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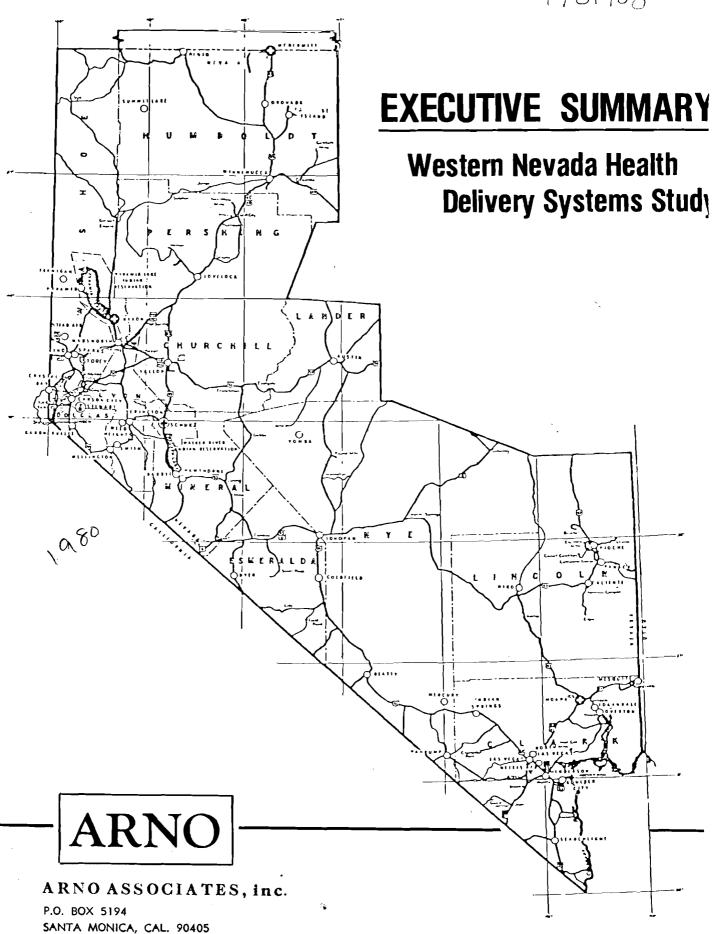
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EXECUTIVE SUMMARY

WESTERN NEVADA HEALTH DELIVERY SYSTEMS STUDY

Prepared under a Contract between the Pyramid Lake Tribal Council, representing the Indian people of Western Nevada, and ARNO Associates, inc.

September 1980

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I. INTRODUCTION

This document is a summary of the <u>Western Nevada Health Delivery Systems Study</u>. The Study was prepared over a ten month period (October 1979 - August 1980). It was a cooperative effort among a sizable group of organizations and individuals.

A Tribal Task Force, representing almost all the Indian Tribes of Western Nevada, was the principal coordinating body for the Study. The Task Force selected ARNO Associates, inc. as the principal overall consultant, and Medical Planning Associates, inc. as the principal architectural planning consultant for the Study.

The rationale and focus of the Study relate to several factors:

- The health care needs of the Indians of Western Nevada are great (the principal health care delivery deficiencies have been documented in the respective Tribal Specific and Urban Specific Health Plans).
- The wide dispersion of relatively small groups of Indians over vast geographic areas in Western Nevada and the reality of limited Indian Health Service (IHS) funding to provide care for these people necessitate an area-wide approach to health planning if realistic requests for resources based on considerations of cost-effectiveness are to result.
- In the past the Tribes of Western Nevada have tended to view themselves in isolation. Thus their Health Plans are duplicative to a degree. At the same time they are fragmented and incomplete when viewed from an areawide perspective.

The Western Nevada Health Delivery Systems Study assesses the total health care needs of the Indians in Western Nevada; sets areawide goals aimed at

satisfying those needs; and develops a phased strategy for moving from the present situation to the desired improvements.

The Study makes detailed recommendations on facility, equipment and personnel requirements for an optimal areawide health care delivery system. Recommendations are linked to the IHS Resource Allocation Criteria (RAC). Although immediate funding for the whole areawide system appears justified by the need, the Study makes provision for an orderly, incremental phasing-in of the system based on partial funding in any given time period. The ordering of the increments reflects Tribal priorities that were defined in the course of the Study.

The Final Report of the Study consists of four principal documents as follows:

- I. Feasibility Study and Master Plan
- II. Program Information Document (P.I.D.)
- III. Supplemental Information Document
- IV. Implementation Plan

The reader of this Executive Summary is referred to these documents in order to gain a full understanding of all details of the Study. The main objectives of the documents are respectively as follows:

<u>Feasibility Study</u>

- to assess the currently available health care resources and the current levels of utilization of ambulatory and inpatient care services of the entire Indian population in Western Nevada (met need).
- to estimate the range and level of unmet health care needs.
- to determine that system of health care delivery to Western Nevada Indians which would have the highest benefit -- cost ratio.

Master Plan

- to provide a detailed plan for health care delivery in Western Nevada based on the system design that emerged from the Feasibility Study.
- to present service and program specifications for each health care facility proposed under the system design.
- to specify Contract Health Services (CHS) requirements and support staff needs under the system design.
- to detail staff housing requirements and the resources needed for planning, constructing and equipping of new health care facilities.

Program Information Document (P.I.D)

to specify site considerations, total size requirements, total cost requirements (including architectural, engineering, equipment and construction costs) and planning and staffing assumptions for each health care facility justified in the Feasibility Study and recommended in the Master Plan.

Supplemental Information Document

to detail findings of the evaluation of the IHS Schurz Hospital.

Implementation Plan

to prioritize health care resource requirements and present an incremental, phased-in approach detailing year by year cost estimates of implementing the Western Nevada Health Care Delivery System.

- to spell out the impacts on workload and staffing of existing health care resources as additional resources are brought into the system.
- to account for partial funding and allow for the contingencies of funding delays.

The Tribal Task Force of this project included the following members:

- Glen Abel -- Ft. McDermitt
- Gordon Aird -- IHS Phoenix
- · Gerald Allen -- Fallon
- Lawrence Astor -- Reno-Sparks
- Leland Bliss -- Lovelock
- Marilyn Bliss -- Fallon
- Gary Bowen -- Reno-Sparks
- Elmer Brewster -- ITC Nevada
- Lorita Cowan -- Summit Lake
- Morrie Davidson -- ITC Nevada
- Shayne Del Cohen -- Reno-Sparks
- Geraldine Dyer -- Nevada Urban Indians
- Lorraine Dyer -- Ft. McDermitt
- Peter Ford -- Ft. McDermitt
- Bob Frangenberg -- Washoe
- Robert Frank -- Washoe
- Glorene Guerrero -- Pyramid Lake
- · Levi Hooper -- Yomba

- · Linda Howard -- Yerington
- · L. Vernae James -- Pyramid Lake
- George Johnny, Jr. --Fallon
- Mike Keneally -- IHS -Schurz
- Rod Kraft -- Washoe
- * Ray Leon -- Winnemucca
- Earl Livermore -- Washoe
- Keith Longie -- IHS -Phoenix
- Carla Molino -- Nevada Urban Indians
- · Mark Okashima -- Fallon
- Albert Phoenix -- Nevada Urban Indians
- Vince Pourier -- IHS -Schurz
- Larry Rhodes -- Lovelock
- Preston Tom -- Moapa
- · Jim Toner -- Moapa
- James Vidovich -- Pyramid Lake
- William Wadsworth --Pyramid Lake
- · Gloria Yazzie -- Las Vegas

The Walker River Tribe was included in the membership of the Task Force, but chose not to actively participate in any phase of the Study.

