Audit of the Department of Human Services' Information System

A Report to the
Governor
and the
Legislature of
the State of
Hawaii

Report No. 01-05
February 2001

THE AUDITOR
STATE OF HAWAII

Office of the Auditor

The missions of the Office of the Auditor are assigned by the Hawaii State Constitution (Article VII, Section 10). The primary mission is to conduct post audits of the transactions, accounts, programs, and performance of public agencies. A supplemental mission is to conduct such other investigations and prepare such additional reports as may be directed by the Legislature.

Under its assigned missions, the office conducts the following types of examinations:

1. *Financial audits* attest to the fairness of the financial statements of agencies. They examine the adequacy of the financial records and accounting and internal controls, and they determine the legality and propriety of expenditures.

2. *Management audits*, which are also referred to as *performance audits*, examine the effectiveness of programs or the efficiency of agencies or both. These audits are also called *program audits*, when they focus on whether programs are attaining the objectives and results expected of them, and *operations audits*, when they examine how well agencies are organized and managed and how efficiently they acquire and utilize resources.

3. *Sunset evaluations* evaluate new professional and occupational licensing programs to determine whether the programs should be terminated, continued, or modified. These evaluations are conducted in accordance with criteria established by statute.

4. *Sunrise analyses* are similar to sunset evaluations, but they apply to proposed rather than existing regulatory programs. Before a new professional and occupational licensing program can be enacted, the statutes require that the measure be analyzed by the Office of the Auditor as to its probable effects.

5. *Health insurance analyses* examine bills that propose to mandate certain health insurance benefits. Such bills cannot be enacted unless they are referred to the Office of the Auditor for an assessment of the social and financial impact of the proposed measure.

6. *Analyses of proposed special funds* and existing *trust and revolving funds* determine if proposals to establish these funds are existing funds meet legislative criteria.

7. *Procurement compliance audits* and other *procurement-related monitoring* assist the Legislature in overseeing government procurement practices.

8. *Fiscal accountability reports* analyze expenditures by the state Department of Education in various areas.

9. *Special studies* respond to requests from both houses of the Legislature. The studies usually address specific problems for which the Legislature is seeking solutions.

Hawaii's laws provide the Auditor with broad powers to examine all books, records, files, papers, and documents and all financial affairs of every agency. The Auditor also has the authority to summon persons to produce records and to question persons under oath. However, the Office of the Auditor exercises no control function, and its authority is limited to reviewing, evaluating, and reporting on its findings and recommendations to the Legislature and the Governor.

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OVERVIEW

Audit of the Department of Human Services' Information Systems

Report No. 01-05, February 2001

Summary

The State Auditor initiated this audit to assess the Department of Human Services' information systems' effectiveness in providing for public welfare needs efficiently. The audit was conducted pursuant to Section 23-4, Hawaii Revised Statutes, which requires the Auditor to conduct postaudits of the transactions, accounts, programs, and performance of all departments, offices, and agencies of the State and its political subdivisions.

The Department of Human Services is one of the largest departments in the State with an annual budget of over $1.0 billion and approximately 1,600 employees. Its mission is to provide high quality, efficient, and effective services designed to achieve self-sufficiency for clients as quickly as possible. Information systems are valuable technological resources that aid in achieving this mission by automating tasks, recording vast and varied information efficiently, and generating accurate management reports. Effective information systems improve government services in supporting public welfare needs and planning for welfare reform.

Divisions within the department use separate and distinct information systems to satisfy program needs and maintain client information. The Benefit, Employment and Support Services Division (BESSD) uses the Hawaii Automated Welfare Information (HAWI) system for its welfare programs and the Hawaii Automated Network for Assistance (HANA) system for its First-To-Work, Employment and Training, and Child Care programs. A social services computer system called the Child Protective Services System (CPSS) maintains records for Social Services Division programs. The Vocational Rehabilitation Division uses the Vocational Rehabilitation Information Statistical System, while the Med-QUEST Division uses a combination of specialized applications running on separate computer systems.

We found that the department's failure to follow state information systems planning guidelines hindered the department's ability to recognize and plan for more effective information systems. The department inadequately followed the State's *Distributed Information Processing and Information Resources Management* (DIPIRM) planning process and failed to form an executive steering review committee according to state standards. This resulted in inadequate linkages among computer systems and ineffective sharing of information. Several intervening manual tasks are required to retrieve information from other systems, reducing the effectiveness of the department's computer systems and hindering operational efficiency.

We also found that the department's major computer systems do not effectively share information. Although some extent of electronic exchange occurs between HAWI and computers of the Internal Revenue Service, the Departments of Health and Human Services, the Social Security Administration, the Hawaii Medical

Service Association, and Citibank, HAWI does not effectively share information with HANA and the social services computer system within the department. Information sharing increases data accuracy, timeliness, and cost effectiveness. For example, in our tests to match HAWI's 233,631 individuals with the social services computer system's 171,561 individuals, we found 47,945 matched social security numbers. However, in these matched records, there were 7,938 first names, 7,141 last names, and 3,175 dates of birth that did not match up. This ineffective sharing of information between HAWI and the social services computer system results in duplicate data entry and increased data inaccuracies.

We also found that inaccurate data and limited usefulness of the department's social services computer system undermine the computer system's effectiveness. Using an automated auditing software called IDEA for Windows, we found significant amounts of missing, inaccurate, and inconsistent data. Out of 171,561 total clients, 16,564 contained no date of birth, 53,999 had no social security number, and 36,539 were not linked to any case. Out of 54,342 cases, 4,980 cases were not linked to any clients. These key data fields are used to track and identify individuals and related information. The discrepancies negatively affect computer system reliability, user efficiency, and program functionality.

Finally, we found that the department missed the opportunity to finance upgrading the computer system's functionality with enhanced federal dollars.

Recommendations and Response

We recommended that the director ensure that the department's *Distributed Information Processing and Information Resource Management* (DIPIRM) plan and its executive steering committee are in accord with State standards and guidelines. In addition, we recommended that the department redesign the social services computer system to better meet user needs and incorporate necessary interfaces. In redesigning the system, the department should consider pursuing federal funding.

The Department of Human Services agreed with our audit findings and states that it is in the process of pursuing the recommendations. It concurred that more automated interfaces would increase efficiencies within the department and with other departments. The department also stated that it is committed to improving the management and coordination of its information technology resources.

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A Report to the
Governor
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Hawaii

Submitted by

THE AUDITOR
STATE OF HAWAII

Report No. 01-05
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Foreword

This is a report of our audit of the Department of Human Services' information systems. This audit was conducted pursuant to Section 23-4, Hawaii Revised Statutes, which requires the Auditor to conduct postaudits of the transactions, accounts, programs, and performance of all departments, offices, and agencies of the State and its political subdivisions.

We wish to express our appreciation for the cooperation and assistance extended by officials and staff of the Department of Human Services, and by others who provided assistance during the course of the audit.

Marion M. Higa
State Auditor

Table of Contents

Chapter 1

Introduction and Background

Introduction

The State Auditor initiated this audit of the Department of Human Services' information systems pursuant to Section 23-4, Hawaii Revised Statutes (HRS), which requires the State Auditor to conduct postaudits of the transactions, accounts, programs, and performance of all departments, offices, and agencies of the State and its political subdivisions.

The Department of Human Services' mission is to provide high quality, efficient, and effective services designed to achieve self-sufficiency for clients as quickly as possible. The department's limited resources are directed to those least able to care for themselves. The State Auditor initiated this audit to assess the Department of Human Services' management and use of its information systems for fulfilling its mission.

Information systems are technological resources that offer significant opportunities to improve government operations and performance while reducing costs. Achieving the greatest return from investments in technology requires properly managed processes and adequate information so that decisions are justified and support goals and objectives.

