' work. For example, HEW said a training course for its timekeepers would be developed that would explain procedures for reporting and recording employees' hours of work and leave as required by Federal regulations and HEW.

A timekeeper training package has been developed and used to train approximately 700 HEW employees in the past year. We did not assess the effectiveness of the training but did note that this year the program would include an audio-visual presentation emphasizing correct procedures. In December 1978, HEW was in the process of developing the presentation and planned to distribute tapes of it to all major HEW installations by October 1979.

We also asked central payroll to monitor timekeepers' performance to ensure that established procedures are followed and to identify timekeepers and supervisors who habitually deviate from the established procedures. As a result, HEW developed a program to isolate problem areas and to establish the basis for errors as well as provide the information needed to rank the training efforts. The monitoring program, which began in December 1977, had been effective in isolating problem areas. For example, the program isolated several HEW installations with unusually high error rates in time and attendance reports. Central payroll officials analyzed the timecards from these locations and identified the timekeepers making most of the errors. Payroll officials reported this condition to appropriate Department officials and, according to them, error rates for time and attendance reports at these locations were sharply reduced.

Supplemental payments supervised

Our September 1977 report pointed out that efforts to make supplemental salary payments to employees had resulted in errors in employees' checks, leave accruals, pay records, and withholding (W-2) statements. The report attributed this condition to inadequate supervision of payroll clerks and only cursory reviews of the clerks' work by their supervisors. Accordingly, several recommendations were made to minimize system errors related to the supplemental payment process.

In complying with the recommendations, HEW officials took specific actions to provide better controls over supplemental payments. For example, they established a requirement that supplemental payment requests be supported by evidence that payroll supervisors have thoroughly reviewed and approved the propriety and accuracy of the request.

Central payroll also revised its payroll manual, emphasizing payroll supervisors' responsibility to review all supplemental pay records for propriety and accuracy prior to payment. The revised manual requires the supervisors to sign the forms used to process supplemental payments so that reviews and approvals of such payments are documented. Moreover, the revised manual emphasizes proper procedures for making the payments.

Expert and consultant pay regulated

Our report pointed out deficient controls in the payroll system. Those deficiencies could result in excessive, and even fraudulent, payments to the large number of experts and consultants employed by the Department of Health, Education, and Welfare. Specifically, the report said:

- Multiple pay records were maintained for some experts and consultants, thereby providing the potential for multiple payments for the same services.
- Time reports for experts and consultants were submitted long after services were rendered and sometimes their validity could not be established.
- Time reports were sometimes changed to show that work was performed on an authorized assignment when, in fact, experts or consultants had submitted reports showing they had spent time on unauthorized assignments.

HEW recognized the seriousness of the deficient controls and took specific actions to correct them. First, central payroll officials issued instructions emphasizing the need for HEW employees to submit time reports at the end of each pay period in which they worked. The instructions reminded each HEW office that the policy applied to all HEW employees, including experts and consultants.

Central payroll then established procedures to ensure that experts and consultants submit their time and attendance reports promptly and accurately. For example, the procedures provide for late reports to be rejected and returned to the originating office for justification and explanation. Payments will not be made for work described in the rejected reports unless all questions are properly resolved and acceptable reasons are given for submitting the late reports. According to payroll officials, these procedures have resulted in a sharp reduction in the number of late reports.

Pay adjustments monitored

Central payroll clerks must occasionally adjust HEW employees' pay for such things as over- and underpayments. HEW's procedures provide for adjustment edit worksheets to be used for correcting the previous errors and for paying amounts, including special bonuses, that cannot be handled by the regular or the supplemental process.

Our report noted that payroll clerks normally prepared the worksheets which were system input documents that bypassed many controls incorporated into the regular automated pay system. The report demonstrated that alternate controls, such as rigorous supervisory reviews, were not used and, as a consequence, the adjustment process provided opportunities for undetected pay errors. The report emphasized that the additional errors would compound the effect of original errors and that the lack of controls over adjustments provided opportunities for fraudulent or otherwise unauthorized payments.

