

**Performance Audit of the Office of Health Data Analysis
Report # 98-01**

February 6, 1998

Senator Howard A. Stephenson, Chair
Representative J. Brent Haymond, Chair
Health and Human Services Appropriation Subcommittee
State Capitol Bldg
Salt Lake City UT 84114

Subject: Office of Health Data Analysis (Report # 98-01)

Dear Legislators:

We have concluded our review of the Department of Health's Office of Health Data Analysis (HDA) and determined that HDA appears to be meeting its legislative mandate by providing information that promotes cost-effective, quality health care and greater provider accountability. Data collection efforts by the state have been well received by the health care industry in general as useful and unbiased and it appears that these efforts have helped to reduce costs and/or promote quality in specific instances. HDA's information also appears to benefit provider business interests and has replaced databases that were previously paid for privately. There is evidence that at least \$200,000 of the \$500,000 HDA receives from state funds could be paid for by users within the health care industry. In addition, system improvements appear possible if the health care industry accepts changes in the data collection process and if HDA fine-tunes its data distribution for individuals and employers.

The Office of Health Data Analysis is a small, interactive component of the state's health care delivery system. In any large multi-dimensional system, it is difficult to assess the value of a single component; this is the case with HDA, and the value of the program has been questioned because there is no direct relationship between program cost and program benefit. During the 1997 legislative session, the Office of the Legislative Fiscal Analyst recommended that HDA's funding from the state be terminated "*due to the limited revenue available for programs statewide.*" This recommendation was based on the belief that health care providers, rather than the general public, are the primary beneficiaries of HDA's efforts to collect and disseminate health care information. While there is some truth to this belief, the recommendation overlooks the public benefit resulting from health care providers using HDA information to assess their performance relative to other providers, keep costs competitive, and make efforts to improve quality of care.

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The public benefit of state-controlled, non-biased data has been recognized by Utah and national health care officials. Approximately 80% of states have health data organizations with some type of legislative mandate to collect health care information and make it publicly available. Other states do many of the same things as does HDA, such as collecting hospital discharge data and measuring HMO patient satisfaction in an effort to encourage provider accountability. In addition, the National Association of Health Data Organizations (NAHDO), to which Utah and many other state data offices belong, is a membership organization which exists to support national and state efforts in “improving health care through the collection, analysis, dissemination, public availability, and use of health data.”

State-Produced Data Appears to Provide a Public Benefit

According to users of the data, the information produced by the HDA does provide a public benefit by helping control costs and promoting provider accountability. Consequently, we believe the legislative purpose for which HDA was created is being fulfilled. Members of the health care community indicate that HDA data are being used to promote cost-effective, quality health care in the state and have provided specific examples of how the data make a difference. In addition, overall health care trends indicate that costs have been increasing less rapidly in recent years, which may in part be a result of HDA providing information to health care providers and the public.

Legislative Mandate Appears to be Met

HDA’s efforts to produce and disseminate useful health care information seem to satisfy the purposes for which it was created. The Health Data Committee (which oversees HDA) was created in the 1990 Legislative session largely in response to rising health care costs. **Utah Code** 26-33a-104 (1) specifies the committee’s responsibility: *“The purpose of the committee is to direct a statewide effort to collect, analyze, and distribute health care data to facilitate the promotion and accessibility of quality and cost-effective health care and also to facilitate interaction among those with concern for health care issues.”* The hope was that making information publicly available would stimulate awareness and competition in the health care industry, promote greater accountability by providers, and engage consumers more in making health care decisions. In our opinion, the information produced by HDA is satisfying the objectives set forth in legislation.

HDA collects, analyzes, and disseminates different types of health care information. Their primary database contains inpatient records for all Utah hospitals since 1992 and identifies information such as procedures performed, charges, length of stay in hospital, and patient demographic information. HDA reports place hospitals in peer group comparisons and provide performance rankings based on cost and quality indicators. HDA is also involved in quality

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monitoring and reporting for Utah HMOs and has published consumer satisfaction surveys for both commercially insured and Medicaid patients for the five biggest plans. Other HDA databases compare outpatient surgical information among providers as well as emergency room information, both of which are scheduled for report release in early 1998.