The Consultant team was as follows:

ARNO Associates, inc.

Arnold I. Kisch, M.D.

Robert Matsushima

Nancy Solomon

Paul Rosati

Joseph Freitas

Susan Redding

Medical Planning Associates, inc,

Dan Logan

George Pressler

Gay Craig

Gregory Newell

Conee Russo

Virginia Hill

The geographic area addressed by this Study is known as the Schurz Service Unit of the Phoenix Area IHS. The target population consists of the Indians residing within this area:

- · Fallon Paiute-Shoshone Tribe,
- * Ft. McDermitt Paiute-Shoshone Tribe,
- Las Vegas Indian Colony,
- Lovelock Paiute Tribe,
- Moapa Band of Paiute Indians,
- Pyramid Lake Paiute Tribe,
- Reno-Sparks Indian Colony,
- Walker River Paiute Tribe,
- Washoe Tribe.
- Winnemucca Paiute Tribe,
- Yerington Paiute Tribe,
- Yomba Shoshone Tribe.

In addition, the Urban Indian populations in Carson City, Las Vegas, Reno-Sparks and Winnemucca are included in the Study.

II. STUDY BACKGROUND

Prior to the development of the <u>Western Nevada Health Delivery Systems</u>
<u>Study</u> the Indians of Western Nevada had participated in the development of a number of Tribal Specific Health Plans. Individual plans were developed for the following population groups:

- The Fallon Paiute-Shoshone, Yerington Paiute, Lovelock Paiute, and Yomba Shoshone Tribes;
- * The Ft. McDermitt Paiute-Shoshone Tribes;
- The Las Vegas Paiute and Moapa Paiute Tribes;
- The Pyramid Lake Paiute Tribe;
- The Reno-Sparks Washoe-Paiute Tribes;
- * The Walker River Paiute Tribe;
- * The Washoe Tribe (Carson Colony, Dresslerville and Woodfords);
- The Urban Indian population in Reno-Sparks, Carson City and Winnemucca.

A Service Unit Health Plan covering the Indians of Western Nevada was also developed. It summarized many of the findings of the Tribal Specific and Urban Specific Plans. Ambulatory care and Contract Health Services were identified respectively as the number one and number two unmet health care needs in the Service Unit.

The various Tribal and Urban Specific Health Plans of Western Nevada agreed to a large extent with regard to unmet health care needs. Principal findings included the following:

- There is a general lack of availability of health care resources in most aspects of health services.
- The IHS health care resources that are available are geographically inaccessible, housed in inadequate facilities and insufficient in quantity.

- The quality of IHS medical services suffers through the fact that IHS physicians are too few in number; often insensitive to Indian culture; are relatively inexperienced; and have a high turnover rate.
- Contract Health Services (CHS) are a major problem because budget limitations, rather than health care needs, tend to determine management decisions. There is no well-developed plan for allocating CHS funds in a cost-effective manner and integrating CHS with the health care services delivered by IHS facilities and providers. The trend over the past few years has been the depletion of CHS funds prior to the end of the fiscal year, resulting in an inability to provide needed health care services.

The issues raised in the Plans focused on the areas of accessibility, acceptability and availability of health care services.

Each Plan identified strategies for overcoming identified health care needs. Recommendations for improvement frequently centered on the desire for a health care facility of some sort. The following ambulatory facility needs were specifically indicated in the Tribal Plans of Western Nevada:

- * A health station on the Pyramid Lake Reservation;
- A health center to serve the Reno-Sparks Colony and the nearby Urban Indian population;
- An expansion of the outpatient department of the Schurz IHS Hospital for the local community;
- A health center to serve the Washoe Tribe;
- A health center to serve jointly the Fallon, Yerington, Lovelock and Yomba Reservations and Colonies. (An outpost type of facility on each of these Reservations or Colonies was also indicated as being essential.)

Such facilities are viewed by the Tribes as the start of an improvement in health care services. The Plans indicated a wish that an array of services be considered for inclusion in the programs of the new health centers and stations. Desired services include the following:

- outpatient medical care;
- dental care;
- · optometric care;
- audiologic care;
- mental health;
- drug abuse and alcoholism services;
- community health and social services;
- nutrition services;
- health education and prevention programs;
- Tribal health administration.

III. STUDY METHODOLOGY

Based on initial data analyses, five (5) alternative health care delivery designs that would adequately provide for the projected demand for future health care services were developed and presented to the Tribal Task Force for consideration.

The alternative designs were evaluated with reference to several factors:

- agreement with Tribal and Urban Specific Health Plans
- travel time
- potential for attraction of health care staff
- projected utilization
- potential cost savings

After discussion with their respective Tribal Councils, the Task Force members convened and selected one of the five alternative designs that seemed to best coincide with Tribal preferences and priorities.

The design that was selected by the Task Force formed the basis for the Master Plan which was then developed.

The <u>Master Plan</u> assumed that the entire <u>Western Nevada Health Delivery Systems Study</u> could be funded in a single year. Since in practice this is highly unlikely, it was decided to develop a detailed, phased <u>Implementation Plan</u> that would view the development of the System in a perspective of not less than six (6) years.

As a first step in developing the <u>Implementation Plan</u> the Task Force prioritized the health care resource requirements contained in the <u>Master Plan</u>.

The prioritization was completed by a process which involved a preliminary listing of priorities; a discussion among Task Force and Tribal Council members of the preliminary listing; and a vote on a final ranking of priorities by the Task Force members.

The final set of priorities voted on by the Task Force formed the basis for the Implementation Plan.

IV. MAJOR STUDY FINDINGS

A. Feasibility Study

1. Background Data

Figure 1 illustrates the geographic area and the main centers of population of the Schurz Service Unit.

Figure 2 presents estimates of the Indian population in Western Nevada for the years 1975, 1980 and 1988. The estimates are based on official $I\underline{HS}$ population figures.

