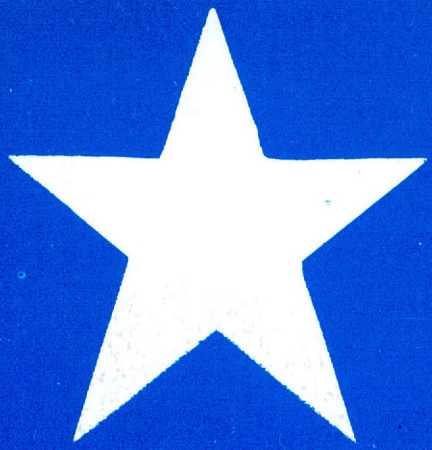

Appendix A

1987-88 TEXAS STATE HEALTH PLAN

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LISTING OF CHAPTER ANNEXES IN APPENDIX A

INTRODUCTION

The information in Appendix A provides additional information and data concerning the health care delivery system. This appendix contains a separate annex for Chapters IV-XVIII of the State Health Plan (SHP). Numbered exhibits, figures and tables are also included in this appendix.

For Chapters IV - XVII, each annex includes a brief discussion, in the subject area background section, of selected referral issues mentioned in the 1987 Texas State Health Plan. Referral issues are those major issues of concern in each subject area, other than the top priority issue, which were recommended by the Statewide Health Coordinating Council (SHCC) to be referred for appropriate action by the organizations most directly involved. The SHCC strongly encourages the affected agencies and organizations to take action on the issues referred to them. The State Health Planning and Development Agency (SHPDA) at the Texas Department of Health will gladly provide assistance to the proponent organizations in developing courses of actions designed to resolve these issues and will assist in implementation activities.

CHAPTER IV - HEALTH PROTECTION

SUBJECT AREA BACKGROUND

In the federal health planning taxonomy, the subject area of health protection is described as, "Services at the community level which improve the environmental factors affecting health."[1] Under the general description, the following sub-categories are given:

- Environmental quality management.
  Activities which enhance the environment and protect the community from hazards, and promote improved personal health care. Environmental hazards include air, waste and noise pollution, as well as unsafe residential and community environs.

- Food protection.
  Measures which assure wholesome food, free from contamination.

- Occupational health and safety.
  Actions which assure the identification, prevention, and control of occupational health hazards and illnesses, and which promote the physical and mental well-being of employed persons.

- Radiation safety.
  Measures which protect the community from unnecessary exposure to radiation.

- Biomedical and consumer product safety.
  Measures which ensure that drugs, cosmetics, therapeutic devices, and other consumer products are safe and clearly labeled as to their proper use.[2]

Hazardous waste management was the top priority health protection issue in the SHP 85. At that time, there were 11 "superfund," or EPA National Priority List, abandoned hazardous waste sites in Texas. There are now 26. Some of these sites contaminate, or threaten to contaminate, the water supplies of thousands of Texans.

Also causing health problems for many small communities statewide is the lack of adequate water and wastewater treatment and distribution systems. The Texas Research League has been commissioned by the governor to study the infrastructure needs and financing for water and wastewater requirements. In addition, Texas Water Development Bonds were approved by voters in November, 1985 to provide funds for regional water treatment facilities in rural areas. Unfortunately, as of March, 1986 this process has been on hold while the federal tax exempt status of municipal bonds remains in doubt.

During the policy analysis phase of the development of this plan, the following organizations provided particularly useful comments:

Texas Department of Agriculture

Texas Department of Health
  Environmental and Consumer Health Protection
  Public Health Regions 2, 11 and 12
Texas Department of Water Resources
  (now the Texas Water Commission)
Texas Agricultural Extension Service
Alamo Area Council of Governments
Golden Crescent Regional Planning Council
Houston-Galveston Area Council
Middle Rio Grande Development Council
North Central Texas Council of Governments
Panhandle Regional Planning Council
West Central Texas Council of Governments
Texas Public Health Association
Texas Safety Association

The concerns identified through the input process were reduced to 17 issues of statewide concern. As a result of the prioritization survey which followed, the issue of groundwater contamination was recommended to and approved by the SHCC as the priority issue to be presented in the plan. The other 16 issues are referred to the appropriate proponent agencies for action.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Environmental Quality Problem Areas

Issue 1: There is an insufficient number of water treatment, distribution and storage facilities to serve all Texas Communities.

Referred to the Texas Department of Health, Texas Water Commission and Texas Water Development Board for appropriate action.

Issue 2: Better protection of the quality of the surface drinking and recreational water supplies is needed.

Referred to the Texas Department of Health, Texas Water Commission and Texas Water Development Board for appropriate action.

Issue 3: Automobile and industrial air pollution is not adequately addressed.

Referred to the Texas Legislature and the Texas Air Control Board for appropriate action.

Issue 4: Health hazards from indoor air contaminants, including air pollution of indoor places by tobacco are inadequately addressed.

Referred to the Texas Department of Health, the Texas Department of Labor and Standards and the Texas Legislature for appropriate action.

Issue 5: Local funds are insufficient to properly dispose of solid waste.

Referred to the Texas Department of Health and regional councils for appropriate action.

Issue 6: Control of wastewater, solid waste and other health and environmental concerns outside of incorporated cities is inadequate.

Referred to the Texas Legislature, the Texas Association of Counties, the Texas Water Commission and the Texas Department of Health for appropriate actions.

Issue 7: Identification and cleanup of abandoned hazardous chemical waste sites is lacking.

Referred to the Texas Water Commission for appropriate action.

Issue 8: Proper handling, transportation and disposal of hazardous wastes are inadequately addressed.

Referred to the Texas Water Commission for appropriate action.

Radiation Safety Problem Areas

Issue 9: Proper handling, transportation and disposal of radioactive materials are inadequately addressed.

Referred to the Texas Low-Level Radioactive Waste Disposal Authority, the Texas Department of Health and the Texas Legislature for study.

Issue 10: Industrial and medical radiation, and x-ray equipment which does not meet safety standards or which is operated by untrained personnel, requires further consideration.

Referred to the Texas Department of Health for appropriate action.

Occupational Health & Safety Problem Areas

Issue 11: The level of employee education about hazardous conditions and materials at the workplace is inadequate.

Referred to the Texas Department of Health, the Industrial Accident Board, and the Texas Board of Insurance for appropriate action.

Issue 12: Worksite exposure to hazardous materials is too high.

Referred to the Texas Department of Health, the Industrial Accident Board and the Texas Board of Insurance.

Food and Consumer Product Safety Problem Areas

Issue 13: There is an insufficient number of food services inspectors.

Referred to the Texas Department of Health and the Texas Legislature for appropriate action.

Issue 14: The level of consumer knowledge of food, nutrition and health quackery issues is inadequate.

Referred to the Texas Department of Health, Texas Medical Association, Texas Dietetic Association and Texas State Nutrition Council for appropriate action.

Issue 15: Foods, drugs and other products that contain potentially harmful substances or materials are improperly labeled.

Referred to the Texas Department of Health and the Texas Legislature for appropriate action.

Issue 16: Pesticides and herbicides, especially in the rural areas, are improperly handled and used.

Referred to the Texas Department of Agriculture, the Texas Water Commmission and the Texas Department of Health for appropriate action.

PRIORITY ISSUE SUPPORT

Exhibit 1. Superfund Sites in Texas. This exhibit lists the EPA National Priority List hazardous waste sites in Texas with the location by city and county.

Figure 1. Underground Water Conservation Districts and Underground Water Reservoir Delineations as of August 1983.

REFERENCES

1. U. S. Department of Health, Education and Welfare, Health Planning Taxonomy (DHEW Pub No. 79-14029, September 1979), p.3.

2. Ibid.

EXHIBIT 1

SUPERFUND SITES IN TEXAS
BY CITY (COUNTY)

Bailey Waste Disposal
Port Arthur (Orange)

Bio-Ecology
Grand Prairie (Dallas)

Brio Refining, Inc.
Friendswood (Harris)

Crystal City Airport
Crystal City (Zavala)

Crystal Chemical Co.
Houston (Harris)

French Ltd.
Crosby/Barrett (Harris)

Geneva Industries
Houston (Harris)

Harris (Farley Street)
Houston (Harris)

Highlands Acid Pit
Highlands (Harris)

Koppers Co., Inc.
Texarkana (Bowie)

Lone Star Army Ammunition
Texarkana (Bowie)

Motco, Inc. (Texas City Wye)
LaMarque (Galveston)

North Cavalcade Street
Houston (Harris)

Odessa Chromium #1
Odessa (Ector)

Odessa Chromium #2
Odessa (Ector)

Pesses Chemical
Fort Worth (Tarrant)

Petro-Chemical Systems, Inc.
Moss Bluff (Liberty)

San Jacinto Pits (Pig Road)
Waverly (San Jacinto)

Sikes Disposal Pits
Crosby/Barrett (Harris)

Sol Lynn
Houston (Harris)

South Cavalcade Street
Houston (Harris)

Stewco, Inc.
Waskom (Harrison)

Texarkana Wood Preserving Co.
Texarkana (Bowie)

Triangle Chemical
Bridge City (Orange)

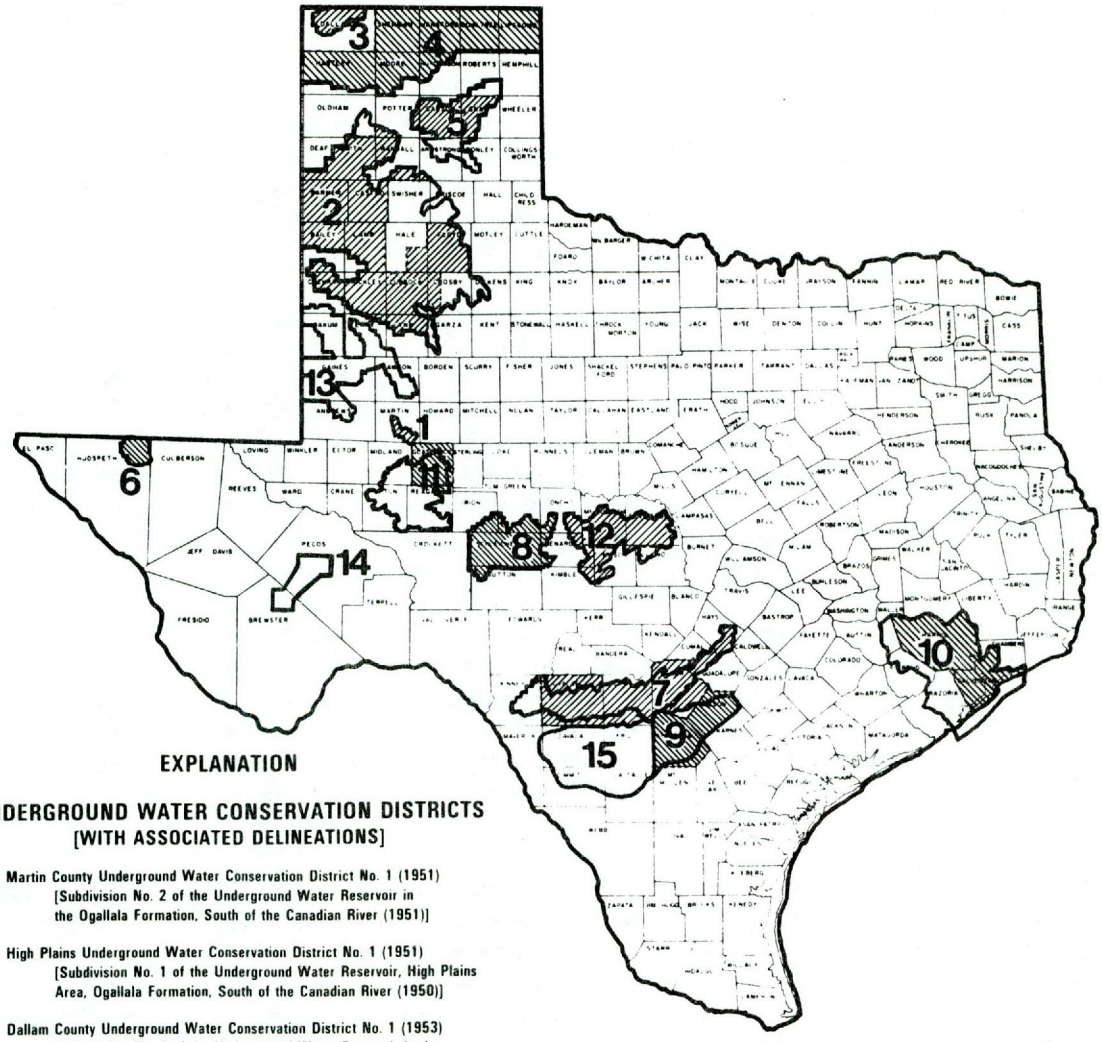
United Creosoting
Conroe (Montgomery)

U.S. Air Force Plant #4
Fort Worth (Tarrant)

Source: Texas Water Commission, October 1985.

FIGURE 1

UNDERGROUND WATER CONSERVATION DISTRICTS AND UNDERGROUND WATER RESERVOIR DELINEATIONS AS OF AUGUST 1983



EXPLANATION

UNDERGROUND WATER CONSERVATION DISTRICTS [WITH ASSOCIATED DELINEATIONS]

* 1 Martin County Underground Water Conservation District No. 1 (1951) [Subdivision No. 2 of the Underground Water Reservoir in the Ogallala Formation, South of the Canadian River (1951)]

2 High Plains Underground Water Conservation District No. 1 (1951) [Subdivision No. 1 of the Underground Water Reservoir, High Plains Area, Ogallala Formation, South of the Canadian River (1950)]

3 Dallam County Underground Water Conservation District No. 1 (1953) [Subdivision No. 1 of the Underground Water Reservoir in the Ogallala Formation, North of Canadian River (1950)]

4 North Plains Ground Water Conservation District No. 2 (1954) [Subdivision No. 2 of the Underground Water Reservoir in the Ogallala Formation, North of Canadian River (1954)]

5 Panhandle Ground Water Conservation District No. 3 (1955) [Subdivision No. 3 of the Underground Water Reservoir, High Plains Area, in the Ogallala Formation, South of the Canadian River (1955)]

6 Hudspeth County Underground Water Conservation District No. 1 (1957) [Subdivision No. 1 of the Underground Water Reservoir in Hudspeth County (1955)]

7 Edwards Underground Water District (1959) [Subdivision No. 1 of the Underground Water Reservoir in the Edwards Limestone, Balcones Escarpment Area (1957)]

8 Plateau Underground Water Conservation and Supply District (1965) [Plateau Underground Water Reservoir (1974)] The Texas Legislature created this district before the delineation was made.

9 Evergreen Underground Water Conservation District (1965) [Subdivision No. 2 of the Underground Water Reservoir in the Carrizo-Wilcox Sands (1957)]

10 Harris-Galveston Coastal Subsidence District (1975) [Subdivision No. 1 of the Gulf Coast Underground Water Reservoir (1975)]

11 Glasscock County Underground Water Conservation District (1981) [Subdivision No. 1 of the Underground Water Reservoir in the Edwards-Trinity Formation (1970)]

12 Hickory Underground Water Conservation District No. 1 (1982) [Subdivision of the Hickory Underground Water Reservoir (1975)]

UNDERGROUND WATER RESERVOIR DELINEATIONS

13 Subdivision No. 4 of the Underground Water Reservoir in the Ogallala Formation, South of the Canadian River (1956). Formed as "the South Plains Underground Water Conservation District No. 4 (1966)." Texas Supreme Court ruled the District Invalid

14 Subdivision No. 1 of the Pecos Underground Water Reservoir (1959)

15 Subdivision No. 1 of the Underground Water Reservoir in the Carrizo-Wilcox Sands (1957)

--- Line denoting the limits of underground water reservoir delineation

1 or 4 Limits of underground water conservation districts (numbered in the order in which they were established)

(1959) Date of delineation or establishment of district

* Inactive district as of August 1983 (those without a board of directors)

SOURCE: Texas Water Commission

CHAPTER V - HEALTH PROMOTION/HEALTH EDUCATION

SUBJECT AREA BACKGROUND

The goal of health promotion is to establish society - wide norms that apply to decreasing specific illness problems and furthering health objectives. Health education, a component of health promotion, is defined as any combination of learning experiences designed to facilitate voluntary adaptions of behavior conducive to health.

While health promotion efforts are increasing in Texas, the state lacks a comprehensive approach towards identifying needs, planning, and implementing health promotion programs. Currently, an interim study by the Senate Subcommittee on Health Services under Senator Carlos Truan, is addressing health promotion efforts in Texas. The subcommittee, working closely with the Center for Health Promotion, U.T. Health Science Center at Houston, is examining and assessing health promotion efforts in the state. The Subcommittee will make recommendations to the 70th Legislature on ways to improve the health promotion system in Texas.

Barriers to health promotion and health education efforts do exist. Since the benefits of healthy lifestyles may not be apparent for many years, the cost savings of effective health promotion programs are difficult to demonstrate. Because these benefits of health promotion activities are not well recognized by policy makers and legislators, appropriations for health promotion and disease prevention activities have been minimal in the past.

Current funding for preventive health programs is a small portion of total health expenditures. Scarce resources are available for aiding communities to establish health promotion programs. The interim study on health promotion by the Senate Subcommittee on Health Services is attempting to identify where funding might be redirected to health promotion efforts. The present fiscal climate in the state, with state oil revenues falling and federal dollars decreasing due to the Gramm-Rudman-Hollings bill, presents an even bleaker future outlook for health promotion appropriations.

Resolution of this issue, however, could potentially determine appropriations and support for health promotion activities statewide. It could initiate a shift in funding and emphasis from secondary and tertiary care programs to preventive programs.

Another barrier to generalized acceptance of health promotion activities, is the common perception that health promotion is aimed at the affluent. Special efforts must be made by public institutions and private entities to provide appropriate health promotion services to special populations, such as low income, minority, and elderly Texans. This is particularly true in Texas, with its tri-ethnic population, wide range of socioeconomic classes, and large elderly population.

Additionally, the current structure of the health insurance system lacks incentives for companies and individuals to invest time and money in

programs to improve health behaviors. The fee-for-service and reimbursement structure for the health insurance system are disincentives to development of health promotion activities.

Another barrier reflects on the perception that providers and other health professionals have not incorporated professional practices and attitudes that promote healthy lifestyles into comprehensive health care delivery. Infant and pediatric care, utilizing the "well-baby" and "well-child" check-up approach is an example of comprehensive health care. However, "illness care" is the norm for most Texas health care consumers. Professional attitudes and practices of health care providers could impact on a desired shift to comprehensive health care.

An alternative approach to effecting positive changes in health behaviors has focused on legislative controls on risk. This includes handgun and seat belt legislation, controls on drug and alcohol use, and limits on advertising for tobacco and alcohol products. The effects of current legislation should be monitored for its impact on mortality and morbidity rates in Texas.

Business coalitions are also examining the impact of health promotion activities on behaviors such as productivity and absenteeism. Employers are beginning to recognize the relationship between healthy employees and economic benefits to the company.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: A demonstration of the effectiveness of health promotion programs.

The referral agencies are the Texas Department of Health (Division of Public Health Promotion and/or Environmental Epidemiology Division) and possibly representatives of other state agencies that have health promotion programs such as: Texas Department of Human Services, Texas Department of Mental Health and Mental Retardation, Texas Department of Community Affairs, Texas Commission on Alcoholism and Drug Abuse, and Department of Public Safety.

Issue 2: The need for health promotion activities directed at special populations, such as the elderly and low-income populations.

The need for health promotion programs targeted for low-income and minority populations is referred to the Public Health Promotion Division, Texas Department of Health, for further review. The need for health promotion programs for the elderly, which could be constructed within the realm of "scope of services," or "alternative services," is referred to the Texas

Department on Aging for further review.

Issue 3: Health insurance industry disincentives regarding health promotion efforts.

Investigation into a potential restructuring of the health insurance system is referred to the State Board of Insurance for further review and study.

Issue 4: The lack of funding for health promotion programs

This issue is referred to the Texas Department of Health, and the Texas Health and Human Services Coordinating Council for further review.

Issue 5: The need for legislative controls on health risk factors.

Further examination of this issue is referred to the Environmental Epidemiology Division, Texas Department of Health, for their review and study.

Issue 6: The need for health promotion efforts as a component of comprehensive health care.

This issue is referred to the Texas Department of Health and the professional organizations of Texas Medical Association, Texas Dental Associations, and the Texas Nurses Association.

Issue 7: The need for worksite wellness programs.

This issue is referred to the Texas Department of Health, and the Texas Business Group on Health for further review and study.

PRIORITY ISSUE SUPPORT

National Efforts

At the national level, the role of the schools in health promotion efforts has been recognized:

> "The nation's schools provide an appropriate and efficient vehicle by which our population could be educated about increasingly complex risks to their health and well-being, and about individual and societal means available to control such risks. Since 1909, schools have been called upon by numerous agencies of society to provide timely and effective health education for our young people. Indeed, the need to educate our young about means to maintain and improve their health has never been more urgent. Although death rates consistently have declined for all other age groups since 1900, death rates actually have increased for young people (15-24 years of age) to the point where they now suffer a rate higher than those the same age did twenty years ago." (Prospects for the Nation, DHHS, 1985)

State Efforts

Decisions to implement comprehensive school health education programs must be made at the state and local level. A basic conflict in implementing comprehensive school health education revolves around the primary educational mission of the schools in contrast to the functions other agencies believe they should perform. Yet, the Texas Education Agency and the Texas Department of Health are working together to address school health issues.

The Texas Education Agency, in recognizing this responsibility to improve school health, has recently reorganized school health-related programs into the Comprehensive School Health program. This program is organized as follows:

Comprehensive School Health Program
- Health Education
- Health Services
- Health Promotion

This iniative by T.E.A. is encouraging to the development of a state-level environment supportive of comprehensive health education.

Local Efforts

Local input in the initial issue survey, indicated a desire to see comprehensive school health education in their local schools. Fifteen of twenty-four regional councils of government named this as a high priority.

The responsibility for implementing comprehensive school health education rests ultimately at the local level. Texas Education Code 21.101 states:

> "The responsibility for enabling all children to participate actively in a balanced curriculum which is designed to meet individual needs rests with the local school districts."

The local school districts, however, cannot realistically implement comprehensive school health education within their schools without assistance. The intent of the regional and local level networks (coalitions) would be to assist local school districts with this implementation.

REFERENCES

American School Health Association, Journal of School Health, October, 1985.

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Gilbert, G.G., R.L. Davis, and C. L. Damberg, "Current Federal Activities in School Health Education", Public Health Reports, vol. 100, no. 5, Sept-Oct. 1985.

Kolbe, Lloyd J., "What Can We Expect From School Health Education?", Journal of School Health, March 1982.

State Board of Education, Rules for Curriculum, Title 19, TAC, Ch. 75.

Texas Education Agency, School Nurse Handbook for the School Health Program, August 1984.

Texas Education Agency, Study of the Availability of Teachers for Texas Public Schools, February 10, 1984.

U.S. Department of Health and Human Services, Prospects for the Nation, 1985.

EXHIBIT 1

SCHOOL YEAR 1984-1985 DATA

Students

Level	Number
K-6	1,764,369
7-8	524,209
9-12	891,285
Total	3,179,863

Teachers

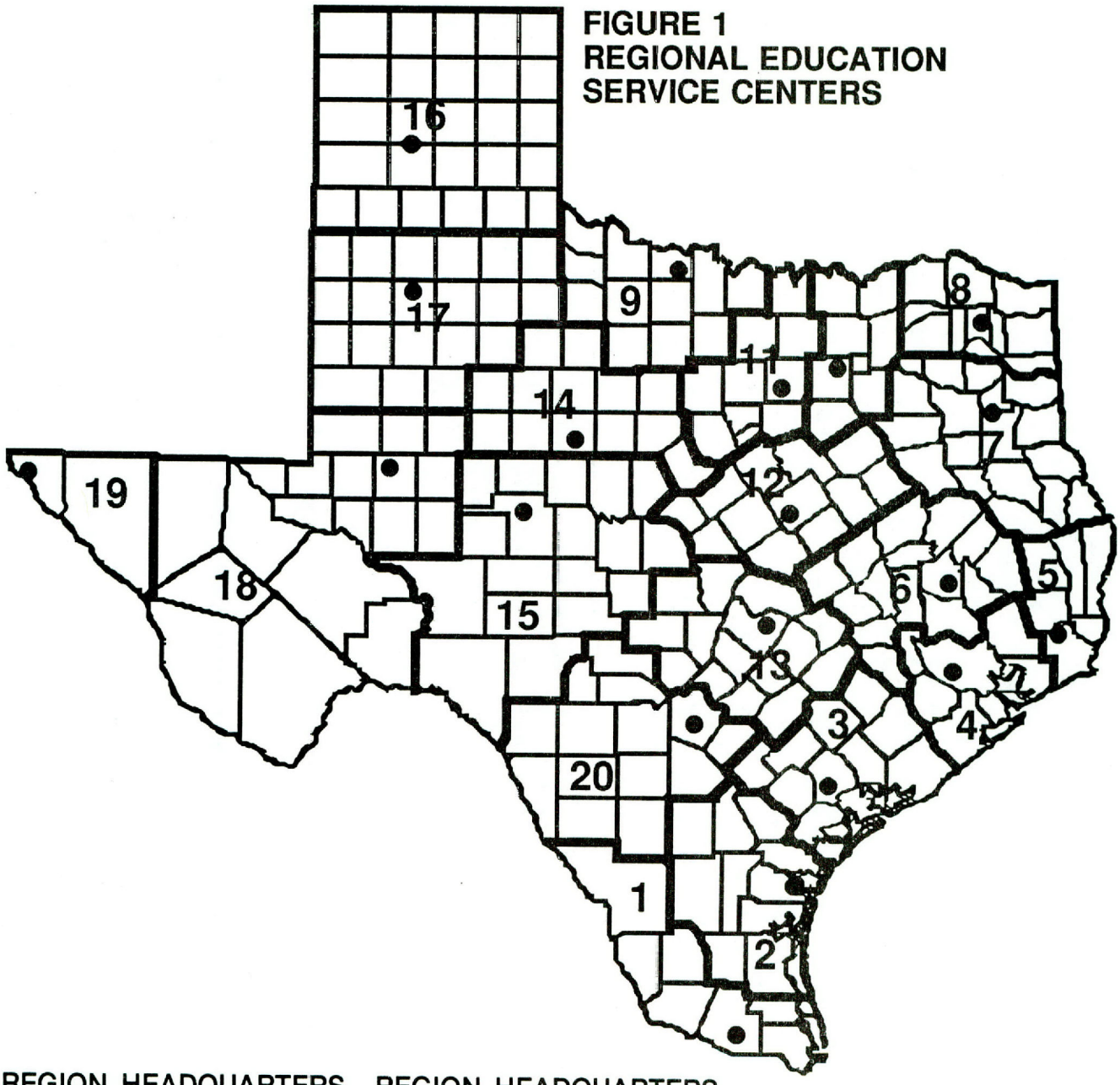
Certification	Number
Elementary	
Health	158
Health and P.E.	66
Secondary	
Health	1,070
Health and P.E.	480
All health and health/P.E. teachers	1,774
All teachers	172,713

Schools

Districts	1,093
Schools within districts	5,000

Source: Texas Education Agency

FIGURE 1
REGIONAL EDUCATION SERVICE CENTERS



REGION	HEADQUARTERS	REGION	HEADQUARTERS
1	Edinburg	11	Fort Worth
2	Corpus Christi	12	Waco
3	Victoria	13	Austin
4	Houston	14	Abilene
5	Beaumont	15	San Angelo
6	Huntsville	16	Amarillo
7	Kilgore	17	Lubbock
8	Mount Pleasant	18	Midland
9	Wichita Falls	19	El Paso
10	Richardson	20	San Antonio

Source: Texas Education Agency

CHAPTER VI - PREVENTION, DETECTION AND REFERRAL

SUBJECT AREA BACKGROUND

"Prevention, detection and referral" pertains to services which are provided to individuals which promote optimal physical and mental well being through prevention, early detection, and protection from disease or disability, and referral to the health care delivery system at the appropriate intake point.