Reports derived from HDA's databases are distributed to Utah's hospitals and other industry participants to aid in quality of care improvements and cost control. Health care providers and other groups also purchase HDA's comprehensive data tapes to conduct various kinds of analyses. HDA distributed copies of their HMO Satisfaction Survey to hundreds of local employers as an aid in health plan selection and provided brochures for Medicaid offices with survey results showing various quality indicators. HDA has also developed an Internet site which enables any user, individual or corporate, to conduct extensive health care and cost queries from all HDA databases.

Utah's Health Care Industry Uses HDA's Data

Utah's health care industry uses HDA's state-produced data for a variety of purposes and indicates there is a public benefit from this use. We surveyed health care providers, third party payers, health care consulting groups, public health officials, actuaries, and local employers to identify uses of HDA-generated data. The response was generally favorable across all health industry groups, and 73% of those surveyed feel HDA's data benefit the public and promote cost-effective, high-quality health care. One provider's response seemed to summarize the general feeling of many surveyed: *"You cannot make any system improvements unless you measure what you are doing."*

Many indicated that the public dissemination of state-controlled, non-biased health care information allows providers to evaluate their relative cost, length-of-stay, and other performance indicators and helps stimulate health care changes that ultimately benefit the consumer. In the words of an official at one Wasatch Front hospital, the benefit of state-produced information, when used by private providers, is basically *"invisible"* to the consumer yet it does exist. Comparative rankings create an incentive for providers to improve operations, become more cost competitive, expand services where needed, etc., which benefits consumers and the public in general. One respondent commented, *"We believe that providers and health plans who are subject to some type of third-party oversight pay more attention to cost and quality. The potential of public scrutiny of a hospital's charges, and comparison of charges for a particular type of care between hospitals, in our opinion, helps mitigate the inflation in hospital charges."*

HDA data have also been useful in addressing access to health care in rural Utah. One respondent commented, *"In particular we have used the data to identify specialists who could be recruited and successfully retained in rural areas because we know the total numbers of patients for that speciality in the rural market area. Without the state data it would be impossible to know*

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this, making recruitment harder. Showing a potential physician the actual number of patients available is a powerful recruitment tool.” In addition, public health officials said access to comprehensive health care data is essential to their work and is the first step towards making system improvements. Health officials said the data sets clearly have a public purpose in helping them analyze and better understand disease trends and patient population characteristics and to anticipate future health care needs.

We also contacted health care actuaries to see if and how they use state-produced data. They were very supportive of HDA’s role and said the industry relies heavily on the information. For instance, they use the data to learn how particular health risks are distributed among providers and to analyze differences between insurance costs and hospitalization charges (which helps in rate negotiations with providers and HMO’s). One actuary stated that, *“The depth and segmentation [of their databases] is great”* and stated the information is used in *“evaluating contract effectiveness, and to see if the client paid more or less than the average charge in the hospital in which they receive care.”* This individual also said, *“The actuary industry would suffer a tremendous setback if HDA was not doing what they were doing.”* The actuaries also value the independent status of HDA and feel this independence promotes the integrity of information produced. They expressed reservations about using databases prepared by private industry groups because of potential data bias, and feel they would need to verify data that did not originate from an independent source. As one consulting firm responded, *“We cannot rely only on the information supplied to us by the health plans because by their very nature they will lack objectivity.”*

Value of State-produced Data Has Been Demonstrated

Several survey respondents related specific instances where HDA information was used to identify or aid in the identification of specific problems. Action taken to address these identified problems has directly affected health care costs and/or quality of care. Examples of problems identified both within the private and public sector are listed below:

Data Have Helped Reduce Hospital Length-of-Stay. Along with other information, HDA data were used by the quality improvement department in one large Wasatch Front hospital to show that average patient stay was excessive compared to peer hospitals. The hospital discharge data showed that average length-of-stay (LOS) was 6-7% above the median for competing hospitals. Previously, the hospital had not routinely tracked patient LOS, but, partly as a result of the HDA data, they have since undertaken specific measures to reduce LOS and thereby reduce costs. For instance, hospital staff teams were created to coordinate and plan patient discharge, and LOS has gone from 7.41 in 1992 to 6.53 in 1997. At an average per-day hospital rate of about \$1,400 with approximately 15,300 hospital admissions in 1997, the decrease in LOS represents a cost reduction of nearly \$19 million dollars that should ultimately benefit consumers. While not the only factor, hospital administration confirmed that HDA data were used to identify and reduce LOS.