Figure 1

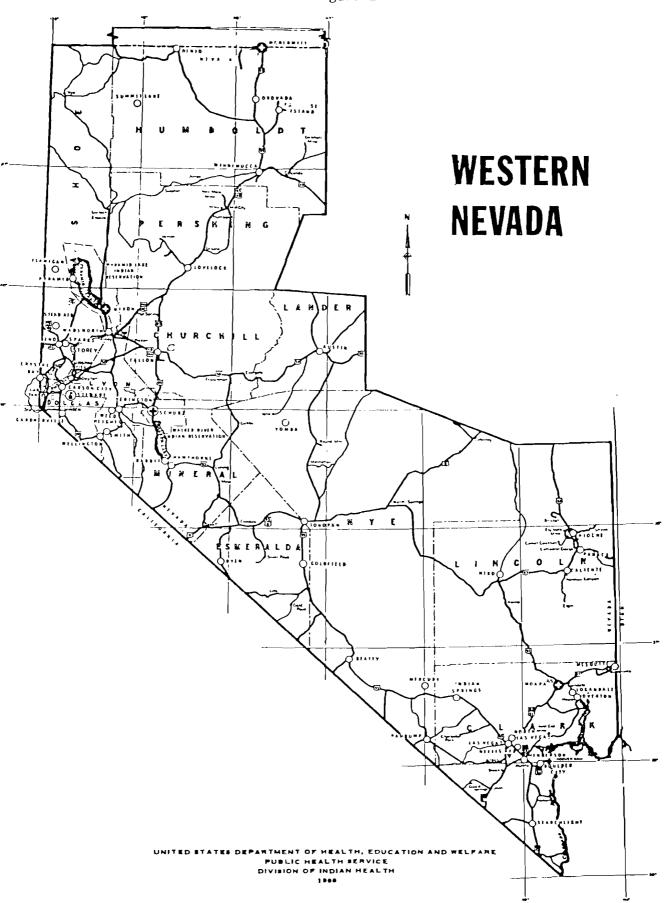


Figure 2
TRIBAL SPECIFIC INDIAN POPULATION ESTIMATES FOR WESTERN NEVADA -1975, 1980 AND 1988

·			
	1975	1980	1988
Fallon Colony and Reservation	426	446	482
Fort McDermitt Reservation	607	773	821
Las Vegas Colony	98	123	149
Las Vegas Urban*	951	1,196	1,388
Lovelock Colony	114	158	216
Moapa Reservation	136	170	207
Pyramid Lake Reservation	Ì		}
Nixon	238	296	345
Sutcliffe	70	86	100
Wadsworth	156	193	226
Reno-Sparks Colony	622	770	900
Reno-Sparks Urban	1,561	1,876	2,251
Walker River Reservation	476	536	702
Washoe Reservation			
Woodfords	136	173	192
Dresslerville	206	262	291
Carson Colony	186	236	262
Carson City Urban	767	1,049	1,243
Winnemucca Reservation	29	36	38
Winnemucca Urban	202	243	291
Yerington-Campbell Ranch	226	255	304
Yomba Reservation	84	111	144
Other	720	878	1,251
SUBTOTAL.	8,011	9,866	11,800
Stewart School & Staff	750	750	750
TOTAL	8,761	10,616	12,550

^{*}Las Vegas urban population was derived by subtracting the Reno-Sparks, Winnemucca and Carson City urban populations (as estimated in the Nevada Urban Specific Health Plan) from the Schurz Service Unit urban population total.

Source: IHS Tribal Specific Indian Population Estimates, FY 1978 to FY 1984; Tribal Specific Health Plans.

2. Currently Available Health Care Resources

a. Direct Indian Health Service Resources

The main local IHS direct service facility for the target population is the IHS Schurz Hospital in Schurz, Nevada. It is located within the boundary of the Walker River Reservation. Built in 1936, this 19 bed hospital has several significant shortcomings:

- The facility is inadequate, understaffed, overcrowded and geographically inaccessible.
- Only limited medical care is provided. No surgical procedures or deliveries are performed.
- The Service Unit population generally views the facility as providing poor quality health care and being insensitive to Indian culture.
- The utilization rate is very low when compared to the IHS Phoenix Area average.

The Stewart School Health Clinic in Stewart, Nevada, provides outpatient services to students at the Stewart Indian School. In addition, it provides services to the general community. The building is of wood frame construction and generally not suitable as a full service ambulatory health center.

The Ft. McDermitt Health Center was opened in 1977 and services the Ft. McDermitt Reservation. The facility comprises approximately 2,500 gross square feet and includes sufficient space for outpatient medical and dental services. However, there is no office space for field health services or a Tribal Health Department.

Using funds provided by the Department of Housing and Urban Development (HUD), the Reno-Sparks Colony is currently in the process of constructing a building which will temporarily function as a health clinic. The building is suitable for office use as well, and this is the function to which it will be converted if funding for a full health center at Reno-Sparks (as envisioned in the current Study) is achieved.

Monthly field clinics are held at Lovelock, Reno, Dresslerville, and Pyramid Lake. Available facilities at Pyramid Lake are inadequate for this purpose, however.

The Final Report of the Study documents that the scope of direct IHS health care services is deficient in meeting the health care needs of the Schurz Service Unit population in the following principal areas:

- Follow-up on therapeutic intervention of chronic diseases is not well established at Schurz, except for a weekly diabetic clinic.
- Behavioral and mental disorders are not handled adequately.
- The medical staff has little interaction with alcoholism and drug abuse workers.
- Accident victims have a difficult time receiving immediate medical attention because the only local IHS facility (Schurz Hospital) is geographically distant from most of the Tribes.
- Health maintenance and preventive health care are not emphasized.

The Tribes have relatively little control over the operations, allocation and distribution of the health care resources that serve them.

b. Contract Health Services (CHS)

Contract Health Services (CHS) are designed to provide health care services to fill in gaps within the services provided by IHS. Since some IHS services are geographically inaccessible and/or insufficiently staffed and equipped, the need for CHS is great in the Schurz Service Unit. In 1978, CHS provided 67.8 percent of the inpatient discharges and 26.9 percent of all outpatient visits in the Service Unit. Most specialty care, surgeries, orthodontic care, refractions and lenses, audiology services, care for pregnancies and emergency services are referred to contract providers. The Moapa Reservation and Las Vegas Colony are totally dependent upon CHS for their health services.

The following two tables indicate the major CHS providers for outpatient and acute inpatient services for FY 1978.