Initial input for this area was received from approximately 70 providers and special interest organizations. Because this section of the SHP does not address a specific topic, it is frequently used by organizations to address their particular interests. Therefore, the comments received covered a broad spectrum of health concerns. Eleven were identified as areas of importance by several organizations. When these 11 issues were prioritized by a second survey, there were three that appeared to be of primary concern to those surveyed. These dealt with sexually transmitted diseases, teenage pregnancies, and child abuse.

Of 82 respondents, 72% indicated that sexually transmitted diseases (STD) were of high or very high concern. Of those, 35% rated this as a very high concern. Ten respondents indicated that STD should be considered the priority issue in this section of this plan, with several of those making specific notations concerning Aquired Immune Deficiency Syndrome (AIDS).

For two reasons, it was recommended that AIDS be considered separately from STD. Resources are currently available for STD while AIDS specifically is lacking in resource commitments. Also, AIDS affects unique populations that may require individualized approaches in dealing with prevention, detection and referral. The SHCC selected AIDS as a separate issue, and this became the priority issue in this portion of the plan. STD, as a result, has been treated as a referral issue.

Of 81 respondents, 77% indicated that prevention of teenage pregnancies was of high or very high concern. Six respondents made special notations indicating that this should be the priority issue. Because of the importance of this issue, a separate "Maternal and Child Health" section was created. Prevention of teenage pregnancies is addressed as a priority issue in this new section of the plan.

Our prioritization survey resulted in 60 of 81 respondents indicating that child abuse was of high or very high concern. One respondent made a special notation indicating that child abuse should be considered the priority issue for the SHP 87. Because of currently operating programs in this area, and the importance of the previous two issues, child abuse has been handled as a referral issue in this plan.

Several of the referral issues deserve some discussion. These are: infant mortality, sexually transmitted diseases, child abuse, and cancer reporting and screening.

Infant Mortality:

There have been great advances in improving maternal and infant health in

the last 50 years. The infant mortality rate in Texas has declined from more than 75 deaths per 1000 births in 1933 to slightly more than 10 per 1000 births in 1984. While Texas' infant mortality rate is lower than the national average, there is still room for improvement. The nation's infant death rate is worse than 15 other developed nations of the world, including Japan and Great Britain. The Texas Health Objectives for 1990 states a target reduction of infant deaths to nine per 1000 live births by 1990. In order to reach this goal, efforts should be made to improve access to medical care, improve nutrition, and decrease teen pregnancies and low birth weight babies.

Sexually Transmitted Diseases:

In Texas in 1984, 76,983 individuals were reported as having acquired either a syphilis or gonorrhea infection. Many cases go unreported. Texas ranks second in the nation for syphilis incidence rates and fifteenth for gonorrhea. Texas has the highest rate of congenital syphilis in the nation.

Chlamydia is only beginning to be recognized and diagnosed and is suspected to be as prevalent as gonorrhea. Chlamydia can, if left untreated, result in sterility and can cause complications in newborn infants. Chlamydia is not a reportable disease at this time. Efforts are being made to assign a reportable status to chlamydia, so that follow-up can be conducted, as is now occurring with other STDs. It is expected that this effort will assist in the prevention of the spread of chlamydia.

The Sexually Transmitted Disease Control Division of the TDH, in conjunction with local health departments, has already established systems to contribute to the prevention of STD. Additional resources are needed to continue to adequately address this issue.

Child Abuse:

In Texas in 1984, there were 36,937 confirmed reports of child abuse. There were 27,376 additional reports that required investigation, but remained unsubstantiated.

The Texas Department of Human Services currently directs the Child Protective Services Program, a comprehensive program that addresses prevention, detection, and referral of child abuse cases. Available resources are not adequate, however, to meet current needs.

Cancer Reporting and Screening:

In 1984, malignant neoplasms were the second most common cause of death among Texans. Of all deaths in Texas, 20% were attributable to cancer. Only diseases of the heart were responsible for more deaths. Early detection of cancer can often affect the success of the treatment.

Complete and accurate reporting of cancer cases in Texas is vital. Until recently, most of the reported cancer data was collected by Cancer Registry personnel who visited hospitals and abstracted hospital charts. The 69th Legislature passed legislation requiring that hospitals with greater than 100 beds provide information concerning all cancer cases to

the Statewide Cancer Registry. The Texas Cancer Council has also been established and may be able to assist in the effort to increase cancer reporting.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: A high incidence of infant mortality.

Referred to: Bureau of Maternal and Child Health, Texas Department of Health; Texas Department of Human Services; Texas Perinatal Association.

Issue 2: A high incidence of other sexually transmitted diseases.

Referred to: Sexually Transmitted Disease Control Division, Bureau of Communicable Disease Services, Texas Department of Health.

Issue 3: The incidence of child abuse and lack of programs to adequately manage the children and families involved.

Referred to: Child Protective Services Program, Texas Department of Human Services; Texas State Teacher's Association; Texas Coalition for the Prevention of Child Abuse.

Issue 4: Incomplete cancer reporting in Texas to the Statewide Cancer Registry.

Referred to: Texas Cancer Council; Legislative Task Force on Cancer; Cancer Registry Division, Bureau of Epidemiology, Texas Department of Health; Texas Hospital Association.

Issue 5: A lack of comprehensive cancer screening programs.

Referred to: Texas Cancer Council; Legislative Task Force on Cancer; Bureau of Epidemiology, Texas Department of Health; American Cancer Society, Texas Division.

Issue 6: A high incidence of unplanned pregnancies among the indigent population.

Referred to: Texas Department of Human Services; Bureau of Maternal and Child Health, Texas Department of Health; Texas Family Planning Association.

Issue 7: A limited availability of immunizations to children and adults.

Referred to: Immunization Division, Bureau of Communicable Disease Services, Texas Department of Health; Texas Education Agency.

Issue 8: Nutritional deficiencies in school-age children.

Referred to: Texas Education Agency.

Issue 9: A lack of dental and eye care services in our public health care programs.

Referred to: Bureau of Dental Health, Texas Department of Health; Texas Department on Aging; Texas State Board of Insurance; Texas State Board of Dental Examiners, Texas Optometry Board.

Issue 10: Inadequate screening for chronic diseases resulting in delayed treatment and disability.

Referred to: Bureau of Chronic Disease Prevention and Control, Texas Department of Health.

PRIORITY ISSUE SUPPORT

In February, 1986, the total number of reported cases of AIDS in the United States exceeded 17,000. According to the Centers for Disease Control, 34% of these cases have been reported in New York, 23% in California, 7% in Florida, 6% in New Jersey, and 5% in Texas (see Table 1). The remaining 25% of the reported cases are distributed throughout the United States, with no additional states reporting more than 2% of the total cases.

Texas reports that 90% of the cases occuring in the state affect homosexual or bisexual men, with only 4% affecting IV drug abusers (See Table 2 and Exhibit 3). In contrast, 73% of the nationally reported AIDS cases have occured in homosexual or bisexual men and 17% have occured in IV drug abusers (see Table 3 and Exhibit 4).

AIDS is an extremely serious manifestation of infection with the HTLV-III virus which almost certainly results in death. Both in Texas, and nationally, over 55% of the reported cases have died. Of those cases diagnosed prior to 1984, this figure approaches 90% (see Exhibit 1 and 2). Data reflecting additional characteristics of persons diagnosed with AIDS follow in Exhibits 4, 5, 6, and 7. These show comparisons of age & racial breakdowns in Texas and the United States.

There are some special problems that need additional attention. These include: 1) women who have AIDS or have been exposed to the HTLV-III virus and are at risk of becoming pregnant; 2) women who are unknowingly at risk of exposure to the HTLV-III virus as sexual partners of men who are bisexual or IV drug abusers; 3) the needs of persons with AIDS that are currently going unfilled due to lack of available resources and services; 4) discrimination against persons with AIDS, such as cancellation of insurance or leases; and 5) education for school age

children with AIDS. Elaboration in each of these five areas follows:

1) Most pediatric HTLV-III infections are acquired perinatally from infected mothers. These women may not even be aware that they are infected with the virus. While not all mothers who carry the virus will give birth to infected infants, the risk cannot be ignored. The Centers for Disease Control (CDC) has developed recommendations regarding testing and counseling procedures for high-risk women. The Texas Board of Health has adopted these guidelines. Through appropriate counseling, uninfected high-risk women can learn how to avoid future infection. Women who have already been infected can choose to delay pregnancy until more is known about perinatal transmission. Those who are already pregnant can be provided with information for managing the pregnancy and caring for the child. CDC does not recommend routine testing of women who do not fall into a high-risk group.

2) The HTLV-III virus can be transmitted through sexual contact by individuals who may not be aware that they are infected. Not only are gay men at risk of exposure, but also women who are sexual partners of bisexual men. Risks are also present for heterosexual partners of IV drug abusers. These risks are compounded if each partner is unaware of the sexual preferences or drug practices of the other. Education of the general public may be helpful in reducing the risk of infection in these individuals.

3) A person with AIDS may encounter difficulty gaining access to the many services that are needed. These include: medical care, financial assistance, housing, home health care, long-term care, mental health services, and legal assistance.

AIDS is frequently a lengthy and expensive illness. Often a patient becomes too ill to continue employment. When employment ends, frequently so does health insurance. With no income and no insurance, medical expenses become impossible to manage. Lack of income also makes it very difficult to maintain a home.

When a patient is medically ready for discharge from a hospital, but unable to care for him or herself, there are several options. If the patient still has a home, home health care is an alternative. Frequently, however, organizations which provide this type of care will not deliver service to a person with AIDS. Discharge to a nursing home is another alternative. However, current admission policies of nursing homes in Texas create barriers for individuals with AIDS. As a result, many individuals spend unnecessary and expensive time hospitalized, simply because there is no where for them to go. It is vital that a viable alternative be identified.

A diagnosis of AIDS can be psychologically devastating to the individual, family members, and significant others. They must cope with an incurable and fatal disease. Sometimes this diagnosis also means that a family discovers information for the first time concerning the sexuality of a loved one. It is imperative that counseling and supportive services be available to all of the parties affected to assist in adjustment to the difficult psychological issues that might arise.

4) Discrimination against persons with AIDS, and those "at-risk" has been apparent since the public first became aware of the disease. Employers have found inventive methods for relieving individuals from job duties. Leases are not renewed, or sometimes tenants are blatently evicted. Insurance is being denied based on suspicion that an individual belongs to a high-risk group. Currently held insurance policies do not always cover expenses if an individual develops AIDS. There is fear that policies might be cancelled if an individual develops AIDS, is exposed to the virus, or even at risk of exposure. All of these issues require careful examination and evaluation aimed at eliminating discriminatory practices.

5) Children with AIDS have been denied access to education through school attendance in some areas of the United States. School age children who have been diagnosed with AIDS are entitled to an education. If the child is well enough to obtain physician approval to attend classes, this is the preferred setting. The Centers for Disease Control have developed guidelines for providing education to school age children with AIDS. The Texas Board of Health has adopted these guidelines, and a copy follows (See Exhibit 5).

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Levine, Carol and Joyce Bermel, eds., "AIDS, the Emerging Ethical Dilema", A Hastings Center Report Special Supplement, August 1985.

Texas Department of Health, Bureau of Epidemiology, AIDS Surveillance Program, "AIDS Cases Reported to the Texas Department of Health", February 22, 1986, and March 3, 1986.

Texas Department of Health, Bureau of Epidemiology, Texas Preventable Disease News, Vol. 46, No. 13, March 29, 1986.

TABLE 1
AIDS CASES BY STATE OF RESIDENCE
MARCH 17, 1986

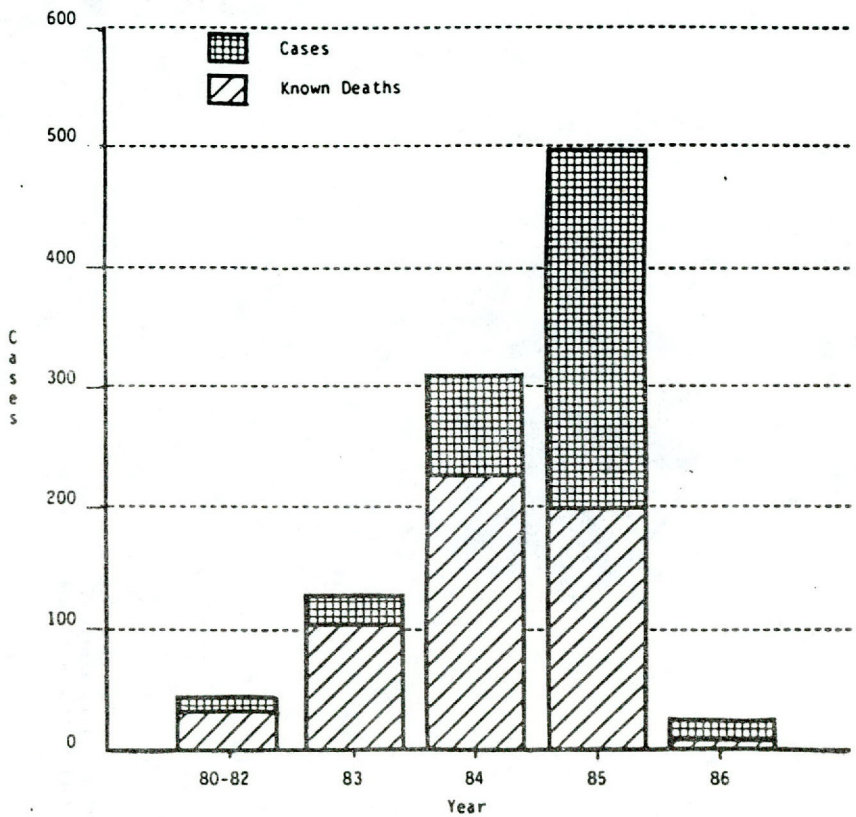
5. RESIDENCE	CASES	PERCENT OF TOTAL
New York	6141	33.4
California	4212	22.9
Florida	1224	6.7
New Jersey	1109	6.0
Texas	1012	5.5
Pennsylvania	412	2.2
Illinois	395	2.1
Massachusetts	367	2.0
District of Columbia	341	1.9
Georgia	310	1.7
Maryland	263	1.4
Virginia	218	1.2
Puerto Rico	210	1.1
Louisiana	207	1.1
Connecticut	205	1.1
Washington	204	1.1
Colorado	164	0.9
Michigan	133	0.7
Ohio	127	0.7
North Carolina	109	0.6
Arizona	98	0.5
Missouri	97	0.5
Minnesota	85	0.5
Indiana	71	0.4
South Carolina	69	0.4
Oregon	66	0.4
Hawaii	56	0.3
Alabama	42	0.2
Wisconsin	41	0.2
Kentucky	38	0.2
Tennessee	38	0.2
Oklahoma	36	0.2
Utah	35	0.2
Nevada	30	0.2
Rhode Island	27	0.1
Delaware	24	0.1
New Mexico	22	0.1
Kansas	21	0.1
Iowa	20	0.1
Arkansas	18	0.1
Mississippi	16	0.1
Alaska	15	0.1
Maine	15	0.1
Nebraska	13	0.1
West Virginia	13	0.1
New Hampshire	12	0.1
Other States (9)	25	0.1
TOTAL - USA	18406	100.0

Source: "Weekly Surveillance Report - United States", AIDS Program, Center for Infectious Diseases. Centers for Disease Control.

EXHIBIT 1

AIDS CASES AND KNOWN DEATHS
BY YEAR

TEXAS

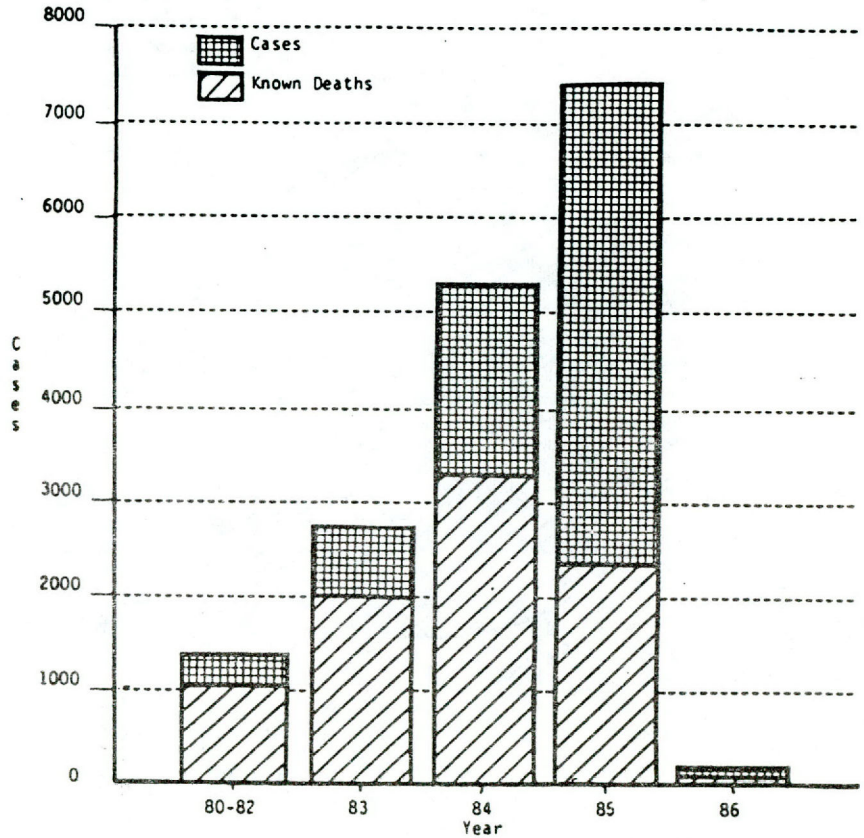


Source: "Texas AIDS Cases Weekly Surveilance Report", Texas Department of Health, Bureau of Enidemiology, February 22, 1986

EXHIBIT 2

AIDS CASES AND KNOWN DEATHS
BY YEAR

UNITED STATES

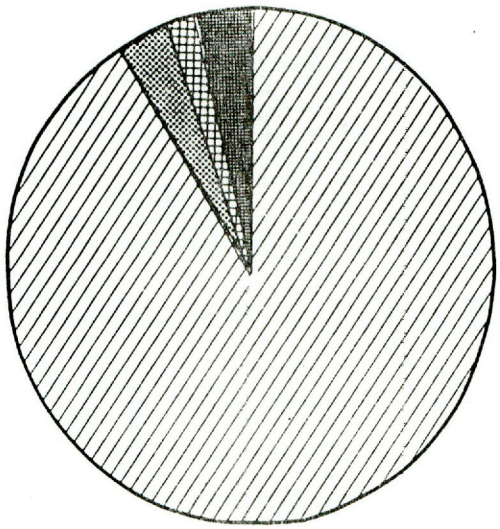


Source: "Weekly Surveillance Report-United States", AIDS Program, Center for Infectious Diseases, Centers for Disease Control, February 3, 1986

EXHIBIT 3

AIDS CASES
BY PATIENT CHARACTERISTICS

TEXAS

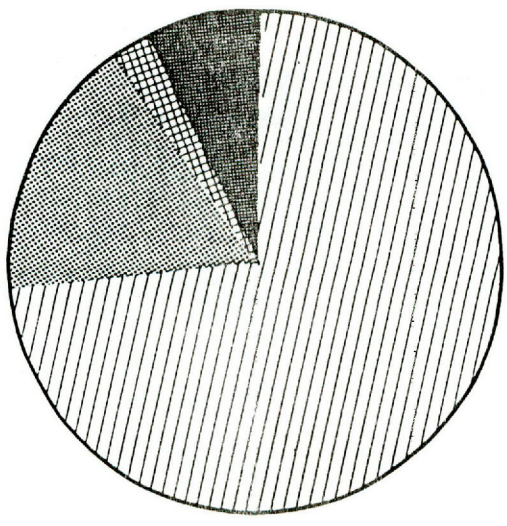


Source: Texas Department of Health,
Bureau of Epidemiology, March 3, 1986

EXHIBIT 4

AIDS CASES
BY PATIENT CHARACTERISTICS

UNITED STATES



Source: "Weekly Surveillance Report-United States",
AIDS Program, Center for Infectious Diseases,
Centers for Disease Control, February 3, 1986

TABLE 2
AIDS CASES
PATIENT CHARACTERISTICS
TEXAS
MARCH 3, 1986

	MALES		FEMALES		TOTAL	
	CASES	PERCENT OF MALES	CASES	PERCENT OF FEMALES	CASES	PERCENT OF TOTAL
Homosexual or Bisexual	907	92%	-	-	907	90%
IV Drug Users	24	2%	12	44%	36	4%
Hemophiliacs	5	1%	0	0%	5	0%
Transfusion-associated	12	1%	5	19%	17	2%
None Apparent/Unknown	36	4%	10	37%	46	5%
TOTAL	984	100%	27	100%	1011	100%

Note: Patient characteristics are ordered hierarchically cases with multiple characteristics are tabulated only in the group listed first.

Source: Texas Department of Health, Bureau of Epidemiology.

TABLE 3
AIDS CASES
PATIENT CHARACTERISTICS
UNITED STATES
FEBRUARY 3, 1986

	MALES		FEMALES		TOTAL	
	CASES	PERCENT OF MALES	CASES	PERCENT OF FEMALES	CASES	PERCENT OF TOTAL
ADULT/ADOLESCENT						
Homosexual or Bisexual*	12307	79%	-	-	12307	73%
IV Drug Users	2272	15%	588	53%	2860	17%
Hemophiliacs	134	1%	4	0%	138	1%
Heterosexual Contact	27	0%	168	15%	195	1%
Transfusion Associated	163	1%	103	9%	266	2%
None Apparent/Other**	751	5%	242	22%	993	6%
Total	15654	100%	1105	100%	16759	100%

PEDIATRIC***	MALES	PERCENT	FEMALES	PERCENT	TOTAL CASES	TOTAL PERCENT
Hemophiliacs	11	8%	0	0%	11	5%
Parent with AIDS/ at risk	93	69%	90	83%	183	76%
Transfusion Associated	24	18%	10	9%	34	14%
None Apparent/Other	6	4%	8	7%	14	6%
Total	134	100%	108	100%	242	100%

Note: Groups listed are ordered hierarchically; cases with multiple characteristic are tabulated only in the group listed first.

* 1347 (11%) of homosexual men also reported having used IV drugs
** Includes 405 persons born in countries in which most AIDS cases have not be associated with known risk factors.
*** Includes patients under 13 years of age at the time of diagnosis.

Source: "Weekly Surveillance Report - United States", AIDS Program, Center for Infectious Diseases, Centers for Disease Control.

TABLE 4
AIDS CASES
BY AGE
TEXAS
MARCH 3, 1986

AGE	CASES	PERCENT OF TOTAL
Under 13	7	1%
13-19	2	0%
20-29	270	27%
30-39	506	50%
40-49	157	16%
Over 49	69	7%
TOTAL	1011	100%

Source: Texas Department of Health, Bureau of Epidemiology.

TABLE 5
AIDS BY CASES
BY AGE
UNITED STATES
FEBRUARY 3, 1986

AGE	CASES	PERCENT OF TOTAL
Under 13	242	1%
13-19	74	0%
20-29	546	21%
30-39	993	47%
40-49	547	21%
Over 49	1559	9%
TOTAL	17001	100%

Source: "Weekly Surveillance Report - United States," AIDS Program, Center for Infectious Diseases, Centers for Disease Control.

TABLE 6
AIDS CASES
RACE/ETHNICITY
TEXAS
MARCH 3, 1986

RACE/ETHNICITY	CASES	PERCENT OF TOTAL
White, not Hispanic	822	81%
Black, not Hispanic	93	9%
Hispanic	91	9%
Asian	2	0%
American Indian	2	0%
Other	1	0%
TOTAL	1011	100%

Source: Texas Department of Health, Bureau of Epidemiology.

TABLE 7
AIDS CASES
RACE/ETHNICITY
UNITED STATES
FEBRUARY 3, 1986

RACE/ETHNICITY	CASES	PERCENT OF TOTAL
White, not Hispanic	10119	60%
Black, not Hispanic	4262	25%
Hispanic	2415	14%
Other	89	1%
Unknown	116	1%
Total	17001	100%

Source: "Weekly Surveillance Report - United States," AIDS Program, Center for Infectious Diseases, Center for Disease Control.

EXHIBIT 5

Texas Preventable Disease NEWS

Vol. 46 No. 2
January 11, 1986

contents:

Bureau of Epidemiology, 1100 West 49th Street, Austin, Texas 78756-3180 (512-458-7207)

RECOMMENDED GUIDELINES FOR PROVIDING EDUCATION TO STUDENTS WITH AIDS/ARC OR HTLV-III INFECTION

The recommended guidelines for local school districts have been adapted from the State of Connecticut Departments of Education and Health Services "Information and Guidelines" published in March 1985, and the Centers for Disease Control (CDC) recommendations "Education and Foster Care of Children Infected with Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus" published in the August 30, 1985 MMWR.

These recommendations apply to all school-age children known to be infected with human T-lymphotropic virus type III/lymphadenopathy-associated virus (HTLV-III/LAV). This includes children with AIDS as defined by the CDC for reporting purposes, children who are diagnosed by their physicians as having an illness because of infection with HTLV-III/LAV but do not meet the case definition, and children who are asymptomatic but have virologic or serologic evidence of infection with HTLV-III/LAV. These recommendations do not apply to siblings of infected children unless they are also infected.