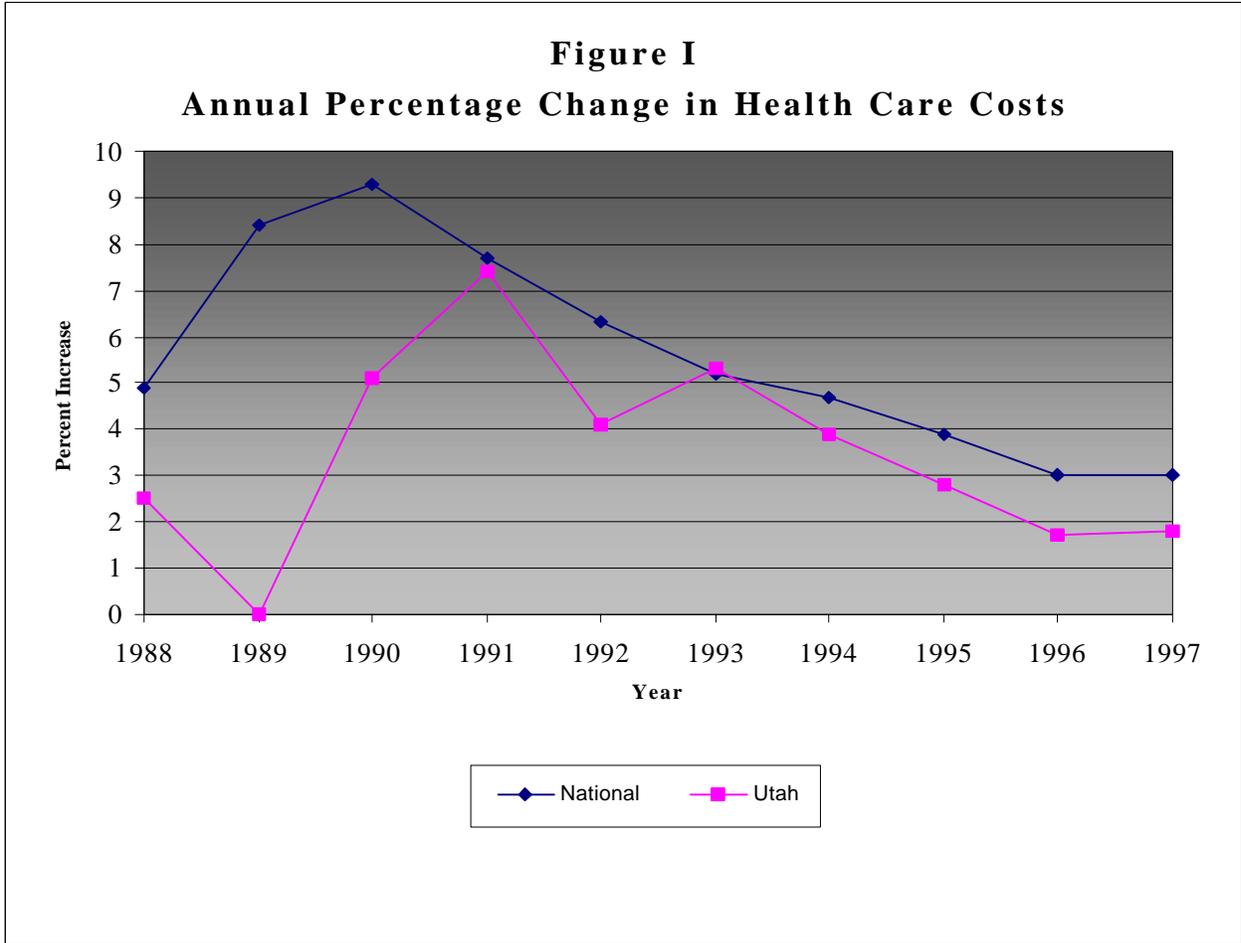
Data Have Aided in Reducing Insurance Premiums. One third-party payer reported that having HDA's data resulted in family size recalculations and premium decreases for employers. The information showed that the family size calculation should be 4.27 rather than 4.79 as previously used, and when this information was presented to underwriters, it resulted in a 10% reduction in insurance premiums for employers.