LEADING CONTRACT OUTPATIENT PROVIDERS, FY 1978

Outpatient Provider	Number of Visits	Percent Total Visits	Total Cost
Washoe Medical Center	480	9.1	\$28,945.24
Carson-Tahoe Hospital	313	5.9	19,113.38
So. Nevada Memorial Hospital	116	2.2	8,711.96
Private MDs, Las Vegas	539	10.2	7,539.50
Mt. View Nursing Center	161	3.1	6,245.55
Sparks Medical Center	284	5.4	6,138.35
Private MDs, Winnemucca	198	3.8	4,780.99
Humboldt General Hospital	104	2.0	4,282.88
Churchill Public Hospital	53	1.0	2,940.16
Pershing General Hospital	104	2.0	2,809.59

Source: IHS Annual Routine Report 3.0, FY 1978

LEADING C	CONTRACT	ACUTE	INPATIENT	PROVIDERS,	FY	1978
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	Number of	% of Total	Patient	
Inpatient Facility	Discharges	Contract Discharges	Days	Total Cost
Washoe Medical Center	204	36.2	1241	\$272,212.00
St. Mary's Hospital, Reno	182	32.3	668	123,164.46
Carson-Tahoe Hospital	60	10.7	275	64,380.62
So. Nevada Memorial Hospital	29	5.2	164	42,665.45
Humboldt General Hospital	18	3.2	75	11,809.98
Churchill Public Hospital	14	2.5	27	4,537.36
Lyon Health Center	6	1.1	79	5,361.15
Pershing General Hospital	5	0.9	11	1,544.65
St. Mary's Hospital, Salt Lake City	3	0.5	7	1,600.34

Source: IHS Annual Routine Report 3.N, FY 1978

As documented in the Final Report of the Study, significant shortcomings of the present CHS system include the following:

- In July 1978 the State of Nevada was defined as a Contract Health Service Area, thereby doubling the eligible Contract Health Service population. There has been no corresponding increase in Contract Health Service funding.
- Much of the CHS funds are spent for primary care services.
- · Administrative clearances for CHS hinders quick response in emergent situations.
- · Elective surgeries must go to Phoenix or San Francisco.

3. Current Levels of <u>Service</u> Utilization

a. Ambulatory Care Services

The following table from the Final Report of the Study shows the Schurz Service Unit ambulatory care utilization rate for direct care and Contract Care in comparision to other Service Units in the Phoenix Area in FY 1978.

AMBULATORY CARE PER CAPITA UTILIZATION
BY SERVICE UNIT, FY 1978

Service Unit	Number of Visits/ Person/Year	
Colorado River	8.2	
Fort Yuma	8.6	
Keams Canyon	6.3	
0wyhee	6.2	
Phoenix	8.5	
Sacaton	2.7	
San Carlos	6.8	
Schurz	2.4	
Uintah & Ouray	4.8	
Whiteriver	5.9	
Phoenix Area Average	6.0	

Source: Phoenix Area Health Plan, 1979.

Large variations in utilization rates are seen to exist. The low utilization rate reported for the Schurz Service Unit is largely due to two factors:

- recent decreases in CHS utilization related to increasing cost per health service and limited CHS funding.
- the unavailability and inaccessibility of direct ambulatory care services.

b. Inpatient Care Services

Figure 3 summarizes the Study's data analyses regarding the Service Unit's acute inpatient utilization for FY 1975 and FY 1978. The data show that during this time period:

- Discharges from the Schurz Hospital decreased by 40.8 percent while discharges from CHS hospitals decreased by 23.8 percent.
- The overall Service Unit decrease in discharges was 30.3 percent.
- There is approximately a one-third decrease in the total number of patient days.
- The cost/patient day increased by 87.6 percent while the CHS inpatient budget increased by only 29.5 percent.

Part of the decrease in the Schurz Hospital utilization is due to the elimination of deliveries and perhaps to the widespread disenchantment of the Service Unit population with the quality of health care received.

Figure 3

SCHURZ SERVICE UNIT ACUTE INPATIENT CARE UTILIZATION -DIRECT AND CONTRACT -- 1975 AND 1978¹

	1975	1978	1975-1978 % Increase
DIRECT CARE			
SCHURZ HOSPITAL			
# Discharges	451	267	-40.8
# Patient Days	3,288	2,180	-33.7
AL OS	7.3	8.2	+12.3
CONTRACT CARE			
SCHURZ SERVICE UNIT		562	22.0
# Discharges	739	563	-23.8
# Patient Days	3,935	2,716	-31.0
AL OS	5.3	4.8	- 9.4
Total Cost	\$ 439,337.33	\$568,891.31	+29.5
Cost/Day	\$ 111.65	\$ 209.46	+87.6
Cost/Discharge	\$ 594.50	\$ 1,010.46	+70.0
TOTAL SCHURZ			
SERVICE UNIT			·
# Discharges	1,190	830	-30.3
# Patient Days	7,223	4,896	-32.2
AL OS	6.1	5.9	- 3.3

 $^{^{1}\}mathrm{Fiscal}$ year for 1975 was from July-June. Fiscal year for 1978 was from October-September.

Source: IHS Routine Report 3N, 1975-1978 and IHS <u>Discharge Summary</u> 1973-1978, Office of Program Statistics, Headquarters.

The decrease in CHS utilization is likely related to the fact that the per unit cost of purchasing health services has been increasing faster than the CHS budget appropriations, rather than to a decrease in health care need.

4. Systems Analysis

In order to develop a system approach for health care delivery to all the Indians of Western Nevada, the existing population was divided into "Service Areas" based on consideration of travel time and traditional patterns of social interaction. The "Service Areas" were:

- Carson City
- · Fallon
- · Ft. McDermitt
- · Las Vegas
- · Pyramid Lake
- · Reno-Sparks
- Schurz

The following table shows the projected population distributions for each "Service Area" for 1988.

PROJECTED SERVICE POPULATIONS BY SERVICE AREAS -- 1988

Carson City	2,976
Fallon	1,326
Ft. McDermitt	936
Las Vegas	1,572
Pyramid Lake	1,066
Reno-Sparks	2,772
Schurz	726 11, 374

Source: IHS Census Data by County; Pyramid Lake Housing Application List.

The following two tables summarize the estimated demand for primary care and specialty outpatient services for each of the Service areas in 1982, 1984, and 1988.

PRIMARY CARE OUTPATIENT DEMAND¹ BY SERVICE AREA 1982, 1984, 1988

	1982	1984	1988
Fallon	7,475	7,840	8,486
Pyramid Lake	6,208	6,502	6,822
Reno-Sparks	15,674	16,794	17,741
Carson City	17,286	17,978	19,046
Schurz	5,050	4,282	4,646
Ft. McDermitt	5,472	5,984	5,990
Las Vegas	6,989	7,787	8,710
TOTAL	64,154	67,167	71,441

Primary care outpatient visits per person are based on 6.4 visits/person/year.

SPECIALTY OUTPATIENT REFERRALS¹ BY SERVICE AREA 1982, 1984, 1988

	1982	1984	1988
Fallon	584	613	663
Pyramid Lake	485	508	533
Reno-Sparks	1,225	1,312	1,386
Carson City	1,351	1,405	1,488
Schurz	395	335	363
Ft. McDermitt	428	468	468
Las Vegas	<u>638</u>	<u>705</u>	<u>786</u>
TOTAL	5,106	5,346	5,687

Based on 0.5 referrals/person/year.

The estimated demand for acute inpatient services for each of the Service Areas in 1982, 1984 and 1988 is presented in the following table.