HTLV-III/LAV has been isolated from blood, semen, saliva, and tears. Transmission has only been demonstrated through intimate sexual contact or blood-to-blood contact. Transmission has not been documented from saliva and tears; in fact, the virus is present in these secretions in lower concentrations than in blood or semen.

The majority of infected children acquire the virus from their infected mothers in the perinatal period. Children may also become infected through transfusion of blood or blood products that contain the virus. None of the identified cases of HTLV-III/LAV infection in the United States is known to have been transmitted in a school, day-care, or foster-care setting or through other casual person-to-person contact. Other than the sexual partners of HTLV-III/LAV-infected patients and infants born to infected mothers, none of the family members of the over 12,000 AIDS patients reported to the CDC has been reported to have AIDS. Six studies of family members of patients with HTLV-III/LAV infection have failed to demonstrate HTLV-III/LAV transmission to adults who were not sexual contacts of the infected patients, to older children who were not likely at risk from perinatal transmission, or to younger children or twin siblings.

Children with either AIDS, AIDS-related conditions (ARC), or HTLV-III infection alone should not pose a health risk to other children or staff in a school setting.

The following guidelines are intended to provide school districts with a framework on which to develop programs to meet the needs of all children for whom the public schools are responsible.

1. All children in Texas have a constitutional right to a free, suitable program of educational experiences.

2. As a general rule, the child should be allowed to attend school in a regular classroom setting with the approval of the child's physician and should be considered eligible for all rights, privileges, and services provided by law and local policy of each school district.

3. The school nurse should function as a) the liaison with the child's physician, b) the child's advocate in the school (ie, assist in problem resolution, answer questions), and c) the coordinator of services provided by other staff.

4. The school should respect the right to privacy of the individual; therefore, knowledge that a child has AIDS/ARC or HTLV-III infection should be confined to those persons with a direct need to know (eg, principal, school nurse, child's teacher). Those persons should be provided with appropriate information concerning such precautions as may be necessary and should be aware of confidentiality requirements. It is recommended that, in general, the local health authority serve as the intermediary between the parents, child, and attending physician, on the one hand, and school officials and staff on the other.

5. Based upon individual circumstances, including those discussed below, special programming may be warranted. Special education should be provided if determined to be necessary by the Admission, [Review, and Dismissal] (ARD) Committee.

6. Under the following circumstances, the child might pose a risk of transmission to others: if the child lacks toilet training, has open sores that cannot be covered, or demonstrates behavior (eg, biting) which could result in direct inoculation of potentially infected body fluids into the bloodstream. If any of these circumstances exist, the school medical advisor, in consultation with the school nurse and the child's physician, must determine whether a risk of transmission exists. If it is determined that a risk exists, the student should be removed from the classroom.

7. The child may be temporarily removed from the classroom for the reasons stated in #6 until either an appropriate school program adjustment can be made, an appropriate alternative education program can be established, or the medical advisor determines that the risk has abated and the child can return to the classroom.

   a) A child removed from the classroom for biting or lack of toilet training should be immediately referred to the ARD Committee for assessment and, therefore, for the development of an appropriate program if warranted.

   b) A child temporarily removed from the classroom for open sores or skin eruptions which cannot be covered should be placed on homebound instruction and readmitted only with medical documentation that the risk no longer exists.

   c) Removal from the classroom under sections a) and b) above should not be construed as the only responses to reduce risk of transmission. The school district should be flexible in its response and attempt to use the least restrictive means to accommodate the child's needs.

d) In any case of temporary removal of the student from the school setting, state regulations and school policy regarding homebound instruction must apply.

8. Each removal of the child from normal school attendance should be reviewed by the school medical advisor in consultation with the student's physician at least once every month to determine whether the condition precipitating the removal has changed.

9. The child, as with any other immunodeficient child, may need to be removed from the classroom for his/her own protection when cases of measles or chickenpox are occurring in the school population. This decision should be made by the child's physician and parent/guardian in consultation with the school nurse and/or the school medical advisor.

10. Routine and standard procedures should be used to clean up after a child has an accident or injury at school. Blood or other body fluids emanating from **any** child, including ones known to have AIDS/ARC/HTLV-III infection, should be treated cautiously. Gloves should be worn when cleaning up blood spills. These spills should be disinfected with a freshly made 10% solution of household chlorine bleach in water, and persons coming in contact with them should wash their hands afterwards. Blood-soaked items should be placed in leakproof bags for washing or further disposition. Similar procedures are recommended for dealing with vomitus and fecal or urinary incontinence in **any** child. Handwashing with soap and hot water after contact with a school child is routinely recommended only if physical contact has been made with the child's blood or body fluids, including saliva.

* * *

CHAPTER VII - AMBULATORY CARE AND EMS

SUBJECT AREA BACKGROUND

The federal health planning taxonomy describes ambulatory care as, "A location where organized health services are provided on an outpatient basis" - both mobile and fixed.[1]

Emergency care is defined as "Services which respond to the perceived need for immediate physical and mental health care."[2]

During the initial input phase of development, the following organizations provided particularly useful comments:

Texas Department of Agriculture
Texas Department of Health
Coastal Bend Council of Governments
North Central Texas Council of Governments
South East Texas Regional Planning Commission
South Plains Association of Governments
West Texas Council of Governments
University of Texas Medical Branch at Galveston
American College of Physicians, Texas Academy Chapter
Texas Ambulance Association

The concerns of these groups and others were narrowed to eleven specific issues. As a result of the prioritization survey which followed, the issue of EMS communications was approved by the SHCC as the priority issue to be presented in this plan. Under the subject of ambulatory care, a major concern was the level of primary care services statewide; however, the Primary Health Care Services Act and the Maternal and Infant Health Improvement Act enacted by the 69th Legislature will be providing a combined amount of over $30 million which will be used principally in the primary health care area during the 1986-87 biennium. The other ten issues are referred to the proponent agencies for action.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Ambulatory Care Problem Areas

Issue 1: The establishment of a licensing program and standards for minor emergency clinics.

Referred to the Texas Legislature and the Texas Department of Health for appropriate action.

Issue 2: An inadequate number and distribution of specialty care clinics, e.g., oncology treatment centers, cystic fibrosis treatment centers, prenatal services for adolescents, and wellness clinics for the elderly.

Referred to the Texas Department of Health for appropriate action.

Issue 3: An insufficient number of primary medical care clinics in rural areas.

Referred to the Texas Department of Health and the Texas Department of Human Services for appropriate action.

Issue 4: An inadequate range of ambulatory care services for low-income persons.

Referred to the Texas Department of Human Services and the Texas Department of Health for appropriate action.

EMS Problem Areas

Issue 5: An integrated, regional EMS system with statewide coordination and a state EMS plan.

Referred to the Texas Department of Health for appropriate action.

Issue 6: An integrated, high-quality and coordinated statewide EMS training system.

Referred to the Texas Department of Health for appropriate action.

Issue 7: Expanded health insurance coverage for ambulatory care and EMS services.

Recently both of these areas have been included in many health insurance programs, but ambulatory care is being covered to a greater degree than EMS. No action is seen as necessary.

Issue 8: A shortage of EMS vehicles and active, qualified EMS personnel - particularly in medically underserved areas.

Referred to the Texas Department of Health for appropriate action.

Issue 9: A shortage of qualified persons to administer cardio-pulmonary resuscitation (CPR).

Referred to the American Heart Association, other community service groups and the Texas Department of Health to combine efforts and expand the CPR training program.

Issue 10: Higher standards for EMS procedures and personnel.

The Texas Department of Health has been establishing new standards for EMS since passage of the Emergency Medical Services Act by the 68th Legislature. No action required at this time.

REFERENCES

[1]U.S. Department of Health, Education and Welfare, Health Planning Taxonomy (DHEW Pub. No. 79-14029, September 1979), p. 6.

[2]Ibid., p. 4.

CHAPTER VIII - SHORT-TERM INSTITUTIONAL CARE

SUBJECT AREA BACKGROUND

Short-term institutional care is inpatient care provided by general and special community hospitals available to the general public, and which have an average length of stay under 30 days. The predominant function of these hospitals is inpatient care, although many facilities provide outpatient care through their emergency rooms, outpatient clinics, and various outreach programs.

The hospital industry in Texas is sizeable both geographically and financially. There was a total of 532 hospitals in Texas in 1984 with 73,455 licensed beds. These figures include all licensed, short-term, community hospitals in Texas, and in addition, include 5 unlicensed, state-owned, short-term hospitals with a total of 1998 operating beds. Hospitals provided 15.1 million patient days of medical care with a collective average daily census of 41,368. Hospitals with less than 100 beds comprised 61% (326) of the total number. Of these smaller hospitals, 218 (67%) were located in rural areas. Preliminary figures indicate that Texas residents spent $8.3 billion for hospital services in 1984. This represents 41% of the total $20.1 billion for all health care services in the state.

During the past fifteen years, the hospital industry has undergone some dramatic structural and behavioral changes. One of the most dramatic relates to the proliferation of multiple hospital systems, both investor-owned and not-for-profit. The Texas Hospital Association reported that in January 1986 there were 20 non-profit systems with 129 hospitals and 19 investor-owned systems with 181 hospitals. These figures indicate that 310 (58%) of the 533 short-term hospitals, as classified by THA, are system associated with 34% members of proprietary systems and 24% members of not-for-profit systems. Data regarding ownership status are presented in Table 1.

A second dramatic change relates to the greater prominence given the "business ethic" within the hospital industry. Changes in the financial environment, such as the advent of the Medicare prospective pricing system, have created demand for greater access to capital, less reliance on philanthropy, more attention to competition, and a greater understanding of profit margins in the long-term financing of the organization. Terms such as "market segmentation," "product line," and "competitive edge" are becoming commonplace.

For many, hospitals have become the symbol of the growth in medicine's ability to effectively fight disease. This improved image has raised public expectation regarding the benefits of modern medical care in general and from hospitals in particular. Communities tend to view their hospitals as synonymous with the availability of medical care.

This view is reflected in the initial survey input received. Thirty-seven organizations and agencies responded to the initial issue selection survey. This survey identified the top ten issues of concern and was used

as the basis for formulation of the prioritization survey. Seventy-two organizations and agencies responded to the second survey. Several primary issues were identified as a result of statistical analysis of survey data. These issues involved the impact of the Medicare prospective pricing system, the development of alternative delivery methods by hospitals, and the continued viability of small rural hospitals.

Several survey respondents provided key input into the priority issue selection process. These primary respondents included the Texas Hospital Association, the Texas Medical Association, the Texas Department of Human Services, and the Texas Department of Health's Bureaus of Community and Rural Health and Maternal and Child Health. Other information was provided by the Texas State Board of Insurance, the Texas Rural Health Field Services, and the Texas Farm Bureau.

The three primary issues were presented to the SHCC for prioritization. Alternative delivery methods was chosen to be the priority issue discussed in the SHP, while the other nine issues were selected as referral issues.

One of these issues deals with the impact of the Medicare prospective pricing system. There is a need to assess the impact of the Medicare prospective pricing system, which uses diagnostic related groups (DRGs), on hospital bed needs, hospital reimbursement (especially rural hospitals), costs, length of stay, admission and re-admission rates, quality of patient care and services, and patient care requirements following discharge.

Since the inception of government sponsored and supported medicine in 1965 (the Medicare and Medicaid programs), health care expenditures have grown at rates unparalleled in other sectors of the economy. Since 1965, health care costs have risen between 9%-15% each year. Concern over rising health care costs has been expressed repeatedly by the U.S. government as Medicare and Medicaid budgets have continued to rise. The Social Security Amendments of 1983 (P.L. 98-21) established the Medicare prospective pricing system, based on the utilization of DRGs, to establish per case payment for hospital care. This represents a major reform of the reimbursement system. This structural change by the federal government is the most comprehensive revision of the reimbursement mechanism for the greater number of Medicare hospital patients since the inception of the program.

Medicare represents approximately 41% of hospital revenues nationally. In Texas as of January 1985, 478 short-stay hospitals were Medicare participating providers. This represents 90% of the total Texas hospitals.

To date, conjecture has been the major method available to evaluate the effects of the prospective pricing system on Texas hospitals. A systematic accurate analysis would prove useful to all sectors of the state health care industry, and would provide a much needed picture of the status of the Texas hospital industry in light of the revisions in the Medicare reimbursement program.

Another issue of great concern is the status of indigent health care financial support requirements for hospitals. There is a need to

determine, in more quantified detail the indigent health care financial support requirements related to hospital reimbursement, e.g., by type of: patient, provider, reimburser and geographic area.

To address the state's indigent health care problem, the 69th Texas Legislature enacted 14 separate bills and initiatives. This landmark legislation was designed to improve the provision of health care services for the state's indigent and uninsured population. The package of reforms is known collectively as the Indigent Health Care Program.

The indigent health legislation will affect hospitals in different ways according to the geographic area in which the hospital is located, the type of hospital ownership, the level of poverty of the patient treated, and which state agency/program is acting as the reimbursing entity.

The financial benefit of the legislation for any particular hospital will depend largely on the amount of indigent care that a facility provides. Those hospitals benefitting most will be the hospitals doing a significant amount of uncompensated care. However, all hospitals will benefit to some extent from the legislation. All attending physicians should experience a decline in inappropriate emergency room utilization as the programs' preventive and primary care services become available. All hospitals will be required to supply specific information, annually, to the TDH, which will improve the availability of data for health care policymakers, both for the indigent and the non-indigent patient population. Due to the hospital transfer bill, all attending physicians will have to stabilize patients, determine the most medically appropriate action, and gain confirmation from the receiving hospital that the transfer patient will be accepted. No patients can be "dumped" into one hospital by another due to the patient's inability to pay for medical care.

In all, the Legislature predicts that 50%-60% of the over $200 million targeted for indigent health care will go to hospitals to help meet their financial support requirements.

As the total program develops, there will be a need to determine specific indigent care financing needs on at least a regional basis rather than just a statewide basis. Program administrators will need to know more information about the specific characteristics of the indigent patient. They will also need to know specific financial requirements by type of provider and how the economy of each geographic area impacts on these financial requirements. Finally, they will need to know and coordinate payment needs of each reimbursing entity.

Another issue warrants consideration. Many of the regional councils indicated concern about the continued viability of small rural hospitals. There is a need to evaluate factors affecting the financial and operational viability of small rural hospitals, particularly sole community providers, to assure continued access to quality medical care compatible with community needs.

More than 60% of the hospitals in Texas can be categorized as either small or rural, constituting a substantial portion of the state's service resources. These hospitals provide thousands of people with a wide range of essential services that otherwide are not available because of

geographical and/or financial inaccessibility. In many instances, they provide the rural resident with his first and often only contact with the state's hospital industry.

The small or rural facility is an essential component of the state's provider system. As small and rural hospitals look to the future, they are faced with a number of challenges brought about by health care delivery changes. Financial demands become increasingly numerous and difficult, including problems associated with the collection of bad debts from those able to pay. Pressures from legislation and regulation continue. Manpower shortages persist. Few physicians and associated health professionals are eager to locate in rural areas without hospital facilities readily available. All create barriers to the efficient delivery of cost effective hospital care.

To deal with these problems, the most important action that any small or rural hospital needs to take is comprehensive long-range planning. The hospital must have access to an accurate and current information base for their plan. An analysis of factors effecting the viability of rural hospitals could provide that information base as well as assist in evaluating the scope of the problem and in making recommendations as to where/how the state should proceed in this area.

Yet another issue is worthy of review. In connection with the priority issue, there is a need to evaluate ways to improve the availability of funds to finance lower cost alternative delivery methods in lieu of hospitalization.

One of the strategies currently proposed by various health care economists to lower industry costs is the development of alternative delivery methods by hospitals. These programs include day surgery, birthing centers, ancillary services, and immediate care centers, which all revolve around the concept of providing medical care on an outpatient basis. However, in the present climate of money restraint, added emphasis needs to be given to evaluating means of improving the availability of funds to finance the lower cost alternative delivery methods.

In addition to the specific problems related to providing health care to indigents, a concern was indicated by the survey participants about reimbursement to hospitals for uncompensated/undercompensated services. There is a need to address inadequacies/inequities in existing health care financing mechanisms to improve reimbursement for all categories of care provided by community hospitals for which hospitals are uncompensated or undercompensated.

The costs of medical care for the poor and uninsured have added to the increasing economic pressures on community hospitals. Inadequacies/inequities in existing health care financing mechanisms threaten care of the poor in many hospitals, and result in a shift of indigent care to public institutions. This could cause a resurgence of a two-tiered system of health care that relegates the poor to public hospitals supported by welfare appropriations. Examples of such problems include the plight of the working poor, who neither qualify for Medicaid nor can afford commercial insurance, and health care for undocumented aliens, which is an area of great concern for border hospitals. These

inadequacies/inequities need to be addressed so as to improve reimbursement for all categories of care provided by community hospitals for which these hospitals are uncompensated or undercompensated.

Another issue deals with the unused/under-used short-term hospital bed capacity and administrative difficulties encountered in converting to other uses. There is a need to evaluate conversion of unused/under-used short-term hospital bed capacity to other uses, such as long-term institutional care services, especially in areas with a shortage of other services and to consider methods to simplify regulatory requirements involved in a conversion.

Many Texas hospitals are experiencing occupancy rates of 50%-70% or lower, leaving less than efficient utilization of both their beds and professional staff. At the same time, some areas are experiencing a shortage in skilled nursing facility and nursing home beds. Converting the unused hospital beds to needed SNF/nursing home beds could benefit both the health care providers and the patients seeking these services. However, to make this conversion work, methods need to be considered to simplify regulatory requirements involved in the change.

Post discharge placement and care of hospital patients constitutes another problem area as pointed out by several survey participants. There is a need to review hospital discharge planning to improve post-discharge care and prompt placement of patients requiring continued care.

Due to the DRG system of standardized stay, it is essential to establish ties between various alternative health care delivery systems to achieve a totally integrated medical care program for each patient. Continuity of care from the primary care clinics to the acute care hospital and back to the community or into long-term care must be improved. Discharge planning, primarily a hospital function, involves total assessment and patient care planning and referral. This planning needs to be improved so as to encourage improvement of post-discharge care and to facilitate prompt placement of patients requiring continued care.

In another issue area, survey participants raised the question of a need for major capital expenditure review. They suggested performance of an evaluation to establish or dispute the need for some type of mechanism/activity to review proposed new or modified medical facilities, medical equipment or services involving major capital expenditures in order to encourage the best use of resources.

With the sunsetting of the Texas Health Facilities Commission in August 1985, Texas was left with no agency specifically responsible for the monitoring of capital expenditures within the health care industry. Some statewide concern has been expressed as to the need for some type of mechanism/activity to review proposed new or modified medical facilities, medical equipment, or services involving major capital expenditures.

Is there a need for such a system? If there is a need, what structure should the system take, and how much decision-making authority should it have? These and other associated questions can only be answered by an evaluation of the possible need for capital expenditure review. An examination of facility expansions since the sunsetting of the THFC would be a start towards the evaluation.

Finally, the issue of the need for and availability of capital expenditure funding was indicated as an area of statewide concern. There is a need to assess the need for capital expenditures to finance expansion and particularly modernization of facilities/equipment, where indicated, and to evaluate access to and methods of financing such expenditures, especially for small rural hospitals.

In the past, the federal government supported expansion/modernization of hospital capacity through construction grants or loans (the Hill-Burton program). Expansion/modernization is still supported indirectly through guaranteed loans and tax-exempt bonds issued in behalf of nonprofit hospitals. However, a proposed federal limit on the amount of tax exempt bonds available to any one entity, could severely limit hospitals' access to needed funding.

In addition, anticipated changes in capital expenditure reimbursement through the Medicare system may further restrict government assistance. Several options have been examined, including a system where hospitals would be reimbursed according to a fixed percentage of their received Medicare payments, and a plan for states to have their own pricing mechanism or capital review. Previously, capital expenditures have been a Medicare reimbursement "pass through", but HCFA has published proposed rules in the Federal Register (June 1986) which, if approved, would integrate capital expenditures reimbursement into the prospective pricing system.

An operating room administrator summed it up well. "I have no idea when I will be able to purchase any new capital equipment. With this cost-containing environment, the future is fairly uncertain, especially since our patient load is decreasing." For Texas hospitals to remain competitive technologically with the rest of the nation, and for Texans to have continued access to contemporary quality health care services, access to and methods of funding needed capital expenditures must be found, especially for small rural hospitals.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: The impact of the Medicare prospective pricing system.

Referred to the Texas Department of Health, Texas Department of Human Services, Texas Hospital Association, and Texas Medical Foundation.

Issue 2: The status of indigent health care financial requirements for hospitals.

Referred to the Texas Department of Health, Texas Department of Human Services, Bureau of Maternal and Child Health (TDH), Bureau of Community Health Services (TDH), Texas Hospital Association, Texas Health and Human Services Coordinating Council, and Texas Hospital Association.

Issue 3: The continued viability of small rural hospitals.

Referred to the Texas Department of Health, Texas Rural Health Field Services, Texas Farm Bureau, Texas Association of Regional Councils, Texas Association of Counties, and Texas Hospital Association.

Issue 4: The availability of funds for alternative delivery methods.

Referred to the Texas Hospital Association, Texas Department of Human Services, Texas Department of Health, Texas Business Group on Health, and Texas Association of Regional Councils.

Issue 5: Reimbursement to hospitals for uncompensated/undercompensated services.

Referred to the Texas Department of Human Services, Bureau of Community Health Services (TDH), Texas Hospital Association, and Bureau of Maternal and Child Health (TDH).

Issue 6: The unused/under-used short-term hospital bed capacity and administrative difficulties encountered in converting to other uses.

Referred to the Bureau of Licensing and Certification (TDH), Texas Health Care Association, Texas Department of Human Services, Texas Hospital Association, and Texas Association of Homes for the Aging.

Issue 7: The post discharge placement and care of hospital patients.

Referred to the Medicare Certification Division (TDH), Texas Hospital Association, Texas Association of Home Health Agencies, Texas Rehabilitation Commission, Texas Health Care Association, and Texas Association of Homes for the Aging.

Issue 8: The need for major capital expenditure review.

Referred to the Texas Health and Human Services Coordinating Council, Texas Department of Human Services, Texas Hospital Association, Texas Business Group on Health, Texas Department of Health, Texas Health Care Association, and Texas Association of Homes for the Aging.

Issue 9: The need for and availability of capital expenditure funding.

Referred to the Texas Department of Health, Texas Department of Human Services, Texas Hospital Association, Texas Business Group

on Health, Texas Health Care Association, Texas Association of Homes for the Aging, and Texas Association of Regional Councils.

PRIORITY ISSUE SUPPORT

The following figure illustrates several options for hospitals interested in alternative delivery methods which can also involve joint ventures.

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NEED FOR AND AVAILABILITY OF CAPITAL EXPENDITURE FUNDING

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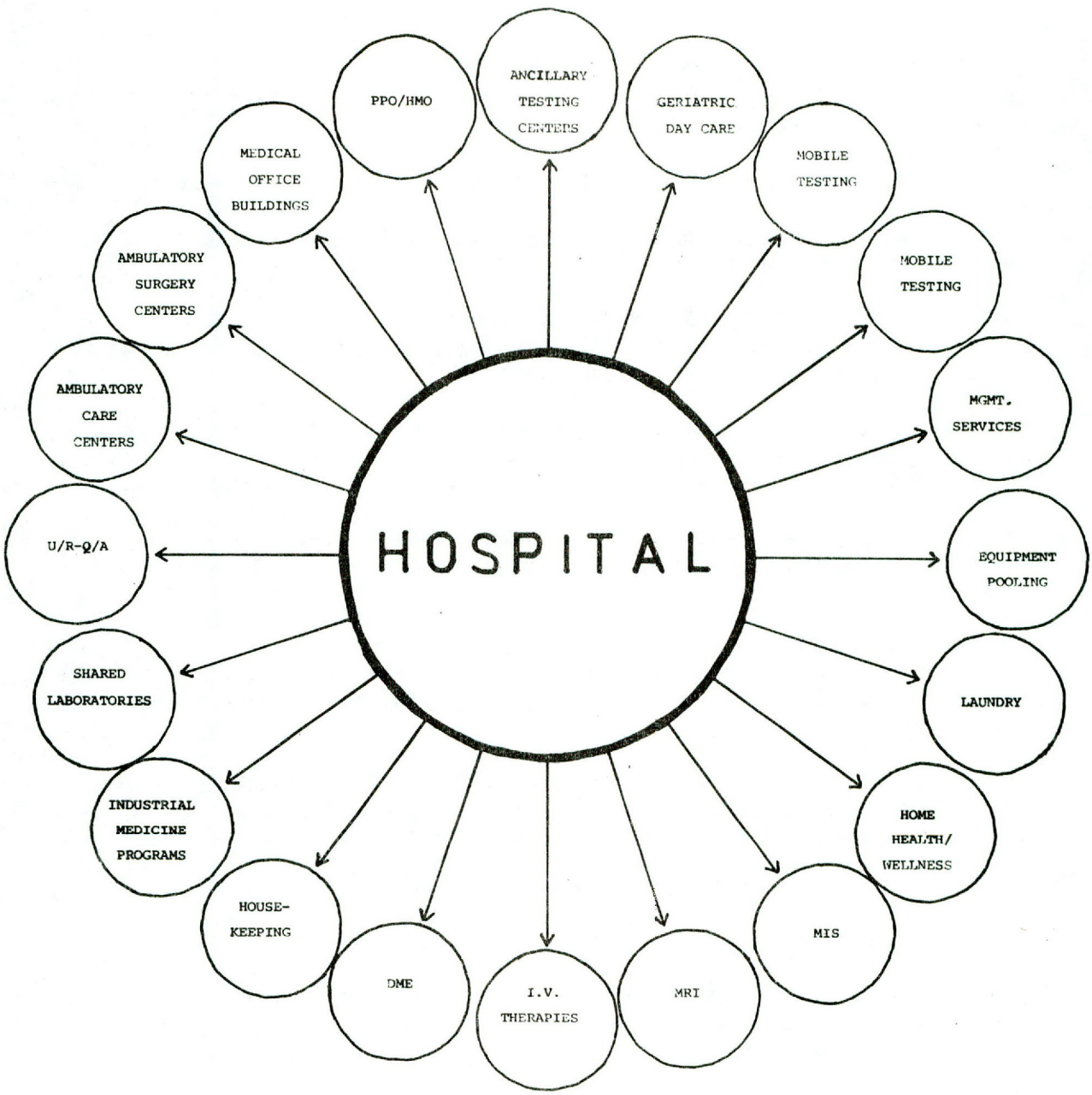
FIGURE 1

TYPICAL HEALTH CARE JOINT VENTURES
INVESTORS: HOSPITALS, PHYSICIANS, INSURERS, EMPLOYERS, SUPPLIERS



Source: "Joint Ventures," Dimensions in Health Care, September 1985.