Data Were Used to Enhance Treatment Patterns for Injured Workers. The state Industrial Commission has used HDA's hospital discharge data to observe and improve practice patterns for injured workers. The commission has been specifically concerned about lower back injuries which are common among workers and represent considerable labor and health care costs. The HDA data showed that spinal fusion rates in some Utah counties were very high (up to four times) when compared to national rates. This further concerned the commission since some research indicates 67% of patients having this surgery fare no better or worse than before; and, 25% of the outcomes result in total and permanent disability for patients. Physicians with the commission assembled the state's spinal fusion surgeons to discuss these concerns. As a result, the surgeons have agreed to the development and implementation of several policies for treating lumbar conditions which include screening candidates for spinal fusion surgery and educating patients as to true outcomes of the surgery.

Undoubtedly, other factors contribute to the outcomes referred to in these examples and to overall changes in the health care system. However, those involved in addressing these issues have indicated that the HDA data are a key part of addressing health care concerns.

Trend Data Show a Decline in Health Care Cost Increases

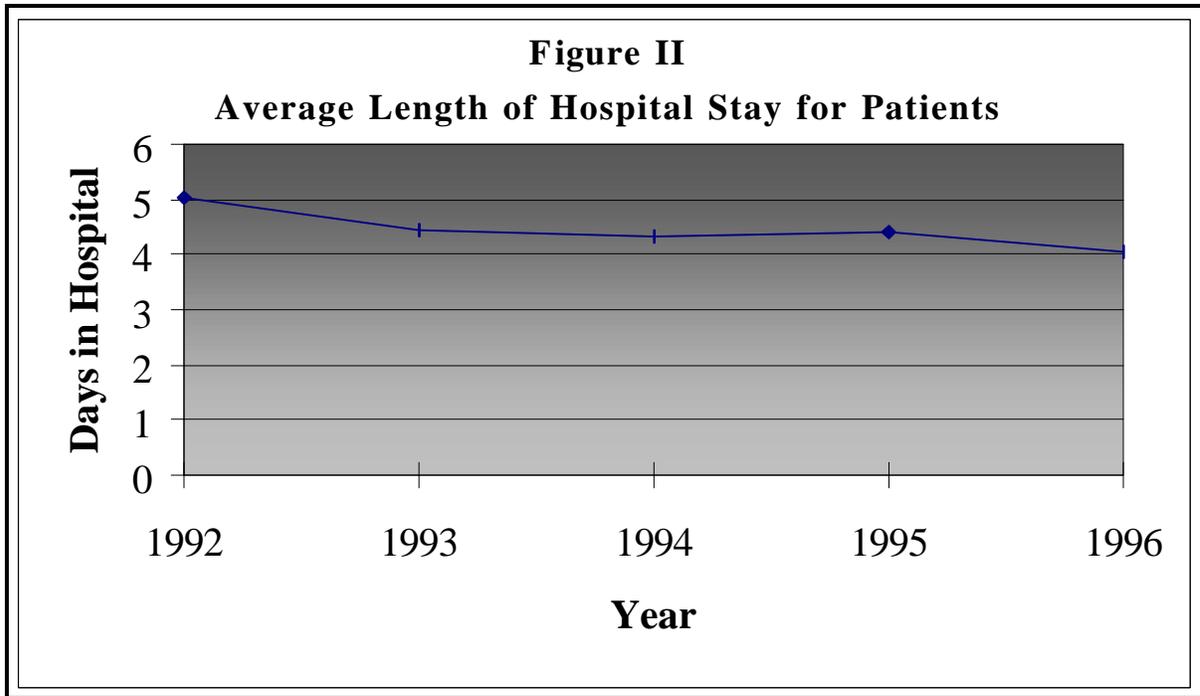
National and local trend data show that health care costs have been increasing at a lesser rate over time. Although the causes for this may be many and varied, the collection and public distribution of health data likely play a role in this process. Figure I shows that while costs in health care are still increasing, the increase is becoming less over time.