ACUTE INPATIENT DEMAND¹ BY SERVICE AREA 1982, 1984, 1988

	1982	1984	1988
Fallon	1,654	1,735	1,878
Pyramid Lake	1,374	1,439	1,509
Reno-Sparks	3,468	3,716	3,925
Carson City	3,825	3,978	4,214
Schurz	1,117	947	1,028
Ft. McDermitt	1,211	1,324	1,325
Las Vegas	1,807	1,997	2,226
Other	405	406	<u>466</u>
TOTAL	14,861	15,542	16,571

Based on 1,416 inpatient days/1000 population.

The general outline for the proposed optimal health care delivery system for Western Nevada (developed on the basis of the systems analysis) contains the following main components:

Outpatient Care

All ambulatory patient care will be provided through a system of decentralized IHS ambulatory care facilities (Health Centers and Health Stations) located at:

- · Carson City
- Fallon
- Ft. McDermitt
- · Las Vegas
- Moapa
- Pyramid Lake
- Reno-Sparks
- Schurz

Regularly scheduled field clinics will be held at areas which are beyond the 30 minute accessibility limit (e.g., Lovelock, Yomba and Winnemucca).

Inpatient Care

All primary level acute inpatient care will be provided on a CHS basis at existing non-IHS hospitals within the Service Areas. Specialty acute inpatient care will be provided on a referral basis to major hospitals in Reno and Las Vegas.

Field Health Services and Tribal Health Programs

A full range of field health services and Tribal Health Programs will be provided at each of the Health Centers and Health Stations.

Dental, Optometric and Audiologic Health Services

Dental operatories will be available at each Health Center and Health Station, except Moapa. Optometric and audiologic services will be available only at the larger facilities.

The system of decentralized ambulatory health facilities outlined above has the following characteristics:

- It is acceptable to most of the Tribes in Western Nevada as it generally coincides with the recommendations of the Tribal and Urban Specific Health Plans.* Each Reservation, Colony or Tribal group is clearly within a "Service Area" and is therefore associated with a distinct facility. Tribal (or inter-Tribal) authority over the administration of the facilities is a definite possibility.
- It is a system in which 88.5 percent of the Indian population is accessible (within 30 minutes travel time) to one of the ambulatory health centers. Those populations that reside outside of the the accessiblity limit will be serviced through a set schedule of field clinics staffed through a parent facility. In this system only 2.6 percent of the population will not be reached at all. This part of the population is not clustered into any organized group, and is therefore very difficult to plan for. These individuals reside in Lincoln, Nye, Esmeralda, and Lander Counties. (Yomba Reservation is also in Nye County, but its population is included in the Plan as a group.)
- Accessibility to health care is greatly improved for the majority of the population.
- Each proposed facility provides a visible and clearly defined point of entry into the system, enabling Indians to receive services for <u>all</u> their health care needs.

^{*} The Walker River TSHP is an exception in that it recommended expansion of the Schurz Hospital to a 56 bed facility to provide services for the entire Service Unit.

- * Each proposed facility is a base for dispensing a comprehensive range of care, either through direct service or through referral.
- There is the possibility of increased control of inpatient utilization because of increased IHS physician access to local hospitals.

The Study proposes that acute inpatient care be provided entirely through CHS. This is preferred to direct IHS care for the following main reasons:

- The cost will be lower.
- Any hospital built in Western Nevada to serve the Indian population would be inaccessible to a large percentage of the population because of the geographic dispersion of the Tribes.
- The current travel burden on patients and their families would be eased.
- * Continuity of care will likely increase because it will be easier for IHS primary care physicians to monitor patient progress in nearby hospitals.

Relocation of the Service Unit Administration from Schurz to Reno-Sparks or Carson City, as recommended in the Study, offers distinct advantages:

- Recruitment and retention of professional staff will be facilitated;
- A more central location will serve to enhance the administrative mechanism;

- Administrative relationships with Contract Care providers will be aided since the major CHS providers are located in Reno-Sparks and Carson City;
- The cost of distribution of supplies to the health centers will be reduced.

5. <u>Schurz Hospital Evaluation</u>

The evaluation of Schurz Hospital done as part of this Study focuses on the following key issues:

- * The present operational constraints of the Hospital.
- The present operational and space constraints of each department within the Hospital;
- Future departmental space requirements;
- The Hospital's present capabilities (without major structural renovations).

This study recommends that inpatient services be discontinued at the Schurz Hospital. The recommendation is based on the following:

- The projected demand for primary level acute inpatient care in 1988 for the Service Unit requires 27-31 inpatient beds. This would require either major expansion of the present facility or construction of an entirely new facility, if the inpatient care is to be in an IHS facility.
- The floor plan of the present facility presents many functional deficiencies. Departmental and inter-

departmental relationships are inefficient; many departments are overcrowded.

Preliminary structural analysis reveals that extensive renovation or expansion of the present facility to the size required would probably be as expensive as construction of an entirely new facility.

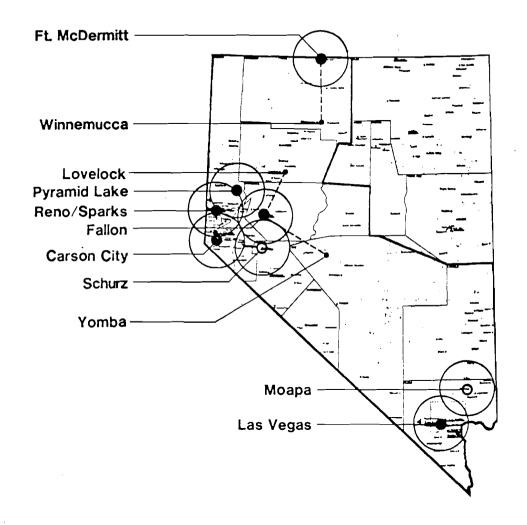
Potential uses for the Schurz Hospital facility are considered in the Study. The following recommendations are made:

- Ambulatory services should continue to be provided at Schurz. The present Outpatient Department is too small and over-crowded if two or three physicians must share space as at present. The projected demand for outpatient services would, however, require the service of only one primary care team at Schurz.
- There is sufficient office space for Field Health Services and Tribal Programs at the Hospital.
- There is additional space available at the Hospital for other uses such as:
 - an alcoholism residential rehabilitation program;
 - an intermediate care facility;
 - a skilled nursing facility.

B. MASTER PLAN

Figure 4 illustrates the location and target area for the various health care facilities of the proposed health care delivery system for the Indians of Western Nevada.

ARNO



LEGEND

HEALTH CENTER

HEALTH STATION O FIELD CLINIC

TARGET AREA



DATE: NOVEMBER 1979

Arno Associates, Inc.

Medical Planning Associates

WESTERN NEVADA **HEALTH DELIVERY** SYSTEMS STUDY

APPROVED HEALTH DELIVERY SYSTEM The following table from the Study report presents the projected 1988 outpatient care utilization and the proposed frequency of operation for the various Health Centers and Health Stations in the system.