The report contained several recommendations to reduce the potential for improper pay adjustments. As a result, HEW required payroll supervisors to review each adjustment edit sheet and its supporting data to assure that the proposed adjustment was both proper and accurate. The manual was changed to require payroll supervisors to sign each pay adjustment edit sheet they approve, and that signature becomes authorization to process the supplemental payments.

The manual now prohibits processing adjustment edit sheets that are not signed by supervisors. Central payroll officials said that the revised procedures are being followed, and we observed this to be the case.

Temporary pay records controlled

For control purposes, HEW's payroll system identified each employee's master pay record by social security number. Any new employees without social security numbers received a temporary identification number for pay purposes until they could obtain a permanent number. Our report pointed out that the methods used to obtain and record permanent social security numbers with HEW were inconsistent, and as a result, opportunities existed for employees to receive improper payments and erroneous withholding statements.

As a result of these inconsistent practices, 24 of the 91 employees having active temporary identification numbers at the time of our review were issued confusing and erroneous withholding statements. Also, seven employees with a combined income of \$32,745 were not issued W-2 statements and 4 other employees were issued statements that understated their total income. Many times temporary pay records were not closed out after permanent records were established and consequently, employees could receive pay under each record. In one such case, an employee was improperly paid \$2,164.80 because of such records.

As a result of our 1977 report's recommendations, HEW took several steps to ensure that only one pay record was active for an employee at any given time. For example, HEW implemented procedures to periodically match personnel records with pay records specifically to purge any unwarranted temporary pay records. HEW had also developed procedures requiring new employees to obtain permanent social security numbers more promptly. We believe that these two actions, if carried out regularly, can eliminate pay record duplications resulting from the temporary identification numbers.

Microfilm record quality improved

HEW microfilms all time and attendance reports and retains microfilm reels for use in payroll research and audits. Our report mentioned that the microfilm of numerous reports was of extremely poor quality, often making it illegible and useless for its intended purpose. For example, 72 of 129

microfilm reels we examined were labeled "fogged," which means that the reels contain a number of reports that cannot be read. The report concluded that the poor quality of the microfilm could severely hamper any research to verify complaints of pay errors or irregularities.

As a result of our recommendation, HEW implemented a program of quality control over its efforts to microfilm employees' time and attendance reports. Quality standards have been developed using military procurement criteria applicable to microfilming. The quality control program requires all microfilm that does not meet the established criteria to be rejected.

ACTIONS TAKEN ON OTHER GAO
RECOMMENDATIONS TO IMPROVE
PAYROLL OPERATIONS

Between August 1976 and May 1977, we issued three reports to the Secretary of Health, Education, and Welfare recommending corrective actions in subsystems related to military pay, salary overpayments, and undelivered checks. As discussed below, HEW has taken action to correct most of the system deficiencies discussed in those reports.

Military pay subsystem improved

In a May 1977 report we pointed out serious deficiencies in the administration and operating controls for the subsystem paying officers of the commissioned corps of the Public Health Service. The report said the deficiencies provided opportunities for (1) improper salary payments that would not be readily detected, (2) inaccurate payments for housing and cost-of-living allowances, and (3) unnecessary delays in collecting debts owed by former corps officers.

The report contained a number of recommended actions to improve controls over military pay. By April 1978, HEW had taken action on most of the recommendations and substantial progress had been made to improve the system's procedures for ensuring proper and accurate payments to military officers. The actions included:

- Development of a new manual specifically detailing procedures for the military pay subsystem, including such things as specific instructions on authorized procedures for processing the commissioned corps' payroll and providing needed instruction to payroll employees.

- Initiation of procedures for record count controls; i.e., comparing the number of documents submitted for computer processing with the number actually processed to ensure that all required actions on documents are performed.
- Requirements for supervisory review of all documents used to adjust officers' payments and to check on the propriety and accuracy of the adjustments before they can be made.

