PERFORMANCE AUDIT

ARIZONA COUNCIL FOR THE HEARING IMPAIRED

THE TELECOMMUNICATION DEVICE FOR THE DEAF PROGRAM

Report to the Arizona Legislature
By the Auditor General
December 1987
87-13

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December 8, 1987

The Honorable John Wettaw, Chairman
Joint Legislative Budget Committee
State Capitol - House Wing
Phoenix, AZ 85007

Dear Mr. Wettaw:

Enclosed is the following report:

A Performance Audit of the Arizona
Council for the Hearing Impaired

This report will be released to the news media and the general public on December 9, 1987.

Douglas R. Norton
Auditor General

Linda J. Blessing

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Deputy Auditor General

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Enclosure
cc: Senator Jack Taylor
Vice-Chairman, JLBC

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December 8, 1987

Members of the Arizona Legislature
The Honorable Evan Mecham, Governor
Ms. Bonnie Tucker, Chairman
Arizona Council for the Hearing Impaired

Transmitted herewith is a report of the Auditor General, A Performance Audit of the Arizona Council for the Hearing Impaired conducted in response to a June 2, 1987, resolution of the Joint Legislative Oversight Committee. In addition, the Telecommunication Device for the Deaf and the Relay Service Program was reviewed as required by Chapter 35 of the 1985 session laws.

The report focuses on the Telecommunication Device for the Deaf and the Relay Service Program which is overseen by the Arizona Council for the Hearing Impaired. We found that this Program meets an important need; however, the current excise tax will not provide adequate revenue to fund the Program. We also found that training provided to recipients of telecommunication devices for the deaf should be improved. Finally, we found that the Arizona Council for the Hearing Impaired has not adequately monitored the performance of the contractor providing relay services for the deaf and hearing impaired.

My staff and I will be pleased to discuss or clarify items in the report.

Respectfully submitted,

Douglas R. Norton
Auditor General

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Enclosure

SUMMARY

The Office of the Auditor General has conducted a performance audit of the Arizona Council for the Hearing Impaired (ACHI) in response to a June 2, 1987, resolution of the Joint Legislative Oversight Committee. This performance audit was conducted as part of the Sunset Review set forth in Arizona Revised Statutes §§41-2351 through 41-2379. In addition, the Telecommunication Device for the Deaf and the Relay Service Program was reviewed as required by Chapter 35 of the 1985 session laws.

Telecommunication Services Meet An Important Need (see pages 11 through 15)

The Telecommunication Device for the Deaf and Relay Service Program provides a needed service. The program permits hearing and speech impaired individuals to communicate via the telephone with other individuals who have a telecommunication device for the deaf (TDD). The statewide dual party relay system enables TDD users to communicate with those who do not have a TDD with an operator as an intermediary. TDD users describe the program as "invaluable" and some say that the machines are a daily part of their lives.

Need for the relay service is demonstrated by the growing demand for the service. All areas of the service have been expanded since the program began in March 1987, yet the current relay system cannot handle user demand. The number of calls to the service continues to increase, and some callers report hold times of up to ten minutes or more in trying to place calls through the service. This growing demand has occurred without widespread advertising of the availability of the service. Projected demand for the service is expected to exceed the maximum capacity of existing equipment within six months.

The Telecommunications Excise Tax Will Not Provide Adequate Revenue To Fund The Relay Program (see pages 17 through 20)

The current tax on telephone services will not generate the revenue needed to provide adequate telecommunications services for Arizona's hearing impaired citizens. The tax is equal to two-tenths of 1 percent of the monthly phone

line service charge paid by all residential and business customers. This amounts to approximately $.02 monthly per line. The tax generates approximately $45,000 per month, while projected monthly expenses for November 1987 are approximately $69,000. ACHI had accrued a balance of funds which enabled it to cover monthly expenses above monthly revenues. However, at projected service levels the fund balance will be depleted by June 1988 and ACHI will lack the necessary funds to maintain the relay service at even minimal levels.

ACHI will need approximately $62,000 per month to continue the program into fiscal year 1989 at current service levels. Raising the tax from 0.2 percent to 0.3 percent should increase monthly revenues to approximately $67,500. However, if service levels are increased to meet the rising demand for the program, additional funding may be necessary to cover new equipment, increased operator hours and other related expenses.

Training In Use Of Telecommunications Devices For The Deaf Should Be Improved (see pages 21 through 23)

Training provided to recipients of telecommunications devices for the deaf does not ensure that all recipients can use the machines. Although all received training, two of the 22 recipients interviewed by Auditor General staff do not use their TDDs because they do not know how. Furthermore, the contractor providing the training says many people return to the distribution centers requesting additional training. Limiting class sizes and structuring the classes to include persons with similar degrees of impairment and communication skills would help resolve the problem.

Arizona Council For The Hearing Impaired Needs To Monitor Relay Contract (see pages 25 through 27)

Arizona Council for the Hearing Impaired has not adequately monitored the performance of the contractor providing relay services for the deaf and hearing impaired. Basic relay system services are provided by Valley Center of the Deaf (VCD). Auditor General staff found that VCD has not complied with several

important provisions of the contract with ACHI. Contrary to the contract, VCD does not give operators written and practical tests prior to job assignments, the center has not developed a 40-hour training curriculum for operators, and the center does not perform timely evaluations of operator skills. These requirements are essential for assessing operator performance and determining areas where additional training is needed. Failure to comply with these requirements may contribute to poor quality service.

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INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit of the Arizona Council for the Hearing Impaired in response to a June 2, 1987, resolution of the Joint Legislative Oversight Committee. This performance audit was conducted as part of the Sunset Review set forth in Arizona Revised Statutes §§41-2351 through 41-2379. In addition, the Telecommunication Device for the Deaf and Relay Service Program [1] was reviewed as required by Chapter 35 of the 1985 session laws.

The Arizona Council for the Hearing Impaired (ACHI) was established in 1977 and funded in 1978. The Council is comprised of 13 members and three administrative staff, including the Executive Secretary who is appointed by the Council.

The Council acts as a statewide information referral center for hearing impaired individuals. ACHI provides information in several ways, including a weekly television program, quarterly news bulletins, monthly updates and pamphlets.

ACHI also studies problems that affect the deaf and takes action to resolve them when possible. The Council was instrumental in the passage of legislation for early identification of hearing loss in infants. The Council is currently attempting to establish a statewide certification program for interpreters in legal proceedings, and has aided the development of an interpreter training program at Phoenix College.