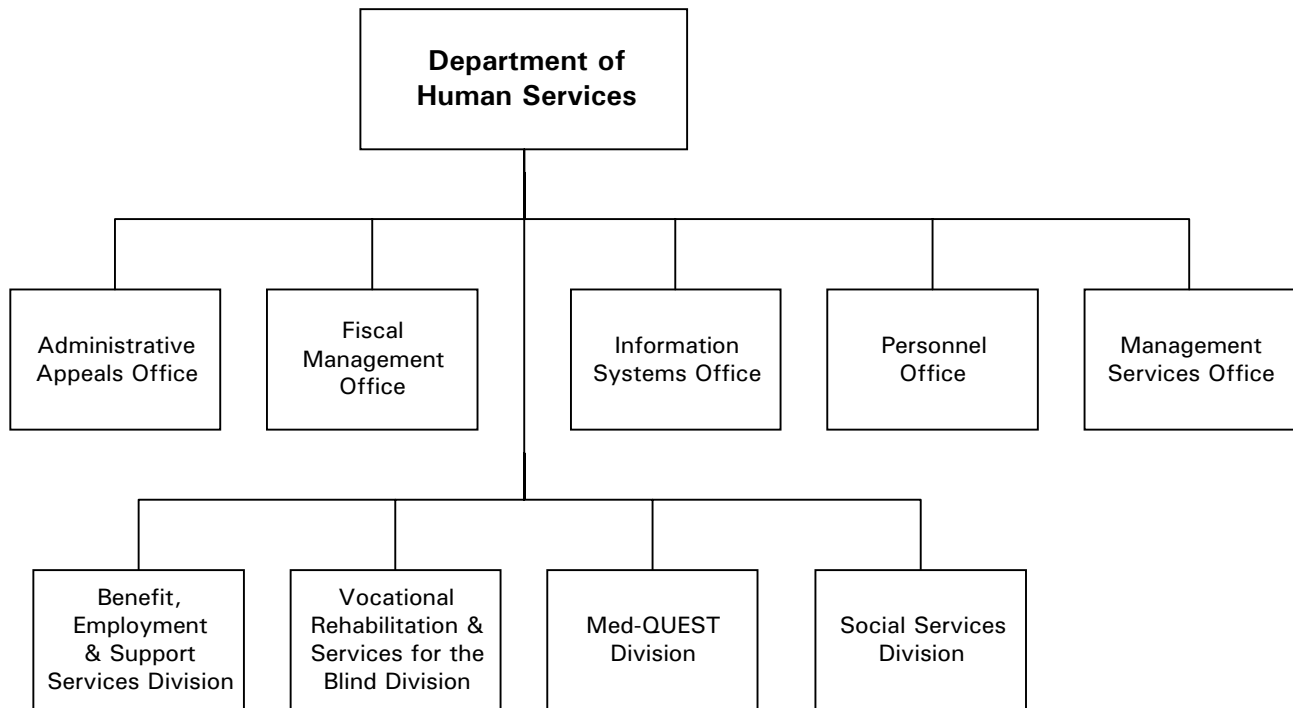**The Department Provides Client Services Through Four Divisions**

The Department of Human Services is one of the largest departments in the State with an annual budget of over $1 billion and approximately 1,600 employees. The department's services are delivered through four divisions: the Benefit, Employment and Support Services Division, the Vocational Rehabilitation and Services for the Blind Division, the Med-QUEST Division, and the Social Services Division. These divisions are supported by five central administrative service offices. Exhibit 1.1 shows the department's organization chart.

The Benefit, Employment and Support Services Division (BESSD) provides employment related services, childcare services, and economic assistance to eligible families and individuals. These programs include Temporary Assistance to Needy Families (TANF); Temporary Assistance to Other Needy Families (TAONF); General Assistance; Aid to the Aged, Blind, and Disabled; job placement and child care services; and the Food Stamps program. The department's total expenditures and encumbrances amounted to over $1 billion for FY1998-99. In that year, the department's food stamp program issued almost $15 million in food stamps to individuals and achieved the nation's second highest accuracy rate of 95.18 percent. The federal government provided the department an additional $1,700,458 in federal funds for achieving this rating.

Exhibit 1.1
Department of Human Services Organization Chart

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                         │    Department of    │
                         │   Human Services    │
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| Administrative Appeals Office | Fiscal Management Office | Information Systems Office | Personnel Office | Management Services Office |

| Benefit, Employment & Support Services Division | Vocational Rehabilitation & Services for the Blind Division | Med-QUEST Division | Social Services Division |

Source: Department of Human Services.

The Social Services Division administers programs for child welfare and adult and community care. Child welfare services include child protective services and licensing and monitoring of foster homes and child placement organizations. Adult and community care services assist dependent adults who are reported to be abused, neglected, or financially exploited by others or by self-neglect. In FY1998-99, the department reported that it investigated 4,978 cases of child abuse and confirmed 2,338 of those cases. For the same fiscal year, the department investigated 467 adult abuse cases and confirmed 189 cases.

The Med-QUEST Division administers the State's medical assistance, or Medicaid, programs. These programs include QUEST, the State's Medicaid managed care program, and the Fee-For-Service Medicaid program. Hawaii implemented its QUEST program in August 1, 1994. The QUEST program serves about 120,000 eligible individuals statewide

who are under age 65 and are not blind or disabled. The Fee-For-Service program serves about 32,500 eligible residents who are age 65 and over, blind, or disabled.

The Vocational Rehabilitation and Services for the Blind Division assists persons with disabilities to become employed. For FY1998-99, the division served 6,630 disabled persons and placed 463 individuals into competitive jobs. The division also administers the Disability Determination program that adjudicates and processes disability claims of Hawaii residents who receive Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI). The department reported that in FY1998-99, over 11,000 individuals received SSDI benefits and over 12,000 individuals received SSI benefits. Actual SSDI and SSI payments made to Hawaii residents for FY1998-99 totaled over $170 million.
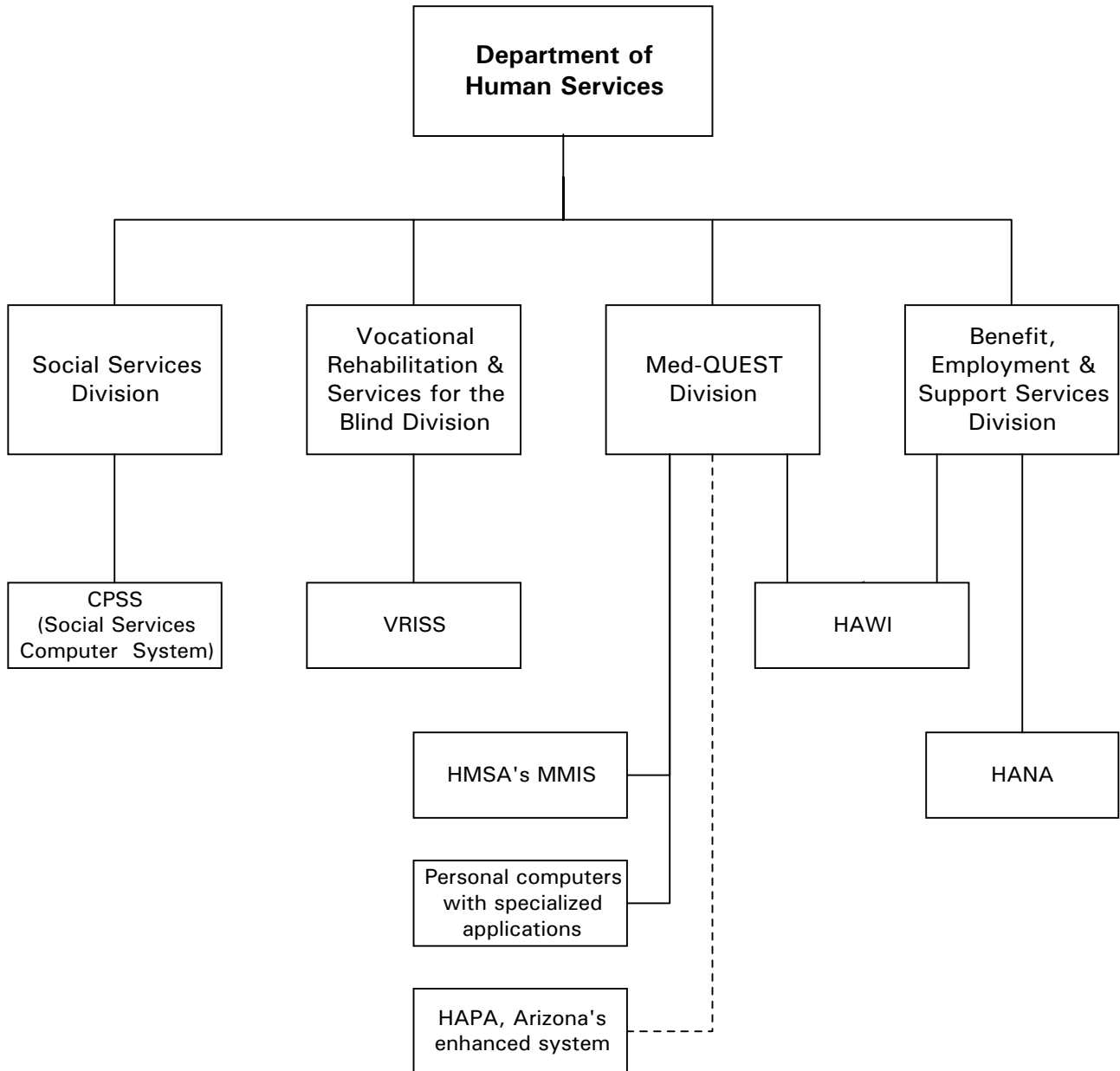
The Department Uses Different Information Systems for Each Division