Furthermore, HEW reorganized the military payroll unit and appointed a new unit chief and assistant chief. Under the new leadership, the military pay subsystem appears to be better organized and disciplined. Also, the working environment is substantially improved with the work area appearing neater and more businesslike.

Collection of salary overpayments controlled

In January 1977, we reported to the Secretary of Health, Education, and Welfare that salary overpayments to current and former HEW employees were being collected only after lengthy delays or, in some cases, were not collected at all. At the time of our review, salary overpayments of \$157,176 to 534 active and former HEW employees had not been collected. The report attributed the collection problem to procedural weaknesses and recommended specific actions to (1) collect overpayments promptly, (2) safeguard files and establish accountability for overpayments, (3) process pay adjustments accurately, and (4) provide training and better supervision for employees.

We evaluated HEW's action on the specific recommendations and found that substantial progress had been made to implement them. For example, HEW revised its procedures so that collection efforts begin on the same day overpayments are reported to the overpayment collection unit and the collection efforts continue until repayments are received or found to be uncollectible. In the case of current HEW employees, if satisfactory repayment arrangements are not agreed to, deductions are made automatically from employees' pay. Further, uncollected cases are now being forwarded to the Department's claims collection officer when regular collection procedures are not effective.

Undelivered salary checks better controlled

In August 1976, we advised the Secretary of Health, Education, and Welfare of specific weaknesses in the Department's procedures for processing, safeguarding, and accounting for payroll checks that could not be delivered and were returned for cancellation. The report discussed deficient procedures for adjusting pay records for returned checks and noted that, as a result of such deficiencies, errors existed in about 3,800 employees' pay records and in about 1,940 employees' Wage and Tax Statements (W-2s). The report also noted that the returned payroll checks, which were negotiable, were unnecessarily exposed to risk of loss or theft.

As of April 1978, HEW had taken positive action on most of our recommendations to correct this situation. For example, HEW developed new procedures to individually account for and control each check returned. The new procedures also provide controls that are designed to help ensure timely and accurate adjustments to employees' pay records and W-2s when returned checks are subsequently canceled.

In responding to another recommendation, HEW notified the Internal Revenue Service that erroneous W-2s had been issued to some of its employees and obtained instructions on how existing and future cases of incorrect W-2s should be handled. HEW has revised its payroll manual to include the Service's instructions for correcting erroneous W-2s.

ACTIONS PENDING ON GAO RECOMMENDATIONS
TO PREVENT OVERPAYMENTS

As we have discussed, HEW has made substantial progress in implementing our recommended actions to improve its payroll operation, and central payroll officials have emphasized the urgency of making the long overdue improvements and have displayed a dedicated attitude toward effectively implementing necessary changes. However, we did note some instances where positive action to correct longstanding system deficiencies had not been completed.

Multiple pay records should be controlled

In our September 1977 report, we discussed inadequacies in the control over experts' and consultants' pay records to prevent improper payments. The report pointed out that HEW's procedures allowed each expert and consultant employed by HEW to have up to six different pay records and that no controls

existed to prevent payments under each pay record for the same time. The report mentioned that the lack of controls had been a longstanding problem and it discussed three instances where the lack of controls allowed experts and consultants to be overpaid a total of \$3,397.

We recommended that HEW revise its pay system to include controls that would prevent payments under different pay records for the same time worked. HEW officials agreed to make those revisions but as of January 1979, we noted that controls to detect payments under multiple payrecords totaling more than the maximum permissible by law were the only controls that had been implemented. Since these controls will only detect improper payments after they are made, and will only identify duplicate payments exceeding the maximum limitation, we do not believe they provide adequate protection against all possible types of improper payments. For example, the controls will not prevent consultants or experts from being paid four different times for the same 20 hours of work within a 2-week period.

Payroll officials said that incorporating more stringent controls into the automated system would be extremely difficult. Because of the potential for improper payments without the controls, however, we believe HEW should implement manual controls to prevent duplicate payments if it finds that automated ones are not feasible.