Telecommunication/Relay Services

ACHI was given responsibility for implementing The Telecommunication Devices for the Deaf (TDD) and Relay Service Program in April 1985. Senate Bill 1010, designed to "make all phases of public telephone service available to persons who are deaf or

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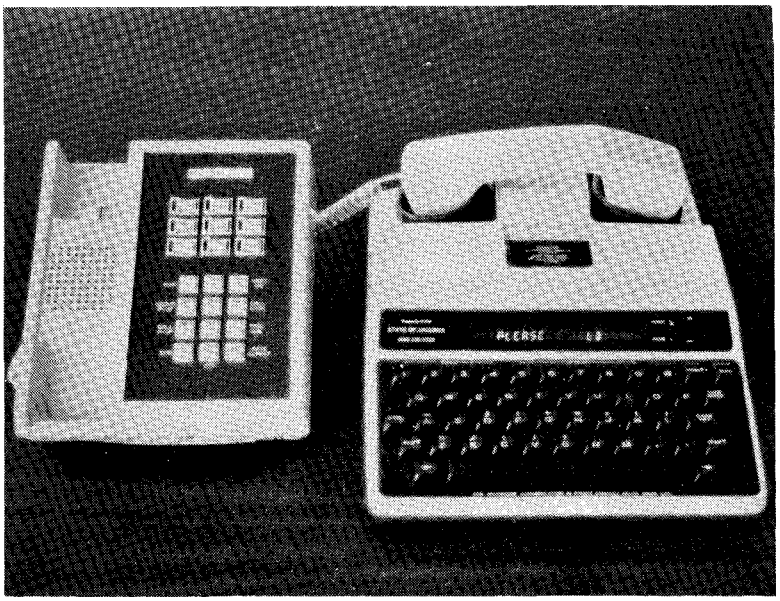
(1) Chapter 35 of the 1985 session laws refers to the program as the Telecommunication Device for the Deaf Program. Because this program entails two separate functions, it is referred to within the audit report as the Telecommunication Device for the Deaf and Relay Service Program.

severely hearing or speech impaired," established the TDD and Relay Service Program. ACHI has contracted with Catholic Community Services[1] for the distribution of TDDs and the operation of the Relay Service.

TDD distribution began in July 1986, and as of August 31, 1987, 1,319 TDDs had been distributed in Arizona. TDDs attach directly to a telephone and allow deaf and speech or hearing impaired individuals to communicate with others who also have TDDs (Figure 1).

FIGURE 1

TELECOMMUNICATION DEVICE FOR THE DEAF



(1) Catholic Community Services does business as Valley Center of the Deaf.

The dual party telephone relay service, established in March 1987, enables hearing and speech impaired persons to communicate by telephone with hearing persons (Figure 2). The relay service provides statewide 24-hour service. Hearing and speech impaired persons call the relay service using a TDD. The relay service then calls the hearing person and relays the conversation from impaired person to hearing person. In addition, hearing persons call the relay service to contact hearing impaired persons with TDDs. For example, a doctor can talk to a hearing/speech impaired patient through the relay service.

FIGURE 2

RELAY SERVICE OPERATOR STATION

Operators can receive voice or TDD calls. When a deaf person uses a TDD to call the relay center, the TDD message is displayed on the operator's monitor. The operator then verbally relays the message to a hearing person through a headset. The hearing person's response is typed back to the TDD user through the computer keyboard.

Dual party relay service is a fairly new concept. According to Joseph Heil, a New Jersey consultant and retired AT&T Disabled Service and Product Coordinator, Arizona is one of two major pacesetters in this area. Arizona and California are the first states to enact legislation that mandates the operation of a statewide 24 hour relay service.

The Telecommunication Device for the Deaf and Relay Service Program is funded by an excise tax equal to two-tenths of 1 percent of the monthly phone line service charge paid by all residential and business customers. This tax is temporary, and expires on June 30, 1988. One full-time equivalent employee (FTE), who works exclusively on the program, is funded by the tax. As of August 1987, almost $1.1 million had been collected since the tax became effective on June 30, 1985.

Staffing And Budget

For fiscal year 1986-87 ACHI had three administrative staff personnel: an Executive Director, an Administrative Assistant and an Administrative Secretary. The Council staff and activities are funded by the Legislature from the State's General Fund, with the exception of The Telecommunication Device for the Deaf and Relay Service Program. The Council's budget for fiscal years 1984-85 through 1987-88 is shown in Table 1.

TABLE 1

ARIZONA COUNCIL FOR THE HEARING IMPAIRED
BUDGET FOR FISCAL YEARS 1984-85 THROUGH 1987-88
(unaudited)

	Actual 1984-85	Actual 1985-86	Actual 1986-87	Approved 1987-88
FTE	3	3	3	3
Expenditures:				
Personal Services	$61,600	$ 71,100	$ 77,341	$ 81,100
Employee Related	14,500	15,800	16,685	18,000
Professional Services	1,400	1,900	470	2,900
Travel (In State)	1,200	2,000	2,410	3,800
Travel (Out of State)	300	200	00	00
Other Operating Exp.	14,400	11,700	15,224	16,600
Equipment	1,400	10,300	00	1,400
TOTAL EXPENDITURES	$94,800	$113,000	$112,130	$123,800

Source: Compiled by Auditor General staff from State of Arizona Appropriations Report Fiscal Years 1986-87 and 1987-88, and ACHI report from Department of Administration for 1987 expenditures.

Scope And Methodology

Our audit of The Arizona Council for the Hearing Impaired and the Telecommunication Device for the Deaf and Relay Service Program concentrated on the distribution of telecommunication devices and the statewide telephone relay service. The report presents findings in the following areas.

- Need for the Telecommunication Device for the Deaf and Relay Service Program
- Level of funding for the Telecommunication Device for the Deaf and Relay Service Program
- Training for TDD users
- Contract Monitoring

A major part of the audit work was a survey of TDD recipients to determine the adequacy of distribution/relay services. The sample was limited to 22 individuals, because of the difficulty of interviewing deaf persons and the potentially low response rate from a mail survey. Seven TDD recipients from Tucson and 15 recipients from Phoenix were interviewed in person.[1] Although the small sample is not statistically significant, the responses provide a qualitative assessment of the distribution/relay program.

Due to time constraints, we were unable to address one potential issue identified during our preliminary audit work. The section Area for Further Audit Work describes this potential issue.

The audit was conducted in accordance with generally accepted governmental auditing standards.

The Auditor General and staff express appreciation to The Arizona Council For The Hearing Impaired, Director and staff for their cooperation and assistance during the course of our audit.

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(1) Interpreters assisted in some interviews.

SUNSET FACTORS

In accordance with Arizona Revised Statutes (A.R.S.) §41-2354, the Legislature should consider the following 12 factors in determining whether the Arizona Council for the Hearing Impaired (ACHI) should be continued or terminated.