TABLE 1
HOSPITALS AND LICENSED BEDS BY OWNERSHIP

SPR	GOVERNMENT*				NOT-FOR-PROFIT				INVESTOR-OWNED				TOTAL			
	LESS THAN 100 BEDS		100 OR MORE BEDS		LESS THAN 100 BEDS		100 OR MORE BEDS		LESS THAN 100 BEDS		100 OR MORE BEDS		LESS THAN 100 BEDS		100 OR MORE BEDS	
	FACS	BEDS	FACS	BEDS	FACS	BEDS	FACS	BEDS	FACS	BEDS	FACS	BEDS	FACS	BEDS	FACS	BEDS
1	14	662	2	350	2	84	2	640	0	0	1	126	16	746	5	1116
2	7	280	1	274	4	165	2	769	7	466	3	440	18	911	6	1483
3	13	620	2	400	0	0	1	203	2	86	0	0	15	706	3	603
4	6	416	8	2230	13	784	22	7495	26	1244	17	3536	45	2444	47	13261
5	4	251	2	265	2	75	3	835	2	112	1	110	8	438	6	1210
6	5	283	2	368	8	463	6	1438	4	172	1	100	17	918	9	1906
7	15	604	0	0	5	216	1	464	2	124	2	378	22	944	3	842
8	2	75	1	335	1	32	2	791	3	108	5	1023	6	215	8	2149
9	11	445	3	685	2	110	0	0	2	97	2	267	15	652	5	952
10	9	225	0	0	2	39	3	555	0	0	0	0	11	264	3	555
11	6	266	0	0	4	219	3	683	4	279	0	0	14	764	3	683
12	6	268	2	526	4	182	3	905	3	218	1	280	13	668	6	1711
13	2	114	0	0	4	217	1	196	3	177	0	0	9	508	1	196
14	7	339	1	184	2	75	1	308	6	354	1	150	15	768	3	642
15	0	0	0	0	0	0	3	1134	3	221	5	910	3	221	8	2044
16	7	342	8	3194	10	479	16	6575	15	1019	31	7080	32	1840	55	16849
17	7	342	1	228	3	97	0	0	0	0	2	409	10	439	3	637
18	5	207	3	877	6	240	8	3279	4	114	7	1583	15	561	18	5739
19	1	44	0	0	1	48	1	288	1	95	0	0	3	187	1	288
20	3	144	2	637	1	73	3	855	2	164	3	555	6	381	8	2047
21	0	0	3	560	4	156	2	480	2	86	4	775	6	242	9	1815
22	4	251	1	190	1	50	1	212	0	0	1	176	5	301	3	578
23	3	128	0	0	3	177	3	862	4	169	0	0	10	474	3	862
24	5	289	0	0	0	0	0	0	0	0	0	0	5	289	0	0
STATE TOTAL	142	6595	42	11303	82	3981	87	28967	95	5305	87	17898	319	15881	216	58168

SOURCE: INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH
JANUARY 31, 1986

*INCLUDES FIVE UNLICENSED STATE-OWNED SHORT-TERM CARE HOSPITALS WITH 1998 OPERATING BEDS

CHAPTER IX - LONG TERM INSTITUTIONAL CARE AND ALTERNATIVES

SUBJECT AREA BACKGROUND

Modern technology has tended to produce increased life expectancy at birth and thus more older persons in our population. Unfortunately, improved life expectancy has not ensured freedom from disease, impairment and disability, all parts of the aging process. The knowledge of how to prolong life regretably has not brought with it the know-how to ensure personal independence for older persons.

Data have shown that the numbers of elderly and frail elderly (85 years and older), persons who are the primary users of long term care, are increasing more rapidly than the population as a whole. As people age, the progression of chronic disease and the aging process itself cause a decrease in abilities in the daily activities of living. Throughout this process, services and living arrangements should be available to the elderly to assist in maintaining optimal functional ability, in adjusting to chronic conditions and in maintaining personal dignity.

As elderly individuals lose the ability to care for themselves, the need for assistance from others increases. However, social changes such as more women in the work force, families with fewer children and family mobility are reducing the amount of informal support care provided by the family. An increasing demand for formal support provided by paid employees of social services and health care organizations has developed and is expected to continue to increase.

Nationally, it is estimated that 32% of persons age 75-84 cannot accomplish major tasks of everyday living, and 33% of those 85 and over cannot care for themselves.[1] It is also estimated that 5% of persons 65 and over, and 20% of persons 85 and over, will be placed in nursing homes.[2] Population projections include the following estimates for persons living in Texas aged 65 and older: 1983 - 1.5 million, 1990 - 1.8 million; and in the year 2000 - 2.1 million.[3] The population growth rate for persons age 65 and older, the prime users of long-term care, is growing at a faster rate than that of the total population. A continuum of services which meet the needs of the elderly and disabled should be available. Services should provide these individuals with the needed care while allowing them as much freedom as possible to reduce the likelihood of premature placement in an institution.

Distribution of Medicaid and state funds among the various state programs is an issue that needs to be researched. The U.S. General Accounting Office reports that nursing home care cost the nation more than $24 billion in 1981.[4] Medicaid alone paid for nearly $13 billion for nursing home care in 1982.[5] It is estimated that over 80% of nursing home care is reimbursed by Medicaid in Texas. For state fiscal year 1985, Medicaid dollars totaled $441,283,197 for nursing home care. In addition, $131,838,408 in Medicaid funds were expended in 1985 for community care services for the elderly and disabled. (See Tables 3 and 5 for additional Medicaid expenditures and client data).

Another related issue of concern involves the limited availability of Medicaid and state funds. Currently, limited federal and state funds indicate that public funding will be inadequate to meet future demands for long-term care services. The greater portion of medical and socio-economic aid to the indigent elderly and disabled individuals is reimbursed by Medicare, Medicaid, Title III and Title XX funds. The capping of these funds and the restrictions which limit the amount of long-term care reimbursed by Medicare have resulted in a tightening of the medical eligibility standards for the elderly and disabled, and many who need long-term care are not eligible for assistance. In order to provide the elderly and disabled with needed services, methods for reimbursing providers need to be reviewed.

Table 3 in the chapter annex shows a slow but steady decline in the number of total nursing home patient days reimbursed by Medicaid between 1982 and 1985. Factors which are believed to be causing this decrease include (1) no new admissions into the ICF II level, (2) the expanded availability of community and home delivered care and (3) the adoption in 1982 of eligibility standards concerning the transfer of personal assets. The need for additional Medicaid and state funds for reimbursement of long-term care should be assessed and methods for acquisition of funds, if needed, should be developed.

Affordability of long-term care requires attention. The lack of reimbursement methods other than Medicare and Medicaid indicates that needed services will not be affordable in the future to elderly and disabled who do not meet eligibility standards for Medicare and Medicaid. Strategies to contain the cost of long-term care services to assure affordable services for the elderly and disabled should be developed. Some intervention alternatives which might be included are as follows: enlist and train more volunteers to assist in providing services; develop alternative living arrangements such as community retirement centers, "granny modules," and shared living arrangements where friends and family can assist in providing care; expand the development of less costly alternative services such as adult day care and adult day health care with transportation provided where needed; and encourage nursing homes to use their resources by expanding services to provide community and in-home care to areas in close proximity to the homes.

Limited private insurance coverage of long-term care hampers provision of needed services to the elderly and disabled. Many elderly individuals enter nursing homes as private-pay clients, but eventually exhaust their resources and become eligible for Medicaid assistance. Home health care and community care are Medicare and Medicaid oriented and often do not serve private-pay individuals. Development of insurance policies to provide coverage for long-term care services would protect the personal resources of individuals in need of long-term care services; reduce the number of individuals whose care is reimbursed by Medicaid; and encourage community and home care providers to expand services to private-pay and insured individuals. The work group established by the Texas Board of Insurance should study the problems associated with long-term care insurance and develop methods to be used by insurance companies in the implementation of long-term care insurance.

Input received in the initial survey indicated that there may be a maldistribution of nursing home beds in Texas. A statewide occupancy rate of 81.12% indicates an overall statewide excess of nursing home beds. However, the location of these beds needs to be assessed and actions taken to ensure that beds are available and accessible to all elderly and disabled who need these services, especially individuals residing in rural areas. Figures 1 and 2 illustrate the distribution of nursing home beds and population age 65 and over by county. Twenty-seven counties do not have a nursing home. The beds per 1000 population 65 and over for counties with nursing home beds range from 23 beds per 1000 to 168 beds per 1000. Table 1 provides occupancy rates for each state planning region (SPR). Table 2 provides a bed per 1000 population 65 and over figure for each SPR.

The number of nursing/custodial homes and the number of licensed beds has increased only slightly from January 1, 1984 to January 1, 1986. The number of facilties changed from 997 to 1,004 while the number of licensed beds increased from 100,749 to 102,712. Tables 1 and 2 show the number of homes and number of licensed beds by SPR for 1984 and 1986. Licensed custodial beds are included with nursing home beds in these counts. Licensed custodial beds continue to decrease since Medicaid reimbursement was discontinued for ICF II level of care, except for "grandfathered" clients. On January 1, 1986 only 840 beds remained licensed for custodial care.

Chapter XVIII provides nursing/custodial bed need projections for the state and each SPR for 1991. These projections should be used as a base for replacement, renovation and construction of nursing home beds. However, the limited Medicaid dollars for reimbursement of nursing home care and the deregulation of new construction by the sunsetting of the certificate of need process has caused the Texas Department of Human Services to initiate a moratorium on certification of additional new beds for participation in the Medicaid program.

Limited availability of skilled level nursing home beds was also identified as an issue by the initial input. It was anticipated that early discharges from hospitals as a result of implementation of diagnostic related group (DRG) reimbursement in the Medicare program would result in a need for additional skilled level nursing home beds. However, on March 20, 1986, there were 180 nursing homes with 11,893 beds certified to provide Medicaid and/or Medicare skilled level care. This was 11.6% of the total licensed nursing home beds compared to 13.1% in 1982. In addition, twelve hospitals had 314 beds which were certified to provide this level of care. Table 4 shows the distribution of these beds among the 24 SPRs.

Table 3 shows that there was an average daily census of only 2751 Medicaid skilled level patients in FY 1985 compared to 3,163 in FY 1982. There were an estimated 8,000 skilled level patients statewide in 1980. This indicates a 60% decline in skilled level patients between 1980 and 1985.

The reasons for this drop in number of beds certified at the skilled level and the low number of nursing home residents receiving this care are not totally clear. Concern has been expressed at the national level that the

release of hospital patients to nursing homes, "quicker and sicker" patients, under the DRG system would discourage nursing homes from accepting "skilled" level patients for whom no additional reimbursement is available. Both Texas nursing home associations have expressed concern that the eligibility criteria and interpretation of the criteria is too strict and should be relaxed so that the elderly in need of skilled care can gain access to nursing home care.

The need for and location of skilled level nursing home beds should be researched and methods developed for certification of needed beds. Where indicated by such a study, rural hospitals should be encouraged to enter the "swing bed" program; excess hospital beds should be available for temporary or permanent conversion to skilled level beds; and excess intermediate level nursing home beds should be certified at the skilled level to meet any identified need.

The initial input received from the various agencies and organizations identified another problem area. Improved and/or additional services are needed to provide patients in nursing homes with a broader range of services. Services such as mental health care, special care for patients with Alzheimer's disease or cancer, rehabilitation services, family counseling, dental care, and hospice care were presented as services which need to be improved or added.

The special subcommittee on Alzheimer's disease of the Senate Health and Human Resources Committee is studying the needs of victims of this disease. Although a medical treatment has not been developed, the techniques for caring for these patients should be incorporated into the training of the staff of nursing homes.

The scope of services provided by nursing homes should be studied. Methods for incorporating services identified as needed should be developed and implemented. Workshops for staff, in-house training and use of consultants are examples of such methods.

The initial input received also indicated that additional populations such as the mentally ill, the emotionally disturbed, the developmentally disabled, and children and adolescents should be included in the Medicaid program to be provided with some kind of nursing home care. The federal Medicaid program provides states with the option of selecting whether to include individuals with a primary diagnosis of mental illness in the Medicaid nursing home program. Texas has not elected to participate in this portion of the Medicaid program.

Although not a part of the original input, a new long-term institutional care issue has emerged. Persons with AIDS frequently require long-term care. Current admission policies of nursing homes have created a barrier for these individuals. This is an issue which needs to be researched and resolved.

Availability of alternative living arrangements for the elderly and disabled was identified as an issue in long-term care. For many years the major concern within long term care was the provision of medically oriented institutional services. In recent years the shift has been toward the development of a broad range of community and in-home services

which meet varying degrees and types of needs of individuals. These services are designed to reduce the premature admission of individuals into institutions. While the family continues to be the primary source of care for the elderly and disabled, various publicly funded services are being developed to provide for the social, personal and medical needs of the semi-dependent elderly and disabled. Such programs allow these individuals to avoid early placement in institutions and to remain within a less restrictive home and community setting. The more appropriately the living environment supports the capabilities and needs of older individuals, the longer they will be able to maintain autonomous lives, and the higher quality these lives will be.

Persons aged 65 and over and especially the frail elderly persons 85 and over, are at high risk of being institutionalized. It has been shown that institutionalization of this population is as likely to result from a breakdown in arrangements of daily living as from a severe medical problem. Lack of transportation, inadequate housing, death of a spouse, relocation of a near son or daughter, brief episode of acute illness and worsening of a chronic disability may result in premature placement in a nursing home. Availability of alternative living arrangements and services could reduce premature placement.

There continues to be a need for additional non-medical living facilities and arrangements which provide independent and supervised living for the elderly and disabled. Arrangements such as progressive living arrangements, sheltered and congregate living apartments, foster homes, retirement homes and villages, halfway houses, personal care homes, "granny modules," share-a-home and accessory apartments are needed. Such facilities provide protective services, socialization, transportation and personal care services to meet the needs of the chronically ill and disabled.

Personal care homes and the number of beds available have increased over the past two years. Table 6 shows that there were 3753 licensed personal care beds on January 1, 1986. The table shows that 1636 of these beds were located in wings of 53 nursing homes with 2117 beds in 72 freestanding personal care homes. There was an increase of five counties with personal care beds and increase of 1291 licensed beds between January 1, 1984 and January 1, 1986. Freestanding personal care homes increased from 23 to 72 while licensed beds in these facilities only increased from 1106 to 2117. This indicates a new trend of licensing personal care homes of less than ten beds. Six SPRs are without personal care beds. The need for additional personal care beds is illustrated by the selection of this concern as part of the key issue addressed in the Long-Term Institutional Care and Alternatives Section of the 1985 State Health Plan. The 69th Legislature established a task force to study licensing of personal care homes.

Gaps in home and community delivered long-term care still remains a problem. In recent years, efforts to reduce the high cost of institutionalization have resulted in the discontinuation of Intermediate Care Level II (custodial) care from the Medicaid program and the development of several alternatives designed to assist the elderly and disabled to remain in their homes and community. Review of current services available to the elderly and disabled indicates a gradually

increasing array of service options. Home and community delivered long-term care services such as adult day care and adult day health care, home health care, nutritional services such as meals on wheels, in-home and community-based respite services, transportation and mental health services provide alternatives to institutionalization. There are still, however, gaps in this continuum of services and gaps in the availability of services to all persons regardless of income levels.

The Texas Department of Human Services (TDHS), the single state Medicaid agency for Texas, is the proponent agency assigned by the legislature to develop a continuum of long-term care services to meet the needs of the elderly and disabled. The department should continue its efforts to provide long-term care to the indigent in the most cost efficient/least restrictive manner through research in care planning, case management and channeling programs. Table 5 provides data on expenditures, number of clients assisted and types of community services provided by Medicaid for FY 1982 through FY 1985.

In recent years, there was a rapid growth in the number of licensed home health agencies. In 1982 there were 392 licensed agencies. By January 1984, there were over 700 licensed agencies. The expansion continued through 1984, but peaked in 1985. Approximately 150 agencies did not renew their license in the last six months of 1985. However, more hospitals expanded their follow-up and discharge planning services by providing home health care. Table 7 provides data concerning licensed home health agencies by SPR.

Senate Bill 957 passed by the 69th Legislature allows the Texas Department of Health (TDH) to set new home health agency licensing fees and to conduct complaint investigations. The home health agency licensing standards are currently being revised and were to have been presented to the Board of Health at its May, 1986 meeting for adoption.

Table 8 illustrates the facilities licensed as adult day care and adult day health care facilities as of January 1, 1986. The table indicates that the services are in short supply and unevenly distributed within the state. While other adult day care services exist, only facilities under contract to TDHS are required to obtain a license. Licensed facilities increased from 21 to 30 and number of clients licensed to serve increased from 1102 to 1752 from January 1, 1984 to January 1, 1986.

Nutritional programs available to the elderly include home-delivery meals (meals-on-wheels) and congregate meals. The Texas Department of Aging (TDOA) through its 28 Area Agencies on Aging under the Older Americans Act, provides nutritional services at 881 sites. Currently they are serving meals to the homes of 24,000 persons. FY 86 budget figures include $25.9 million for congregate meals and $7.5 million for home delivery meals. TDHS also provides nutritional services under Title XX.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration

within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: The affordability of services and the need to contain the cost of care.

This issue is referred to the following agencies and organizations: Texas Department of Human Services, lead agency; Texas Department of Health; Texas Department on Aging; Texas Board of Licensure for Nursing Home Administrators; Texas Health Care Association; Texas Association of Homes for the Aging; Long-Term Care Coordinating Council for the Elderly; Texas Association of Home Health Agencies; and the regional health planning advisory committees of the 24 regional councils.

Issue 2: The scope of nursing home services.

This issue is referred to the following agencies and organizations: Texas Department of Health; Texas Department on Aging; Texas Department of Human Services; Texas Department of Mental Health and Mental Retardation; Texas Health Care Association; Texas Association of Homes for the Aging; and Texas Board of Licensure of Nursing Home Administrators.

Issue 3: Limited private insurance coverage for long-term care services and the need to develop this type of insurance.

This issue is referred to the following agencies and organizations: Texas Board of Insurance, lead agency; Long-Term Care Insurance Feasibility Study Advisory Group of the Texas Board of Insurance; and the Texas Legislature.

Issue 4: Limited availability of skilled-level nursing home beds.

This issue is referred to the Standing House Committee on Human Services which is conducting a study of the problems encountered by the elderly in gaining access to appropriate post-hospital health care services, including skilled nursing and custodial services. The following agencies and organizations should also be involved: Texas Department of Health; Texas Department of Human Services; Texas Department on Aging; Texas Health Care Association; and Texas Association of Homes for the Aging.

Issue 5: The service gaps in home and community care services.

This issue is referred to the following agencies and organizations: Texas Department of Human Services, lead agency; Texas Department of Health; Texas Department on Aging; Texas Department of Mental Health and Mental Retardation; and Texas Association of Home Health Agencies.

Issue 6: Limited Medicaid and other state funds to provide long-term care for the indigent.

This issue is referred to the following agencies and organizations: Texas Department of Human Services, lead agency; Texas Department of Health; Texas Department on Aging; Texas Health Care Association; and Texas Association of Homes for the Aging.

Issue 7: The availability of alternative living arrrangements.

This issue is referred to the House Services Committee which is studying continuing care communities and other options for well-elderly together with the following agencies and organizations: Texas Department on Aging; Texas Department of Health; Texas Department of Human Services; and Long-Term Care Coordinating Council for the Elderly.

Issue 8: The distribution of available Medicaid dollars among institutional, community-based and home-delivered services.

This issue is referred to the Texas Department of Human Services as the lead agency together with the Legislative Budget Board and the Texas Legislature.

Issue 9: Access to nursing home care for certain special populations, such as the mentally ill.

This issue is referred to the Texas Department of Human Services together with the Texas Department of Health, Texas Department on Aging, Texas Department of Mental Health and Mental Retardation and the Health and Human Services Coordinating Council.

Issue 10: Maldistribution of nursing home beds.

This issue is referred to the Texas Department of Human Services together with the Texas Department of Health, Texas Department on Aging, Texas Health Care Association, Texas Association of Homes for the Aging, and the Long-Term Care Coordination Council for the Elderly.

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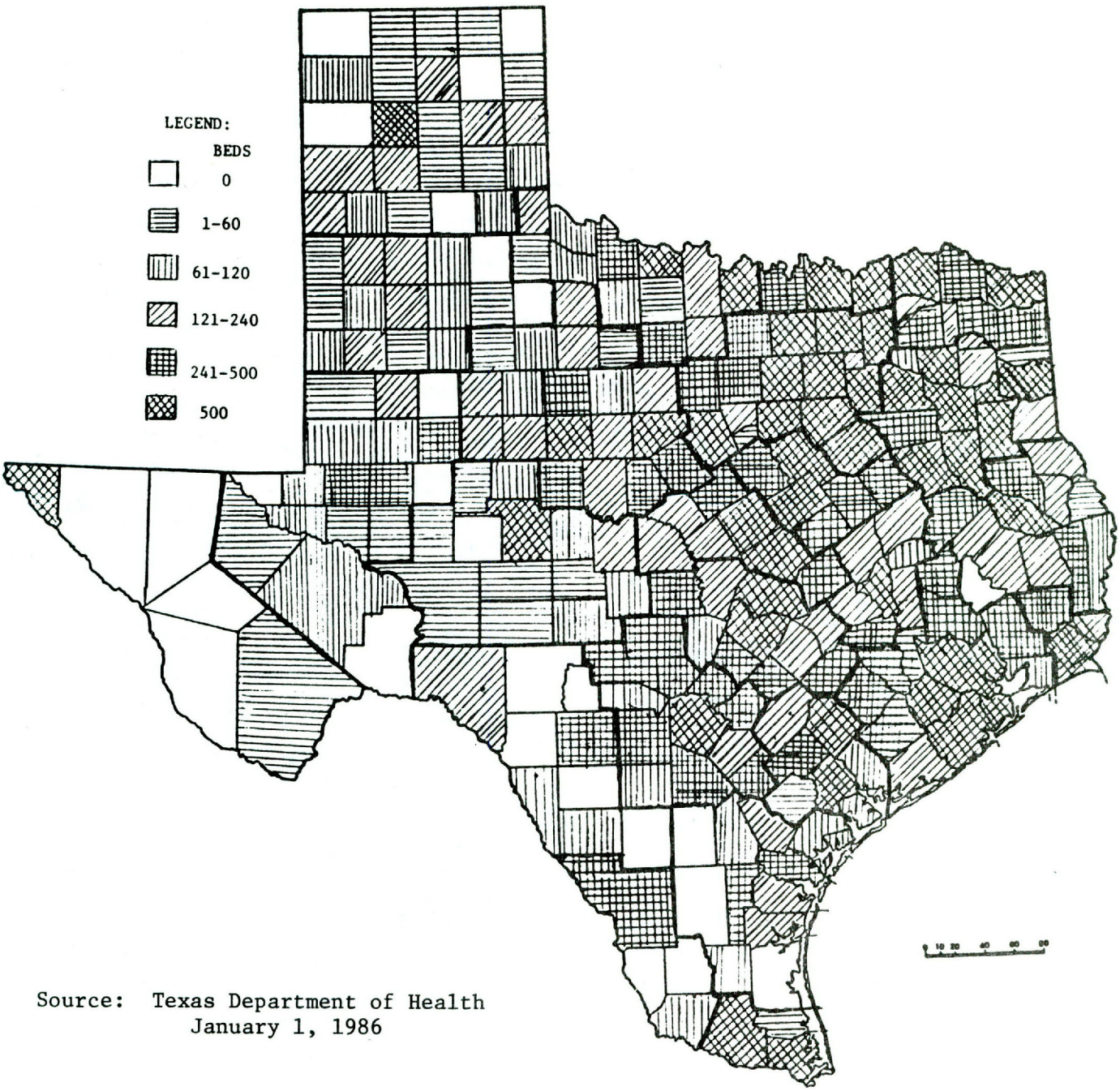
FIGURE 1