Pay entitlement controls should be used

In our May 1977 and prior reports on the commissioned officers' payroll subsystem, we recommended that action be taken to assure that only entitled personnel received salary payments. Although HEW designed such controls and said that they would be implemented, we noted that they were not used effectively or for the purpose intended.

The need for effective entitlement controls over payments to commissioned officers has been a longstanding problem which was first reported by us in 1969. ^{1/} In that report, we pointed out that the lack of such controls resulted in overpayments of \$7,411 to five corps officers who were no longer on the payroll. In May 1977, we again reported this problem to the Secretary of Health, Education, and Welfare,

^{1/}"Need for Improvements in the Automated Central Payroll System of the Department of Health, Education, and Welfare," (B-164031), Jan. 17, 1969.

pointing out that although entitlement controls had been incorporated into payroll's required procedures, the control procedures were not followed. HEW officials responded that the controls had not worked well in practice, and their use had been discontinued.

In our May 1977 report, we again recommended that HEW implement and use an effective system of pay entitlement controls. HEW officials agreed to develop a new system of controls that would allow listings of officers for whom checks were being prepared by central payroll to be compared against listings of active duty officers maintained by the corps' personnel office. The new controls were to eliminate delivery of paychecks to corps officers not entitled to the checks.

About 1 year after the report was issued, we evaluated HEW's progress in implementing the new control procedures. Although comparisons were being made, they were not done in time to stop delivery of checks found to be improper. Therefore, the controls were of little value. Payroll officials were aware of this condition and said that steps to correct technical deficiencies in the entitlement controls were being considered.

HEW faces a difficult task in implementing effective pay entitlement controls in the military-pay subsystem. The difficulty exists primarily because many corps officers are at remote locations and any entitlement control must be designed so that payroll checks are not unnecessarily delayed to those officers. Nonetheless, in the absence of effective pay entitlement controls, improper payments have occurred in the past, and we believe central payroll's management needs to devote greater effort to ensuring that entitlement controls are working properly.

Amounts receivable from salary
overpayments should be established

In our January 1977 report on salary overpayments, we noted that amounts owed HEW by employees were not properly recorded as accounts receivable so that collection efforts could be monitored by HEW management. Accordingly, we recommended that the overpayments be recorded so that management had detailed data on new overpayments, past collection efforts, and the ages of balances outstanding.

Central payroll had not completed action on this recommendation as of September 1978. Although payroll clerks were preparing reports for management on overpayments, the reports

only provided data on new cases. Also, action had not been completed to record overpayments as receivables, and therefore, management was not being provided all the data required for effective monitoring of collection efforts, such as data comparing amounts outstanding at different time periods.

According to central payroll's director, the automated payroll accounting system was being revised to include amounts due from overpayments. He said that the planned revision would provide management with the detailed data needed to effectively monitor collection efforts, such as amounts collected each month, balances due, and ages of amounts overdue. He added that most of the necessary procedures have been developed and indicated that they expected to begin implementing them in March 1979. The director felt that implementing the procedures to account for overpayments before implementing other procedures would be uneconomical. This rationale appears to have merit; however, in the interim, central payroll should manually record the data necessary to properly account for and control the overpayments until the automated procedures become fully operational.

HEW ACTIONS ON CHANGES RECOMMENDED
BY SPECIAL PAY TASK FORCE

In February 1972, the Secretary of HEW convened a panel of personnel from various agencies with expertise in the payroll area to study his Department's centralized payroll system. The Secretary specifically asked the panel to recommend actions needed to (1) reduce pay errors, (2) eliminate delays in paying employees, and (3) otherwise improve service in the payroll operation. In May 1972, the panel made six comprehensive recommendations to improve the payroll system. The most significant of these were to develop a common automated data storage system for use by both HEW's payroll and personnel operations and to reassign responsibility for submitting and processing data affecting employees' pay status--referred to as pay entitlement data--from central payroll to HEW's 66 personnel offices. HEW started operating under system design changes to satisfy these recommendations in the middle of calendar 1977, over 5 years after the panel's report.