1. **The objective and purpose in establishing the Arizona Council for the Hearing Impaired**

   ACHI was established as an advocacy program in response to needs and concerns expressed by Arizona's deaf residents. ACHI was created in 1977 as the Arizona Council for the Deaf. Its originating statute, A.R.S. §36-1943, requires that the agency "study the handicapping problems afflicting the deaf and hard of hearing of all ages, review the administration and operation of the various programs for the deaf and hard of hearing in this state and make recommendations concerning such problems and programs to the several agencies and institutions represented on the council as the council deems necessary and proper." In 1985 the Council was renamed the Arizona Council for the Hearing Impaired through Senate Bill 1085. The intent of this legislation was to expand representation on the Council to hard of hearing persons, and instruct the Council to address issues and concerns of this group.

2. **The effectiveness with which ACHI has met its objective and purpose and the efficiency with which it has operated**

   The Council has been effective in meeting its prescribed objectives and purpose. The Council helped establish a sign language interpreter training program at Phoenix College, worked to reduce long distance telephone rates for telecommunication device for the deaf (TDD) users, and is helping promote installation of amplification for hearing aid users in public facilities. In addition, the Council helped design and supported Senate Bill 1334, which established early identification of hearing loss in neonates and infants. According to the Director, ACHI has distributed more than 500,000 pieces of literature to the public through public awareness booths at the State fair, county fairs, classroom presentations, workshops, conventions, seminars, public festivals, monthly updates and newsletters.

3. **The extent to which the Council has operated within the public interest**

The public served by ACHI includes the hearing impaired population throughout the State of Arizona. ACHI is operating within the public interest by addressing problems confronting hearing impaired people. For example, ACHI was an advocate in establishing a mental health program for the hearing impaired, and oversees the statewide Telecommunication Device for the Deaf and Relay Service Program. Furthermore, ACHI cosponsors a weekly one-half hour statewide television program for and about the deaf. Recently, the Council arranged for the closed captioning of the Pope's visit.

4. **The extent to which rules and regulations promulgated by ACHI are consistent with the legislative mandate**

According to the Attorney General's Office, the rules and regulations promulgated by ACHI are consistent with its legislative mandate.

5. **The extent to which ACHI has encouraged input from the public before promulgating its rules and regulations and the extent to which it has informed the public as to its actions and their expected impact on the public**

Two public hearings were held regarding the Telecommunication Device for the Deaf Program rules and regulations: one in Tucson and one in Phoenix, with total attendance of approximately 400 persons. ACHI meetings are conducted in accordance with State open meeting laws, including proper posting of meeting notices.

6. **The extent to which ACHI has been able to investigate and resolve complaints that are within its jurisdiction**

ACHI's enabling legislation did not establish a formal complaint review process. However, as set forth in ACHI rules, complaints about the relay service can be filed with the relay center or the Council. According to ACHI's Director, the intent of this rule was to address confidentiality or operator

misconduct complaints. However, the majority of complaints involve long hold times and inability to get through to the relay center. ACHI is currently working with the relay center to reduce hold times by expanding the number of operator hours and requiring the center to evaluate operator performance.

7. **The extent to which the Attorney General or any other applicable agency of State government has the authority to prosecute actions under enabling legislation**

ACHI's enabling legislation provides limited authority to prosecute for loss or damage to a State provided TDD.

8. **The extent to which ACHI has addressed deficiencies in its enabling statutes which prevent it from fulfilling its statutory mandate**

According to the Director, ACHI has been involved in legislation to expand the Council's scope to include the hard of hearing, and is presently reviewing legislation to continue funding for the Statewide Telecommunication Device for the Deaf and Relay Service Program.

9. **The extent to which changes are necessary in the laws of ACHI to adequately comply with the factors listed in the Sunset Factors**

Funding for the Telecommunication Device for the Deaf and Relay Service Program will expire June 30, 1988, under A.R.S. §42-1472. Through this program telecommunication devices are distributed to the deaf, hearing and speech impaired at no cost. In addition, the program operates a 24-hour statewide dual party relay service. The program makes phone communication a reality for deaf, hearing and speech impaired persons, and appears to provide a needed service.

Based on our audit work we recommend that the Legislature consider:

1. Continuing the Telecommunication Device for the Deaf and Relay Program (see Finding I).
2. Continuing funding for this Program (see Finding II).

10. **The extent to which the termination of ACHI would significantly harm the public health, safety or welfare**

Terminating the Council could impact the welfare of the hearing impaired persons which it serves. If ACHI were terminated, the State would lose a valuable resource. According to ACHI's Director, the Council has been a key liaison for hearing impaired persons and is the key consultant for the Governor and State Legislature on issues relating to the hearing impaired. In addition, if the Council were terminated another agency would have to oversee the Telecommunication Device for the Deaf and Relay Service Program or this program would be discontinued.

11. **The extent to which the level of regulation exercised by ACHI is appropriate and whether less or more stringent levels of regulation would be appropriate**

ACHI has some regulatory responsibility involving interpreters used in legal situations. Under A.R.S. §§36-1946 and 12-242, the Council determines what constitutes a "qualified" interpreter for legal proceedings involving deaf persons. Only interpreters with certificates approved by the Council shall be appointed by the courts. ACHI has approved several certificates that qualify interpreters for legal proceedings, and this appears to be an appropriate level of regulation. However, the few interpreters holding approved certificates may be inadequate to fulfill the intent of the law (see Other Pertinent Information, Page 29).

12. **The extent to which ACHI has used private contractors in the performance of its duties and how effective use of private contractors could be accomplished**

ACHI currently uses private sector contractors for the Telecommunication Device for the Deaf and Relay Program. For example, ACHI contracts with Catholic Community Services to distribute TDDs and signal lights and to operate the relay center. In addition, ACHI contracts with four private contractors to supply TDD and signal light equipment. Existing contracts may exceed $600,000 in fiscal year 1987-88.

FINDING I

TELECOMMUNICATIONS SERVICES MEET AN IMPORTANT NEED

The Telecommunication Device for the Deaf (TDD) and Relay Service Program provides a needed service. The telecommunications services provided by the Arizona Council for the Hearing Impaired (ACHI) allow hearing and speech impaired persons to communicate more readily with others. The need for the services is indicated by the fact that demand exceeds the relay service's ability to provide adequate, quality service.

Telecommunications Services Are Essential For Hearing and Speech Impaired Citizens

The Telecommunications Device for the Deaf and Relay Service Program has made telephone communication a reality for hearing and speech impaired persons. TDDs allow them to communicate via the telephone with other individuals who have a TDD, and the statewide dual party relay system permits communication with those who do not have a TDD.

TDD users describe the distribution/relay services as invaluable. Interviews with some recipients of the state issued TDDs revealed that these machines are a daily part of most of their lives. Fifteen of 22 TDD owners[1] interviewed use their TDDs daily. Nine said they use their TDDs more than three times a day. Some TDD recipients expressed strong appreciation for the TDD/Relay Program.