Source: First Security Bank, Economics Division.

Note: 1988 figures are for a ten-month period beginning March 1988

Another local indicator of decreased costs is the amount of time patients spend in hospitals. As Figure II shows, length of stay has also been decreasing in Utah hospitals.



Source: HDA, Utah Hospital Utilization and Charges Profile 1992-1996.

Because of the complexity of the health care industry and the various forces on the system to control costs and improve care, it is difficult to isolate and measure the effect that HDA information may be having in this process. However, based on survey responses, it seems that having quality data is necessary to being able to make well informed decisions regarding health care cost and quality, and the collection and dissemination of health data are likely important factors to changes in the industry.

Program Issues Need to be Addressed

Certain changes to HDA's office may make the data collection and dissemination process more effective and equitable. Although the information produced by HDA appears to provide a public benefit, the data are also used for private business purposes, and, in our opinion, a portion of HDA's budget should come from user-based fees. Such a user-based fee system is further supported by user desire for more types of HDA information and because health data offices in some states are funded exclusively by user fees. In addition, addressing concerns about the limited use of hospital "charge" data currently being collected and the distribution of HDA information should make the program more effective.

Cost of Data Collection Should be User Supported

Sufficient information exists to justify a portion of HDA's budget coming from user fees. We believe that users throughout the health care industry could pay for at least \$200,000 of the \$500,000 HDA receives from the state. For example, the former Utah Hospital Association (now the Utah Association of Health Care Providers) gathered and distributed similar hospital discharge information prior to the state's involvement in health data collection. The cost of collecting and producing this information was about \$200,000 annually. The association is no longer involved in this effort, and what it once paid for is now provided through HDA's tax-funded operation. HDA's current budget is about \$640,000: \$500,000 from the State, \$100,000 from Medicaid for their work in the HMO satisfaction survey, and about \$40,000 for the sale of data products. We believe it is reasonable that all users and beneficiaries of HDA data, within the health care industry, share in the cost of funding HDA.

In addition, many of the providers use HDA information specifically to enhance their market share and competitive edge. For example, they use the information to understand their share of the statewide market for various procedures and to analyze "patient origin and destination" information. Doing so allows them to see where patients come from by zip code, where they go for hospital services, where physicians are referring patients, and what areas they need to target to gain a greater market share. While this kind of competition in the industry can ultimately benefit consumers, the information is clearly valuable to providers for their own business interests. Thus, we believe HDA is justified in collecting user fees to support its data collection effort.

Other states have also recognized the benefit of health care data for providers. Health data offices in some other states are funded exclusively by health care provider fees. For example, California's Office of Statewide Health Planning and Development charges each hospital a certain percentage of its gross operating expense to fund data collection efforts throughout the state. Basing fees on gross operating expenses encourages hospitals to operate as effectively as possible and rewards those that avoid cost overruns and that allocate their resources most efficiently. The current assessment to California hospitals is .0312% of operating expenses with a maximum of .035% allowed by statute. In addition, Wisconsin's Office of Health Care Information is also funded by users and is based on the total amount of patient revenue each hospital generates annually. Thus, hospitals with more patient revenue pay a greater percent of the office's budget to gather and disseminate information than do smaller hospitals with less patient revenue.

Other states collect similar types of information to Utah's office as well as additional types of data, all of which is paid for by user fees. For instance, some states utilize "linked data sets," which combine hospital discharge data with state birth and death records that allows for tracking of hospital mortality rates. The Wisconsin office collects legislatively mandated data on individual physicians such as educational background, professional credentialing, years in practice, types of

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services/procedures offered, and whether Medicaid and Medicare patients are accepted. Thus, interested citizens can obtain valuable information which may help them in selecting a physician.