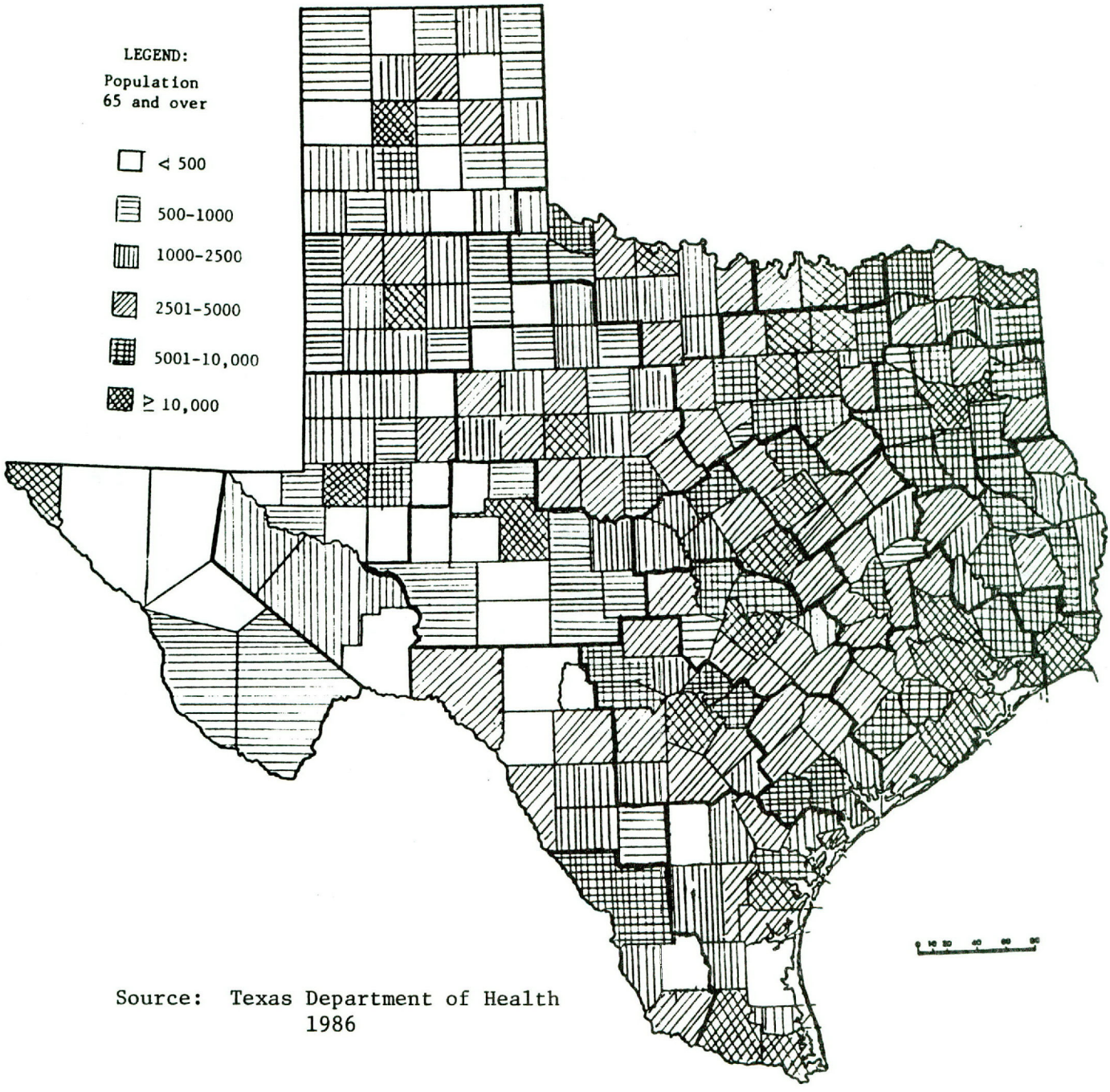
NURSING HOME BEDS BY COUNTY



Source: Texas Department of Health
January 1, 1986

FIGURE 2

POPULATION 65 YEARS OF AGE AND OLDER



Source: Texas Department of Health
1986

TABLE 1

NURSING/CUSTODIAL HOME UTILIZATION DATA - 1984*

SPR	NUMBER FACILITIES	LICENSED BEDS	PATIENT DAYS	AVG. DAILY CENSUS	OCCUPANCY RATE
1	36	2706	717184	2116	78.23
2	34	2463	648799	1835	74.50
3	43	3611	956249	2698	74.74
4	196	22398	6343861	17966	80.21
5	35	3489	1044646	2893	82.94
6	69	6828	2073300	5766	84.46
7	57	4646	1207161	3547	76.36
8	11	1257	384712	1054	83.85
9	22	1921	511685	1424	74.17
10	19	1504	442429	1212	80.59
11	37	3730	1137450	3116	83.56
12	57	5480	1587046	4533	82.73
13	15	1952	519242	1422	72.88
14	31	2601	843602	2311	88.86
15	21	2474	724147	2081	84.15
16	113	13362	3912962	11020	82.48
17	19	1896	615440	1686	88.93
18	76	8639	2670587	7347	85.05
19	3	428	114994	315	73.61
20	24	2867	838161	2296	80.10
21	22	2129	608493	1667	78.31
22	23	2403	699754	1917	79.78
23	31	2811	824182	2258	80.33
24	6	602	146096	412	68.60
STATE TOTAL	1000	102197	29572182	82903	81.12

*As of December 31, 1984
Source: 1984 Integrated Facilities File, Texas Department of Health

TABLE 2

1986 LICENSED NURSING/CUSTODIAL HOME BEDS*

SPR	NURSING BEDS	CUSTODIAL BEDS	TOTAL BEDS	BEDS PER POPULATION 65+
1	2817	0	2817	60.4
2	2446	0	2446	61.1
3	3564	14	3578	101.2
4	22412	139	22551	69.9
5	3708	0	3708	90.6
6	6977	44	7021	71.9
7	4617	0	4617	87.4
8	1211	0	1211	27.2
9	1853	69	1922	54.9
10	1503	0	1503	75.3
11	3666	0	3666	79.1
12	5434	20	5454	71.7
13	1832	0	1832	74.0
14	2818	0	2818	57.0
15	2394	40	2434	54.7
16	13027	231	13258	48.9
17	1900	0	1900	79.1
18	8491	283	8774	59.6
19	428	0	428	28.3
20	2987	0	2987	57.4
21	2021	0	2021	31.9
22	2325	0	2325	91.4
23	2839	0	2839	93.4
24	602	0	602	42.9
STATE TOTAL	101872	840	102712	63.4

* AS OF JANUARY 31, 1986

SOURCE: INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

TABLE 3
MEDICAID LONG TERM INSTITUTIONAL CARE DATA

EXPENDITURES	FY 1982	FY 1983	FY 1984	FY 1985
ICF II	57,927,430	48,523,885	38,832,225	29,449,245
ICF III	338,680,610	356,707,566	365,985,322	379,635,361
SKILLED	31,659,178	31,913,472	31,808,492	32,198,591
TOTAL	428,267,218	437,144,923	436,626,039	441,283,197
PATIENT DAYS				
ICF II	3,390,691	2,641,480	2,049,177	1,477,636
ICF III	17,268,449	17,160,334	17,331,519	17,465,959
SKILLED	1,154,605	1,078,996	1,032,401	1,004,092
TOTAL	21,813,745	20,880,810	20,413,097	19,947,687
AVERAGE DAILY CENSUS				
ICF II	9,290	7,237	5,599	4,048
ICF III	47,311	47,015	47,354	47,852
SKILLED	3,163	2,956	2,821	2,751
TOTAL	59,764	57,208	55,774	54,651

Source: Texas Department of Human Services

TABLE 4
CERTIFIED SKILLED LEVEL NURSING HOME BEDS BY SPR

SPR	COUNTIES WITH SNF	NUMBER* FACILITIES	MEDICARE** ONLY	MEDICAID ONLY	MEDICARE MEDICAID	TOTAL
1	2	4	30	0	126	156
2	2	3	0	0	161	161
3	3	4	16	112	73	201
4	9	50	205	1,390	2,036	3,631
5	4	6	37	147	182	366
6	8	16	41	360	445	846
7	4	4	0	58	177	235
8	1	3	0	105	53	158
9	1	1	0	0	32	32
10	1	2	0	29	100	129
11	3	7	63	168	320	551
12	2	5	0	108	176	284
13	2	3	8	51	164	223
14	4	4	31	86	33	150
15	3	7	0	44	551	595
16	7	28	87	643	757	1,487
17	1	1	0	34	12	46
18	6	8	113	266	526	905
19	1	1	0	12	34	46
20	3	8	0	184	266	450
21	2	9	31	48	340	419
22	2	5	22	246	81	349
23	4	12	28	211	490	729
24	1	1	0	40	18	58
STATE	76	192	712	4,342	7,153	12,207

*Includes 12 hospitals with beds certified for skilled nursing care.
**Includes 314 hospital beds certified for skilled nursing care.

Source: Quality Standards Division, Texas Department of Health, as of March 20, 1986.

TABLE 5
MEDICAID COMMUNITY CARE DATA

EXPENDITURES:	FY 1982	FY 1983	FY 1984	FY 1985
Emergency Response			55,141	707,075
Family Care	45,571,482	46,865,573	44,515,288	49,154,505
Meals	2,653,512	3,314,903	3,213,717	3,881,137
Foster Care	1,281,150	902,173	1,262,658	1,348,001
Handicapped	228,590	1,346,819	1,337,635	1,383,630
Primary Home Care	38,659,911	39,287,119	47,855,948	70,400,000
DAHS XX	1,705,550	765,565	696,650	926,532
DAHS XIX	429,268	591,780	785,580	1,048,451
DEMO-Supv. Living	1,130,384	1,657,160	2,410,613	2,989,077
TOTAL	91,659,847	94,731,092	102,133,230	131,838,408

CLIENTS:				
Emergency Response			2,027	2,861
Family Care	21,408	20,059	20,816	22,615
Meals	3,693	4,413	5,006	6,051
Foster Care	485	520	418	456
Handicapped	86	285	472	485
Primary Home Care	11,354	12,354	14,065	20,130
DAHS XX	653	423	297	348
DAHS XIX	100	329	297	349
DEMO-Supv. Living	635	882	323	476
TOTAL	38,414	39,369	43,721	53,771
UNDUPLICATED*	35,951	36,426	38,659	47,303

Legend:

*Back out 66.7% meals and 85% ERS to get unduplicated client count.

Source: Texas Department of Human Services

TABLE 6
PERSONAL CARE HOMES BY SPR

SPR	COUNTIES	NURSING/PERSONAL CARE* FACILITIES	NURSING/PERSONAL CARE* BEDS	FREESTANDING FACILITIES	FREESTANDING BEDS	TOTAL FAC.	TOTAL BED
1	2	2	40	1	8	3	48
2	2	1	35	4	58	5	93
3	4	5	121	2	117	7	238
4	3	6	355	14	846	20	1201
5	3	2	46	1	54	3	100
6	0	0	0	0	0	0	0
7	3	3	62	0	0	3	62
8	1	0	0	2	14	2	14
9	1	1	22	0	0	1	22
10	0	0	0	0	0	0	0
11	2	0	0	2	66	2	66
12	6	3	88	10	159	13	247
13	0	0	0	0	0	0	0
14	2	1	15	2	31	3	46
15	2	3	60	0	0	3	60
16	4	8	280	10	227	18	507
17	0	0	0	0	0	0	0
18	7	8	237	22	432	30	669
19	0	0	0	0	0	0	0
20	4	5	159	1	92	6	251
21	2	3	62	0	0	3	62
22	0	0	0	0	0	0	0
23	1	1	30	1	13	2	43
24	1	1	24	0	0	1	24
State Totals	50	53	1636	72	2117	125	3753

* Nursing home beds and personal care bed combined in same facility

Source: Quality Standards Division, Texas Department of Health
as of January 1, 1986

TABLE 7
LICENSED HOME HEALTH AGENCIES BY SPR

SPR	FREESTANDING CLASS A	FREESTANDING CLASS B	HOSPTIAL BASED CLASS A	HOSPTIAL BASED CLASS B	TOTAL
1	8	5	5	2	20
2	14	10	3	0	27
3	8	9	2	1	20
4	63	71	10	1	145
5	7	4	4	0	15
6	22	13	10	2	47
7	9	7	3	1	20
8	11	8	2	0	21
9	9	5	4	0	18
10	2	4	4	1	11
11	7	3	3	0	13
12	19	20	4	1	44
13	1	0	1	1	3
14	13	3	10	1	27
15	14	14	0	0	28
16	70	79	11	4	164
17	2	3	4	0	9
18	29	34	9	1	73
19	3	3	1	0	7
20	16	12	5	2	35
21	11	6	0	0	17
22	5	3	4	0	12
23	8	7	5	2	22
24	5	0	1	0	6
State Totals	356	323	105	20	804

Source: Quality Standards Division,
Texas Department of Health, March 1, 1986.

TABLE 8
ADULT DAY CARE - DAY HEALTH CARE FACILITIES BY SPR

SPR	Counties	Facilities	# of Clients*
1	1	1	160
2	1	1	50
3	0	0	0
4	2	5	425
5	2	2	146
6	0	0	0
7	1	1	50
8	1	2	80
9	0	0	0
10	0	0	0
11	1	1	50
12	2	3	87
13	1	1	30
14	1	1	30
15	1	2	92
16	1	6	365
17	0	0	0
18	1	3	157
19	0	0	0
20	1	1	30
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
State Total	17	30	1752

* Number of clients licensed to serve

Source: Quality Standards Division, Texas Department of Health
As of January 1, 1986

CHAPTER X - HABILITATION AND REHABILITATION

SUBJECT AREA BACKGROUND

In order to understand better the services offered in Habilitation and Rehabilitation (H & R) and the need for such services, we should explore the meaning of "disability". A human disability is any limitation of physical, mental or social activity of an individual as compared with other individuals of similar age, sex and occupation. It frequently refers to limitation of the usual or major activities, most commonly vocational. There are varying types of disabilities: functional, vocational, learning, mental illness, emotional disorders, and degrees: partial or total; and durations: temporary or permanent. This concept speaks to the limitation itself, whereas the term "handicap" denotes the difficulty of achievement in overcoming the disability.

Rehabilitation is the combined and coordinated use of medical, social, educational and vocational measures for training or retraining individuals disabled by disease or injury to the highest level of functional ability. Habilitation is used for similar activities undertaken for individuals born with limited functional ability, as compared with people who have lost abilities because of disease or injury.

The disabling conditions include, but are not limited to the following: alcoholism, alzheimer's disease, arthritis, autism, cancer, cardio-vascular conditions, cerebral palsy, cystic fibrosis, deafness and hearing impairments, down's syndrome, drug abuse, emotional disturbances, epilepsy, head injury, learning disabilities, legal definitions of handicapping conditions, mental retardation, multiple sclerosis, muscular dystrophy, physical disabilities and special health problems, severe handicaps, speech and language impairments, spina befida, spinal cord injury, visual impairment, and chronic chest diseases.

The disabling conditions are varied, complex, large in number and frequently occur in multiples, rather than singly, which compounds the task of the service providers. The services are, therefore, varied, complex, numerous, and ideally should be delivered in a planned, combined and coordinated manner where patients have multiple needs.

In terms of H&R services necessary for treatment of the various disabling conditions, several factors must be considered: (1) these conditions can and do occur in multiples; (2) these conditions generate sufficient physical and emotional pain and distress to overwhelm the disabled person; (3) the needs of the disabled, both in terms of individualized services and caring professions, are sufficient to overwhelm the H&R services delivery system; and (4) there is a lack of incidence/prevalence rates for these disabling conditions. Exhibit 2 lists those disabling conditions for which current prevalence rates, some national and some for Texas, could be located. These are extrapolated figures, at best.

The great majority of the disabled persons in Texas are those with conditions which can be treated in community outpatient service settings, whether in a hospital or a freestanding clinic. These are the people who require an increased number and diversity of outpatient services in their rural communities, or at the very least, some practical means of accessing those services they need, even if they are one or two counties away.

Table 1 lists the 1984 inventory of the hospitals and freestanding clinics in each state planning region (SPR) which offers outpatient H&R services. This table also lists other information about people with disabling conditions to include: number of persons with disability age 65 and over; the grand total of disabled persons; the 1991 estimates for total disabled persons; and state totals.

The H&R outpatient services which can be offered in these facilities are audio therapy, medical evaluation, medical supervision, occupational therapy, physical therapy, prosthetics, psychiatric and psychological evaluation, recreational therapy, social case work, social evaluation, speech therapy, and vocational services. These services are not offered in a full array in each outpatient facility. The practice seems to be one or two such services are provided, except in the larger hospital facilities where space, equipment and trained staff are available. The most commonly offered outpatient services are: audio therapy, physical therapy, and speech therapy.

There is very little offered in most communities in the way of personal care (attendant) services, sheltered workshops, education to reduce dependency, like living skills, recreation, and coping with architectural barriers. They seldom offer services in such areas as: prosthetics; orthotics; employment placement services; community housing; and manpower training, whether professional or volunteer. The same can be said for the extended services such as: telecommunications, library, Client Assistance Projects (CAPS); Community Alternative Service Systems (CASS) which are for the developmentally disabled; and respite care for the families of the disabled.

There is a great and growing need for community level outpatient services for disabled persons. As the federal government withdraws its financial support in compliance with the Gramm-Rudmann-Hollings Amendment, there is a great challenge for community leaders. As the federal money disappears, the political power returns to the communities and the state. This provides the opportunity to tackle problems and create change at the local level. The federal restraints will fade away and a large number of problems can be solved at the local level with less money. There must be an appreciation of future trends and a willingness to focus efforts for change and progress at the local and state levels, if problems are to be solved.

The plan development contributors to this section were very concerned about all the issues with a very small difference between the priority concern and the last referral issue. The contributors included concerned state agencies, community providers, professional provider groups and councils of government.

A great number of disabled people residing in rural counties (50,000 or

less population) do not have adequate access to H&R outpatient facilities which offer an appropriate array of services. Three approaches to solving this problem are: (1) upgrading the array of services offered; (2) establishing a rural transportation system where item (1) will not suffice; (3) the establishment of H&R outpatient facilities with an appropriate array of services. This issue will affect 499,242 rural disabled persons in 1987. See Table 2.

TRC estimates that approximately 2.5 million persons or 15% of the total population will be disabled. The 15% estimate utilized by TRC was derived from Dr. Frank Bowe's book, Handicapping America, which estimated that approximately 15% of the United States population in 1978 was handicapped. This estimate is consistent with other national estimates and is used in Tables 1 and 2.

A need exists for public information programs concerning the availability of H&R services. The major reason people do not seek out H&R services is lack of knowledge of their existence. Not all who need the services would seek help even with knowledge of where facilities are located and what services are offered, but the great majority would go if they only knew where. This H&R public information function would impact about 2.5 million persons with disabling conditions under 1987 estimates. It would result in tremendous savings in dollars and human pain and suffering.

A need exists for a statewide job placement mechanism to facilitate the placement of trained disabled workers in both private and public sectors. It could be established by TEC within its existing progams. The community agencies would be called on to supply lists of eligible employees and local available jobs. With a systematic search function in their behalf, those disabled workers with job training could become partially independent of public support funds. The exact number of such people is not known but an estimate probably is in the 80,000 to 100,000 range statewide.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: Improved access for rural disabled persons to receive outpatient services.

The proponent agencies are the health and human service agencies which are members of the Human Services Interagency Committee (HSIC). This Committee was created by executive order for the purpose of demonstrating coordination of services by various state agencies. (See Exhibit 1 for composition)

The Texas Health and Human Services Coordinating Council and the Texas Statewide Health Coordinating Council (SHCC) should join in their efforts on this issue and its solutions in order to

increase access to services and to reduce costs by coordination of administrative and health delivery services.

Issue 2: The need for funding of community habilitation and rehabilitation facilities and services.

The legislature is the proponent organization with appropriate mandates to the Texas Health and Human Services Coordinating Council, the Texas SHCC, state agency members of the Human Services Interagency Council who are involved in offering H&R services, and local organizations and officials.

Issue 3: The lack of reliable and valid habilitation and rehabilitation data.

The Council on Disabilities is the referral agency.

Issue 4: Limited habilitation and rehabilitation public information.

The Texas Health and Human Services Coordinating Council and Human Services Interagency Council member agencies who provide habilitation and rehabilitation services should join with the private sector and mount public information efforts on the community level.

Issue 5: The need for an improved job placement mechanism for the disabled.

Since this is a vocational function and not restricted by the type of H&R services being administered, it is appropriate for the Texas Employment Commission (TEC) to be the lead proponent agency. With the assistance of Texas Rehabilitation Commission (TRC), Texas Commission for the Blind (TCB), Texas Youth Commission (TYC), Texas Department of Mental Health and Mental Retardation (TDMHMR) and community groups, this statewide job placement mechanism could be established and operating within a relatively short period of time.

Issue 6: The need for a case management system.

Those Health and Human Services Coordinating Council member agencies which provide H&R services and the private sector providers are urged to initiate case management systems wherever the need exists. Those state agencies which deliver services to individuals with disabilities should encourage prompt and appropriate referrals of individuals for additional services from other services providers.

PRIORITY ISSUE SUPPORT

The ultimate result of solving this fragmentation problem is to make H&R services more accessible to those in need of such services. That means the person in need should be within a reasonable traveling distance of a facility; that the facility offers the service(s) required for his/her condition(s); that the person can afford the charges for treatments; that transportation is available to and from the facility during hours of operation; that the facilities' operating times do not conflict with his/her job obligations; and that professional referral and follow-up services to other medical services are available as needed.

The complexity of the situation is enormous. We are dealing with a wide array of largely highly technical services offered in varying degrees by mostly private providers for a large population, largely unidentified as to condition and as to location. The task is to bring the public providers in step with the large private sector. In this way, internal costs can be reduced and more services provided in harmony with the private sector. Those who are in need of H&R services will benefit from this coordinated approach.

Implicit in this coordinated approach is the need for a statewide demographic survey on the disabled population based on standardized definitions of those disabling conditions. Strategic planning, funding appropriations and program planning cannot effectively be accomplished without facts which the demographic survey would provide.

The extent of the fragmentation of the H&R delivery system can be seen in Figure 1 which shows those rural counties (50,000 or less population) with no H&R services whatsoever. Table 1 demonstrates that Texas has 206 rural counties with a 1987 estimated total population of 3,328,911 people with almost half a million persons with disabling conditions. These are people in need of H&R services with almost no way to get the treatment they need.

The problems created by fragmentation of delivery services will be compounded by the increasing population, the increasing number of elderly people, the increasing incidence of multiple disabilities, and the current public funding shortages. The solutions will be in the direction of coordination with an interconnected management network that will produce an increase in services in a far more efficient manner. The state agencies are urged to come together under the leadership of the H&HSCC and SHCC to solve the problem of fragmentation of H&R delivery services. The TRC will be the lead agency in these implementation efforts.

EXHIBIT 1

MEMBERS OF THE HUMAN SERVICES
INTERAGENCY COMMITTEE (HSIC)

Texas Department of Health (TDH)

Texas Rehabilitation Commission (TRC)

Texas Youth Commission (TYC)

Texas Department of Mental Health and
Mental Retardation (TDMHMR)

Texas Department of Human Services (TDHS)

EXHIBIT 2

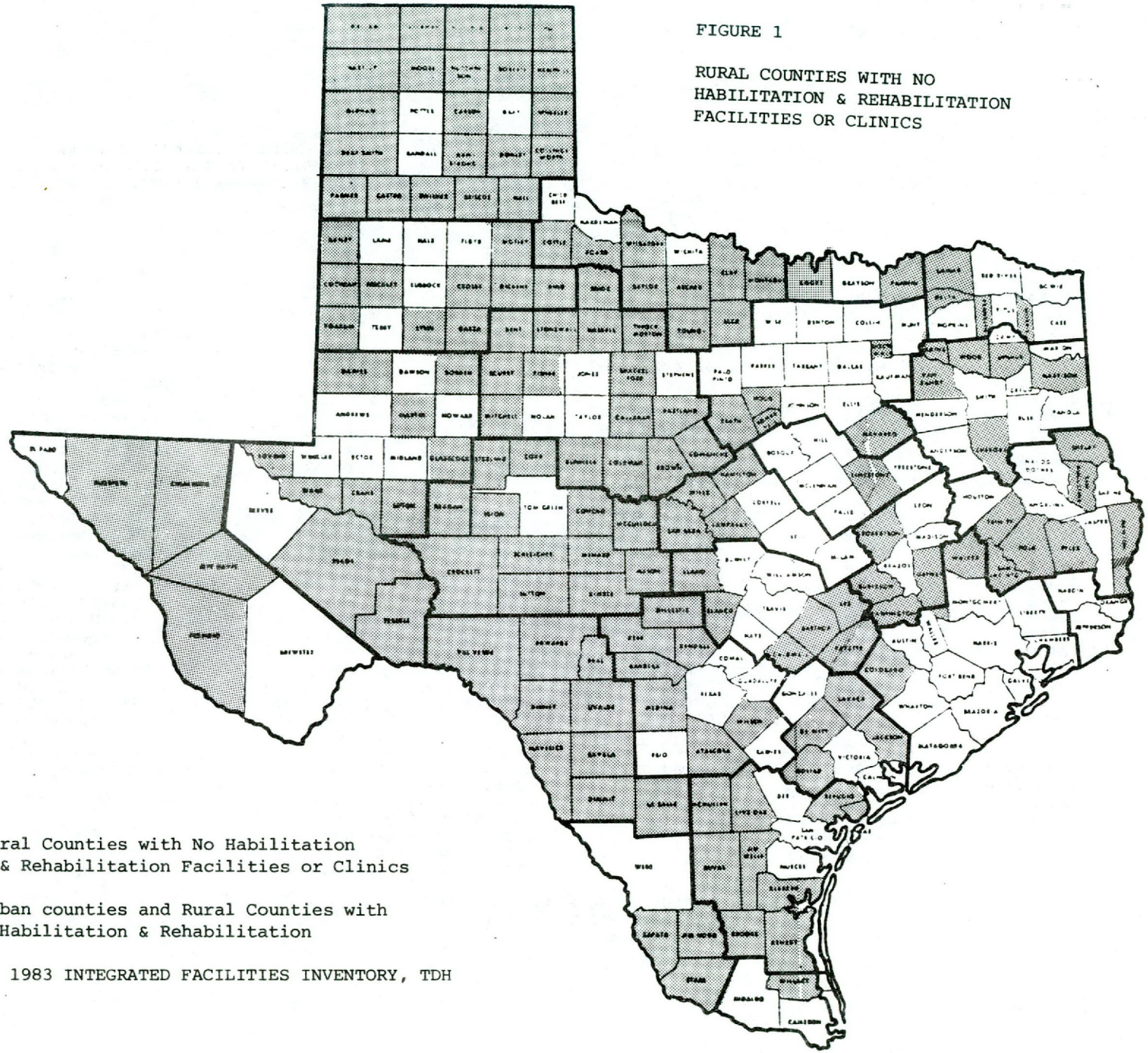
SELECTED PREVALENCE RATES

DISABLING CONDITION	PREVALENCE RATE & SOURCE
Alcoholism	5.1% of Texas general population, Texas Commission on Alcohol and Drug Abuse.
Autism	.04%, or 4 out of every 10,000 live births, National Information Center for Handicapped Children & Youth (NIC for HC&Y).
Cerebral Palsy	700,000 Americans, or 16 out of every 5,000; 10,000 babies born each year and another 2,000 acquire it in early years of life, NIC for HC&Y.
Deafness and Hearing Impairments	16 million Americans have hearing impairments and of these, 2 million are deaf, Gallaudet College and the National Assocociation of the Deaf.
Down's Syndrome	1 per 800 live births, or approximately 7,000 in the U.S. each year, NIC for HC&Y.
Drug Abuse	5% of Texas population in need of counselling, Texas Commission on Alcohol and Drug Abuse.
Emotional Disturbances	10% of the total school age population including 2% with severe emotional/behavioral problems, NIC for HC&Y.
Epilepsy	Approximately 2% of the national population, or 2 million Americans and 100,000 new cases each year, of which 3/4 are children or adolescents, NIC for HC&Y.
Learning Disabilities	2 to 3% of school-aged children and youth, NIC for HC&Y.
Mental Retardation	3% of general population, NIC for HC&Y.
Physical Disabilities and Special Health Problems	.5% of school-aged children, NIC for HC&Y.
Speech and Language Impairments	5% of school-aged children, NIC for HC&Y.
Spina Bifida (Cleft Spine)	40% of all Americans have bone openings in the spine; 4% have meningocele, with spine intact but sheath or covering in a sac, and

	of these 4%, 96% have a severed spinal column including bone and nerves, NIC for HC&Y.
Visual Impairments	7 per 1000 for those under 45, 44.5 per 1000 for those over 65, NIC for HC&Y.