> "I think TDDs are vital to allow deaf [persons] to communicate with others and would hate to see program discontinued."

> "[I] love it, got one TDD for my daughter so we could talk. Wish we got them long, long ago."

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(1) Auditor General staff interviewed 22 TDD recipients to obtain information about the TDD/Relay program (see methodology section on page 5 of Introduction and Background).

"[W]e, the hearing impaired/deaf people really need it very deeply and badly. It helps us stand on our feet to be able to make calls ourselves.

"Before [we were] unable to communicate with people other than face to face, couldn't use the phone. Now [it is] wonderful, [there is a] changed atmosphere in house. [I] can do without everything except the phone. [I can] remain in contact with rest of the world. One of greatest inventions of [my] lifetime."

"Now we can call the doctor, can call work, look for work, call work if sick. [It] really helps us to be independent."

These statements convey the importance of the TDD/Relay Program to these hearing and speech impaired. Without it, many hearing and speech impaired persons would face increased isolation from the outside world.

Demand for Relay Services Exceeds Capacity

The need for the Relay Service Program is clearly demonstrated by the growing demand for its services. Current relay capacity cannot handle user demand, as evidenced by the increasing volume of calls, time on hold and the high number of abandoned calls. In addition, projected demand is expected to exceed the maximum capacity of existing equipment within six months.

Although the exact number of people served by this program could not be determined, demand for the statewide dual party relay system has increased steadily since the service was started in March 1987. The number of incoming calls handled each month increased from 7,100 to more than 11,200 in the program's first five full months of operation (Figure 3). The number of calls from TDD users increased by 43 percent between April and September. Further, the increased use is not limited to the hearing impaired. During the same time period, the number of voice calls [1] handled per month almost doubled from 1,136 to 2,251. The total number of outgoing calls handled by the relay center actually exceeds the incoming call volume because the relay service permits callers to make an unlimited number of calls out each time they call in. Thus, for the 10,817 calls into the relay center in September, approximately 20,500 outgoing calls were made by the center.

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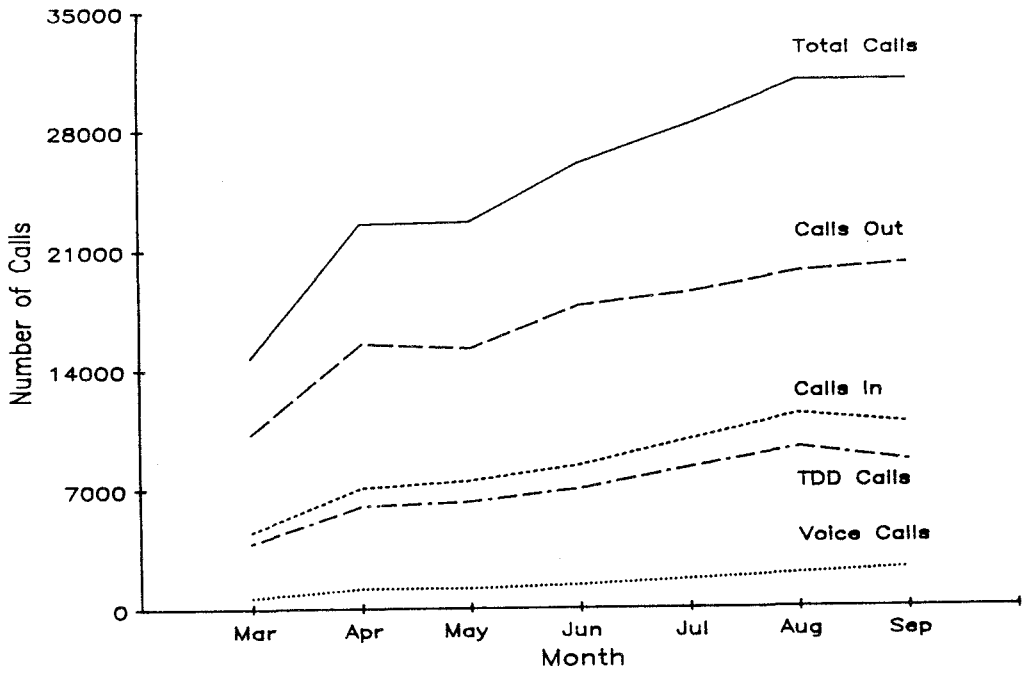
(1) A voice call is made to the relay center by a hearing person to contact a TDD user.

FIGURE 3

NUMBER OF RELAY CALLS [a]
March 1987 - September 1987



(a) Abandoned calls not included.

Source: Auditor General staff analysis of relay center call data obtained from Valley Center of the Deaf.

The relay service has expanded its capacity to address increased demand. The system began with eight phone lines, seven operator stations and 2,000 operator hours per month. Within six months the the relay center was using 23 phone lines, ten operator stations and authorized 4,000 operator hours per month.

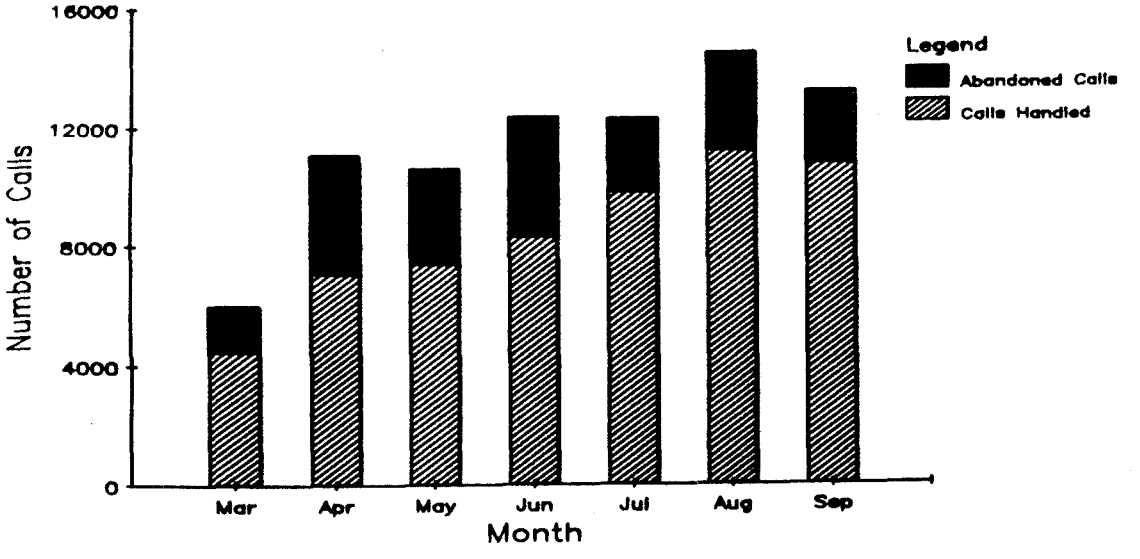
Despite these increases, user demand still exceeds relay capacity. The length of time persons remain on hold appears high. According to the relay contractor, the majority of complaints regarding relay service refer to accessibility and long hold times. Although ACHI set a goal of 30 second hold time, some users have waited over ten minutes for an operator. Eleven of the 13 relay users interviewed

have had to wait longer than the 30 second target set by ACHI. In fact, eight of these 13 respondents said they usually wait for an operator from a minimum of three minutes to more than ten minutes.