Common data base developed

At the time of the panel's review, HEW was planning an automated personnel record system that would duplicate data already on the payroll system. Because of the diseconomies of duplicate systems and because of the advantages offered

by systems using a common data base, the panel recommended that such a base be developed for use by both the personnel and payroll systems. As discussed below, HEW has proceeded slowly in the development of the base.

Payroll and personnel systems require similar data on employees. A payroll system normally stores the data needed to compute pay for each employee in a master file. The computation of pay to HEW employees is based on many factors which must be accurately maintained in the master file. For example, in addition to general schedule personnel, HEW has employees classified under six other pay plans, each having different pay rates. Also, certain employees are entitled to special allowances for such things as hazardous duty and cost of living.

In addition to data related to employees' earnings, the master files contain information needed to determine deductions and withholdings to be subtracted from an employee's gross pay. This information covers such things as Federal, State, and local income tax status; social security or retirement plan coverage; and health and life insurance options. Also, other factors, such as allotments for savings bond purchases or court ordered alimony deductions, are reflected in the master pay records.

The panel recommended in May 1972 that the common data base be developed on a priority basis. HEW, however, did not start using such a base until the middle of calendar 1977, over 5 years after the panel's recommendation. In addition, according to payroll officials, much additional work remains to be done to fully realize the potential benefits of operating under the common data base. They said that a contributing factor to the slow implementation has been the time needed to manually compare and identify and correct erroneous data contained in the separate payroll and personnel master files. The matching process identified over 28,000 significant discrepancies that had to be investigated and corrected before the combined data system could be put into effect; otherwise, the new system would have started with erroneous data.

We recognize the difficulty of HEW's challenge to develop a revised system that would provide the data needed by both payroll and personnel managers. Nonetheless, we believe that 5 years is an excessive amount of time to revise the system and bring it into operation. Moreover, HEW is still experiencing problems with the revised system, thus preventing it from operating at its full potential. HEW should get the problems resolved as quickly as possible and should immediately commit the resources necessary to do this.

Responsibility for pay
entitlement data decentralized

In its 1972 report, the panel commented that the controls to establish the accuracy of transactions processed in the automated payroll system were inadequate and that accountability for accuracy was not clearly established. The panel recommended that responsibility for entering data into the system be transferred to HEW's field offices, a change that would also provide better service to employees with pay or personnel problems.

At the time of the panel's study, the process used to enter data into the payroll master files was unreliable and slow. Much of the data originated from HEW's personnel offices, but the division of central payroll in Washington, D.C., was responsible for entering the data into the master files. Under the procedures then in effect, central payroll received information on changes in pay entitlement data from various sources. These sources included (1) the Office of Personnel headquarters in Washington, D.C., (2) each of the servicing personnel offices in HEW installations in various regions of the United States, and (3) special payroll representatives at each major HEW installation. Most of the information was sent to central payroll by mail and virtually all of it had to be converted into machine-readable format compatible with the automated payroll master files.

Central payroll was responsible for input of data forwarded to it from the various sources, but accountability for the data's accuracy was not clearly established because it came from many different sources. Additionally, delays occurred in mailing documents to central payroll and in converting them to machine readable form. Because of these problems and because of the apparent advantages of locating responsibility for the accuracy of data as closely as possible to affected employees, the panel recommended that the responsibility for entering and correcting pay entitlement data be assigned to HEW's field personnel offices.

HEW has acted on the panel's recommendation since our latest review was completed. The Department's 66 field offices have been assigned responsibility and accountability for developing, verifying, and entering pay entitlement data into the master files. Additionally, the field offices now have responsibility for correcting and resubmitting any errors detected in the data entry process. They receive all

complaints or inquiries about employees' pay, and they correct any payroll errors caused by erroneous or delayed entry of pay entitlement information. Each field office has a processing unit staffed by employees trained to perform the data input function and the review process necessary to identify and correct errors. Central payroll retained responsibility for correcting errors caused by missing or late time and attendance reports and errors in employees' leave balances.