FIGURE 1

RURAL COUNTIES WITH NO HABILITATION & REHABILITATION FACILITIES OR CLINICS



Legend:

Rural Counties with No Habilitation & Rehabilitation Facilities or Clinics

Urban counties and Rural Counties with Habilitation & Rehabilitation

Source: 1983 INTEGRATED FACILITIES INVENTORY, TDH

TABLE 1 - PAGE 1
NUMBER OF FACILITIES AND
ESTIMATED NUMBER OF DISABLED BY SPR

PHR	NAME OF SPR	NUMBER OF FACILITIES OFFERING HOSPITAL AND REHAB OUTPATIENT SERVICES, 1983(1)		1987 ESTIMATED NUMBER OF DISABLED (EXCL 65+)(2)	1987 ESTIMATED NUMBER OF DISABLED 65+(2)	TOTAL 1987 ESTIMATED NUMBER OF DISABLED(2)	TOTAL 1991 ESTIMATED NUMBER OF DISABLED(2)
		HOSPITALS	FREESTANDING CLINICS				
1	1 - PANHANDLE	4	2	51823	9789	61612	66576
2	2 - SOUTH PLAINS	10	1	50850	8259	59109	62467
4	3 - NORTEX	4	1	27552	6988	34540	35788
5	4 - NORTH CENTRAL	40	8	483813	69168	552981	616668
7	5 - ARK-TEX	5	1	32119	8107	40226	43661
7	6 - EAST TEXAS	8	1	85550	19995	105545	120403
4	7 - WEST CENTRAL	4	1	40623	10359	50982	54579
3	8 - WEST TEXAS	7	2	81187	10078	91265	102883
12	9 - PERMIAN BASIN	6	2	50949	7747	58696	64410
4	10 - CONCHO VALLEY	2	1	17980	4013	21993	24036
6	11 - HEART OF TEXAS	9	3	34668	9137	43805	47140
6	12 - CAPITAL AREA	7	3	106411	15802	122213	142182
6	13 - BRAZOS VALLEY	3	1	24803	4890	29693	33031
10	14 - DEEP EAST TEXAS	7	3	40420	10178	50598	57300
10	15 - SOUTH EAST TEXAS	6	3	50473	9510	59983	62765
11	16 - HOUSTON-GALVESTON AREA	42	8	573583	61492	635075	744462
8	17 - GOLDEN CRESCENT	3	0	22173	4892	27065	29110
9	18 - ALAMO AREA	14	6	180341	31145	211486	230693
8	19 - SOUTH TEXAS	1	1	23620	3231	26851	31384
8	20 - COASTAL BEND	5	1	68114	11065	79179	84693
8	21 - LOWER RIO GRANDE	7	3	89582	13467	103049	122665
5	22 - TEXOMA	1	1	17716	5015	22731	23749
6	23 - CENTRAL TEXAS	3	1	42227	6235	48462	55261
6	24 - MIDDLE RIO GRANDE	0	0	20662	3033	23695	27463
	STATE TOTALS	198	54	2217239	343595	2560834	2883369

(1) SOURCE: 1983 INTEGRATED FACILITIES FILE TDH
(2) SOURCE: TDH POPULATION DATA SYSTEM
15% OF POPULATION - TRC

TABLE 2 - PAGE 1
ESTIMATED POPULATION, NUMBER OF FACILITIES
NUMBER OF VISITS AND ESTIMATED DISABLED POPULATION IN RURAL COUNTIES

PHR	NAME OF SPR	RURAL COUNTIES (1)	ESTIMATED POPULATION (2) 1987	ESTIMATED POPULATION (2) 1991	1983 NUMBER OF FACILITIES AND FREESTANDING CLINICS (3)	REPORTED NUMBER OF VISITS IN 1983(3)	ESTIMATED NUMBER OF DISABLED PERSONS (INCL 65+) (4) 1987	ESTIMATED NUMBER OF DISABLED PERSONS (INCL 65+) (4) 1991
7	6 - EAST TEXAS	ANDERSON	48876	58015	1	1704	7331	8702
12	9 - PERMIAN BASIN	ANDREWS	16830	20165	1	4293	2524	3024
8	20 - COASTAL BEND	ARANSAS	20330	25224	0	0	3049	3783
4	3 - NORTEX	ARCHER	8890	10088	0	0	1333	1513
1	1 - PANHANDLE	ARMSTRONG	2382	2692	0	0	357	403
9	18 - ALAMO AREA	ATASCOSA	31443	36135	0	0	4716	5420
11	16 - HOUSTON-GALVESTON AREA	AUSTIN	21975	25278	1	3328	3296	3791
2	2 - SOUTH PLAINS	BAILEY	8082	8178	0	0	1212	1226
9	18 - ALAMO AREA	BANDERA	9350	11023	0	0	1402	1653
6	12 - CAPITAL AREA	BASTROP	33617	40886	0	0	5042	6132
4	3 - NORTEX	BAYLOR	4864	4915	0	0	729	737
8	20 - COASTAL BEND	BEE	29055	31360	1	6900	4358	4704
6	12 - CAPITAL AREA	BLANCO	5848	6738	0	0	877	1010
12	9 - PERMIAN BASIN	BORDEN	1002	1130	0	0	150	169
6	11 - HEART OF TEXAS	BOSQUE	15578	17169	1	288	2336	2575
3	8 - WEST TEXAS	BREWSTER	7624	7775	1	0	1143	1166
1	1 - PANHANDLE	BRISCOE	2615	2754	0	0	392	413
8	20 - COASTAL BEND	BROOKS	8886	9264	0	0	1332	1389
4	7 - WEST CENTRAL	BROWN	40355	45865	0	0	6053	6879
6	13 - BRAZOS VALLEY	BURLESON	15039	17128	0	0	2255	2569
6	12 - CAPITAL AREA	BURNET	24176	28968	1	400	3626	4345
6	12 - CAPITAL AREA	CALDWELL	26555	29270	0	0	3983	4390
8	17 - GOLDEN CRESCENT	CALHOUN	20968	22012	1	0	3145	3301
4	7 - WEST CENTRAL	CALLAHAN	14054	16352	0	0	2108	2452
7	6 - EAST TEXAS	CAMP	10949	12302	1	0	1642	1845
1	1 - PANHANDLE	CARSON	7122	7550	0	0	1068	1132
7	5 - ARK-TEX	CASS	34367	37818	2	1933	5155	5672
1	1 - PANHANDLE	CASTRO	10856	11145	0	0	1628	1671
11	16 - HOUSTON-GALVESTON AREA	CHAMBERS	25938	31807	1	669	3890	4771
7	6 - EAST TEXAS	CHEROKEE	44125	48486	0	0	6618	7272
4	3 - NORTEX	CHILDRESS	7627	8348	1	1506	1144	1252
4	3 - NORTEX	CLAY	10962	11930	0	0	1644	1789
2	2 - SOUTH PLAINS	COCHRAN	4644	4634	0	0	696	695
4	10 - CONCHO VALLEY	COKE	3308	3423	0	0	496	513
4	7 - WEST CENTRAL	COLEMAN	10735	11046	0	0	1610	1656
1	1 - PANHANDLE	COLLINGSWORTH	4815	5038	0	0	722	755
11	16 - HOUSTON-GALVESTON AREA	COLORADO	20279	21500	0	0	3041	3225

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(2) SOURCE: TDH POPULATION DATA SYSTEM
(3) SOURCE: 1983 INTEGRATED FACILITIES FILE TDH
(4) SOURCE: TDH POPULATION DATA SYSTEM
15% OF TOTAL POPULATION, TRC

TABLE 2 - PAGE 2
ESTIMATED POPULATION, NUMBER OF FACILITIES
NUMBER OF VISITS AND ESTIMATED DISABLED POPULATION IN RURAL COUNTIES

PHR	NAME OF SPR	RURAL COUNTIES (1)	ESTIMATED POPULATION (2) 1987	ESTIMATED POPULATION (2) 1991	1983 NUMBER OF FACILITIES AND FREESTANDING CLINICS (3)	REPORTED NUMBER OF VISITS IN 1983(3)	ESTIMATED NUMBER OF DISABLED PERSONS (INCL 65+) (4) 1987	ESTIMATED NUMBER OF DISABLED PERSONS (INCL 65+) (4) 1991
9	18 - ALAMO AREA	COMAL	49008	58380	2	4233	7351	8757
4	7 - WEST CENTRAL	COMANCHE	13520	14266	0	0	2028	2139
4	10 - CONCHO VALLEY	CONCHO	3059	3220	0	0	458	483
5	22 - TEXOMA	COOKE	31359	34040	0	0	4703	5106
4	3 - NORTEX	COTTLE	2941	3034	0	0	441	455
12	9 - PERMIAN BASIN	CRANE	5419	6279	0	0	812	941
4	10 - CONCHO VALLEY	CROCKETT	5583	6349	0	0	837	952
2	2 - SOUTH PLAINS	CROSBY	8824	8945	0	0	1323	1341
3	8 - WEST TEXAS	CULBERSON	3541	3787	0	0	531	568
1	1 - PANHANDLE	DALLAM	7223	7750	0	0	1083	1162
12	9 - PERMIAN BASIN	DAWSON	16329	16569	1	0	2449	2485
1	1 - PANHANDLE	DEAF SMITH	23004	24318	0	0	3450	3647
7	5 - ARK-TEX	DELTA	5094	5348	0	0	764	802
8	17 - GOLDEN CRESCENT	DE WITT	19599	20223	0	0	2939	3033
2	2 - SOUTH PLAINS	DICKENS	3667	3843	0	0	550	576
9	24 - MIDDLE RIO GRANDE	DIMMIT	13631	15315	0	0	2044	2297
1	1 - PANHANDLE	DONLEY	4567	4939	0	0	685	740
8	20 - COASTAL BEND	DUVAL	13316	13914	0	0	1997	2087
4	7 - WEST CENTRAL	EASTLAND	20930	22062	0	0	3139	3309
9	24 - MIDDLE RIO GRANDE	EDWARDS	2257	2446	0	0	338	366
5	4 - NORTH CENTRAL	ERATH	26820	30089	0	0	4023	4513
6	11 - HEART OF TEXAS	FALLS	19180	20250	1	581	2877	3037
5	22 - TEXOMA	FANNIN	25914	27115	0	0	3887	4067
6	12 - CAPITAL AREA	FAYETTE	20637	22174	0	0	3095	3326
4	7 - WEST CENTRAL	FISHER	5865	5934	0	0	879	890
2	2 - SOUTH PLAINS	FLOYD	9783	10004	1	291	1467	1500
4	3 - NORTEX	FOARD	2215	2319	0	0	332	347
7	5 - ARK-TEX	FRANKLIN	8741	10140	0	0	1311	1521
6	11 - HEART OF TEXAS	FREESTONE	19795	23940	1	638	2969	3591
9	18 - ALAMO AREA	FRIO	16431	18321	1	336	2464	2748
12	9 - PERMIAN BASIN	GAINES	14685	15820	0	0	2202	2373
2	2 - SOUTH PLAINS	GARZA	5785	6260	0	0	867	939
9	18 - ALAMO AREA	GILLESPIE	16379	18400	0	0	2456	2760
12	9 - PERMIAN BASIN	GLASSCOCK	1494	1685	0	0	224	252
8	17 - GOLDEN CRESCENT	GOLIAD	5804	6372	0	0	870	955
8	17 - GOLDEN CRESCENT	GONZALES	17868	18672	2	6557	2680	2800
1	1 - PANHANDLE	GRAY	26283	26643	1	0	3942	3996

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15% OF TOTAL POPULATION, TRC

TABLE 2 - PAGE 3
ESTIMATED POPULATION, NUMBER OF FACILITIES
NUMBER OF VISITS AND ESTIMATED DISABLED POPULATION IN RURAL COUNTIES

PHR	NAME OF SPR	RURAL COUNTIES (1)	ESTIMATED POPULATION (2) 1987	ESTIMATED POPULATION (2) 1991	1983 NUMBER OF FACILITIES AND FREESTANDING CLINICS (3)	REPORTED NUMBER OF VISITS IN 1983(3)	ESTIMATED NUMBER OF DISABLED PERSONS (INCL 65+) (4) 1987	ESTIMATED NUMBER OF DISABLED PERSONS (INCL 65+) (4) 1991
6	13 - BRAZOS VALLEY	GRIMES	15989	17890	0	0	2398	2683
2	2 - SOUTH PLAINS	HALE	41183	44128	2	0	6177	6619
1	1 - PANHANDLE	HALL	5542	5610	0	0	831	841
6	23 - CENTRAL TEXAS	HAMILTON	9344	10118	0	0	1401	1517
1	1 - PANHANDLE	HANSFORD	6250	6380	0	0	937	957
4	3 - NORTEX	HARDEMAN	6464	6641	1	591	969	996
1	1 - PANHANDLE	HARTLEY	5257	6194	0	0	788	929
4	7 - WEST CENTRAL	HASKELL	7388	7306	0	0	1108	1095
6	12 - CAPITAL AREA	HAYS	44272	48784	1	420	6640	7317
1	1 - PANHANDLE	HEMPHILL	7942	10209	0	0	1191	1531
6	11 - HEART OF TEXAS	HILL	27546	29408	3	3921	4131	4411
2	2 - SOUTH PLAINS	HOCKLEY	25795	27787	0	0	3869	4168
5	4 - NORTH CENTRAL	HOOD	29471	39540	0	0	4420	5931
7	5 - ARK-TEX	HOPKINS	29463	32438	1	1509	4419	4865
10	14 - DEEP EAST TEXAS	HOUSTON	26711	30277	1	550	4006	4541
12	9 - PERMIAN BASIN	HOWARD	30493	29520	2	7158	4573	4428
3	8 - WEST TEXAS	HUDSPETH	3187	3525	0	0	478	528
1	1 - PANHANDLE	HUTCHINSON	28186	29873	0	0	4227	4480
4	10 - CONCHO VALLEY	IRION	1869	2279	0	0	280	341
4	3 - NORTEX	JACK	7999	8441	0	0	1199	1266
8	17 - GOLDEN CRESCENT	JACKSON	13894	14372	0	0	2084	2155
10	14 - DEEP EAST TEXAS	JASPER	36539	40512	1	7398	5480	6076
3	8 - WEST TEXAS	JEFF DAVIS	1885	2114	0	0	282	317
8	19 - SOUTH TEXAS	JIM HOGG	5627	5960	0	0	844	894
8	20 - COASTAL BEND	JIM WELLS	39104	40902	0	0	5865	6135
4	7 - WEST CENTRAL	JONES	18977	20402	1	282	2846	3060
9	18 - ALAMO AREA	KARNES	13923	14298	1	628	2088	2144
5	4 - NORTH CENTRAL	KAUFMAN	46411	51762	2	2579	6961	7764
9	18 - ALAMO AREA	KENDALL	14439	17338	0	0	2165	2600
8	20 - COASTAL BEND	KENEDY	539	563	0	0	80	84
4	7 - WEST CENTRAL	KENT	1068	1046	0	0	160	156
9	18 - ALAMO AREA	KERR	38659	46137	0	0	5798	6920
4	10 - CONCHO VALLEY	KIMBLE	4273	4455	0	0	640	668
2	2 - SOUTH PLAINS	KING	517	583	0	0	77	87
9	24 - MIDDLE RIO GRANDE	KINNEY	2523	2753	0	0	378	412
8	20 - COASTAL BEND	KLEBERG	34161	35029	0	0	5124	5254
4	7 - WEST CENTRAL	KNOX	5173	5233	0	0	775	784

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15% OF TOTAL POPULATION, TRC

TABLE 2 - PAGE 4
ESTIMATED POPULATION, NUMBER OF FACILITIES
NUMBER OF VISITS AND ESTIMATED DISABLED POPULATION IN RURAL COUNTIES

PHR	NAME OF SPR	RURAL COUNTIES (1)	ESTIMATED POPULATION (2) 1987	1991	1983 NUMBER OF FACILITIES AND FREESTANDING CLINICS (3)	REPORTED NUMBER OF VISITS IN 1983(3)	ESTIMATED NUMBER OF DISABLED PERSONS (INCL 65+) (4) 1987	1991
7	5 - ARK-TEX	LAMAR	47605	51349	0	0	7140	7702
2	2 - SOUTH PLAINS	LAMB	20139	21426	1	0	3020	3213
6	23 - CENTRAL TEXAS	LAMPASAS	14910	17048	0	0	2236	2557
9	24 - MIDDLE RIO GRANDE	LA SALLE	6154	6648	0	0	923	997
8	17 - GOLDEN CRESCENT	LAVACA	20340	21396	0	0	3051	3209
6	12 - CAPITAL AREA	LEE	14122	16787	0	0	2118	2518
6	13 - BRAZOS VALLEY	LEON	10792	11768	1	717	1618	1765
6	11 - HEART OF TEXAS	LIMESTONE	22108	23564	0	0	3316	3534
1	1 - PANHANDLE	LIPSCOMB	4220	4646	0	0	633	696
8	20 - COASTAL BEND	LIVE OAK	12923	15539	0	0	1938	2330
6	12 - CAPITAL AREA	LLANO	12534	14211	0	0	1880	2131
12	9 - PERMIAN BASIN	LOVING	109	119	0	0	16	17
2	2 - SOUTH PLAINS	LYNN	8566	8698	0	0	1284	1304
4	10 - CONCHO VALLEY	MCCULLOCH	9082	9425	0	0	1362	1413
8	20 - COASTAL BEND	MCMULLEN	778	815	0	0	116	122
6	13 - BRAZOS VALLEY	MADISON	11813	13428	1	1895	1771	2014
7	6 - EAST TEXAS	MARION	12439	14068	0	0	1865	2110
12	9 - PERMIAN BASIN	MARTIN	4851	5009	0	0	727	751
4	10 - CONCHO VALLEY	MASON	4074	4381	0	0	611	657
11	16 - HOUSTON-GALVESTON AREA	MATAGORDA	48038	55860	1	1182	7205	8379
9	24 - MIDDLE RIO GRANDE	MAVERICK	46789	59139	0	0	7018	8870
9	18 - ALAMO AREA	MEDINA	26038	28005	0	0	3905	4200
4	10 - CONCHO VALLEY	MENARD	2316	2336	0	0	347	350
6	23 - CENTRAL TEXAS	MILAM	25942	28425	1	1724	3891	4263
6	23 - CENTRAL TEXAS	MILLS	4948	5345	0	0	742	801
4	7 - WEST CENTRAL	MITCHELL	9331	9582	0	0	1399	1437
4	3 - NORTEX	MONTAGUE	19132	20321	0	0	2869	3048
1	1 - PANHANDLE	MOORE	19614	22329	0	0	2942	3349
7	5 - ARK-TEX	MORRIS	17049	18844	0	0	2557	2826
2	2 - SOUTH PLAINS	MOTLEY	2076	2197	0	0	311	329
5	4 - NORTH CENTRAL	NAVARRO	39431	42420	0	0	5914	6363
10	14 - DEEP EAST TEXAS	NEWTON	14881	16049	0	0	2232	2407
4	7 - WEST CENTRAL	NOLAN	18819	19994	1	0	2822	2999
1	1 - PANHANDLE	OCHILTREE	9814	10243	0	0	1472	1536
1	1 - PANHANDLE	OLDHAM	2498	2712	0	0	374	406
5	4 - NORTH CENTRAL	PALO PINTO	21729	20642	1	3306	3259	3096
7	6 - EAST TEXAS	PANOLA	26093	30278	1	343	3913	4541

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15% OF TOTAL POPULATION, TRC

TABLE 2 - PAGE 5
ESTIMATED POPULATION, NUMBER OF FACILITIES
NUMBER OF VISITS AND ESTIMATED DISABLED POPULATION IN RURAL COUNTIES

PHR	NAME OF SPR	RURAL COUNTIES (1)	ESTIMATED POPULATION (2) 1987	1991	1983 NUMBER OF FACILITIES AND FREESTANDING CLINICS (3)	REPORTED NUMBER OF VISITS IN 1983(3)	ESTIMATED NUMBER OF DISABLED PERSONS (INCL 65+) (4) 1987	1991
1	1 - PANHANDLE	PARMER	12351	13617	0	0	1852	2042
12	9 - PERMIAN BASIN	PECOS	16144	17441	0	0	2421	2616
10	14 - DEEP EAST TEXAS	POLK	34993	43496	0	0	5248	6524
3	8 - WEST TEXAS	PRESIDIO	5624	5943	0	0	843	891
7	6 - EAST TEXAS	RAINES	6125	7084	0	0	918	1062
4	10 - CONCHO VALLEY	REAGAN	5561	6941	0	0	834	1041
9	24 - MIDDLE RIO GRANDE	REAL	2904	3251	0	0	435	487
7	5 - ARK-TEX	RED RIVER	18204	19739	1	1061	2730	2960
12	9 - PERMIAN BASIN	REEVES	15759	15930	1	1835	2363	2389
8	20 - COASTAL BEND	REFUGIO	9490	9719	0	0	1423	1457
1	1 - PANHANDLE	ROBERTS	1526	1796	0	0	228	269
6	13 - BRAZOS VALLEY	ROBERTSON	15282	15809	0	0	2292	2371
5	4 - NORTH CENTRAL	ROCKWALL	22814	29898	0	0	3422	4484
4	7 - WEST CENTRAL	RUNNELS	12291	12699	0	0	1843	1904
7	6 - EAST TEXAS	RUSK	49280	55289	1	864	7392	8293
10	14 - DEEP EAST TEXAS	SABINE	10098	11104	1	100	1514	1665
10	14 - DEEP EAST TEXAS	SAN AUGUSTINE	9588	10171	0	0	1438	1525
10	14 - DEEP EAST TEXAS	SAN JACINTO	16934	21620	0	0	2540	3243
6	23 - CENTRAL TEXAS	SAN SABA	7129	7845	0	0	1069	1176
4	10 - CONCHO VALLEY	SCHLEICHER	3385	3839	0	0	507	575
4	7 - WEST CENTRAL	SCURRY	21074	23465	0	0	3161	3519
4	7 - WEST CENTRAL	SHACKELFORD	4830	5625	0	0	724	843
10	14 - DEEP EAST TEXAS	SHELBY	26093	28180	0	0	3913	4227
1	1 - PANHANDLE	SHERMAN	2897	2796	0	0	434	419
5	4 - NORTH CENTRAL	SOMERVELL	5874	7280	0	0	881	1092
8	19 - SOUTH TEXAS	STARR	37401	45000	0	0	5610	6750
4	7 - WEST CENTRAL	STEPHENS	11845	13302	1	1487	1776	1995
4	10 - CONCHO VALLEY	STERLING	1503	1764	0	0	225	264
4	7 - WEST CENTRAL	STONEWALL	2500	2619	0	0	375	392
4	10 - CONCHO VALLEY	SUTTON	7450	9411	0	0	1117	1411
1	1 - PANHANDLE	SWISHER	9579	9670	0	0	1436	1450
12	9 - PERMIAN BASIN	TERRELL	1548	1565	0	0	232	234
2	2 - SOUTH PLAINS	TERRY	15549	16505	1	0	2332	2475
4	7 - WEST CENTRAL	THROCKMORTON	2112	2196	0	0	316	329
7	5 - ARK-TEX	TITUS	26230	29908	1	1268	3934	4486
10	14 - DEEP EAST TEXAS	TRINITY	11387	12784	0	0	1708	1917
10	14 - DEEP EAST TEXAS	TYLER	20228	23145	0	0	3034	3471

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15% OF TOTAL POPULATION, TRC

TABLE 2 - PAGE 6
ESTIMATED POPULATION, NUMBER OF FACILITIES
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PHR	NAME OF SPR	RURAL COUNTIES (1)	ESTIMATED POPULATION (2) 1987	1991	1983 NUMBER OF FACILITIES AND FREESTANDING CLINICS (3)	REPORTED NUMBER OF VISITS IN 1983(3)	ESTIMATED NUMBER OF DISABLED PERSONS (INCL 65+) (4) 1987	1991
7	6 - EAST TEXAS	UPSHUR	36666	42684	0	0	5499	6402
12	9 - PERMIAN BASIN	UPTON	4693	4799	0	0	703	719
9	24 - MIDDLE RIO GRANDE	UVALDE	27366	30873	0	0	4104	4630
9	24 - MIDDLE RIO GRANDE	VAL VERDE	44087	49907	0	0	6613	7486
7	6 - EAST TEXAS	VAN ZANDT	41227	48446	0	0	6184	7266
11	16 - HOUSTON-GALVESTON AREA	WALKER	48515	54575	0	0	7277	8186
11	16 - HOUSTON-GALVESTON AREA	WALLER	24962	29625	0	0	3744	4443
12	9 - PERMIAN BASIN	WARD	15004	15821	0	0	2250	2373
6	13 - BRAZOS VALLEY	WASHINGTON	25197	27627	0	0	3779	4144
11	16 - HOUSTON-GALVESTON AREA	WHARTON	43150	45279	3	4402	6472	6791
1	1 - PANHANDLE	WHEELER	8068	8809	0	0	1210	1321
4	3 - NORTEX	WILBARGER	16755	17528	0	0	2513	2629
8	21 - LOWER RIO GRANDE	WILLACY	19396	20737	0	0	2909	3110
9	18 - ALAMO AREA	WILSON	20581	23437	0	0	3087	3515
12	9 - PERMIAN BASIN	WINKLER	11296	12925	1	1651	1694	1938
5	4 - NORTH CENTRAL	WISE	33321	38219	1	992	4998	5732
7	6 - EAST TEXAS	WOOD	30888	35511	0	0	4633	5326
2	2 - SOUTH PLAINS	YOAKUM	9539	10630	0	0	1430	1594
4	3 - NORTEX	YOUNG	22845	25566	0	0	3426	3834
8	19 - SOUTH TEXAS	ZAPATA	8680	10293	0	0	1302	1543
9	24 - MIDDLE RIO GRANDE	ZAVALA	12262	12757	0	0	1839	1913
	STATE TOTAL	TOTAL COUNTIES 206	3328911	3701923	59	81520	499242	555192

(1) RURAL COUNTIES ARE THOSE WITH 50,000 POPULATION OR LESS
(2) SOURCE: TDH POPULATION DATA SYSTEM
(3) SOURCE: 1983 INTEGRATED FACILITIES FILE TDH
(4) SOURCE: TDH POPULATION DATA SYSTEM
15% OF TOTAL POPULATION, TRC