The department uses different information systems to track client information for each division. The Benefit, Employment and Support Services Division uses the Hawaii Automated Welfare Information (HAWI) system for its welfare programs and the Hawaii Automated Network for Assistance (HANA) for its First-To-Work, Employment Training, and Child Care programs. The Social Services Division's programs use the Child Protective Services System (CPSS), hereinafter referred to as the social services computer system. The Vocational Rehabilitation Division uses the Vocational Rehabilitation Information Statistical System (VRISS). The Med-QUEST Division uses a combination of HAWI, specialized applications running on personal computers, and an information system managed by a private contractor (Medicaid Management Information System managed by Hawaii Medical Services Association). In September 1999, the department contracted with the State of Arizona to enhance the latter's welfare information system in order to accommodate Hawaii's QUEST program. Exhibit 1.2 shows the different systems and the primary users of the systems.

The Hawaii Automated Welfare Information system (HAWI)

When the department first developed its welfare information system, federal law required that such systems be transferred from another state's existing system. The department transferred Arizona's welfare computer system and HAWI became operational in August 1988 and certified by the federal government in February 1989. Over 1,000 persons use the HAWI system but primary users are the 500 income maintenance workers in the Benefit, Employment and Support Services Division who enter applicant data, verify eligibility, and calculate benefit amounts. In general, an applicant's income level, asset level, and age determine eligibility for economic assistance. Since its implementation, HAWI has been modified several times to accommodate changes in federal law or to add functions such as eligibility determination for Med-QUEST

Exhibit 1.2
Department of Human Services' Major Computer Systems

participants. The department estimates expenditures of $63 million for HAWI software, hardware, operating expenses, and enhancements.

Prior audits conducted by our office and by financial consultants noted weaknesses in the department's control over data entry functions into HAWI. In our 1994 *Financial Audit of the Department of Human Services,* Report No. 94-5, we noted that key data entered into the HAWI system was not checked for accuracy and that inaccurate information resulted in overpayments. The department stated that supervisory reviews of cases would be conducted to ensure that eligibility information was properly entered. However, we found these supervisory reviews were not being performed when we re-visited the department in 1998, as reported in the *Financial Audit of the Department of Human Services,* Report 98-14. A 1997-98 fiscal year audit conducted by private accountants found that supervisors were reviewing transferred and newly opened cases, but were not reviewing ongoing cases.

The Hawaii Automated Network Assistance System (HANA)

In July 1995, the department contracted with a private vendor to design, develop, and implement the HANA system by September 1996 for $150,000. Originally acquired for the federally mandated JOBS (Job Opportunities and Basic Skills) now called First-To-Work program, the HANA system now maintains data for Child Care, Employment & Training, and First-To-Work programs. HANA receives its client list from HAWI by file transfers although the original contract required that the list be provided electronically. The original development of HANA failed, and the department paid the contractor another $300,000 to develop the system in another programming language. The contractor completed the system in October 1999 using the ACCESS database language, and the system now resides on the department's local area network of personal computers. Various modifications and hardware purchases increased implementation costs to over $1 million. The department is currently contracting a vendor to further enhance the HANA system for an additional $2.5 million.

The social services computer system (Child Protective Services System - CPSS)

The social services computer system serves various programs in the Social Services Division: child protective services, child welfare services, adult protective services, adult services, foster care, adoption, and licensing resource facility. The system tracks reports of alleged abuses and maintains information on licensing of foster care facilities. The system's financial module tracks payments for foster care services and purchase orders for clothing and miscellaneous items. The Social Services Division estimates that the system cost $2 million to develop. The department and private contractor first developed the computer system from 1985 to 1989. Since then, private contractors have made numerous changes. Total users amount to approximately 750 employees with 500 from the Social Services Division.

We reviewed the child protective services program in early 1999 and found that insufficient management controls jeopardized the effectiveness of the computer system and the reliability of the data in the system. In Report No. 99-5, *Audit of the Child Protective Services System,* we noted that over half of all child abuse and neglect cases reported statewide during June 1998 were not registered in the social services computer system thereby diminishing the effectiveness of the system. We also found coding errors on Title IV-E foster children eligibility determinations that affected federal reimbursements to the State. The department's controls also failed to ensure that Temporary Assistance to Needy Families (TANF) payments were adjusted or flagged when a child was placed into foster care. This made the identification and recovery of overpayments unlikely.

The Hawaii Arizona PMMIS Alliance (HAPA)

In December 1994 the Med-QUEST Division contracted for the development and implementation of an information system but the project was not successful. In our prior audit of the QUEST project, *Audit of the QUEST Demonstration Project,* Report No. 96-19, we found that the project was delayed for eighteen months due to inadequate staffing by the division and the contractor's inability to meet deadlines. We found that the absence of an adequate information system resulted in difficulties in processing and analyzing data, verifying premium payments, and generating reports. The department settled with the private contractor to terminate the contract and avoid costly litigation.

The Med-QUEST Division currently uses a combination of five systems for its information needs. The division uses the HAWI system to determine eligibility and enrollment and a personal computer accounting software package to track account receivables and cash receipts. Another personal computer based system generates and reconciles monthly premium amounts due for health plans. A fourth system is used to process and store eligibility, enrollment, reference, encounter, and provider information. Finally, the division accesses the Medicaid Management Information System managed by Hawaii Medical Service Association (HMSA).

In 1998, the Med-QUEST Division selected an information system currently used by the State of Arizona's Medicaid program. In September 1999, the department contracted with the State of Arizona's Arizona Health Care Cost Containment System Administration (AHCCCS) to enhance its information system to accommodate Hawaii's QUEST Program. Arizona's computer system is called the Prepaid Medical Management Information System (PMMIS). Under the agreement, Hawaii will pay Arizona $5 million to modify the PMMIS, produce an operational system by October 2000, and maintain the system until June 2001.

The Vocational Rehabilitation Information Statistical System (VRISS)

The Vocational Rehabilitation Division uses the VRISS to track statistics of people served by the division. The system generates monthly and quarterly reports to meet federal reporting requirements and is used by approximately 40 people within the division. The computer system tracks statistical information such as the length of time for a social worker to process a client from initial meeting to delivery of service. The system does not manage any payments or fiscal functions. There are no electronic interfaces, but for research purposes the division shares information on disks with the University of Hawaii and the Department of Labor and Industrial Relations.

The Department Provides In-house and Contracted Technical and User Support

Support for users of the department's computer systems is provided by the department's Information Systems Office (ISO) and by program specialists within each division. The ISO has a staff of 50, of whom 38 are programmer/systems analysts. The office provides technical programming and revisions to the information systems while division program specialists provide direct user support for computer related problems. The Benefit, Employment and Support Services Division uses five permanent workers and two limited term employees to provide program specialist services. The Med-QUEST Division uses one systems analyst and five program specialists. Three program specialists support the Social Services Division. Program specialists assist staff members who encounter computer related difficulties when processing a case. Program specialists work with ISO's technical staff to identify system problems, find solutions and test the system after ISO staff modifications. The Vocational Rehabilitation Division relies solely on ISO for its support.

The department also hires private contractors to help modify and maintain its information systems. Many contractors are retained through the federal government's General Services Administration. The department contracts with the General Services Administration which in turn subcontracts with companies that do the actual technical modification and maintenance. These subcontractors perform work that the department's technical programmers cannot manage or do not have the time to manage.