To handle these new responsibilities, HEW equipped each field office with automated equipment and programming called the terminal data collection system. Each servicing personnel office in this system has an input/output terminal linked directly to the common data base in Washington, D.C. The system provides for essential functions related to employees' pay to be performed more promptly and efficiently. For example, the system can (1) assemble and transmit pay entitlement and personnel data to the common data base in Washington, D.C., (2) edit the information entered into the system, and (3) reject and return erroneous information to the originating personnel office for correction and resubmission. This system has been used in part since 1973 but did not begin full operation until the common data base was established in 1977.

OTHER ACTIONS UNDERTAKEN TO IMPROVE THE PAYROLL SYSTEM

In addition to implementing many of the changes recommended by the payroll review panel and by us, HEW has made two other major changes to improve the operation of its payroll system. These changes are designed to provide more accurate payments in the military pay system and to provide for more timely distribution of checks to employees paid by the civilian payroll system.

Greater automation of the military payroll subsystem

At the time we reported on HEW's subsystem to pay commissioned officers, central payroll paid its military personnel based upon information provided by the corps personnel office in Rockville, Maryland, and by corps timekeepers at Public Health Service facilities in the United States and overseas. Since this information was provided in a manual format and often via mail, over- and underpayments occurred because of mailing delays and because of the time required to convert the material into machine-readable form. HEW is currently implementing revisions designed to simplify payroll processing and to eliminate delays and errors.

Under the planned revisions, the payroll master file will be maintained on new automated equipment in a program format that is fully compatible with data in the master files of the personnel record system. The revisions provide for employees' pay entitlement data to be automatically and mechanically transmitted from the personnel files to the payroll master files. The mechanical transmission will eliminate both the delays and the potential for clerical error inherent in manually transcribing data from one format to another.

We believe the revisions, if implemented properly, will significantly improve the military pay subsystem. Direct input of data into the payroll computer will reduce the time and effort needed to make changes to the payroll master files, thus helping to both ensure accuracy in pay computation and reduce the need for pay adjustments.

Preparation of paychecks
being decentralized

At the time of our review, all paychecks for HEW employees were prepared by the Treasury's regional disbursing center in Washington, D.C. Because delays in mailing the checks over long distances were cited as the cause for many late payments, HEW has recently developed procedures enabling checks to be mailed from the Treasury's disbursing centers closest to employees.

Under procedures in effect until late 1977, HEW furnished magnetic tapes on its payroll to the Treasury's regional office in Washington, D.C. The tapes provided data necessary for the Treasury to prepare all HEW paychecks, after which the Treasury mailed the checks to HEW's regional offices for distribution to employees. HEW has received numerous complaints from employees in recent years about late paychecks. Recent investigations of such complaints by both central payroll and the Treasury disclosed that delays in the U.S. mails were a major cause of the problem.

To eliminate late payments caused by untimely mail delivery between Washington and other parts of the United States, central payroll and the Treasury developed procedures to provide for HEW payroll checks to be prepared by the Treasury's regional disbursing centers covering the area in which HEW employees work. Under the revised procedures, central payroll electronically transmits data contained on the magnetic check tapes directly to the Treasury's regional disbursing

centers located near HEW regional offices. Based upon the check-tape data, the disbursing centers prepare the checks and deliver them directly to the regional HEW offices, thus eliminating the risk of mail delays. This concept has been successfully implemented at the San Francisco and Kansas City disbursing centers and HEW plans to expand it to other regions.

ADDITIONAL ACTIONS REQUIRED BY MANAGEMENT
TO ASSURE SATISFACTORY COMPLETION OF
SYSTEM IMPROVEMENTS

As previously mentioned, HEW has put into operation a common automated data base for payroll and personnel and also has decentralized responsibility for submission of payroll data to its field personnel offices using the terminal data collection system. The combined data base, along with the terminal data collection system, provides basically a new operating method having the potential to vastly improve the efficiency and timeliness of the payroll operation. However, several actions, including those described below, must be taken by HEW management to ensure that the potential benefits from the changes in operations are realized.