HEALTH CENTERS AND HEALTH STATIONS FOR WESTERN NEVADA HEALTH CARE DELIVERY SYSTEM

	1988 Projected OPVs ¹	Operations
Fallon Health Center	8,486	5 days/week
Pyramid Lake Health Center	6,822	3-5 days/week
Reno-Sparks Health Center	17,741	5 days/week
Carson City Health Center	19,046	5 days/week
Las Vegas Health Center	8,710	5 days/week
Ft. McDermitt Health Center	5,990	4 days/week
Schurz Health Station	4,646	4 days/week
Moapa Health Station	1,350	3 days/week

OPV = Outpatient Visits

The Resource Plans presented in Figures 5, 6 and 7 show the basic outline for the provision, respectively, of ambulatory services, inpatient services and field health services/Tribal Programs. The footnotes on the figures illustrate the extent to which resources will be shared among the proposed facilities.

Figure 8 presents the complete staffing requirements in 1988 for each Service Area if the entire <u>Western Nevada Health Delivery Systems Study</u> is implemented. Personnel shown as being assigned to Service Unit will provide services to each of the Service Areas. Service Unit administrative staff will oversee and coordinate activities that affect the entire Service Unit.

Figure 5
RESOURCE PLAN FOR AMBULATORY SERVICES

						_		Specialty 0	linics/Year		
Service Area	Primary Care	Specialty Care	Dental	Optometry	Audiology	OB/GYN	In. Med	Pediatrics	Dermatology	Radiology	Total
Fallon	FTS ¹	CHS	SU	SU	SU	12	12	12	4	12	52
Pyramid Lake	SHD/FTS ²	CHS	SU	SU	SU	4	6	12	0	12	34
Reno-Sparks	FTS	снѕ	รบ	SU.	SU	12	12	12	4	12	52
Carson City	FTS	снѕ	SU	SU	SU	12	12	12	4	12	52
Schur z	SHD3	снѕ	su	su	SU	4	6	12	0	12	34
Ft, McDermitt	FTS ⁴	снѕ	SU	SU	SU	4	6	12	0	12	34
Las Vegas	FTS	CHS	CHS	снѕ	CHS	12	12	12	4	12	52
Моара	SHD ⁵	снѕ	CHS	снѕ	снѕ	0	0	0	0	0	0

FTS = Full time staff.

SHD = Shared staff.

CHS = Contract Health Services.

SU = Service Unit Based. Space is available at each facility for services to be provided directly within the Service Area.

¹Field clinics will be held at Lovelock 2 days/months and at Yomba 2 days/month.

²Pyramid Lake will share clinical staff with Reno-Sparks until 1986 at which time it will be staffed on a full time basis as a health center.

³Schurz clinical staff wil be administered through Fallon. Clinics at Schurz will be held 5 days/week but due to travel time will be limited to short hours.

⁴Field clinics will be held at Winnemucca ⁴ days/month.

 $^{^{5}\}text{Las}$ Vegas staff will conduct clinics at the Moapa health station 3 days/week.

Figure 6

RESOURCE PLAN FOR INPATIENT SERVICES

				Providers	
Service Area	Acute	Long-Term	Primary Acute	Specialty Care	Long-Term
Fallon	CHS	CHS	Churchill Public Pershing General Lyon Health Center	Washoe Medical St. Mary's	Fallon Convalescent Pershing County Lyon Health Center
Pyramid Lake	CHS	CHS	Washoe Medical St. Mary's	Washoe Medical St. Mary's	Reno Convalescent Riverside Hospital Sierra Health Center
Reno-Sparks	CHS	CHS	Washoe Medical St. Mary's	Washoe Medical St. Mary's	Reno Convalescent Riverside Hospital Sierra Health Center
Carson City	CHS	CHS	Carson Tahoe	Washoe Medical St. Mary's	Sierra Convalescent Carson Convalescent
Schurz	CHS	CHS	Lyon Health Center Churchill Public	Washoe Medical St. Mary's	Fallon Convalescent Lyon Health Center
Ft. McDermitt	CHS	СНЅ	Humboldt General	Washoe Medical St. Mary's	Humboldt Hospital Pershing County
Las Vegas/Moapa	CHS	СНЅ	Valley So. Nevada Memorial	Valley So. Nevada Memorial	Beverly Manor Hillhaven

CHS = Contract Health Services.

Figure 7
RESOURCE PLAN FOR FIELD HEALTH SERVICES

Service Area	Health Education	P.H. Nursing	Mental Health	Social Service	Nutrition	Environmental Health	Alcoholism	Tribal Outreach
Fallon	SU	FTS	FTS	FTS	FTS	FTS	FTS	FTS
 Pyramid Lake	SU	FTS	FTS	FTS	SHD/FTS ¹	FTS	FTS	FTS
Reno-Sparks	SU	FTS	FTS	FTS	FTS	FTS	FTS	FTS
Carson City	SU	FTS	FTS	FTS	FTS	FTS	FTS	FTS
Schurz	SU	FTS	SHD ²	SHD ²	SHD ²	FTS	FTS	FTS
Ft. McDermitt	SU	FTS	SHD ³	SHD ³	SHD ³	FTS	FTS	FTS
Las Vegas	SU	FTS	FTS	FTS	FTS	FTS	FTS	FTS
Moapa	SU	SHD ⁴	SHD ⁴	SHD ⁴	SHD ⁴	SHD ⁴	SHD ⁴	FTS

FTS = Full time staff.

SHD = Shared staff.

CHS = Contract Health Services.

SU = Service Unit Based. Space is available at each facility for services to be provided directly within the Service Area.

¹Pyramid Lake will share staff with Reno-Sparks until 1986 at which time it will be staffed on a full time basis as a health center.

²Schurz will share staff with Fallon although all services will be provided at the Schurz facility.

³Ft. McDermitt will share staff with Reno-Sparks although all services will be provided at the Ft. McDermitt facility. Present Field Health staff should be maintained.

⁴Moapa will share staff with Las Vegas although all services will be provided at the **Mo**apa facility.