Objectives of the Audit

1. Assess the Department of Human Services' planning and management of resources to effectively implement and maintain its information systems.

2. Assess the adequacy of the department's information systems to support its programs to effectively plan for public welfare needs and meet federal reporting requirements.

3. Make recommendations as appropriate.

Scope and Methodology

We conducted this audit following standard office procedures for conducting performance audits pursuant to the Office of the Auditor's *Manual of Guides* and in accordance with generally accepted government auditing standards. We reviewed general and application controls of the department's welfare and social services computer systems and followed the General Accounting Office's (GAO) guidelines in *Assessing the Reliability of Computer-Processed Data.*

Fieldwork included interviews with staff, management, and officials of the affected department. We reviewed laws, policies and procedures manuals, other management controls, and previous audits. We conducted follow up work on significant findings and recommendations from previous audits that affected the audit objectives. We also reviewed project files, memoranda, correspondence, meeting minutes, and systems documentation.

We assessed the department's organization, staffing, decision-making structure, and processes involved in the planning and implementation of computer systems projects and in the maintenance and support of the welfare and social services computer systems. We examined the HANA systems development effort from project initiation and planning to the system's present status. We reviewed system development methodology and implementation status with the focus of our assessment from January 1998 to the present.

In analyzing the consistency and reliability of the data within the welfare computer system and the social services computer system, we conducted computer data matches. We obtained demographic and payment data from the two computer systems and tested for data consistency among common elements. We also compared data from those systems with the Department of Health's vital statistics database to assess data accuracy. We used a computer assisted auditing tool called IDEA for Windows to extract relevant records and conduct analysis of the data.

We used as criteria the System Development Methodology (SDM), adopted by the Information and Communications Services Division (ICSD) of the Department of Accounting and General Services, as the standard state policy to be followed in the development of computer application systems. In addition, the State's *Distributed Information Processing and Information Resource Management* (DIPIRM) requirements were used to assess the department's compliance with planning of data processing resources. We also used the General Accounting Office's *Assessing Risks and Returns: A Guide for*

Evaluating Federal Agencies' IT Investment Decision-making, 1997 to evaluate the department's planning and management of information systems.

Our work was performed from April 2000 through September 2000 in accordance with generally accepted government auditing standards.

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Chapter 2

The Effectiveness of the Department of Human Services' Computer Systems Is Questionable

The Department of Human Services' inadequate planning and oversight has limited the effectiveness of its computer systems that should support its mission. With the increasing need and use of information, the value of computer systems is evident. Computer systems can automate many manual tasks, facilitate the compilation of thousands of records, and generate accurate reports. This is particularly important as changes in national welfare requirements necessitate information on the effects on the eligible population receiving services. Welfare reform forces recipients of entitlement programs to work, which can then place pressure on other social service programs such as child welfare, child protective services, and adult protective services. Effective computer systems can track and report on the impacts of welfare reform to enable government to better manage social service programs.

Computer systems for social services can be effective only if they are properly developed, managed, and used. Often costing millions of dollars, a computer system's value and effectiveness are measured not only by its ability to generate reports, but also by how it can improve an organization's mission and performance. The Department of Human Services computer systems' ability to improve the organization's mission and performance is hampered by inadequate planning and management.

Summary of Findings

1. The failure of the Department of Human Services' leadership to ensure departmental oversight on the planning and implementation of its computer systems has resulted in computer systems that are disjointed, are inadequately planned, and hinder the department's ability to fulfill its mission to deliver services efficiently.

2. Inaccurate data and limited usefulness of the social services computer system undermine the computer system's effectiveness.

Computer Systems' Effectiveness Hindered by the Lack of Departmental Oversight

The Department of Human Services' computer systems have been implemented without adequate planning. The department failed to adequately follow state guidelines for information technology planning when developing and implementing its computer systems. As a result, the department's major computer systems do not interface with other computer systems that can provide essential data for effective operations. We also compared the department's planning efforts with federal General Accounting Office "investment approach" guidelines for technology and found that the department's efforts were lacking. As a result, the department's computer systems do not effectively support the department's mission. The failure to provide adequate leadership also resulted in weak direction and guidance for developing effective computer systems.

Computer systems were implemented without sufficient direction and guidance

The Department of Human Services' management and development of computer systems lacks planning and direction. Computer systems projects should be selected and implemented based on their ability to support mission needs and organizational goals. The department's selection and development of projects was not based on any such defined plan. The department failed to effectively use state guidelines for information technology planning such as following the State's planning process, submitting an adequate planning document, and forming an executive steering committee to guide systems development. As a result, division computer systems operate separately with information that is not easily shared.

In February 1999, a consultant for the department developed a strategic plan for the department's computer systems. The consultant concluded that the sharing of data across the separate divisions would help the department better meet its goals. However, the same conclusion could have been reached had the department adequately followed state technology planning guidelines or used an investment approach endorsed by the federal government. State technology planning guidelines and the federal government's investment approach require that each project be evaluated for meeting organizational goals and improving mission performance. An evaluation would have revealed the benefits of sharing computer systems information.

Insufficient attention was paid to state information technology planning standards

The State's Information and Communications Services Division (ICSD) of the Department of Accounting and General Services requires state agencies to submit a *Distributed Information Processing and Information Resources Management* or DIPIRM plan. The process of developing a

DIPIRM involves conducting a cost-benefit analysis and screening and ranking projects. The DIPIRM plan is intended to guide the automation of department functions, processes, and data in support of business objectives. The Department of Human Services last submitted its DIPIRM in 1998, but we found that the department's key provisions provided little value.

The State DIPIRM process promotes strategic planning and integration. The DIPIRM is the department's plan for distributing and managing processed information. Distributed information processing represents the environment of functions and supporting framework of specifications, interfaces, and formats within which all the computing components—hardware, software, data/information, and communications service—are coordinated and integrated. Information resource management promotes the principle that identified, planned, and managed data are strategic and business resources to be shared where appropriate within and among agencies.

According to the ICSD, the plan must define departmental functions, processes, data, or operations that will benefit from the use of technology and identify the who, what, how, and why requirements for integration/ interfacing of data, functions, and processes among all organizational entities. In developing the plan, the department should look for duplications across organizational boundaries and determine if consolidation or streamlining is possible. In addition, the plan should identify unique processes and data that stand alone and require no integration or interface.

State DIPIRM planning process was ineffectively utilized. The DIPIRM process begins with a project valuation assessment. The project valuation assessment defines the need, assesses the project's relationship to the agency's business model or computer systems plan, and includes a cost-benefit analysis and risk assessment. The state's Systems Development Methodology (SDM) describes how to complete project valuation assessments. The SDM also describes how to apply ranking criteria to screen and prioritize projects and utilizes an executive steering committee to prioritize projects and decide when to proceed.

We found the department's DIPIRM inadequate in conveying the department's automation plan. According to ICSD, the DIPIRM and its required annual updates are a departmental responsibility. The Department of Human Services assigned each of its four divisions the responsibility of developing its own section for the DIPIRM with little departmental direction before submittal to ICSD. We found that the DIPIRM referenced out-of-date documents (1987) and several key provisions lacked sufficient detail. Thus, it was of little practical use as a department automation plan. We also found contradictory information. Some sections referenced a computer system as operational while another

section listed the same system as being replaced. The most prominent deficiencies included descriptions of proposed systems relationships that lacked sufficient detail to document project relationships to the department's overall plan. Descriptions mainly consisted of a general statement without supporting details to verify project consistency with the department's DIPIRM plan.

The inadequacy of the department's DIPIRM can be attributed in part to ICSD's review process that we found to be cursory. ICSD attributed this to reduced staffing levels.

However, of greater concern was the Department of Human Services' reaction to this situation. The department stated that the DIPIRM was no longer significant, contending that it was relevant only when ICSD had sufficient staff and promoted a statewide information system. The department failed to recognize the importance of the DIPIRM plan as a planning process, instead of merely a document with which to comply and guide its information technology investments. Through the process, projects are analyzed, screened, ranked, and selected to implement the most productive and cost effective systems within the given limited resources. The process establishes an executive steering review committee to provide guidance by reviewing and selecting the best projects to meet organizational goals. The department does not recognize the importance of the DIPIRM process and needs such a committee to provide oversight and guidance in developing information technology.