The fact that many callers hang up without completing their calls also indicates long hold times. Abandoned calls [1] have accounted for over one-third of incoming calls, and currently account for almost 20 percent of incoming calls. The fact that at least one of every six incoming callers hang up indicates the relay service cannot currently handle the demand. Figure 4 presents the number of abandoned calls recorded in relation to the number of incoming calls handled.

FIGURE 4

NUMBER OF ABANDONED CALLS
COMPARED TO NUMBER OF CALLS HANDLED
March 1987 - September 1987



(1) All incoming calls are automatically put on hold unless an operator is available. When a caller hangs up before an operator answers it is recorded as an abandoned call.

In addition, demand for the relay service is expected to increase beyond current equipment capacity. According to one consultant [1] the volume on the relay system is increasing by approximately 1.7 percent each week. The consultant predicts that demand will exceed system capacity within the next six months. In fact, the consultant estimates that during the busiest hour of the day, more than 50 percent of the attempted calls on the toll free lines and about 38 percent of the attempted calls on the local lines will receive a busy signal. Furthermore, advertising the relay service will most likely increase the number of calls to the center, causing an even greater strain to the current equipment. [2] However, current funding will not cover further expansion of the relay service. (See Finding II, page 17)

RECOMMENDATION

The legislature should consider continuing the Telecommunications Device for the Deaf and Relay Service Program. (See Finding II, page 20 for funding recommendations)

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(1) The firm of McGladrey, Hendrickson, and Pullen were hired by ACHI and Catholic Community Services to analyze the usage and capacity of the current relay system.

(2) The relay service has had limited advertising; however, Mountain Bell recently published the relay phone number and a brief explanation about it in the Customer Service pages of the phone book. In addition, ACHI plans to issue a statewide bulletin about the service soon.

FINDING II

THE TELECOMMUNICATIONS EXCISE TAX WILL NOT PROVIDE SUFFICIENT REVENUE TO FUND THE RELAY SERVICE PROGRAM

The current tax on telephone services will not generate the revenue needed to provide adequate telecommunications services for Arizona's deaf and hearing impaired citizens. Monthly program costs now exceed the monthly tax revenue. At the current tax rate the program will run out of money by June 1988.

The telecommunication services excise tax funds the Telecommunication Device for the Deaf and Relay Service Program. The tax is equal to two-tenths of 1 percent of the monthly phone line service charge paid by all residential and business customers. This amounts to approximately $.02 monthly per line and generates revenues of approximately $45,000 a month. Almost $1.1 million [1] has been collected since the tax became effective June 30, 1985.

Although tax collection began in July 1985, monies were not expended until June 1986. This delay allowed ACHI to accrue a balance of $411,000, which was used to purchase telecommunication devices for the deaf (TDD) and relay equipment, and to cover monthly expenses in excess of monthly revenues.

Monthly Costs Exceed Revenues

The cost of the Telecommunication Device for the Deaf and Relay Service Program exceeds the revenue generated by the telephone tax. As of August 1987, monthly costs exceeded revenues by more than $12,000. The increasing costs for the program result from the growing demand for relay services.

The telecommunications services program is comprised of two main components: TDD distribution and the relay service. TDD distribution expenses experienced a sharp initial peak and then decreased. However, the decrease in distribution expenses has been offset by the increase in relay expenses, which have more than doubled since the program began in March 1987. All areas of the relay service have expanded. Current monthly relay expenses are approximately $43,000, while TDD distribution expenses

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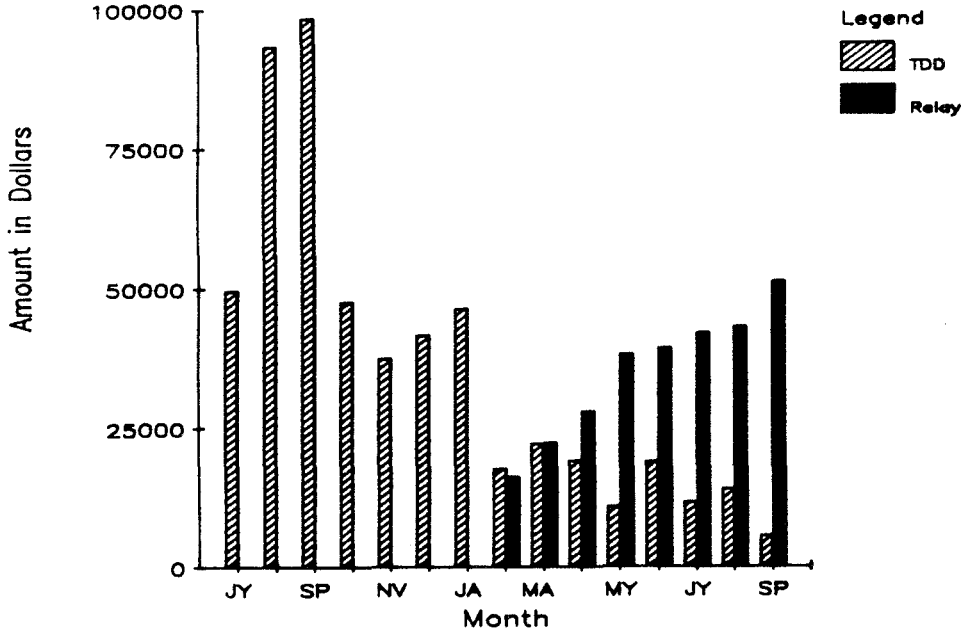
(1) As of August 1987.

are approximately $14,000.[1] Thus, the total monthly cost of the telecommunication services program is $57,000, more than $12,000 above the monthly revenue of $45,000. Further, this difference is expected to increase to $24,000 by November 1987 as fixed costs increase and additional operator hours are added to the relay service.

Total monthly expenses for both the relay service and the TDD distribution are shown in Figure 5. As the figure illustrates, TDD distribution has decreased greatly since the first few months of the program.[2] However, relay service expenses are steadily increasing. In addition, demand for the service shows no signs of having peaked.[3]

FIGURE 5

TELECOMMUNICATIONS SERVICES FOR THE DEAF FUND EXPENSES JULY 1986 - SEPTEMBER 1987



Source: Auditor General staff analysis of TDD/Relay expenses from ACHI

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(1) As of August 1987.