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Figure 8

STAFFING PROGRAM REQUIREMENTS
-TARGET YEAR 1988-

	Fallon	Pyramid Lake	Ft. McDermitt	Reno- Sparks	Schurz	Carson City	Las Vegas	Moapa	Serví Unit
Population	1,326	1,066	936	2,772	726	2,976	2,268	211	
OPV's	8,486	6,822	5,990	17,741	4,646	19,046	14,576	1,350	
Staff Position			_						
Ambulatory Care Primary Care Provider	2.0	1.0	1.0	2.0	Γ			Г	
Registered Nurse	1.0	1.0	r- ^{1.0}	2.0		2.0	2.0		
Licensed Practical	1.0	1.0		2.0		2.0	1.0		
Nurse	2.0		1.0	1.0		1.0	1.0	1	ļ
Nurse Assistant		1.0		1.0	Staffed from Fallon	1.0		Staffed from Las Vegas	
X-Ray Tech.	1.0	1.0		1.0	clinics	1.0	1.0	clinics	
Laboratory Tech.	2.0	1.0	1.0	2.0		2.0	1.0	1.0 Nurse Practitioner	
Pharmacist	2.0	1.0	1.0	2.0		2.0	2.0	1.0 General Clerk	
Pharm. Clerk		0.5		1.0		1.0		l Cici k	
Medical Records Clerk	2.0	1.0		2.0		2.0	1.0		1
General Clerk	1.0		1.0	1.0		1.0	1.0		
Naintenance	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
lousekeeping	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Subtotal	15.0	9.5	7.0	17.0	2.0	17.0	12.0	_	
Dentist		·, -							4.0
Dental Auxilliary									
Optometrist]						Total (Contract	8.0
Opt. Assistant					 				2.0
Audiologist					 .	 			2.0
Audio Tech.					 				1.0
Subtotal		-=			_ -=				_1.0
		-		_	_	_		<u> </u>	18.0
Administration Facility Director	1.0	1.0	_	1.0	<u>Г</u>	1.0	1.0	_	
Secretary	1.0	1.0		1.0		1.0	1.0		
CHS Clerk	1.0	1.0	Adminis-	1.0	Administered	1.0	1.0	Administered	
Communications Provider	1.0	1.0	tered through Reno- Sparks	1.0	through Fallon	1.0	1.0	through Las Vegas	

¹Staffing is based on the assumption that 60 percent of the eligible population will utilize the facility (8,710 0

Figure 8 (continued)

STAFFING PROGRAM REQUIREMENTS -TARGET YEAR 1988(continued)

Staff Position	Fallon	Pyramid Lake	Ft. McDermitt	Reno- Sparks	Schurz	Carson City	Las Vegas	Moapa	Service Unit
Transportation Provider	2.0	2.0	1.0	2.0	1.0	2.0	2.0	1.0	
Supply and Property Clerk	1.0	1.0	Through Reno-Sparks	1.0	Through Fallon	1.0	1.0	Through Las Vegas	
Service Unit Director			_		L			_	1.0
Admin. Assistant]	ı							1.0
Secretary									1.0
Contract Health Ser. Manager									1.0
CHS Technicians									3.0
Quality Assurance Prof.								l	1.0
QA Abstractor	ļ)			1.0
QA Clerk			•						1.0
S.U. Supply and Property Clerk									3.0
Warehouseman									1.0
Subtotal	7.0	7.0	1.0	7.0	1.0	7.0	7.0	1.0	14.0
Field Health Services Comm. Hith. Nurse	1.0	1.0	1.0	3.0	1.0	3.0	1.0	From	
LCN Prct. Nurse	1.0	1.0	1.0	2.0	1.0	2.0	1.0	Las Vegas	
CHN Supervisor				1.0		1.0		L	
Public Hlth Nutritionist			~~						1.0
Public Nutrition Tech.	1.0	1.0	From Reno-Sparks	1.0	From Fallon	1.0	1.0	From Las Vegas	
Environmental Engineer	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Mental Health Consultant									1.0
Mental Health Technician	1.0	1.0		2.0		2.0	1.0		
Social Worker	1.0	1.0	From Reno-Sparks	1.0	From Fallon	1.0	1.0	From Las Vegas	
S.W. Associate	1.0		·	1.0		1.0	1.0		
Clerks	2.0	1.5		3.0		3.0	2.0		
			L		-	-		L-	,

Figure 8 (continued)

STAFFING PROGRAM REQUIREMENTS -TARGET YEAR 1988(continued)

Staff Position	Fallon	Pyramid Lake	Ft. McDermitt	Reno- Sparks	Schurz	Carson City	Las Vegas	Moapa	Service Unit
Field Health Services (cont.) Public Health Educator									1.0
Community Health Educator		,							1.0
Hlth. Educator Assistant									2.0
Clerk									2.0
Subtotal	9.0	7.5	3.0	15.0	3.0	15.0	9.0	0.0	8.0
Tribal Outreach Workers	5.0	3.0	5.0	8.0	2.0	8.0	5.0	2.0	
Emergency Medical Services EMS Ambulance									
Emergency		1.0	1.0		1.0			1.0	
Medical Tech.		5.0	5.0		5.0			5.0	1
EMS Director		ĺ.							
Clerk									
Subtotal		5.0	5.0		5.0			5.0	
Alcoholism Services									
Alcoholism Counselors	4.0	3.0	3.0	4.0	2.5	4.0	4.0		
Attendant/Driver	2.5	1.5	1.5	2.5		2.5	2.5		
Subtotal	6.5	4.5	4.5	6.5	2.5	6.5	6. 5		

The following table summarizes the gross square footage requirements and the planning and construction cost estimates for all the needed health facilities if they were funded in 1982 (the earliest possible date when funding could be available).

SUMMARY OF FACILITY NEEDS

Facility	Gross Sq. Ft.	1982 Planning & Construction Cost
Reno-Sparks	23,788.5	\$ 6,187,387.10
Carson City	20,428.5	5,313,451.30
Las Vegas	15,139.5	3,937,782.70
Fallon	14,809.5	3,851,949.70
Pyramid Lake	14,824.5	3,855,851.20
Ft. McDermitt (expand existing facility)	2,310.0	600,830.83
Schurz (use existing facility)	0	0
GRAND TOTAL	91,300.5	\$ 23,747,250.83
	Gross Sq. Ft.	Estimated Purchase Price
Moapa (purchase trailer)	880.0	\$ 65,000.00
		

NOTE:

Costs projected in accordance with IHS/ROFEC typical total unit project cost for IHS facilities (1981 average) for health center construction.

Although it appears unlikely that all needed construction will be funded in one year, the following table summarizes the operating costs related to directly running the facilities in Western Nevada as if they were all in operation in 1982. Staffing positions are based on justified need.

DIRECT SERVICE DELIVERY COSTS Total Western Nevada System -- 1982

Ambulatory - Positions	85.5
Operating Costs	\$ 2,934,360.00
Administration - Positions	46.0
Operating Costs	1,578,720.00
Field Health Services - Positions	67.0
Operating Costs	2,299,440.00
Tribal Programs - Positions	95.5
Operating Costs	3,277,560.00
GRAND TOTAL 1982 OPERATING COSTS	\$ 10,090,080.00

Total operating costs include staff salaries and cost of operations. Staff salaries are based on \$24,000 per position in 1981. Cost of operations is based on 30 percent of salaries or \$7,920 in 1981.