We were informed that the department recently formed an Information Technology Steering Committee to set strategic direction, consolidate business unit strategies, promote information sharing, and resolve inter-divisional conflicts. It is too soon to determine whether the committee can adequately provide appropriate oversight and guidance.

Absence of executive steering review committee results in lack of leadership

The Department of Human Services failed to establish an executive steering committee in accordance with System Development Methodology (SDM) guidelines. As a result, the development of computer systems lacked leadership and management. Effective leadership involves organizing tasks and staff to meet desired objectives, guiding staff to achieve the objectives, and exercising controls by taking corrective action. The SDM executive steering committee fulfills this leadership role by screening projects and prioritizing the various contending needs for technical services. The committee evaluates all the projects against each other within the framework of corporate objectives and overall automation. Only one executive steering review committee consisting of representatives from all major organizational entities should make these decisions. The department had no such functioning committee.

The department has numerous committees and meetings to discuss computer systems issues. However, these groups and meetings fail to fulfill the role and responsibilities of an executive steering review committee. The department director stated that she often meets separately with the information systems office administrator and with functional division administrators. In addition, the Benefit, Employment and Support Services Division conducts meetings relating to the welfare computer system that other divisions can attend. However, these committees or meetings failed to perform the basic functions of an executive steering review committee.

Executive committee helps to guide computing resources toward achieving organizational goals. SDM describes the basic functions and responsibilities of an executive steering review committee as:

- Defining the corporate objectives and priorities with regard to future directions and plans for information systems related activities;

- Fostering proper commitments and involvement that may be necessary for effective utilization of information systems resources;

- Providing at a company wide level a consistent and formal mechanism for deciding which new systems should or should not be funded;

- Setting specific directions as to where the company should be headed in the use of information systems and computers to further the goals of the organization;

- Approving all information systems plans for future automation efforts;

- Assessing all new large (depending on a certain dollar amount or impact on the organization) projects within the framework of the total organizational needs, setting the final priorities, and approving development; and

- Continuously assessing priority realignments and existing business conditions, and authorizing required changes—as needed—to priorities, schedules, and costs so that they continue to remain in accord with the corporate objectives.

The department's methods did not meet the above requirements of a steering committee. Also, the department failed to provide for one key factor: that all organizational entities having direct or indirect interest in and bearing on information systems-related matters/projects/issues be

15

adequately represented. Lacking this kind of leadership, the department's information systems development was fragmented and failed to help the department achieve organizational goals.

Department's consultant also recommended executive committee. The department paid a consultant about $349,000 to assess the effectiveness of the department's use of information technology and to develop a strategic plan that would assist the department in meeting its long-term goals. The consultant found that the department's business goals were not aligned with its computer systems strategy. Consequently, the consultant recommended that the department establish an executive committee to set directions for its computer systems development. Had the department adequately followed the State's SDM and DIPIRM planning process, the executive steering committee would have been established and been responsible for aligning computer systems strategy with its business goals.

Improving organizational performance requires department-wide perspective and direction

The federal government's General Accounting Office (GAO) issues guidance on managing information technology resources to best meet organizational goals and improve performance. The guidance document is titled *Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-making, 1997.* The GAO developed this guide from analyzing management practices of leading private and public sector organizations. GAO found that well-managed information technology investments meet mission needs and propel an organization forward, dramatically improving performance while reducing costs. Likewise, poor investments that are inadequately justified or whose costs, risks, and benefits are poorly managed, can hinder and even restrict an organization's performance.

The federal government recommends a strategic investment approach. GAO recommends using an investment approach in developing information technology to improve mission performance. This investment approach consists of three phases—Selection, Control, and Evaluation—that should minimize risks and maximize returns on projects. The phases should be applied to all types of projects, such as mission critical or infrastructure related projects, and at all different phases such as initial development or maintenance phase.

In the Selection phase, a senior management decision-making body applies uniform screening criteria to rank and prioritize information technology projects. At a minimum, the ranking criteria should include cost, risk, and benefit factors as well as an assessment of how well the project meets mission needs. The decision-making body then selects the projects for funding based on mission needs and organizational priorities. The criteria and decision-making body during the Selection phase help ensure that the

organization's projects will best support mission needs and that proposed benefits and risks are identified and analyzed before a significant amount of funds are spent. A critical aspect of this phase is management's understanding, participation, and decision-making that are driven by accurate up-to-date data. The emphasis again is on using information technology to enhance mission goals and performance.

Once selected, all of the projects are consistently managed under the Control phase. This phase helps to ensure that the project continues to meet mission needs as it develops and investment costs rise. If problems arise, mitigating steps are quickly taken to address the deficiencies. Progress reviews are held to compare project progress against projected costs, schedule, and expected mission benefits. The type and frequency of these reviews are based on the risk, complexity, and cost of the selected project. During the Control phase, decisions may include canceling the project, modifying it to better meet mission requirements, accelerating project development, or continuing development as planned.

Once projects have been fully implemented, the Evaluation phase requires that the organization evaluate actual versus expected results. The evaluation is to (1) assess the project's impact on mission performance, (2) identify any changes or modifications to the project that may be needed, and (3) revise the investment management process based on lessons learned.

The GAO listed critical factors that make the investment approach successful. These factors include the following:

- Key organizational decision-makers are committed to the process and are involved throughout each project's life cycle;

- The investment management process is repeatable, efficient, and conducted uniformly and completely across the organization;

- Decisions are made using uniform decision criteria;

- Decisions are driven by accurate and up-to-date cost, risk, and benefit information;

- Decisions are made from an overall mission focus (there is an explicit link with the goals and objectives established in the organization's strategic plan or annual performance plans); and

- The process incorporates all information technology investments, but recognizes and allows for differences among various project types (mission critical, administrative, infrastructure) and phases (new, under development, operational, etc).

The department's guidance for information systems is inadequate.
Unlike the GAO's investment approach and SDM guidelines, the
Department of Human Services does not have an established and defined
method to develop its computer systems projects that will meet
organizational goals or enhance its mission. The department's computer
systems projects are generally initiated at the division level with each
division setting the priorities for its own projects. Departmental
involvement is limited. The deputy director meets with the Information
Services Office administrator every two weeks to review project status
and coordinate technical resources. The department director becomes
involved to resolve conflicts between divisions and when the costs, risk, or
exposure justify the director's involvement. However, this director's
involvement is neither defined in policy nor documented.

The department also does not have a formal mechanism for establishing
priorities or specific guidelines for decision making to ensure computer
systems meet organizational goals or improve mission performance. As a
result, each division has an operable computer system but does not share
information for greater organizational purposes. The failure to recognize
commonalties among the different systems contributed to inefficient
operations and a hindrance to the department's overall mission of
providing services effectively.

Inadequate linkage among its computer systems reduces operational efficiency

The department's inadequate planning efforts resulted in the failure to
recognize the benefits of automated interfaces and information sharing for
its computer systems. The lack of adequate interfaces between computer
systems forces users to retrieve information repetitively and manually
from other computer systems. This lack of automated interfaces reduces
the effectiveness of the department's computer systems.

Welfare assistance programs often must rely on applicants and clients to
comply with program regulations and provide truthful information. In
order to verify client-provided information, the department accesses
information from other government agency computer systems to
independently and cost-effectively verify the client-provided information
and identify any noncompliance. Automated interfaces with these other
computer systems would omit several manual tasks, make data more
readily available, and increase the reliability and accuracy of data. While
departmental staff can access some systems, the process is often not
automated.

The department's welfare computer system (HAWI) supports the food
stamp, financial assistance, and Medicaid programs. This system needs
information from other computers to determine a person's eligibility for
public assistance. Users of HAWI access other computer systems to
obtain information, but HAWI interfaces with and electronically transfers
data only with a few computer systems. Through HAWI, to verify a

person's income and to confirm eligibility, users can view data in computer systems of the City and County of Honolulu's Motor Vehicle Division, the Department of Labor and Industrial Relations' Unemployment Insurance Division, and the Child Support Enforcement Agency. However, HAWI does not electronically exchange or share data with these systems. Every access consists of several manual steps including logging into the other agency's computer system and searching for the required information.