Computer edits for common
data base should be installed

An automated payroll requires a series of edit checks to ensure that data processed by the system is complete and accurate. According to HEW payroll officials, the edits originally included in HEW's revised payroll system have not been sufficient to screen out all erroneous or questionable data.

According to GAO's standards for Federal payroll systems, when automatic data processing equipment is used, the equipment's capabilities must be fully utilized to ensure the accuracy of payroll processing. Computer programs can include both instructions for calculating pay and edits for validating the data being processed. Edits normally should test critical payroll information for missing data; reasonableness of data; and validity of codes, characters, and transactions entered into the system.

HEW officials said that the system did not contain all the basic edit checks needed to identify and reject invalid data, or at a minimum, flag invalid data for review, correction, and reentry into the system. For example, edit weaknesses allow small errors in overtime pay rates to enter the common data base files for several thousand HEW employees.

Although the amounts involved in the errors were very small and have been corrected, the fact that they existed in large numbers in the early phases of the data base operation points out a need to thoroughly evaluate the system's edit capabilities. Payroll officials agreed that the system's edit features should be upgraded. They said steps are being taken as rapidly as resources permit to identify areas needing improved edits and to develop and implement such edits.

The payroll/personnel data system contains master files for over 160,000 HEW employees, and HEW annually pays more than \$2.9 billion to these employees based upon information in the master files. Because of the size, complexity, and value of transactions processed by the payroll system, we believe that improved edit checks should be put into operation without further delay. We also believe that management should make the resources available to do this.

Control bypass feature
should be further restricted

As emphasized above, automated systems must have properly designed edits to guard against entry of erroneous or improper data. Ironically, HEW's terminal data collection system contains a feature which allows entry of data into the system, bypassing all the built-in edits. The system permits use of the bypass feature with a single code word. Although HEW officials maintain that adequate administrative and mechanical controls govern the use of this code, we have serious reservations about the system operating with this feature.

HEW officials explained that the bypass feature was developed to permit needed flexibility in data entry, especially during the start-up stages. They said such flexibility was still needed to permit entry of data into the system under unusual circumstances, such as when normal edits reject unusual data known to be valid. HEW's procedures require the field offices to obtain special permission to use the bypass code.

We are concerned that the bypass code will become well known and could be used without permission and under inappropriate circumstances. For example, unwarranted use of the code provides an easy shortcut for entering data which is carelessly or incompletely prepared. Another possibility is that a dishonest employee could use the code to effect improper payments.

We recognize that occasionally a legitimate need may exist to bypass normal edits, and HEW officials have expressed serious reservations about abolishing the bypass feature. Considering their reservations, we believe that use of the code should be further restricted so that it could only be used at headquarters and with the specific permission of the director of the employee systems center.

System improvements should be monitored

We believe that steps must be taken by HEW's management to assure that ongoing efforts to improve the system are not unnecessarily extended or abandoned outright, as has been the case in the past. Many of the deficiencies noted in four reports issued since 1976 had been previously reported to HEW by us and others as long ago as 1969.

Development of the combined payroll/personnel data system was recommended to HEW in May 1972, but real progress on implementing many recommended improvements began only recently. Progress on this revision, as well as others, could not be measured because, in general no formal milestones or goals were established for completing various phases of revisions, and when milestones or goals were established, no explanation was required when they were not met.

We believe that HEW needs a formal system to monitor the progress on its improvements and to ensure that corrective actions are completed as quickly as possible. As a minimum, realistic deadlines should be set for completing major tasks associated with specific improvements and the progress made to meet the deadlines should be periodically reviewed. Delays and expected slippages should be justified in writing. The system should pinpoint responsibilities and should impress upon payroll officials the need for timely resolution of problems in meeting the established goals.

We believe that an effective monitoring process could have facilitated timely completion of the combined payroll/personnel data system. For example, had HEW management closely monitored implementation of the common data base, it could have quickly resolved the communication and coordination problems that delayed implementation of the system.