Many users of HDA data indicated they would like other kinds of information such as outpatient data from hospitals and free standing health care clinics. Collecting other data sets may be valuable to the health care industry, but we believe those who stand to benefit should share in the costs to HDA of providing additional types of information. Having a well-conceived, legislatively mandated funding arrangement using both public and private dollars creates a more equitable system and also preserves the independence of HDA's data collection and dissemination efforts.

Collection of Hospital Charge Data Has Limitations

Several surveyed respondents mentioned that hospital "charge" data has limitations in today's health care environment of managed care contracts and discounts. Data tapes submitted quarterly by hospitals to HDA contain information on all inpatient records including total hospital charges for each patient. However, charge data do not accurately reflect hospital costs or what they will actually receive in payment for services provided. In today's managed health care environment, most providers are not reimbursed at the rate "charged" for services because discounts have already been negotiated with third party payers typically in exchange for a relatively stable patient population. Consequently, charge data overstate the amount providers will actually be reimbursed for each case. While many of those surveyed said charge data are still useful, reimbursement data would more accurately compare costs between hospitals and would likely create more of a cost competitive environment.

Part of the reason that charge data are collected is due to apparent ambiguity in the state statute and sensitivity in the industry that reimbursement data may reveal proprietary information about provider discounts negotiated. **Utah Code** 26-33a-104 subsection (8) states: "*The (health data) committee does not have authority to require any data supplier to submit fee schedules, maximum allowable costs, area prevailing costs, terms of contracts, discounts, fixed reimbursement arrangements, capitations, or other specific arrangements for reimbursement to a health care provider.*" However, subsection (10) states: "*Nothing in Subsection (8) shall prevent the committee from requiring the submission of health data on the reimbursements actually made to health care providers from any source of payment, including consumers.*"

The language in these two subsections is contradictory and needs clarification so that HDA knows whether or not it is authorized to collect reimbursement data as implied in subsection (10). If the Legislature deems this to be an appropriate data field to collect, we believe HDA should begin requiring the submission of data which accurately indicate at least the total anticipated or expected reimbursement amount for each procedure.

Distribution of Health Information Can be Improved

Improved distribution of health information would enhance the value of the program. For instance, results of the HMO satisfaction survey were mailed to a large number of Utah businesses but were not necessarily reviewed by company personnel. A number of the businesses we contacted said they did not recall ever seeing the mailing, and some said they likely discarded it as just another request to participate in a survey. In other instances, survey results were sent to business locations where they could not really be utilized. One grocery store manager said he had little use for the survey because health care decisions are made centrally rather than at the individual store level. A large utility company and a television broadcasting company both said they have no input concerning health care options because those arrangements are made by their out-of-state parent companies.

However, after learning of its purpose, many human resource directors indicated their interest in knowing more about the HDA information. The few who did receive and actually reviewed the survey said it was valuable because it showed how different HMO plans were performing throughout the state and said it could aid in health plan selection. One HR director indicated HDA's satisfaction survey would be an indispensable, independent information source to judge internal satisfaction surveys conducted by their health plan. We believe HDA information needs to be properly routed to those individuals with responsibility over company health care options, with some avenue for follow-up to see if the information is useful and to answer any questions. Doing so will create a more effective and valuable program.

Recommendations:

1. We recommend that funding for the Office of Health Data Analysis be restored to its base level of approximately \$540,000.
2. We recommend that the Legislature consider funding HDA in part with private funds from users within the health care industry.
3. We recommend the Legislature clarify the language in **Utah Code 26-33a-104** subsections 8 and 10 regarding HDA's authority to collect accurate hospital reimbursement data.
4. We recommend that HDA take steps to improve its data distribution process. Specifically,

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reports such as the HMO satisfaction survey should be sent directly to those individuals in businesses who make decisions about company health care options, with some follow-up to determine if the information is beneficial.

5. We recommend that HDA contact professional organizations such as those in the human resource field to explore ways of more effectively providing health care information to Utah employers.

We hope this letter addresses your concerns. A letter of response from the Utah Department of Health is attached. If there is any additional information you need or if you have any further questions, please feel free to contact our office.

Sincerely,

Wayne L. Welsh
Auditor General

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