Electronic interfaces between HAWI and other computers would enable the efficient transfer of information with little human intervention. The department transfers or receives computer tapes with the Internal Revenue Service (IRS), the Hawaii Medical Service Association (HMSA), and the federal Department of Health and Human Services (DHHS). The department exchanges information on computer magnetic tape with the IRS to intercept tax refunds. The department provides HMSA with the names of people who are eligible for Medicaid. DHHS informs the department about individuals who should be denied eligibility because they violated public assistance laws. A direct electronic connection between the welfare computer system and the Social Security Administration allows the department to verify social security numbers in the welfare computer system. The welfare computer system also electronically communicates with a national bank—Citibank's computer—that generates the Electronic Benefits Transfer (EBT) cards to credit or debit benefit amounts. These interfaces allow the department to update many data fields in the welfare computer system with automated steps that save time and keep data current.

Inadequate automated interfaces reduce users' operational efficiency in the Social Service Division. The division's social services computer system, referred to as CPSS by the department, maintains information on occurrences of abuse and on foster care activities, and users frequently access the welfare system, HAWI, for information. Such access consist of several steps, and some of the information is already duplicated in the social services computer system. The duplicated information results in unnecessary work and increases the possibility of data inaccuracies.

The department's employment and training computer system called the Hawaii Automated Network for Assistance (HANA) is another example of an interface that unnecessarily increases user workloads. HANA maintains information to support the department's First-To-Work (formerly JOBS), Employment and Training (formerly PRIDE), and Child Care programs. These programs help people who receive financial assistance or food stamps to become employable and self-sufficient. As such, the welfare system HAWI provides the HANA system with the names of individuals who are eligible for employment and training programs. However, HAWI provides the HANA system with the necessary information only twice a month because HANA lacks an

automated interface. Untimely information delays the department staff from calling individuals for interviews to assess their employability. During this time delay, the individual's welfare case could change and affect eligibility for employment services. To deal with the time lag, users of the HANA system must access the welfare computer system for the current status of clients before calling them in for an interview. An automated interface would eliminate the time lag and the need to access the information more than once.

Automated interfaces offer information sharing and other benefits

The effectiveness of the department's computer systems would improve with increased use of automated interfaces. Shared information may be character-based, or include photographs, graphics, page images, facsimiles, or any information that can be formatted and sent between computers via a telecommunications network. Information sharing increases data accuracy, timeliness, and cost effectiveness. Information sharing can provide a comprehensive picture of program use and outcome measures, allowing social service policymakers the opportunity to better learn how people interact with social welfare programs.

Information sharing also reduces redundant data collection. The undesirable alternative to sharing information is for each governmental agency to collect information separately and redundantly. Additionally, each time the same information is keyed into a database, the potential for inserting errors into the database increases. By removing redundant data collection and by sharing a primary database, each agency can better devote resources to increasing the accuracy of the information when and where data is first collected. With the appropriate technology, transferred information to other agencies is thereafter essentially error-free. Information also becomes more timely because it is available instantaneously instead of subject to separate agencies' collection efforts and/or limited accessibility.

Sharing information is cost effective because it costs much less to store and send data to another user than it does for the user to collect the same data again. Data collection activity is ongoing over a period of time and is subject to labor costs and inflation. On the other hand, systems development costs to program data transfers are a one-time cost less subject to wage inflation. The cost to user agencies is a one-time programming cost as compared to inflation sensitive data collection costs that repeat over a period of time. In addition, the custom programming and technical specifications required to connect one system with others for data transfers are reusable for other types of data transfers.

Linking data from different systems gives decision-makers greater information to address policy issues. In many cases, a single person is

simultaneously known to several governmental agencies. Many computer systems maintain readily available information such as social security numbers that can identify a person's participation in different programs. The 1996 Welfare Reform Law relating to Temporary Assistance to Needy Families (TANF) clients limits financial assistance and affects clients in other welfare programs and jurisdictions. For example, as a client's financial assistance ends and the client is pressed into the workforce, the greater strain on family economics may increase enrollment in child welfare programs. By linking the welfare computer system with the social services computer system, social service agencies could address questions like "do rates of abuse and neglect increase as a client leaves welfare?" or "do former foster care clients become welfare clients?" The ability to link the various welfare program information systems would allow the State to analyze the impact on other programs as clients leave welfare. These types of analysis will be useful for program planning, predicting outcomes for clients, and targeting resources and efforts.

Computer systems affect operational efficiency and department mission

Computer systems can also have an impact on the efficiency of an agency. Computer systems automate numerous manual tasks, reduce paperwork, track diverse information, and generate useful reports with very little effort. How well the agency's computer systems can perform these functions and are integrated into fundamental business/mission needs will contribute towards the agency's effectiveness. Computer systems that still require intermediate manual steps to retrieve information diminish operational efficiency and agency effectiveness. Inconsistent collection of data jeopardizes its usefulness. Computer systems with inaccurate data do not produce useful reports. Reduced operational efficiency and inaccurate information impede the agency's ability to achieve its mission.

The Department of Human Services' computer systems are not efficient and effective and hinder the department's ability to fulfill its mission. Users of the department's three computer systems—the welfare computer system, social services system, and the employment and training system—must perform several intermediate manual tasks to retrieve necessary information. In addition, data inaccuracies we found to be present in either the welfare computer system or the social services computer system undermine the integrity of the information retrieved.

The department's computer systems' manual tasks hinder staff efficiency. Users of the welfare computer system must manually retrieve necessary information such as a person's income and assets to determine eligibility for public assistance. Staff access the Honolulu City and County's Department of Motor Vehicles' computer system to determine whether a person owns an automobile. Staff also access the Department

of Labor and Industrial Relations' unemployment insurance database to verify the receipt of unemployment insurance or to confirm employment and salary. Department staff also access the Child Support Enforcement Agency's computer to corroborate the amount of child support received by the applicant. None of these computer systems can electronically transfer information to the welfare computer, so the department staff must execute several steps to enter each system, locate the applicant by name, and confirm the necessary information.

Users of the social services computer system are also constrained by the additional steps necessary to retrieve information. After being informed about an incident of abuse, the social worker enters the information into the social services computer and accesses the welfare computer system to obtain additional case information. The social worker obtains demographic data about the parties involved from the welfare system and manually inputs that data into the social service system. Demographic information in the welfare computer system is validated by official documents and is therefore more accurate than information received from the caller. For foster children, staff in the Social Service Division must access the welfare computer system to obtain information on the child's status with Aid to Families with Dependent Children (AFDC) assistance at the time of foster care placement. This information is needed for federal reimbursements for foster care related costs of administration, training, and payments under Title IV-E of the Social Security Act. In addition, when children are moved in or out of the foster care program, staff again access the welfare computer system to obtain information about the child's medical coverage or to notify the Med-QUEST Division about the child's changed status in the foster care program. Frequent manual access of the welfare computer system to transcribe information reduces program efficiency.

User efficiency is also hindered when data must be entered twice. The department maintains same but separate information in two systems: the social services and the welfare computer systems. Data such as an individual's name, social security number, date of birth, and address appear in both systems. We obtained records from each system and identified totals of 233,631 individuals in the welfare computer system and 171,561 in the social services system. We used an automated auditing tool called IDEA for Windows to compare the social security numbers of individuals in the two computer systems and identified 47,945 matches. For these 47,945 duplicated individuals, department staff enter the names, social security numbers, addresses, and other common information twice.

Frequent manual tasks increase opportunities for data errors.
Duplicate data entry increases the chances of data inaccuracy. We used our automated auditing tool to identify similar data on the 47,945 matched social security number records in the two systems. Of the 47,945 records,

there was no match on 7,938 first names and no match on 7,141 last names. A total of 2,205 records contained discrepancies in both first and last names. We also found discrepancies regarding the date of birth in 3,175 records. Of the 47,945 matched records, there were 14,391 records in which there was at least one discrepancy in data fields for first name, last name, or date of birth. The clear presence of over 14,000 discrepancies, where there should be none, indicates data entry errors or inaccuracies. Each individual record should have only one social security number, consistent first and last names, and the correct date of birth. Exhibit 2.1 shows the progression for matching social security numbers between HAWI and the social services computer system. Exhibit 2.2 summarizes a sample of data discrepancies found in the matching records.