(2) As Figure 4 shows, TDD expenses were abnormally low in September 1987. This is because TDD distribution virtually stopped while extension of the distribution contract was approved. Expenses are expected to increase in October.

(3) According to McGladrey, Hendrickson, and Pullen, a consulting firm hired by ACHI and Catholic Community Services to analyze the usage and capabilities of the current relay system.

Additional Funding Will Be Needed To Continue Program

Continued operation of the Telecommunication Device for the Deaf and Relay Service Program will require additional funding. Although the Council has an existing balance that currently pays for expenses in excess of revenues, the balance will be depleted by June 1988. Auditor General projections indicate that additional funding will be needed by June 1988 to maintain and expand current service levels.

At projected service levels, the program will run out of money during the last quarter of fiscal year 1987-88 (see Table 2). As of September 30, 1987, the fund had a balance of $207,000. According to Auditor General projections, the funds will be depleted in June 1988. ACHI will need approximately $61,000 per month to meet its projected TDD distribution and relay expenses for fiscal year 1988-89. Therefore, the current funding of $45,000 a month will not be adequate to finance the programs.

TABLE 2

PROJECTED REVENUES VS. PROJECTED EXPENSES

		Projected Revenues [a]	Projected Expenses	Balance $207,000 [b]
October	1987	$45,000	$67,000 [c]	$185,000
November	1987	45,000	69,000 [d]	161,000
December	1987	45,000	69,000	137,000
January	1988	45,000	69,000	113,000
February	1988	45,000	69,000	89,000
March	1988	45,000	69,000	65,000
April	1988	45,000	69,000	41,000
May	1988	45,000	69,000	17,000
June	1988	45,000	69,000	(7,000)

(a) Excluding interest.
(b) Balance in fund as of September 30, 1987
(c) Relay expenses at projected level of 3,800 operator hours
(d) Relay expenses at projected level of 4,000 operator hours

Source: Auditor General analysis of ACHI revenue and expenditure data.

Raising the tax from 0.2 percent to 0.3 percent would increase the monthly revenues from $45,000 to approximately $67,500, if all factors remain constant. This additional revenue would cover projected expenses at current service levels. However, current service levels appear to be inadequate (see Finding I).

Furthermore, the consultants report that the current relay equipment may have reached its capacity. The report states that although additional phone lines and operator stations can be physically attached to the system, it may not be able to handle the increased call volume that would be generated. It is possible to extend the life of the current system with a rental backup system at a cost of approximately $1,200 per month. However, this would only be effective for a maximum of four months. (1) The consultants recommend that ACHI not use a backup system, but immediately begin replacing the current relay equipment, at an estimated expense of $40,000 to $45,000. (2)

Expenses for equipment and service level increases have not been calculated in Auditor General staff predictions of future expenses. Therefore, a monthly revenue of $67,500 may not be sufficient to cover the future expenses for the Telecommunication Device for the Deaf and Relay Service Program. Purchase of new equipment and expansion of the relay service to reduce hold times and handle an increased call volume would require raising the tax above the 0.3 percent rate.

RECOMMENDATIONS

1. The Legislature should consider increasing the funding for the Telecommunication Device for the Deaf and Relay Service Program.

2. ACHI should provide the Legislature with cost estimates for projected relay service levels. The estimates should include fixed and variable monthly costs, and costs to purchase needed equipment.

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(1) As of October 1987.

(2) At current funding levels ACHI will not have the funds to cover the expense of additional equipment.

FINDING III

TRAINING IN USE OF TELECOMMUNICATIONS DEVICES FOR THE DEAF SHOULD BE IMPROVED

Training provided to recipients of telecommunication devices for the deaf (TDD) does not ensure that all recipients can use the machines. User comments and Auditor General observations indicate that the training program does not meet the needs of all users. ACHI recently negotiated a new contract for TDD distribution and training, but the contract does not specifically address identified training problems.

TDDs are the center of the Telecommunication Device for the Deaf and Relay Service Program. TDDs give the hearing impaired consumer the ability to communicate via the telephone with other individuals who have a TDD. In addition, TDDs enable hearing impaired individuals to communicate with those who do not have a TDD using the relay service where an operator conveys messages between the TDD user and the hearing person. In order to utilize the TDD to its potential and to benefit from the relay service, recipients need a working understanding of the TDD. Thus, TDD training specifications are outlined in the distribution contract which was awarded to Catholic Community Services. Before applicants can be issued a TDD they must receive training from one of the Catholic Community Services distribution centers, and demonstrate that they can send and receive messages.

Training Problems Identified

Interviews with TDD users and observation of training revealed deficiencies in training provided some persons who receive TDDs. Eleven of the 22 recipients interviewed [1] felt that training was inadequate. Although class size is limited to 30 people, several people commented that the class was too large and some felt they did not receive the individual attention that they needed in order to properly learn to use the TDD. In addition, some of those interviewed noted that people of

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(1) Auditor General staff interviewed 22 TDD recipients to obtain information about the TDD/Relay program. (See methodology section on page 5 of Introduction and Background).

different ages and varying degrees of impairment were taught in the same class. Thus, the wide range of needs and large class size limited instructors ability to provide needed assistance to some recipients.

Auditor General staff attended a TDD training session and observed these problems, and others.

- The instructor was unable to assist all members of the class. Seventeen people were at the session with one instructor and no aides. Although the instructor provided personal assistance in response to some questions, some recipients were assisted by others in the class and a few persons received no assistance.

- Instruction did not appear to meet the needs of a diverse group. Ages ranged from approximately 5 to 65. Some were deaf, some hearing impaired. Some used sign language, others read lips, and still others used verbal communication. Despite this diversity, the class was taught in sign language and limited verbal communication. For the deaf people who sign, this was adequate. It was not adequate for those who read lips or use verbal communication.

In addition, recipients were not tested to ensure that they could use the TDD, [1] they were not told who to contact if their TDD needed repair work, and they were given outdated information about the relay service.

Our review indicates that even after the training, some users lack the knowledge to use their TDDs. Although all received training, two of the 22 recipients interviewed do not use their TDDs because they do not know how. Furthermore, the contractor reports that many people return to the distribution centers requesting additional training. Distribution center management realize that training problems exist and plan to implement procedures to correct them.

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(1) According to the ACHI relay coordinator, TDD recipients are normally tested at the end of each class to determine their ability to use the machines.