For maximum cost-efficiency in constructing the proposed facilities it is recommended that Health Centers having similar space requirements be constructed using similar architectural designs. Two "prototype" designs developed were as follows:

• Carson	City/Reno-Sparks
----------	------------------

10,579 Net Square Feet 8,233 Net Square Feet

Fallon/Las Vegas/Pyramid Lake

C. IMPLEMENTATION PLAN

The following priority ranking for the improvement of health care services within the Service Unit was developed by the Task Force:

- 1. Improve CHS for the whole service population.
- 2. Provide improved patient transportation to the whole service population.
- 3. Provide for total acute inpatient care for the whole service population through CHS; temporarily provide long-term inpatient care at Schurz hospital.
- 4. Construct facilities as outlined in the <u>Master Plan</u>. (Order construction so as to phase in all buildings over a six (6) year period. Relocate Service Unit headquarters to Reno-Sparks as soon as possible).
- 5. Improve community health nursing services for the whole service population.
- 6. Improve mental health services for the whole service population.
 - 7. Improve social services for the whole service population.

A priority ranking for constructing the facilities outlined in the $\underline{\text{Master}}$ $\underline{\text{Plan}}$ was developed by the Task Force. The ranking is as follows:

1. Reno-Sparks Health Center and Service Unit headquarters (Concurrently convert Stewart School Clinic to Stewart Community Clinic and fully staff it. This Community Clinic is to function together with the Dresslerville Clinic).

- 2. Las Vegas Health Center and Moapa Health Station.
- 3. Fallon Health Center and Pyramid Lake Health Center.
- 4. Convert Schurz Outpatient Department to a Health Station. (Discontinue use of Schurz Hospital for long-term inpatient care at the same time.)
- 5. Carson City Health Center (to replace Stewart Community Clinic).
- 6. Ft. McDermitt Health Center expansion. (Trailers or modular buildings to provide needed office space can be obtained at an earlier time if Ft. McDermitt foregoes the option of constructing a new permanent building.)

The above priority ranking for facility construction is dependent on the closing of the Stewart School in the near future. In the event that the Stewart School is not closed, the Task Force developed a priority ranking as follows:

- 1. Reno-Sparks Health Center.
- Las Vegas Health Center and Moapa Health Station.
- 3. Carson City Health Center.
- 4. Fallon Health Center and Pyramid Lake Health Center.
- 5. Convert Schurz Outpatient Department to a Health Station. (Discontinue use of Schurz Hospital for long-term inpatient care at the same time).
- 6. Ft. McDermitt Health Center expansion. (Trailers or modular buildings to provide needed office space can be obtained at an earlier time if Ft. McDermitt foregoes the option of constructing a new permanent building.)

The priority rankings developed by the Task Force formed the basis for the <u>Implementation Plan</u>. Details of the priorities, the phasing-in process, and the expected impacts on the entire system of phased implementation are presented in the text of the Implementation Plan.

Figures 9 and 10 summarize respectively the additional resource and cost requirements for each year of the phased implementation. All numbers shown are specific for their respective year and are non-cumulative. It is assumed that all funding requests for prior years have been granted.

Staff positions in parentheses illustrate transfers of existing personnel to other services or sites. Cost figures in parentheses for CHS represent reductions due to increased availability of direct IHS services as the Western Nevada Plan is implemented. They are subtracted when calculating the total additional cost requirements for that year.

In the <u>Implementation Plan</u> provision is made for the impact of inflation should funding be delayed past the year indicated in Figure 10.

Figure 9

SUMMARY OF ADDITIONAL RESOURCE REQUIREMENTS

		TOTAL		ONAL RES	OURCE	
COMPONENT	1982	1983	1984	1985	1986	1987
Personnel (FTE) S.U. Admin. Schurz Hospital Schurz Outpatient Other Direct Services	4.0 (5.0)	21.0 (7.0)	(3.0)	(21.0)		
Ft. McDermitt H.C.		(2.0)				15.5
Reno Field Office CHR, HHA, Alcohol Stewart/Carson City	(3.0)	(2.0) (8.0) 38.5	(5.0)	(17.0) 1.0		(5.0)
Reno-Sparks H.C. Ľas Vegas/Moapa H.C.		38.5	35.5			
Fallon H.C. Pyramid Lake H.C. Schurz H. S.				10.5 27.5 10.5		
Other Transportation CHN Mental Health	12.0	8.0	2.0			
Social Services Subtotal	42.0	67.5	37.5	3.0 52.5	0.0	15.5
Facilities Reno-Sparks H.C.	1.0					~
Las Vegas H.C. Moapa H.S.		1.0 1.0				
Fallon H.C. Pyramid Lake H.C.			$\frac{1.0}{1.0}$			
Carson City H.C. Ft. McDermitt (Expan.) Subtotal	1.0	2.0	2.0	1.0 1.0	1.0 1.0	
Staff Housing Units Moapa Pyramid Lake		1.0	13.0			
Fort McDermitt Subtotal		1.0	13.0		8.0 8.0	
Equipment Units Yans Ambulances Subtotal	13.0 13.0	1.0	1.0 1.0 2.0	1.0 2.0 3.0		1.0 1.0

Figure 10
SUMMARY OF ADDITIONAL COST REQUIREMENTS

	-	REAL	ADDITIONAL	COST REQUIRE	MENTS	
COMPONENT	1982	1983	1984	1985	1986	1987
CHS	\$1,352,900	1,412,886	(403,969)	(155,635)		2,579,707
Operating Costs						
S.U. Admin.	137,280	792,792				
Schurz Hospital						
Schurz Outpatient						
Other Direct Servi	ces					
Ft. McDermitt H	.C					856,716
Reno Field Offi						
CHR, HHA, Alcoh						
Stewart/Carson City	892,320			45,679		
Reno-Sparks H.C.		1,453,452		10,075		
Las Vegas/Moapa H.C			1,474,209			
Fallon H.C.				479,630		
Pyramid Lake H.C.				1,256,173		
Schurz H. S.				479,630		
Other				473,000		
Transportation	411,840				-	
CHN	411,040	302,016				
		302,010				
Mental Health			83,054			
Social Services	1 441 440	2 540 260	1 557 969	137,037		056 716
Subtotal	1,441,440	2 ,548,260	1,557,263	2,398,149 —————		856,716
Construction Costs						
Reno-Sparks H.C.	6,187,387					
Las Vegas H.C.		4,607,206				
Moapa H.S.		76,050				
Fallon H.C.			5,272,934			
Pyramid Lake H.C.			5,278,275			
Carson City H.C.				8,510,093		
Ft. McDermitt (Exp	.)				1,125,889	
Staff Housing	•				_,,	
Moapa		74,100				
Pyramid Lake			1,098,162			
Fort McDermitt					878,252	
Subtotal	6,187,387	4,757,356	11,649,371	8,510,093	2,004,041	
Staff Relocat. Costs	13,615	50,915				
Equipment Costs	208,000	17,600	54,765	99,188		47,12
TOTAL ADDITIONAL			-			
COSTS FOR THE YEAR	\$9,203,342	8.787.017	12.857.430	10,851,795	2.004.141	3.483.548