Exhibit 2.1
Summary of Matching SSN Data Using Automated Auditing Tool – IDEA for Windows

Items Compared	No. of Records
Number of records in the welfare computer system (HAWI) that identifies a unique individual.	233,631
Number of records in the social services computer system that identifies a unique individual.	171,561
Number of records where the social security number in the HAWI system matched the social security number in the social services computer system.	47,945

Exhibit 2.2
Summary of Data Differences in the HAWI Computer System and the Social Services Computer System from 47,945 Records Matched by Social Security Numbers

Matching Data Information Test Conducted between HAWI and the Social Services Computer System using Same Social Security Numbers	No. of Records containing differences
First Name data field does not match	7,938
Last Name data field does not match	7,141
Date of Birth data field does not match	3,175
First and Last Name data fields do not match	2,205
First Name, Last Name, or Date of Birth data fields do not match	14,391

Effectiveness of the Social Services Computer System Limited by Data Inaccuracies and Lack of Functional Capabilities

Tests of the department's social services computer system revealed data weaknesses that impede the department's ability to perform its mission. Data inaccuracies and limited functional capabilities hinder the usefulness of the social services computer system. Inaccurate data and other record anomalies create operational inefficiencies and increase the likelihood that potential data inaccuracies will be compounded. The system's limited functional capabilities require users to perform additional work. The department elected not to take advantage of enhanced federal funding previously available to make improvements to its computer system. It may be cost beneficial for the department to reconsider federal assistance in order to improve the effectiveness of the social services computer system.

To analyze the data from the social services computer system we obtained computer data from the department and applied our automated auditing tool to summarize, compare, sort, and extract records and elements to identify irregularities. We could not perform an analysis of the data of the welfare computer system (HAWI) because the department was unable to generate a sufficient amount of necessary data for us to conduct a thorough analysis within the timeframe of this audit.

The system contains inaccurate data or is missing key data

We found significant amounts of missing, inaccurate, and inconsistent data in the social services computer system. These discrepancies includes dates of birth, dates of death, social security numbers, and case linkages. We also found clients who were not related to any cases and cases that had no clients. Such inaccuracies negatively affect computer system reliability, user efficiency, and program functionality.

The social services computer system performs an important function for welfare programs in Hawaii. The computer system is used statewide and stores information related to child welfare, adult protective services, and licensed providers who provide adult day care and child foster care services. The system maintains historical reports on alleged child abuse that help investigators determine whether to remove a child from an abusive environment for the child's protection. If removal is necessary, the system keeps track of information related to court hearings and foster care services. For adult protective services, the system maintains records of alleged adult abuses and tracks adult day care services. The system maintains information on foster care services provided and their payments. For foster care services, the computer system helps to determine eligibility of applicants and federal government reimbursements.

Data inaccuracies and missing data continue to plague the department's social services computer system. In our prior Report No. 99-5, *Audit of*

the Child Protective Services System, we found the department's deficient control over data entry resulted in numerous data inaccuracies. In this audit, we conducted a more in-depth examination of the computer system and its data. The department provided us with data that included 171,561 records containing basic client information. From our review of these records, we determined that 16,564 records contained no date of birth and 53,999 had no social security number. Missing dates of birth affect the agency's ability to determine foster care eligibility because a person must be under 18 years to qualify for such services. Without date of birth information, the agency cannot determine when to terminate foster care services. Without social security numbers the department's ability to obtain information from other computer systems such as the welfare computer system or databases on criminal convictions is hampered. For example, to investigate whether an alleged perpetrator or a new family member has a prior history of abuse, only the person's name, sex, and date of birth would be used to search the criminal justice center's database which lowers the possibilities of finding any prior history. A social security number raises the possibility of locating an individual on other computer systems.

We found other anomalies that require attention. The department maintains case files that describe pertinent information specific to a case such as case status. The department also maintains a participation file that contains information describing the role of each person participating in a case such as a biological parent, a perpetrator, or a family member. The participation file links persons to cases. We found that out of 171,561 clients, 36,539 were not linked or participating in any case. We also found that out of 54,342 cases, 4,980 cases were not linked to any clients. The department indicated that unlinked clients occur when staff do not create a case record after creating a client record. However unlinked cases should not occur because the system progresses from creating client records to creating linkage of a case to a client only after a client record is created. These unlinked case records create opportunities for duplicate data. We compared 135,022 clients who were participating in a case to the 36,539 clients who were not participating and found 1,052 duplicate names. These duplicates cause further inaccuracies as different users may update one record but not the other.

We also found instances where the computer may have paid for services delivered to deceased clients. The computer system maintains a death date on each person but users are not diligent in verifying that field and the system does not effectively use the field. We matched death records from the Department of Health with the social services computer system's client records and found that 5,325 clients were deceased but the computer client records showed only 1,206 as deceased. In addition, 189 of the 1,206 deceased dates were inaccurately recorded. Without an accurate date of death, the computer system pays for services delivered after the client's decease. Providers may fail to inform staff about the

client's death. We found that the computer system did contain payments made to 24 individuals whose date of death preceded the service end date on which payment was based. In these situations, the computer must initiate recovery efforts through its overpayments programming.

Data inconsistencies lead to inaccuracies and inefficiencies

Inaccurate and inconsistent data can lead to further inaccuracies. The social services staff frequently access the department's welfare computer system to obtain information relating to medical insurance, welfare eligibility, and demographic information. We compared welfare computer system client information to the social services computer system's client information based on non-blank social security number entries. The match produced 51,637 records. We then compared the names and dates of birth and found 4,405 differences in the dates of birth; 8,493 differences in the last names; and 9,567 differences in the first names. These data discrepancies can cause further inaccuracies when social service staff attempt to locate an individual using the welfare computer system's data. The welfare computer system produces a list of similar matches from which the staff member chooses. Should the staff member select the wrong individual who has the same name or fails to locate the individual because the welfare computer stores the individual under a different name, any further information obtained from the welfare computer will not be accurate. The potential for proliferating inaccurate data applies when staff attempt to access other computer systems using erroneously selected welfare matches.

The data inaccuracies also cause inefficiencies. Instead of easily locating an individual on another computer system, users must review additional information to ensure that the other system is identifying the correct individual. For example, almost 54,000 of the social services computer system's client records are missing a social security number. Because the social security number is missing, staff must use the person's name to locate the same individual on the welfare computer system. The welfare computer system does contain social security numbers that are verified by the federal government Social Security Administration. In addition, staff must also compare and verify the person's date of birth. The criminal justice center's database that holds the criminal history of individuals also uses name, social security number, and date of birth as identifying elements to locate an individual. The justice center stated that missing one of those elements lowers the probability of locating the right individual. The time requirements for additional verification and cross checks with multiple databases are unnecessary and inefficient. Better controls over initial data entries to ensure accuracy and completeness would reduce this inefficiency.

An automated interface would reduce work and improve data accuracy

The department's Social Services Division recognized that an automated interface between the social services computer system and the welfare computer system would improve data accuracy. In the division's portion of the DIPIRM plan, the division listed this interface among its primary needs. The division identified its most significant problems as duplicated work and the lack of data integrity and accessibility. The DIPIRM further noted that an integrated information system would reduce duplication of work under a single interactive system that would eliminate manual data coordination between systems. Reducing duplicate data entry would improve data integrity and accessibility and would make data available in a timelier manner.

An automated interface would also reduce data inaccuracies. The department believes that its computer data inaccuracies are caused by social workers who consider entering data of secondary importance to providing services to clients. An automated interface between the welfare computer system and the social services computer system would reduce some data entry requirements. For example, the department's welfare program requires clients to submit monthly updates of their situation which is used to update the welfare computer system. An automated interface would allow the social services computer system to receive the same updates reducing the need for their social workers to key in data.

The system's limited functional capabilities create additional work for users

The social services computer system lacks basic capabilities that would increase its functionality. Thus, staff have increased workload and function less effectively. For example, designated income maintenance workers are responsible for screening all children placed in foster care for Title IV-E eligibility. Each foster child needs to be screened every six months. However, the system does not notify the income maintenance workers when a foster child needs to be screened. To compensate for the limited functionality of the computer system, one supervisor uses a personal computer database system to track the children and their associated screening dates. Using a personal computer to track information already available in the social services computer system requires keying in relevant information twice.