Internal audit coverage should be increased

HEW's internal audit organization can make a significant contribution to ensuring the success of planned payroll system improvements. Despite this generally recognized value, we saw no recent indication that the organization had participated in developing HEW's revised payroll system.

HEW's internal audit activity could help review system design changes and monitor their operation once the changes come into practice. Our Policy and Procedures Manual for Guidance of Federal Agencies emphasizes that regular internal audit coverage constitutes an integral part of an agency's system of internal control and ensures greater adherence to proper prescribed procedures. In recent years, little emphasis has been placed on the practice of internal auditors participating in the development of payroll systems.

In the early development phase of the common data base, the internal auditors were consulted on the system's design. However, although many changes have been made in the design since then, the internal auditors have not been consulted on those changes. Also, implementation of the system has taken place without review and monitoring by the internal audit staff.

We believe that the new operating mode needs to be regularly reviewed by internal auditors. A primary benefit of the new approach is the speed with which needed changes can be made directly to the master payroll records of employees by the field personnel offices. While this should eliminate payroll errors associated with delays in updating pay records, it can also be potentially harmful if not handled correctly. HEW has developed extensive procedures to ensure proper and accurate entry of data into the system. However, even the best of procedures will be ineffective unless strictly followed. We believe cyclical internal audit coverage of the field personnel offices' payroll functions is essential for ensuring the proper operations of the system which annually pays over \$2.9 billion to about 160,000 employees. Payroll officials also agree with the need for such audit coverage.

CONCLUSIONS AND RECOMMENDATIONS

As discussed in the preceding pages, HEW has recently taken a number of significant actions to correct longstanding and persistent problems with its payroll system. These actions have included developing detailed manuals to guide

central payroll employees in performing their duties, implementing control procedures to help prevent improper or erroneous payments, and adopting a new operating method. Achieving and maintaining permanent improvements in the system's operation, however, is a continuous process requiring day-to-day efforts by payroll clerks, supervisors, and officials.

As we have pointed out, HEW's past efforts to implement changes to its payroll system in response to recommendations contained in reports by GAO, HEW's internal auditors, and the blue ribbon panel often did not achieve lasting improvements. We believe these efforts were unsuccessful because they did not receive continuing management attention and support and were abandoned prematurely. The recently undertaken and planned improvements described in this report have the potential to vastly improve the system. However, because of HEW's past history of not completing changes undertaken to improve the payroll operation, we believe it will be necessary for payroll management to create periodic tests to ensure that the new methods and procedures are properly and consistently carried out. Also, efforts should be undertaken to complete actions on the recommendations that have not been fully implemented.

HEW's recent actions clearly indicate that greater emphasis is currently being placed on making needed improvements to the payroll system. Many recent changes resulting from earlier recommendations as well as other significant changes undertaken by HEW management that are still in the planning or implementation stages underscore that emphasis. Although the changes are too recent to have any meaningful effect on the payroll error rate, the system will experience a lower rate, we believe, if HEW management takes appropriate action to ensure proper implementation of actions planned and underway. Also, in our view, management should provide for adequate internal audit coverage to ensure continuing proper operation of the payroll system once improvements are implemented.

We recommend, therefore, that the Secretary of Health, Education, and Welfare:

- Ensure that adequate edits are established to control the accuracy, propriety, and validity of data entered into the combined payroll/ personnel data system.
- Take actions to ensure that the system's edits cannot be readily bypassed.

- Establish a system to provide for close monitoring and review of progress made in implementing improvements to the payroll system.
- Instruct the Inspector General's office to provide assistance in revising HEW's payroll system and to review the system on a regularly scheduled basis for adherence to established policies and procedures.

SCOPE OF REVIEW

Our followup was performed at your Department's division of central payroll and reports processing in Washington, D.C. We reviewed changes to the payroll procedures manual and other guidelines to bring about needed improvements in payroll operations. We reviewed practices of selected activities to determine whether personnel were following established procedures. We also interviewed appropriate officials to obtain information about the status of improvements, including planned changes to the system.

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