TABLE 3

ESTIMATED NUMBER OF DISABLED BY TYPE OF DISABILITY BY SPR

PHR	NAME OF SPR	AUTISM(1)(2)		CEREBRAL PALSY(1)(3)		DEAFNESS AND HEARING IMPAIRED(1)(4)		DOWN'S SYNDROME(1)(5)		EMOTIONAL DISTURBANCES(1)(6)		EPILEPSY(1)(7)	
		1987	1991	1987	1991	1987	1991	1987	1991	1987	1991	1987	1991
1	1 - PANHANDLE	164	177	1314	1420	27109	29293	8	8	9934	10565	34	36
2	2 - SOUTH PLAINS	157	166	1261	1332	26008	27485	7	8	9932	10175	33	34
4	3 - NORTEX	92	95	736	763	15197	15746	4	4	5172	5266	18	18
5	4 - NORTH CENTRAL	1474	1644	11796	13155	243312	271333	73	82	85300	92219	298	330
7	5 - ARK-TEX	107	116	858	931	17699	19211	5	5	6335	6776	21	23
7	6 - EAST TEXAS	281	321	2251	2568	46440	52977	14	16	16427	18386	57	64
4	7 - WEST CENTRAL	135	145	1087	1164	22432	24014	6	7	7920	8400	27	29
3	8 - WEST TEXAS	243	274	1946	2194	40156	45268	12	13	17466	19208	53	60
12	9 - PERMIAN BASIN	156	171	1252	1374	25826	28340	7	8	9782	10517	33	36
4	10 - CONCHO VALLEY	58	64	469	512	9676	10576	2	3	3399	3637	11	12
6	11 - HEART OF TEXAS	116	125	934	1005	19274	20741	5	6	6744	7177	23	25
6	12 - CAPITAL AREA	325	379	2607	3033	53774	62560	16	18	18595	21056	65	75
6	13 - BRAZOS VALLEY	79	88	633	704	13065	14534	3	4	4543	4798	15	17
10	14 - DEEP EAST TEXAS	134	152	1079	1222	22263	25212	6	7	7998	8847	27	30
10	15 - SOUTH EAST TEXAS	159	167	1279	1339	26392	27616	7	8	9525	9664	32	33
11	16 - HOUSTON-GALVESTON AREA	1693	1985	13548	15881	279433	327563	84	99	100247	114088	348	405
8	17 - GOLDEN CRESCENT	72	77	577	621	11909	12808	3	3	4325	4486	14	15
9	18 - ALAMO AREA	563	615	4511	4921	93054	101505	28	30	35976	37948	118	127
8	19 - SOUTH TEXAS	71	83	572	669	11814	13809	3	4	5670	6478	16	19
8	20 - COASTAL BEND	211	225	1689	1806	34839	37265	10	11	13925	14474	45	47
8	21 - LOWER RIO GRANDE	274	327	2198	2616	45342	53972	13	16	21331	24923	62	74
5	22 - TEXOMA	60	63	484	506	10002	10449	3	3	3288	3325	11	12
6	23 - CENTRAL TEXAS	129	147	1033	1178	21323	24315	6	7	8196	9322	27	31
6	24 - MIDDLE RIO GRANDE	63	73	505	585	10426	12083	3	3	4835	5478	14	16
	STATE TOTALS	6816	7679	54619	61499	1126765	1268675	328	373	416865	457213	1402	1568

(1) SOURCE: TDH POPULATION DATA SYSTEM
(2) .04%, OR APPROXIMATELY 4 OUT OF EVERY 10,000 LIVE BIRTHS, NATIONAL INFORMATION CENTER FOR HANDICAPPED CHILDREN AND YOUTH
(3) 700,000 AMERICANS, OR 16 OUT OF EVERY 5,000. 10,000 BABIES BORN EACH YEAR AND ANOTHER 2,000 ACQUIRE IT IN EARLY YEARS OF LIFE NATIONAL INFORMATION CENTER FOR HANDICAPPED CHILDREN AND YOUTH
(4) 16 MILLION AMERICANS HAVE HEARING IMPAIRMENTS AND OF THESE, 2 MILLION ARE DEAF, GALLAUDET COLLEGE AND THE NATIONAL ASSOCIATION OF THE DEAF
(5) 1 PER 800 LIVE BIRTHS, OR APPROXIMATELY 7,000 IN THE U.S. EACH YEAR, NATIONAL INFORMATION CENTER FOR HANDICAPPED CHILDREN AND YOUTH
(6) 10% OF THE TOTAL SCHOOL AGE POPULATION INCLUDING 2% WITH SEVERE EMOTIONAL/BEHAVIORAL PROBLEMS, NATIONAL INFORMATION CENTER FOR HANDICAPPED CHILDREN AND YOUTH
(7) APPROXIMATELY 2% OF THE NATIONAL POPULATION OR 2 MILLION AMERICANS AND 100,000 NEW CASES EACH YEAR, OF WHICH 3/4 ARE CHILDREN OR ADOLESCENTS, NATIONAL INFORMATION CENTER FOR HANDICAPPED CHILDREN AND YOUTH

TABLE 3 - Page 2

ESTIMATED NUMBER OF DISABLED BY TYPE OF DISABILITY BY SPR

PHR	NAME OF SPR	LEARNING DISABILITIES(1)(2)		MENTAL RETARDATION(1)(3)		PHYSICAL DISABILITIES AND SP. HLTH. IMPAIRED(1)(4)		SPEECH AND LANGUAGE IMPAIRMENTS(1)(5)		VISUAL IMPAIRMENTS(1)(6)		TOTAL FOR ALL DISABILITY TYPES (7)	
		1987	1991	1987	1991	1987	1991	1987	1991	1987	1991	1987	1991
1	1 - PANHANDLE	2483	2641	12322	13315	496	528	4967	5282	142	91	58973	63356
2	2 - SOUTH PLAINS	2483	2543	11822	12493	496	508	4966	5087	131	102	57296	59933
4	3 - NORTEX	1293	1316	6908	7157	258	263	2586	2633	405	267	32669	33528
5	4 - NORTH CENTRAL	21325	23054	110596	123333	4265	4610	42650	46109	561	426	521650	576295
7	5 - ARK-TEX	1583	1694	8045	8732	316	338	3167	3388	428	304	38564	41518
7	6 - EAST TEXAS	4106	4596	21109	24080	821	919	8213	9193	587	377	100306	113497
4	7 - WEST CENTRAL	1980	2100	10196	10915	396	420	3960	4200	44	22	48183	51416
3	8 - WEST TEXAS	4366	4802	18253	20576	873	960	8733	9604	96	61	92197	103020
12	9 - PERMIAN BASIN	2445	2629	11739	12882	489	525	4891	5258	165	125	56785	61865
4	10 - CONCHO VALLEY	849	909	4398	4807	169	181	1699	1818	1512	1048	22242	23567
6	11 - HEART OF TEXAS	1686	1794	8761	9428	337	358	3372	3588	3020	1990	44272	46237
6	12 - CAPITAL AREA	4648	5264	24442	28436	929	1052	9297	10528	1692	1743	116390	134144
6	13 - BRAZOS VALLEY	1135	1199	5938	6606	227	239	2271	2399	449	273	28358	30861
10	14 - DEEP EAST TEXAS	1999	2211	10119	11460	399	442	3999	4423	384	247	48407	54253
10	15 - SOUTH EAST TEXAS	2381	2416	11996	12553	476	483	4762	4832	1392	1097	58401	60208
11	16 - HOUSTON-GALVESTON AREA	25061	28522	127015	148892	5012	5704	50123	57044	708	472	603272	700655
8	17 - GOLDEN CRESCENT	1081	1121	5413	5822	216	224	2162	2243	1172	929	26944	28349
9	18 - ALAMO AREA	8994	9487	42297	46138	1798	1897	17988	18974	334	249	205661	221891
8	19 - SOUTH TEXAS	1417	1619	5370	6276	283	323	2835	3239	151	97	28202	32616
8	20 - COASTAL BEND	3481	3618	15836	16938	696	723	6962	7237	976	759	78670	83103
8	21 - LOWER RIO GRANDE	5332	6230	20610	24533	1066	1246	10665	12461	289	206	107182	126604
5	22 - TEXOMA	822	831	4546	4749	164	166	1644	1662	1698	1032	22722	22798
6	23 - CENTRAL TEXAS	2049	2330	9692	11052	409	466	4098	4661	142	83	47104	53592
6	24 - MIDDLE RIO GRANDE	1208	1369	4739	5492	241	273	2417	2739	174	124	24625	28235
	STATE TOTALS	104207	114295	512162	576665	20832	22848	208427	228602	16652	12124	2469075	2751541

(1) SOURCE: TDH POPULATION DATA SYSTEM
(2) 2 TO 3% OF SCHOOL-AGED CHILDREN AND YOUTH, NATIONAL INFORMATION CENTER FOR HANDICAPPED CHILDREN AND YOUTH
(3) 3% OF GENERAL POPULATION, NATIONAL INFORMATION CENTER FOR HANDICAPPED CHILDREN AND YOUTH
(4) .5% OF SCHOOL-AGED CHILDREN, NATIONAL INFORMATION CENTER FOR HANDICAPPED CHILDREN AND YOUTH
(5) 5% OF SCHOOL-AGED CHILDREN, NATIONAL INFORMATION CENTER FOR HANDICAPPED CHILDREN AND YOUTH
(6) 7 PER 1000 FOR THOSE UNDER 45, 30.2 PER 1000 FOR AGES 45-64, 44.5 PER 1000 FOR THOSE OVER 65, NATIONAL INFORMATION CENTER FOR CHILDREN AND YOUTH
(7) THIS IS A SUMMARY COLUMN FOR THE DISABILITIES LISTED ON THIS PAGE AND THE PRECEDING PAGE

CHAPTER XI - MENTAL HEALTH AND MENTAL RETARDATION

SUBJECT AREA BACKGROUND

Mental illness refers to a broad range of psychological, physiological and organic disorders. These disorders include all forms of illness in which emotional, behavioral, or intellectual disturbances are the dominant features. The exact meaning of mental illness is elusive because it varies among different cultures, schools of thought, and working definitions. Symptoms of mental illness are often variable, and there are few tangible physical symptoms specific to mental illnesses. There are no universally accepted treatment procedures for mental illness. Mental illness is not easy to equate with the type of statistics often appearing in association with physical health. Moreover, there is no mandatory reporting of mental illness. Therefore, it is difficult to obtain timely and comprehensive data, particularly concerning outpatient care in the private sector.

The definition of mental retardation most widely accepted today is that given by the American Association of Mental Deficiency which states: mental retardation refers to significantly sub-average general intellectual functioning. In current usage, it refers to persons with intellectual quotients below 70 if they also display deficits in adaptive behavior. The second term of the definition, "adaptive behavior", refers to how well, or to what degree (levels I-IV), the individual has been able to adapt to his world within the broad limitations of his intellectual deficit. The third requirement of the definition is that the impairment in intellectual functioning and adaptive behavior be manifested during the developmental period of life.

Mental disorders occur in 14.5% of the general population and mental retardation in 3% according to Advocacy, Inc. In Texas, for 1987, those percentages estimate 2,475,496 persons with mental illnesses and 512,171 individuals with mental retardation. The 1991 figures are estimated to be 2,787,269 persons with mental illnesses and 576,676 mentally retarded persons. These estimates indicate a 12.5% increase in both categories in just four years. Texas Department of Mental Health and Mental Retardation served 93,655 "MH" clients and 17,325 "MR" clients in FY 1985 according to their Data Book, 1985, Volume A. These are small percentages of the total risk population.

Quality of care for clients is achieved in three ways: 1) by meeting standards for physical environments, 2) by achieving adequate treatment modes for individual clients, and 3) by maintaining adequate numbers of properly trained staff. TDMHMR has completed guidelines for quality assurance assessments to be used within all facilities and programs in its system. The department will request funds to assure meeting JCAH and Medicare standards and to assure continued compliance with ICF-MR standards for currently certified beds.

The passage of S.B. 633 attests to the legislature's awareness; the appropriation of adequate funding will demonstrate the extent of their

interest.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: The need to improve the quality of care in the MHMR delivery system

The proponent agency is the Texas Department of Mental Health and Mental Retardation and its affiliated community level facilities.

Issue 2: The need for a case management system for MHMR patients

The proponent agency is the Texas Department of Mental Health and Mental Retardation and its affiliated community level facilities.

Issue 3: Limited community MHMR services capacity (a broader restatement of the priority issue).

The proponent agency is the Texas Department of Mental Health and Mental Retardation and its affiliated community level facilities.

PRIORITY ISSUE SUPPORT

TDMHMR is underway with making the necessary and indicated changes to shift from a program or facility oriented system to one which is client oriented. One implication of this shift is that the system will be focused less on placing clients where services are available and more on locating services where clients reside. Within specified geographic regions, the spectrum of services related to MHMR should be available and accessible. This thrust is reflected in the organizational changes already being accomplished.

The future service delivery system must serve a large and growing population. Alternative patterns of state facility bed utilization will be necessary, including establishment of more specific admission and length of stay criteria, and an improved capacity to conduct specialized diagnostic and treatment services. As the emphasis on alternative delivery shifts, it is essential that the quality of care provided in institutional settings be maintained. It also will be necessary to expand significantly, the number and range of community programs designed as alternatives to care and treatment in state facilities. Such programs include, but are not limited to, case management, residential programs, respite and home care, around the clock crisis and emergency services,

brief hospitalization, crisis homes, intensive day hospitals, childhood intervention services and education/vocational programs.

With the changes in these areas underway, there is every reason to expect the TDMHMR will be able to carry out its committment to its first priority individuals, and to assure them of treatment in their own home communities whenever appropriate and feasible.

TABLE 1

INDIVIDUALS SERVED IN COMMUNITY PROGRAMS

FACILITY TYPE BY COUNTY OF RESIDENCE,

FISCAL YEAR 1985

FROM SEPTEMBER 1, 1984 TO AUGUST 31, 1985

COUNTY	COMMUNITY MHMR CENTERS	HOSPITAL OUTREACH	SCHOOL OUTREACH	STATE CENTERS	TOTAL
ANDERSON	5	312	0	1	318
ANDREWS	4	143	7	0	154
ANGELINA	757	6	4	1	768
ARANSAS	10	28	14	0	52
ARCHER	5	156	1	0	162
ARMSTRONG	4	0	0	2	6
ATASCOSA	32	188	7	0	227
AUSTIN	7	48	11	1	67
BAILEY	142	0	0	0	142
BANDERA	4	42	10	1	57
BASTROP	5	190	64	0	259
BAYLOR	1	201	7	0	209
BEE	8	319	62	0	389
BELL	4,766	0	3	1	4,770
BEXAR	13,095	5	21	0	13,121
BLANCO	5	11	16	0	32
BORDEN	1	1	0	0	2
BOSQUE	69	0	0	0	69
BOWIE	890	0	0	0	890
BRAZORIA	821	14	4	3	842
BRAZOS	1,771	15	0	2	1,788
BREWSTER	0	0	0	43	43
BRISCOE	48	2	0	2	52
BROOKS	6	0	14	72	92
BROWN	721	1	5	0	727
BURLESON	159	1	0	1	161
BURNET	11	104	72	0	187
CALDWELL	5	213	57	0	275
CALHOUN	278	1	0	0	279
CALLAHAN	80	0	0	0	80
CAMERON	3,067	3	3	1	3,074
CAMP	2	52	0	0	54
CARSON	48	0	0	5	53
CASS	260	2	0	0	262
CASTRO	135	0	0	3	138

Source:

1 Data Book 1985, Volume B, TDMHMR

TABLE 1 - PAGE 2

INDIVIDUALS SERVED IN COMMUNITY PROGRAMS

FACILITY TYPE BY COUNTY OF RESIDENCE

FISCAL YEAR 1985

FROM SEPTEMBER 1, 1984 TO AUGUST 31, 1985

COUNTY	COMMUNITY MHMR CENTERS	HOSPITAL OUTREACH	SCHOOL OUTREACH	STATE CENTERS	TOTAL
CHAMBERS	93	1	0	112	206
CHEROKEE	17	431	70	0	518
CHILDRESS	1	148	0	10	159
CLAY	5	154	0	0	159
COCHRAN	12	2	0	0	14
COKE	24	0	2	0	26
COLEMAN	132	0	0	0	132
COLLIN	1,725	1	50	0	1,776
COLLINGSWORTH	31	0	0	10	41
COLORADO	2	132	55	0	189
COMAL	26	268	80	0	374
COMANCHE	173	1	0	0	174
CONCHO	15	2	0	0	17
COOKE	625	0	0	0	625
CORYELL	558	0	1	0	559
COTTLE	1	102	1	2	106
CRANE	5	23	0	0	28
CROCKETT	13	0	0	0	13
CROSBY	12	0	0	0	12
CULBERSON	0	0	0	29	29
DALLAM	105	0	0	3	108
DALLAS	13,043	21	55	5	13,124
DAWSON	2	182	1	0	185
DEAF SMITH	393	0	0	29	422
DELTA	1	32	10	0	43
DENTON	723	1	160	1	885
DEWITT	215	0	1	0	216
DICKENS	2	19	1	0	22
DIMMIT	2	127	4	0	133
DONLEY	66	2	0	1	69
DUVAL	2	0	10	89	101
EASTLAND	235	0	7	0	242
ECTOR	1,777	36	1	0	1,814
EDWARDS	0	6	0	0	6
ELLIS	4	289	52	0	345

TABLE 1 - PAGE 3

INDIVIDUALS SERVED IN COMMUNITY PROGRAMS

FACILITY TYPE BY COUNTY OF RESIDENCE

FISCAL YEAR 1985

FROM SEPTEMBER 1, 1984 TO AUGUST 31, 1985

COUNTY	COMMUNITY MHMR CENTERS	HOSPITAL OUTREACH	SCHOOL OUTREACH	STATE CENTERS	TOTAL
EL PASO	5,697	0	0	114	5,811
ERATH	466	0	7	0	473
FALLS	84	0	46	0	130
FANNIN	371	2	1	0	374
FAYETTE	0	86	40	0	126
FISHER	0	22	4	0	26
FLOYD	190	0	0	0	190
FOARD	0	17	1	0	18
FORT BEND	1	146	166	1	314
FRANKLIN	0	32	0	0	32
FREESTONE	74	1	27	0	102
FRIO	7	127	1	0	135
GAINES	2	121	2	0	125
GALVESTON	1,293	5	4	4	1,306
GARZA	0	98	5	0	103
GILLESPIE	2	79	37	0	118
GLASSCOCK	1	3	0	0	4
GOLIAD	68	0	0	0	68
GONZALES	29	164	40	0	233
GRAY	382	0	0	39	421
GRAYSON	1,490	0	0	0	1,490
GREGG	1,942	0	4	5	1,951
GRIMES	189	0	0	0	189
GUADALUPE	31	373	102	0	506
HALE	928	0	0	1	929
HALL	56	5	0	4	65
HAMILTON	188	0	0	0	188
HANSFORD	37	0	0	1	38
HARDEMAN	0	324	8	0	332
HARDIN	89	280	0	13	382
HARRIS	14,549	3,195	22	46	17,812
HARRISON	979	1	0	1	981
HARTLEY	9	0	0	1	10
HASKELL	0	105	18	0	123
HAYS	14	243	91	0	348

TABLE 1 - PAGE 4

INDIVIDUALS SERVED IN COMMUNITY PROGRAMS

FACILITY TYPE BY COUNTY OF RESIDENCE

FISCAL YEAR 1985

FROM SEPTEMBER 1, 1984 TO AUGUST 31, 1985

COUNTY	COMMUNITY MHMR CENTERS	HOSPITAL OUTREACH	SCHOOL OUTREACH	STATE CENTERS	TOTAL
HEMPHILL	47	1	0	3	51
HENDERSON	710	1	7	2	720
HIDALGO	3,922	0	1	0	3,923
HILL	113	0	50	0	163
HOCKLEY	95	2	1	0	98
HOOD	255	1	6	0	262
HOPKINS	14	215	41	0	270
HOUSTON	175	2	0	2	179
HOWARD	6	581	5	0	592
HUDSPETH	1	0	0	3	4
HUNT	1,092	6	3	0	1,101
HUTCHINSON	327	0	0	36	363
IRION	6	0	0	0	6
JACK	1	162	2	0	165
JACKSON	159	1	0	0	160
JASPER	312	0	0	3	315
JEFF DAVIS	1	0	0	6	7
JEFFERSON	4,458	2	11	590	5,061
JIM HOGG	1	0	0	68	69
JIM WELLS	11	0	32	262	305
JOHNSON	31	174	74	0	279
JONES	179	5	34	0	218
KARNES	4	224	23	1	252
KAUFMAN	7	460	39	0	506
KENDALL	13	14	11	1	39
KENEDY	0	0	2	1	3
KENT	0	2	1	0	3
KERR	6	377	67	0	450
KIMBLE	0	26	5	0	31
KING	0	0	0	0	0
KINNEY	2	7	2	0	11
KLEBERG	6	0	71	176	253
KNOX	0	70	3	0	73
LAMAR	1	239	58	0	298
LAMB	320	0	5	1	326

TABLE 1 - PAGE 5

INDIVIDUALS SERVED IN COMMUNITY PROGRAMS

FACILITY TYPE BY COUNTY OF RESIDENCE

FISCAL YEAR 1985

FROM SEPTEMBER 1, 1984 TO AUGUST 31, 1985

COUNTY	COMMUNITY MHMR CENTERS	HOSPITAL OUTREACH	SCHOOL OUTREACH	STATE CENTERS	TOTAL
LAMPASAS	188	1	0	0	189
LASALLE	0	18	0	0	18
LAVACA	160	1	9	0	170
LEE	1	64	21	0	86
LEON	123	0	0	0	123
LIBERTY	508	4	0	123	635
LIMESTONE	89	0	26	0	115
LIPSCOMB	34	0	0	2	36
LIVE OAK	3	35	6	0	44
LLANO	2	44	26	0	72
LOVING	0	0	0	1	1
LUBBOCK	3,602	8	3	3	3,616
LYNN	20	5	0	0	25
MCCULLOCH	103	0	0	0	103
MCLENNAN	1,941	2	27	0	1,970
MCMULLEN	2	2	0	0	4
MADISON	71	0	0	0	71
MARION	189	0	0	1	190
MARTIN	8	28	2	0	38
MASON	0	25	5	0	30
MATAGORDA	1	176	48	1	226
MAVERICK	4	358	1	0	363
MEDINA	22	120	0	0	142
MENARD	1	14	6	0	21
MIDLAND	1,613	12	3	1	1,629
MILAM	353	2	13	0	368
MILLS	31	2	0	0	33
MITCHELL	8	151	16	0	175
MONTAGUE	3	231	3	0	237
MONTGOMERY	1,127	12	74	9	1,222
MOORE	277	2	0	12	291
MORRIS	1	75	1	0	77
MOTLEY	35	1	0	0	36
NACOGDOCHES	525	0	0	1	526
NAVARRO	926	2	63	1	992

TABLE 1 - PAGE 6

INDIVIDUALS SERVED IN COMMUNITY PROGRAMS

FACILITY TYPE BY COUNTY OF RESIDENCE

FISCAL YEAR 1985

FROM SEPTEMBER 1, 1984 TO AUGUST 31, 1985

COUNTY	COMMUNITY MHMR CENTERS	HOSPITAL OUTREACH	SCHOOL OUTREACH	STATE CENTERS	TOTAL
NEWTON	108	1	0	0	109
NOLAN	2	159	30	0	191
NUECES	2,975	0	72	1	3,048
OCHILTREE	177	0	0	8	185
OLDHAM	28	0	0	5	33
ORANGE	1,173	0	2	103	1,278
PALO PINTO	374	0	0	0	374
PANOLA	354	1	0	1	356
PARKER	493	0	1	0	494
PARMER	130	0	1	2	133
PECOS	193	5	0	0	198
POLK	308	2	0	0	310
POTTER	1,049	1	1	210	1,261
PRESIDIO	1	0	3	34	38
RAINS	87	2	1	0	90
RANDALL	269	0	0	102	371
REAGAN	13	6	0	0	19
REAL	0	13	2	0	15
RED RIVER	217	7	0	0	224
REEVES	1	187	0	0	188
REFUGIO	71	3	6	0	80
ROBERTS	4	0	0	1	5
ROBERTSON	196	0	2	0	198
ROCKWALL	19	33	11	0	63
RUNNELS	36	6	1	0	43
RUSK	503	2	0	0	505
SABINE	84	0	0	0	84
SAN AUGUSTINE	128	0	2	0	130
SAN JACINTO	80	0	0	1	81
SAN PATRICIO	58	211	50	0	319
SAN SABA	55	0	0	0	55
SCHLEICHER	1	3	0	0	4
SCURRY	1	235	13	0	249
SHACKELFORD	0	11	0	0	11
SHELBY	354	0	0	0	354

TABLE 1 - PAGE 7

INDIVIDUALS SERVED IN COMMUNITY PROGRAMS

FACILITY TYPE BY COUNTY OF RESIDENCE

FISCAL YEAR 1985

FROM SEPTEMBER 1, 1984 TO AUGUST 31, 1985

COUNTY	COMMUNITY MHMR CENTERS	HOSPITAL OUTREACH	SCHOOL OUTREACH	STATE CENTERS	TOTAL
SHERMAN	24	0	0	2	26
SMITH	3,115	1	1	3	3,120
SOMERVELL	65	0	0	0	65
STARR	2	0	0	112	114
STEPHENS	1	170	23	0	194
STERLING	2	0	0	1	3
STONEWALL	0	44	0	0	44
SUTTON	1	20	0	0	21
SWISHER	163	0	0	8	171
TARRANT	13,294	0	245	2	13,541
TAYLOR	1,936	27	2	0	1,965
TERRELL	14	1	1	0	16
TERRY	2	129	4	0	135
THROCKMORTON	0	34	0	0	34
TITUS	2	111	8	0	121
TOM GREEN	881	15	8	0	904
TRAVIS	7,384	92	139	1	7,616
TRINITY	115	0	0	0	115
TYLER	168	0	0	0	168
UPSHUR	497	0	0	1	498
UPTON	1	30	0	0	31
UVALDE	7	65	0	0	72
VAL VERDE	3	241	18	0	262
VAN ZANDT	571	17	3	1	592
VICTORIA	1,760	0	4	0	1,764
WALKER	340	1	2	0	343
WALLER	2	99	6	1	108
WARD	4	155	0	0	159
WASHINGTON	315	1	60	3	379
WEBB	19	1	3	916	939
WHARTON	2	270	60	0	332
WHEELER	57	0	3	5	65
WICHITA	1,983	4	0	0	1,987
WILBARGER	6	385	0	5	396
WILLACY	195	0	0	0	195

TABLE 1 - PAGE 8

INDIVIDUALS SERVED IN COMMUNITY PROGRAMS

FACILITY TYPE BY COUNTY OF RESIDENCE

FISCAL YEAR 1985

FROM SEPTEMBER 1, 1984 TO AUGUST 31, 1985

COUNTY	COMMUNITY MHMR CENTERS	HOSPITAL OUTREACH	SCHOOL OUTREACH	STATE CENTERS	TOTAL
WILLIAMSON	40	454	212	0	706
WILSON	15	48	0	0	63
WINKLER	1	106	6	0	113
WISE	11	216	21	1	249
WOOD	555	3	2	1	561
YOAKUM	0	46	0	1	47
YOUNG	1	357	77	0	435
ZAPATA	2	0	0	97	99
ZAVALA	6	83	0	0	89
COUNTY UNKNOWN	5,991	213	185	81	6,470
OUT OF STATE	224	0	0	0	224
TOTAL	149,995	17,761	3,767	3,680	175,203

TABLE 2

TDMHMR INPATIENT FACILITIES
UNDUPLICATED COUNT OF CLIENTS SERVED
SCHOOL - MR SERVICES
FY 1985

Facility	Individual Cases Served*	Average Daily Population	Operating Beds	Occupancy Rate	Direct Admissions
Abilene State School	1,160	1,107	1,200	92.3	10
Austin State School	800	757	743	101.9	3
Brenham State School	640	580	653	88.8	48
Corpus Christi State School	509	481	498	96.6	38
Denton State School	927	882	972	90.7	2
Fort Worth State School	535	479	553	86.6	19
Lubbock State School	561	497	554	89.7	3
Lufkin State School	678	618	628	98.4	4
Mexia State School	1,185	1,118	1,168	95.7	26
Richmond State School	1,016	947	1,000	94.7	34
San Angelo State School	697	663	785	84.5	1
San Antonio State School	377	357	405	88.1	7
Travis State School	960	921	936	98.4	10
Total	10,045	9,407	10,095	93.2	205

*Includes all clients served during the period regardless of admission date.