New Contract May Not Address Training Deficiencies

ACHI and Catholic Community Services revised the distribution contract when it was extended in July 1987. The revised contract reflects changes in some of the problem areas identified, but specific steps to correct problems are not addressed. Contract changes address class size and scheduling of classes. The contract no longer specifies a minimum class size, but neither does it establish a maximum limit. To address the problem of varying ages and impairments within a class, the distribution centers now are responsible for scheduling classes rather than ACHI.[1] However the contract does not specifically state that people of similar ages and abilities should be taught together.

RECOMMENDATION

ACHI should amend the distribution contract to require the contractor to: 1) establish a maximum size for TDD distribution classes, and 2) schedule training for persons of similar ages and ability.

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(1) The distribution center established a policy on November 18, 1987, that limits classes to ten persons and directs its staff to consider age, communication skills and instruction time needed to provide successful training when scheduling classes.

FINDING IV

ARIZONA COUNCIL FOR THE HEARING IMPAIRED NEEDS TO MONITOR RELAY CONTRACT

Arizona Council for the Hearing Impaired (ACHI) has not adequately monitored the performance of the contractor providing relay services for the deaf and hearing impaired. The contractor has not complied with several important requirements. To ensure the quality of relay services, ACHI should periodically review contractor performance in critical areas.

ACHI contracts with Catholic Community Services to provide dual party telephone relay service. The amount of this contract is expected to exceed $450,000 in fiscal year 1987-88, which is almost 75 percent of ACHI's total projected contract expenditure of approximately $610,000 for that same period.

Important Contract Provisions Are Not Met

Although Valley Center of the Deaf (VCD) provides basic relay system services, it has not complied with several important provisions of the contract with ACHI. Auditor General staff found that VCD has not met contract requirements to ensure the competence of relay operators. Failure to comply with these requirements may contribute to poor quality service.

Auditor General staff found that VCD has not met contract requirements in testing, training and evaluating operator personnel. These requirements are essential for assessing operator performance and determining areas where additional training is needed. The following examples illustrate the contractor's lack of compliance in these areas.

- **Operators Not Tested** - The contract states that all operators will be given written and practical tests prior to job assignments. However, no tests were given until August although operators were hired in March. As of September 5, 1987, only 21 of the 38 operators have been given typing tests. Four operators

scored below standard of 35 words per minute.[1] Typing speed is important because slow typing speed increases the time needed to complete calls and reduces the capacity of the service. ACHI has received complaints from deaf consumers regarding the speed and efficiency of the service.

- **No Training Curriculum** - The relay contract mandates that a 40-hour curriculum for training operators be developed and submitted to ACHI for review. However, after six months of relay service operation, no formal training curriculum had been developed. According to the director of the relay service, training is critical due to the lack of experienced help for this unique program. A relay operator needs not only typing and spelling abilities, but an awareness of deaf culture, client confidentiality, and policies and procedures to successfully relay deaf/hearing impaired calls.

- **Evaluations Not Timely** - According to contract provisions, the relay director shall evaluate operators performance during their third month of employment and thereafter semiannually. However, Auditor General staff found that eight of the 18 operators due for evaluation have not received one. The 10 completed evaluations were all 30 to 60 days late. Due to the lack of an established work force, timely evaluations are vital for determining if performance is adequate. For example, an operator hired six months ago recently tested at a typing speed of 30 words per minute.

The relay director states that he has been reacting to crises, and has been unable to address many contract issues. The relay center has experienced constant growth and technological problems. Within six months, operator hours have been doubled to handle increased demand. The relay director states that the technological problems have subsided and he will be able to address critical operational problems such as employee performance.

ACHI Should Monitor Performance On Regular Basis

ACHI should monitor contractor performance to ensure that it provides high quality services. Although ACHI is now taking action to resolve compliance problems, it should consider asking State Purchasing for assistance in developing contract monitoring procedures for both the current and future contracts.

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(1) Typing requirements were increased to 45 words per minute on September 4, 1987. Thirteen of the 21 operators tested scored below 45 words per minute.

ACHI staff did not verify VCD's compliance with the relay contract, but has now begun to resolve the compliance problems. During the initial phases of the relay operation, ACHI staff believed that VCD was administering typing tests and training to operator personnel. Since learning that VCD had not met these requirements, the Council staff requested documentation from the contractor regarding typing tests, evaluation forms and hiring criteria. In addition, Council and contractor staff have discussed noncompliance issues, and the Council is beginning to check for other areas of noncompliance. However, according to the Director, additional staff time for monitoring must come at the expense of other ACHI projects.

ACHI staff have no prior experience in handling contracts. Because of ACHI's lack of knowledge regarding the procedures and importance of contract monitoring, training seems appropriate. According to State Purchasing, one of its roles is to provide agencies with information regarding contract monitoring and its importance, because problems in handling new contracts are not unusual.

RECOMMENDATIONS

1. ACHI should obtain training from State Purchasing on contract monitoring.

2. ACHI should develop and implement contract monitoring procedures.

OTHER PERTINENT INFORMATION

During our audit we developed pertinent information regarding legal interpreters, and the rationale behind providing telecommunication devices for the deaf (TDD) free of charge.

Legal Interpreters for the Deaf

Under Arizona Revised Statutes §12-242.A courts are required to appoint a "qualified interpreter" to interpret legal proceedings whenever a deaf person is involved in the action.[1] Since 1982 the Arizona Council for the Hearing Impaired (ACHI) has been responsible for approving certificates of competency for interpreters of legal proceedings. In 1983 the Council drafted and submitted interpreter rules and regulations which addressed screening, examining, and certifying individuals to provide interpretation services to deaf persons in legal proceedings. However, the rules were never adopted because of confusion over ACHI's authority to promulgate these rules and regulations. Therefore, in 1984 ACHI informed all courts and law enforcement agencies by letter of the interpreter statute and outlined four certificates of competency.[2] These four certificates had ACHI's approval and indicated an interpreter was qualified for legal proceedings.

Although ACHI's action complies with statutory responsibility, the intent of the statute may not be adequately met. Only ten persons in the state of Arizona have these certificates and are approved to act as interpreters in legal cases. As a result, deaf persons may lack adequate interpretation. The limited number of qualified interpreters may deprive deaf persons of their rights under the law. Recently a Maricopa County Superior Court judge ruled that a confession from a deaf man accused of murder could not be used to prosecute him because he did not understand his rights. The judge's decision was based on the fact that the Maricopa County Sheriff's Office did not use a "qualified" sign-language interpreter to interpret the suspect's Miranda rights.

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(1) State law defines a "qualified interpreter" as a person having a certificate of competency authorized by the Arizona Council for the Hearing Impaired.

(2) These four certificates represent different skill levels.

ACHI is aware of the limited number of qualified interpreters, and is currently working with the Arizona Court Interpreter's Association (ACIA) to establish qualifications of judiciary interpreters for Arizona courts. Currently, there are no legal interpreter programs offered in Arizona, however, an interpreter test is being developed by ACIA and ACHI in order to provide an avenue for persons to qualify as legal interpreters.