Departmental staff must also perform additional work to summarize information from the system to satisfy federal reporting requirements. The social services computer system must produce three major reports for the federal government. One report contains adoption statistics and the second report provides information on meeting outcome measures. The federal government requires these two reports to be generated directly from the computer. The third report requires the department to produce statistics on child abuse and neglect but the report does not need to be

generated directly from the computer system. The department applies statistical software to the data to generate required federal reporting statistics. The department stated that many other states follow similar processes to generate this report. However, computer systems can be programmed to generate these types of reports automatically. The additional effort required to generate the report could be eliminated by improving the current system's capability to meet these basic requirements.

The department missed opportunities to finance upgrading the system´s functionality with enhanced federal dollars

The Department of Human Services did not pursue opportunities to obtain federal funds to improve the functionality of its computer systems. The federal government promotes the use of effective statewide, automated computer systems to support the administration of child welfare programs as essential to improving program administration and service delivery. It contends automation will facilitate the delivery of service goals, ease administrative duties, increase the availability of staff, and provide more accurate and timely information to assist decision-making. The federal government provided enhanced funding for states to develop a Statewide Automated Child Welfare Information System (SACWIS). The department's child welfare information system is part of the social services computer system.

From October 1993 to September 30, 1997, the federal government encouraged states to become more automated in providing child welfare services by offering to pay 75 percent of the costs for the design and implementation of a computer system that met SACWIS requirements.

The Department of Human Services believed that potential benefits did not justify the effort required to obtain enhanced federal funding. At the time, federal funding required prior approval from the federal government through the Advanced Planning Document process. The process required states to submit a detailed cost benefits analysis and describe how the automated system would improve the program. States must receive prior approval before proceeding to procurement and must submit annual updates to the federal government.

The department claims that various factors prevented it from pursuing enhanced funding. First, it claims that the social services computer system at the time met all SACWIS requirements. Second, it stated that it lacked the resources to meet the federal documentation requirements and third, it had already committed its share of 25 percent of the funding to other needs.

Current social services computer system is not compliant with federal SACWIS regulations

The current social services computer system would not pass a federal SACWIS certification review. While the department's computer system may have complied with initial SACWIS regulations by producing a required report on adoptions, the current social services computer system does not meet current federal SACWIS requirements. The ability to generate the adoption report is only one of several requirements that a SACWIS certified computer system must possess. In a May 2000 document describing functional requirements, the federal government stated that a computer system must provide exchange and referral information necessary to determine eligibility under Title IV-E through an interface with the Title IV-A (welfare) system. The system must also prompt the eligibility worker when an eligibility determination is due, automatically update the child welfare system record with information from the IV-A system, and produce ticklers to ensure the timely completion of determination. As previously noted, the current social services computer system does not have an automated interface with the welfare computer system and cannot generate ticklers for eligibility determination.

Federal funding is still available

The federal government eliminated the enhanced funding of 75 percent for SACWIS in September 1997. However, federal funding at 50 percent is still available should the department pursue building a SACWIS compliant system. In addition, the federal government has also relaxed some federal documentation requirements to make the advanced planning document process more flexible and effective. Since July 22, 1994, the federal government exempted automation projects from federal review and approval where total federal and state costs were under $1,000,000 for sole source acquisitions and under $5,000,000 through competitive procurements. Prior to that date, the federal government required almost all projects (those that cost less than $100,000 for sole source or less than $300,000 for competitive procurement) to be reviewed and approved prior to any expenditure.

It may be more cost beneficial for the department to redesign the social services computer system based on SACWIS requirements than to attempt to correct the data errors and improve the functionality of the existing system. The social services computer system was begun in 1985 and fully implemented in 1991 by various contractors. A separate contractor added a payment subsystem in 1995. The department has also made numerous modifications and changes to the system every year since then. The age of the system and the various changes made to the system by different technical personnel may be contributing reasons for the current costly maintenance fees of approximately $260,000 per year. The federal

government does not mandate but rather encourages states to implement a SACWIS computer system. Implementing a SACWIS system allows the department to follow established functional requirements, tap other states for their knowledge and experience about design and implementation, receive guidance and funding from the federal government, and have the system certified by the federal government. In addition, the department's need for more staff to produce federal documentation requirements is decreased due to the reduced federal requirements and the department's own experience with the advanced planning documents process.

Conclusion

Information systems are valuable resources that can greatly improve an organization's mission performance if planned, managed, and used effectively. The department's failure to follow state information systems planning guidelines hindered the department's ability to recognize and plan for more effective information systems. The department's needs, including efficiencies gained through automated interfaces, were not recognized. Reliance upon individual divisions to develop information systems has resulted in a loss of departmental oversight and duplicated work. As a consequence, the department has several computer systems that are used primarily by separate divisions and cannot transfer information to each other. The lack of automated interfaces causes data inconsistencies between computer systems and operational inefficiencies as users perform multiple manual procedures to retrieve and verify information.

The effectiveness of the social services computer system is questionable due to numerous data error problems and limited functionality. The computer system continues to be plagued by data inaccuracies and inconsistencies. The multitude of data problems and the limited level of functionality require staff to intervene manually to perform certain tasks. Implementing electronic interfaces would provide some improvement to data accuracy, but it may be more cost beneficial to redesign the system.

Recommendations

1. The director of human services should ensure that a departmental *Distributed Information Processing and Information Resource Management* (DIPIRM) plan that reflects the department's overall automation plan is completed and ensure that projects are consistent with the DIPIRM.

2. The Department of Human Services should ensure its Information Technology Steering Committee is in accord with the State's System Development Methodology. The committee should be chaired by the

deputy director and be comprised of administrators from each division. The Information Systems Office administrator should be a non-voting member and provide advisory assistance.

3. The department should redesign the social services computer system to better meet user needs and incorporate necessary interfaces. In redesigning the system, the department should consider pursuing federal SACWIS funding.

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Response of the Affected Agency

Comments on Agency Response

We transmitted a draft of this report to the Department of Human Services on February 7, 2001. A copy of the transmittal letter to the department is included as Attachment 1. The department's response is included as Attachment 2.

The department responded that it agrees with our findings and is in the process of pursuing the recommendations. It noted that it will follow up on our recommendations such as ensuring that all information systems projects are consistent with the departmental *Distributed Information Processing and Information Resources Management* (DIPIRM) plan and ensuring that the Information Technology Steering Committee is in accord with the state's System Development Methodology. It also concurs that more automated interfaces would increase efficiencies within the department and with other departments. Finally, the department stated that it is committed to improving the management and coordination of its information technology resources.

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MARION M. HIGA
State Auditor

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February 7, 2001

COPY

The Honorable Susan M. Chandler, Director
Department of Human Services
Queen Liliuokalani Building
1390 Miller Street
Honolulu, Hawaii 96813

Dear Dr. Chandler:

Enclosed for your information are three copies, numbered 6 to 8 of our draft report, *Audit of the Department of Human Services' Information System*. We ask that you telephone us by Friday, February 9, 2001, on whether or not you intend to comment on our recommendations. If you wish your comments to be included in the report, please submit them no later than Friday, February 16, 2001.

The Governor and presiding officers of the two houses of the Legislature have also been provided copies of this draft report.

Since this report is not in final form and changes may be made to it, access to the report should be restricted to those assisting you in preparing your response. Public release of the report will be made solely by our office and only after the report is published in its final form.

Sincerely,

Marion M. Higa
State Auditor

Enclosures

34

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February 14, 2001

The Honorable Marion M. Higa
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RECEIVED

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OFC. OF THE AUDITOR
STATE OF HAWAII

Dear Ms. Higa:

Thank you for the opportunity to comment on the Information Technology Audit of the Department of Human Services (DHS). We appreciate the analysis of the department's management of its Information Systems.

Recommendations such as ensuring that all information systems projects are consistent with the departmental Distributed Information Processing Information Resource Management (DIPIRM) plan and ensuring that the Information Technology Steering Committee is in accord with the state's System Development Methodology will be followed up on. Activities to pursue more federal funding to better meet the needs of users on the social services computer systems are duly noted. We agree with your findings and are in the process of pursuing these recommendations. We concur that more automated interfaces would increase efficiencies within DHS and with other departments.

The audit has highlighted a number of areas deserving attention. The Department is committed to improving the management and coordination of our information technology resources.

Sincerely,

Susan M. Chandler
Director

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