TDDs Provided Free of Charge

ACHI provides TDDs at no charge to all Arizonans meeting the criteria for hearing or speech impairments, regardless of their income.[1] The Director of ACHI gave two reasons why TDDs are issued without charge. First, deaf people cannot use a phone without a TDD. Therefore, a TDD merely gives the deaf person the same ability that a hearing person has to use the phone. The director feels requiring a deaf person to pay for this ability would be unfair. Second, evaluating applicants on the basis of income level would require an additional staff person (at an average cost of approximately $23,000) to review and verify the financial data.

Because ACHI does not determine eligibility based on income, it has no documentation on the financial status of the Arizona TDD recipients. However, the most recent national study of the deaf population conducted in 1974 revealed that deaf people earn 28 percent less than hearing people.[2]

Auditor General staff contacted ten other states with operational TDD programs. In addition to Arizona, four of those states provide free TDDs to all qualified applicants regardless of income. Of the other six states, three provide free TDDs to applicants whose income is below a certain level, and three have a sliding fee scale based on income.

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(1) ACHI contracts with Krown Research, Inc. for TDD's at a cost of $322 each.

(2) According to The Deaf Population by Schein and Delk, 1974.

AREA FOR FURTHER AUDIT WORK

Our audit work focused on the Telecommunication Device for the Deaf Program, since this program has received over $1 million since its inception in 1985. However, during the course of our audit we identified one potential area for further audit work, which due to time and staffing constraints, we were unable to review.

- Is ACHI's General Fund appropriation adequate?

  According to the Director, lack of funds has caused the Council to give slight attention to many areas of concern to the hearing impaired. He says the Council's current budget of $123,800 does not enable it to adequately address other issues affecting the hearing impaired such as mental health care, legal rights, senior citizen services and prisoner rights. Many Council members agree with the Director, as do other Arizona organizations associated with the hearing impaired.

Further audit work is needed to determine utilization and efficiency of current staff and funds, and the need for the Arizona Council for the Hearing Impaired to expand activities.

Evan Mecham
GOVERNOR

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December 4, 1987

Douglas R. Norton
Auditor General
2700 North Central
Phoenix, Arizona 85004

Dear Mr. Norton:

The Arizona Council for the Hearing Impaired (ACHI) has reviewed the draft report of the performance audit of the ACHI and the Telecommunication Device for the Deaf Program. We have enjoyed working with your audit team and feel that your report reflects an enormous amount of work. We also appreciate the opportunity to respond to this report, for the purpose of clarifying a few points, which we will address individually.

1. Findings I and II of your report indicate that the TDD Distribution program and Relay Service are greatly needed, and recommend that the legislature continue both projects. Your thorough financial review shows that the Relay Service cannot meet existing call volume demands due to limited available funds. You also point out that the existing call management equipment at the relay center needs to be replaced as it cannot handle the high call volume. In order to continue this unique program and increase call volume capacity, a draft bill has been prepared for introduction into the upcoming legislative session. This bill proposes to increase the present level of revenue in order to address the above problems.

2. Finding III addresses the TDD Distribution program and some training deficiencies observed. The new contract calls for the vendor to provide any follow up training to TDD recipients who request such training. As your report notes, the new contract calls for the scheduling of training classes by the vendor, and it has been noted that these classes will be much smaller in size, thus affording closer attention to the particular needs of the recipient. The vendor will also be contacting recipients prior to their training class to determine their main mode of communication (i.e. sign language or speech reading) to enable individuals to be placed in classes with others who use the same mode of communication.

3. Finding IV of your report calls for the Council to provide closer monitoring of the relay contract. It should be noted that the directors of ACHI and Valley Center of the Deaf have expended hundreds of hours on the initial installation of the relay equipment and in addressing equipment failures as they were identified. Additionally, the staff time devoted to the relay service by the ACHI TDD Project Coordinator was to such a high degree, because the design and implementation of this program was an original project, that she was seldom seen at her own office. The program has required enormous expenditures of time and effort on the part of all involved.

The shortfalls of contract compliance noted in your report are being, and have been for some time, addressed by this office, to the extent that a key staff person of the relay center was dismissed at the request of this agency. A new relay administrator has been hired and is in the process of developing a thorough training curriculum for operators, finalizing a testing protocol for all applicants and implementing a schedule of follow up skill evaluations.

4. We concur with your review of the issue relating to economic need when distributing TDDs in Arizona. The cost to the state to conduct such a review could not be justified, therefore we recommend that the existing procedures and application criteria remain the same.

5. Under "Area For Further Audit Work," we were somewhat surprised that the extensive audit performed by your team was restricted to the TDD Distribution program and Relay Service. This agency has, as you point out, been involved in many projects and services to address the needs of the hearing impaired people of Arizona. We are of the strong opinion that a return visit to our agency by your team is necessary to review the work that we have done and also the work that we cannot do because of very limited funds and staff. In our earlier report to you under Sunset Factors, we pointed out that <u>the Arizona Council for the Hearing Impaired is the lowest funded state agency in the United States for the deaf and hard of hearing.</u>

6. We hope and trust that your recommendation for "...further audit work is needed to determine utilization and efficiency of current staff and funds, and the need for the Arizona Council for the Hearing

Impaired to expand activities" will be implemented at your earliest convenience.

SUMMARY: Your audit team has worked well with us and has enabled us to gain some keen insight as to how we can better manage the TDD programs. Most importantly your report indicates that this small agency has been able to establish a statewide program of TDD distribution and a statewide relay service to assist thousands of deaf and hearing residents of Arizona. Your report also clearly recognizes that this unique project is worthy of continuance and must be awarded additional funds if a quality service is to be provided to Relay Center users. Unfortunately, however, your audit has focused on only one issue that is of concern to Arizona's hearing impaired citizens and ACHI. The Arizona Council for the Hearing Impaired, to the contrary, is not a "single issue" agency. Rather, it is the Council's responsibility to address a multitude of problems and concerns facing Arizona's hearing impaired population. The Council is attempting to address as many of these concerns as possible. Significant problems and concerns remain unaddressed, however, due to the gross insufficiency of funds allotted to this agency by the Arizona legislature. Further auditing is desperately needed to determine the extent to which additional funds will alleviate the serious obstacles that continue to face Arizona's deaf citizens (such as the almost total lack of interpreting services provided to deaf people within our criminal justice system).

Again we wish to thank you for the opportunity to respond to your report and trust that your final report will be thoroughly reviewed by the Arizona legislature and executive office.

Sincerely,

Bonnie Tucker

Bonnie Tucker
ACHI Chairperson

Stuart R Brackney

Stuart R. Brackney
Director

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