SOURCE: 12/02/85 FY 85 Strategic Planning, TDMHMR

TABLE 3

TDMHMR INPATIENT FACILITIES
UNDUPLICATED COUNT OF CLIENTS SERVED
HOSPITAL - MH SERVICES
FY 1985

Facility	Individual Cases Served*	Average Daily Population	Operating Beds	Occupancy Rate	Direct Admissions
Austin State Hospital	4,273	706	920	76.7	4,293
Big Spring State Hospital	1,927	358	458	78.2	1,684
Kerrville State Hospital	937	538	689	78.1	437
Rusk State Hospital	3,220	721	1,053	68.5	2,595
San Antonio State Hospital	3,387	681	994	68.5	3,086
Terrell State Hospital	3,143	714	850	84.0	2,774
Texas Research Institute	375	33	49	67.3	369
Vernon State Hospital	1,360	401	614	65.3	1,003
Waco Center for Youth	175	85	96	88.5	91
Wichita Falls State Hospital	2,004	479	739	64.8	1,632
Total	20,801	4,716	6,462	73.0	17,964

*Includes all clients served during the period regardless of admission date.

SOURCE: 12/02/85 FY 85 Strategic Planning, TDMHMR

TABLE 4

TDMHMR INPATIENT FACILITIES
UNDUPLICATED COUNT OF CLIENTS SERVED
STATE CENTER INPATIENT MHMR SERVICES
FY 1985

Facility	Individual Cases Served*	Average Daily Population	Operating Beds	Occupancy Rate	Direct Admissions
El Paso State Center Inp. - MH	504	56	60	93.3	603
El Paso State Center Inp. - MR	103	101	105	96.2	4
Laredo State Center Inp. - MH	148	12	15	80.0	191
Laredo State Center Inp. - MR	28	13	15	86.7	31
Rio Grande St. Ctr. Inp. - MH	772	55	60	91.7	1,001
Rio Grande St. Ctr. Inp. - MR	135	120	160	75.0	7
Totals MH	1,424 MH	123 MH	135 MH	91.1 MH	1,795 MH
Total MR	266 MR	234 MR	280 MR	83.6 MR	42 MR

Note: Amarillo State Center and Beaumont State Center have a few respite (very short-term) beds and do not report inpatient admissions. These two centers do not have residential care in the same sense as El Paso, Laredo, and Rio Grande.

SOURCE: 12/02/85 FY 85 Strategic Planning, TDMHMR

CHAPTER XII - ALCOHOL AND DRUG ABUSE

SUBJECT AREA BACKGROUND

Issues arising from the abuse of any substance --- alcohol, drugs, tobacco, foods --- can and should be addressed in basically the same manner. Measures such as prevention, early intervention and detection, education, public awareness, treatment, rehabilitation -- can each be applied in any area. Biological and psychological urges or needs can be addressed, each in their own particular way, by the measures previously mentioned. To believe one doesn't affect the other is incorrect. Thus, the SHP addresses each abuse as a single area.

In a statewide survey of some 200 entities asked to identify health issues considered to be of the greatest public concern, alcohol and drug abuse surfaced in about 95% of those responding. Of those, the majority indicated prevention of alcohol and drug abuse through education in grades K-12 was the most critical. However, two other areas of concern also surfaced: early intervention into the users habit before it became chronic, and treatment of those already into addiction.

Early intervention is considered to be of extreme importance by such involved agencies as the state's 52 local councils on alcoholism and drug abuse, as well as TCADA and TDMHMR, which feel that intervention can very often reach the abuser before he or she needs treatment.

While treatment is considered the highest priority by TCADA, it was made a referral issue by the SHCC following the analyses of input from all surveyed entities. While a greater potential for long-range reduction of the alcohol and drug abuse problem exists in the area of education and prevention, intervention and treatment modalities are essential. There are 571 facilities in Texas providing some form of treatment (Table 1).

Public and legislative concern was evidenced by action of the 69th Legislature in creating the Texas Commission on Alcohol and Drug Abuse, an indicator of the concern to strengthen all efforts to combat alcohol and drug abuse, including treatment.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: The need for early intervention services for persons in the early stages of alcohol or drug abuse or addiction to prevent their continued progression into chronic abuse, and to lessen alcohol or drug abuse-related social and economic costs.

Key action agencies to which this issue is referred for appropriate action are:

Texas Commission on Alcohol and Drug Abuse
Texas Education Agency
Community Councils on Alcoholism and Drug Abuse
Texas Department of Mental Health and Mental Retardation
Texas Youth Commission
Criminal Justice Division, Governor's Office
Juvenile Probation Commission
Texans' War on Drugs
Texas Rehabilitation Commission

Issue 2: Services should provide effective quality treatment and rehabilitation for alcohol and drug abusers and their families in both inpatient and outpatient facilities, especially at the local level.

Key action agencies to which this issue is referred for appropriate action are:

Texas Commission on Alcohol and Drug Abuse
Texas Department of Mental Health and Mental Retardation
Texas Rehabilitation Commission
Community Councils on Alcoholism and Drug Abuse
Texas Youth Commission
Juvenile Probation Commission

PRIORITY ISSUE SUPPORT

As further support for the need for additional certified health education teachers, Table 2 demonstrates the number of teachers certified in health and physical education each year since 1975 and 1976.

As of January 9, 1986, out of 172,713 teachers there were 26 all-level, 66 elementary and 480 secondary teachers holding certification in health and health/physical education, and four all-level, 158 elementary and 1,070 secondary teachers holding certification in health.

The following information and statistics are additionally provided to demonstrate the impact of alcohol, drug and inhalant abuse on Texas youth.

Texas Youth Commission - For the period between September 1 and December 31 there were 1886, 10 to 17 year olds (average age 15.5 years) in the Commissions' residential program. All were involved in delinquent activity, adjudicated and committed to the custody of the commission. In 1985, the intake was 2307 commitments, and there are currently 2200 on parole. With many involved with one or more chemical substances, 60.3% had been using marijuana, 48.2% had an alcohol problem, 16.2% were using inhalants, and 18.44% were involved with speed and cocaine. The average cost for direct child care for 1984 from the courts through commitment to release was $17,700 per youth; the rate of recidivisim, 30%.

Texas Department of Mental Health and Mental Retardation - In 1985, the department was involved with 44,076 alcohol and drug abuse clients of whom 11.5% were 21 years of age and under and 54.7%, between the ages of 22 and 44. These clients were served at hospital and state center inpatient and outpatient facilities and at community centers.

Texas Rehabilitation Commission - In the period October through December 1985 there were 2281 alcohol abuse and 1238 drug abuse clients on the roles, ages 16 through 18. Intake of alcohol abuse clients during the quarter was 695 and of drug abuse clients, 319. Closure (clients rehabilitated and employed) for the period was 318 and 145, respectively, with the averge cost to return each alcohol abuse client to society estimated to be $662 and for the drug client $788; each cost exclusive of costs for staff. Most clients are referrals from bonifide treatment programs and have 30 days sobriety at intake. It is estimated that 1 in 5 will remain free of alcohol and/or drugs after release.

Juvenile Probation Commission - In 1984, the commission received 77,280 referrals 10 years old and over, but not having attained their 17th birthday. Each was alleged to have committed an offense under Title III of the Family Code (includes felonies and misdemeanor drug offenses, i.e., controlled substances, liquor law violations, public intoxication, inhalant offense, and DUI and DWI, and status offenses, i.e., truancy and runaways), 1 in 4 exhibited symptoms of alcoholism, 1 in 6 drug abuse and 1 in 15 inhalant abuse. Due to repeat offenders, of the 77,280 referrals the individual count accounted for 58,918 children, or almost 24% recidivism.

Texas Department of Public Safety - A graphic representation of alcohol and drug arrests for juveniles ages 14 and younger provides additional support. (See Figures 1 & 2).

TABLE 1
ALCOHOL AND DRUG TREATMENT FACILITIES IN TEXAS

CITY	NO. OF FACILITIES
Abilene	6
Alvin	1
Amarillo	6
Andrews	1
Angleton	1
Archer City	1
Argyle	1
Arlington	6
Athens	1
Atlanta	1
Austin	22
Bastrop	1
Bay City	1
Beaumont	6
Bedford	1
Beeville	1
Bellaire	1
Belton	1
Big Spring	4
Bonham	1
Bowie	2
Breckenridge	1
Brownfield	1
Brownsville	4
Brownwood	1
Bryan	2
Buda	1
Burnet	1
Cameron	1
Canton	1
Canyon	1
Canyon Lake	1
Carizzo Springs	1
Carthage	1
Center	1
Center Point	1
Childress	1
Clarksville	1
Cleburne	1
College Station	1
Colorado City	1
Columbus	1
Conroe	4
Copperas Cove	1
Corpus Christi	9
Dallas	33
Decatur	1
Deer Park	1
Del Rio	1
Denton	6
Eagle Pass	1
Edinburg	2
El Paso	15
Floresville	1
Fort Hood	1
Fort Worth	15
Fredericksburg	1
Freeport	1
Gainesville	1
Galveston	4
Garland	1
Gatesville	1
Georgetown	1
Giddings	1
Gilmer	1
Gonzales	1
Graham	1
Granbury	1
Grand Prairie	2
Greenville	2
Groesbeck	1
Hamilton	1
Harlingen	5
Haskell	1
Hebbronville	1
Hempstead	1
Henderson	2
Henrietta	1
Hockley	1
Hondo	1
Houston	76
Hungerford	1
Hunt	1
Huntsville	5
Hurst	1
Jacksboro	1
Jacksonville	1
Jourdanton	1
Katy	1
Kenedy	1
Kerrville	4
Killeen	3
Kingsville	1
Kountze	1
Lamesa	1
Lampasas	1
Laredo	5
LaGrange	1
LaMarque	1
LaPorte	1
Leander	1
Levelland	1
Liverpool	1
Livingston	1
Longview	5
Lubbock	13
Lufkin	5
Luling	1
Marshall	1
McAllen	2
McCamey	1
McKinney	1
Mercedes	1
Midland	5
Mineola	1
Mineral Wells	1
Monahans	1
Mount Pleasant	1
Nacogdoches	1
Nassau Bay	1
New Braunfels	1
Nocona	1
Odessa	7
Orange	2
Paducah	2
Palestine	1
Pampa	1
Paris	1
Pasadena	2
Pearland	1
Pearsall	1
Pecos	2
Plainview	3
Port Arthur	4
Post	1
Quanah	1
Richardson	1
Rio Grande City	1
Rosenberg	1
Round Rock	1
Rusk	2
San Angelo	3
San Antonio	38
San Marcos	3
Seguin	1
Seminole	1
Seymour	1
Sherman	3
Snyder	1
Spring	1
Spur	1
Stamford	1
Stephenville	2
Sulphur Springs	1
Sweetwater	2
Taylor	1
Temple	4
Terrell	1
Texarkana	4
Texas City	2
Tulia	1
Tyler	6
Van Horn	1
Vernon	5
Victoria	4
Vidor	1
Waco	10
Waxahachie	1
Weatherford	1
Webster	1
Wharton	2
Wichita Falls	8
Wilmer	1
Wortham	1
Zapata	1

Source: Texas Commission on Alcohol and Drug Abuse

Table 2

K-12 AREAS OF SPECIALIZATION

ELEMENTARY AREAS OF SPECIALIZATION

AREA OF ACADEMIC SPECIALIZATION	PLAN I 18 SEMESTER HOURS WITH 9 ADVANCED	PLAN II 24 SEMESTER HOURS WITH 12 ADVANCED	EXCEPTIONS	REQUIREMENTS
Health Education	X	X		Must include 15-18 semester hours in areas identified in the health education curriculum bulletin of the Texas Education Agency, with special emphasis on: Consumer Health, Sex Education for Family Living, Nutrition, Human Diseases, and the Use and Abuse of Tobacco, Alcohol, and Drugs. Human Anatomy and Physiology are required components of the total program.
Health and Physical Education	X	X	No new students admitted after 9/1/78	

Extracted from Bulletin 753, Procedure No. 1.0411

ELEMENTARY TEACHERS WITH SPECIALIZATION OF HEALTH AND HEALTH AND PHYSICAL EDUCATION

YEAR	HEALTH	HEALTH AND PE
75/76	7	426
76/77	5	454
77/78	9	413
78/79	14	308
79/80	19	180
80/81	35	127
81/82	35	46
82/83	38	26
83/84	45	0
84/85	47	3

JUNIOR HIGH SCHOOL AND HIGH SCHOOL TEACHING FIELDS

TEACHING FIELD	PLAN I 24 SEMESTER HOURS WITH 12 ADVANCED	PLAN II 48 SEMESTER HOURS WITH 18 ADVANCED	PLAN III 48 SEMESTER HOURS WITH 18 ADVANCED	EXCEPTIONS	REQUIREMENTS
Health Education	X			Teachers whose certificates are dated after 9/1/83 must have completed an approved teaching field of 24 semester hours in Health Education.	Must include 15-18 semester hours in areas identified in the health education curriculum bulletin of the Texas Education Agency, with special emphasis on Consumer Health, Sex Education for Family Living, Nutrition, Human Diseases, and the Use and Abuse of Tobacco, Alcohol, and Drugs. Human Anatomy and Physiology are required components of the total program.
Health and Physical	X			No new students admitted after 9/1/78. Also applies to All-Level Health and Physical Education	Courses from the health and physican education departments.

Extracted from Bulletin 753, Procedure No. 1.0451

YEAR	SECONDARY HEALTH	HEALTH AND PE
75/76	344	2185
76/77	356	2206
77/78	365	1870
78/79	408	1605
79/80	411	1138
80/81	440	829
81/82	432	488
82/83	382	301
83/84	430	---
84/85	485	---

Source: Texas Education Agency

FIGURE 1

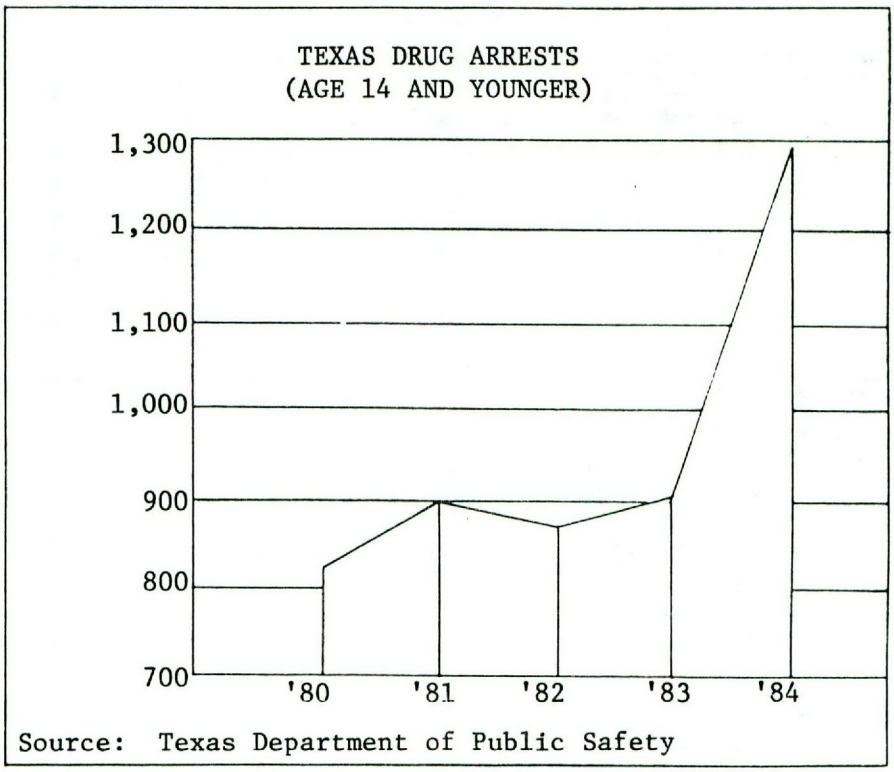
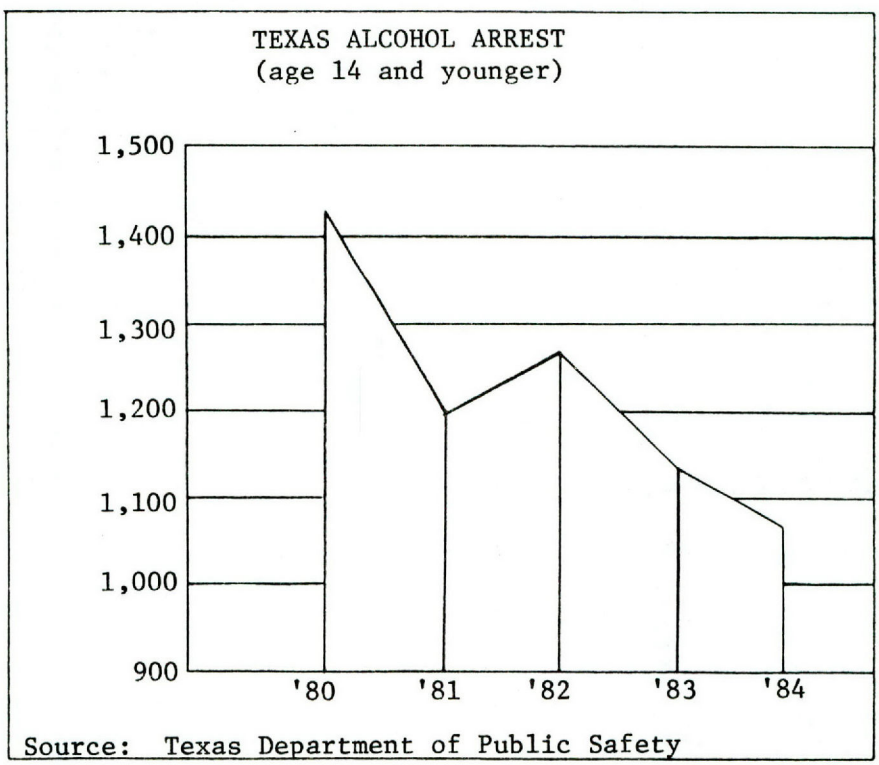


FIGURE 2



CHAPTER XIII - HEALTH CARE COSTS

SUBJECT AREA BACKGROUND

The rising costs of medical care have come to command attention in public discussions of health care. Therefore, it is not surprising that the goal of constraining and moderating the increase in health care expenditures has become one of the central themes running throughout public health care policy. This section dealing with health care costs refers to the total amount of money expended for the provision of health care services and supplies.

The consumer price index measures relative changes in the prices of a specified set of consumer goods which would be bought by the average household on a regular basis. The index measures the effect of price change only on the cost of living. It does not measure changes in the total amount that families spend.

The price to the consumer for health care has steadily increased, as has the price for all items during that same time period. According to the CPI in 1984, medical costs increased by 6.2% over 1983 compared to a 4.3% increase for all items. Between 1982 and 1985, the actual price index change has increased yearly at an average of 12.9 points, while the medical care component of the CPI has increased at an average of 28.3 points, almost two and a half times that of the general CPI (see Figure 1). Yet, the rate of the medical care increase is diminishing - decreasing approximately 6 points each year.

Several factors contribute specifically to the rising costs of health care: reimbursement mechanisms, aging population, provider market control, medical technology, and market response. Approximately 70% of all health care purchases are paid by third-party payers, primarily on the basis of cost reimbursement. Prior to the advent of HMOs and DRGs, this figure was approximately 90%, but the HMO capitation mode of reimbursement and the prospective pricing method of Medicare reimbursement have lowered the percentage. Thus, neither price nor cost have functioned as inhibiting factors when health care purchasing decisions have been made. Demand for health care tends to increase as the population ages which is the current population trend. Physicians and other providers have controlled the supply of services in the health care market through licensure and codes of conduct and practice. The costs of capital investements made in advanced medical technology to meet the pressures of an increasingly competitive market are high due to the resulting overcapitalization and rapid obsolescence. Finally, the health care provider industry has been characterized by relatively low productivity due to the labor-intensive nature of the work. Market capacity does not respond rapidly to increases in general levels of demand, which increases the tendency for inflationary pressure.

Another factor which affects health care costs is not characteristic of only the health care industry. This is the cost of energy. The entire health care industry is an energy-intensive/dependent component of our economy. The availability and costs of energy are and will continue to be weighted factors in the planning and administration of health care services. The impetus for providers to conserve energy comes from two sources: first from the drive to reduce health care costs and second from the more universal movement toward energy conservation throughout all sectors of the economy.

Within the health care industry itself, hospitals are the primary users of energy. Until the passage of P.L. 95-619, in 1978, hospital energy conservation efforts in Texas were largely dependent on the philosophy and interests of the individual hospital administration and plant engineering staff. The National Energy Conservation Policy Act (P.L. 95-619) established a federally sponsored program which makes energy conservation grants available to public or non-profit hospitals. An energy conservation program does not necessarily require large expenditures, substantial changes in service, nor radical changes in plant operations. Rather, it inquires an understanding of what the hospital provides, when the demand for hospital services is the greatest, and what can be done to ensure the continued operation of the equipment required to deliver these services.

There are many strategies available to retard the growth in health care costs, but there is no concensus as to which set of solutions would best solve the problems. Remedial steps must be taken or the abilities of both the public and private sectors to pay the health care bills will be in question.

This view is reflected by the thirty-eight organizations and agencies responding to the initial request for input. This effort identified the top concerns and was used to structure the prioritization survey. Eighty-nine organizations and agencies responded to the prioritization survey. After the prioritization survey was evaluated, further research into health care costs was completed, and statistical analysis methods were applied to the survey results to identify several primary issues.

Primary input was received from the Texas Medical Association, the Texas Business Group on Health, the Texas Department of Human Services, and the Bureau of Community and Rural Health of the Texas Department of Health. Other information was provided by the Texas State Board of Insurance and the Texas Rural Health Field Services.

The three primary issues were presented to the Statewide Health Coordinating Council for prioritization. A combination of insurance reform, patient care management alternatives, insurance for the working poor, and other aspects of the reimbursement system was chosen to be the priority issue for presentation in the SHP.

Although the 69th Sessison of the Texas Legislature enacted programs to provide for extension of health and medical care among the medically indigent, the input received from the various respondents indicated that questions still remain regarding the fairness of the distribution of funding responsibilities for treatment of these persons, as well as the

extent to which the acceptance of indigent persons for treatment can be avoided by individual providers of care.

A loss of health and the use of medical care are more costly to the poor than nonpoor. This cost is two-fold. First, the proportionate share of income required for medical care is greater for the poor. Any program which "picks up the tab" can redress the inequity between the proportion of income paid by the poor for medical care versus the proportion of income paid by the nonpoor for medical care. This method of redress is more income distributional than health improving. Second, poor health can drastically affect earnings, making poor out of previously nonpoor and creating a financial barrier to movement out of poverty for those already at that level.

In 1985, the 69th Legislature passed an indigent health care package as the first step towards better addressing the health care needs of the state's poor. Fourteen different bills and initiatives were enacted. Such initiatives affect the people who use urban, rural and migrant health clinics. As the poor population increases, funding needs for this type of program will increase.

Although questions remain regarding the fairness of the distribution of funding responsibilities for treatment of indigents, some steps have been taken to address the issue. Among the Medicaid-related improvements authorized by this last state legislature was financial assistance to "disproportionate share" hospitals. This program, administered by the Texas Department of Human Services, reimburses hospitals which provide a larger portion of health care to low-income individuals, relative to other hospitals. Payments are to be made before the end of 1986.

Action has also been taken to decrease the extent to which the acceptance of indigent persons for treatment can be avoided by individual providers of care. H.B. 1963 amends the Texas Hospital Licensing Law to require the Board of Health to adopt rules for minimum standards for the transfer of patients, so as to eliminate the problem of medically inappropriate transfers of indigent patients. Hospitals were required to have transfer policies that meet the Board of Health's rules by April 1986 as a condition of licensure. Besides running the risk of having its license denied, suspended, or revoked, an institution that does not adopt, implement, and enforce a patient transfer policy in accordance with this act is subject to a civil penalty of up to $1000 for each day of violation and for each act or violation.

The initial move towards providing quality health care for the state's poor has occurred. The future task is to monitor the effects of this move on both the delivery of health care services to the indigent and the state's health care provider industry. The indigent care programs need time to be developed and put into effect before any further studies in the area are done. They need time to work or not work. Then, we may need to take further steps, if indicated by gaps in the programs, to meet the health care needs of the state's low-income population.

Many of the COGs indicated concern about rural access to health care. Residents of rural areas have greater problems in gaining access to care than urban residents. Rising health care costs coupled with government retrenchment in health care financing will undoubtedly exacerbate these

problems, particularly for hospital services as small, financially distressed, rural hospitals close.

There are two components of rural health care accessibility: Physical access refers to the presence or absence of physical barriers, such as lack of transportation to the site of care, inability to make an appointment with a physician, or inconvenient location of a health facility. Financial access pertains to the presence or absence of financial barriers to care, such as rising health care costs coupled with rural limitations on the availability of affordable health insurance programs.

Most rural health programs are based on the assumption that they will become financially self-sufficient, whereas many urban programs are either cross-subsidized by other health programs or funded by tax revenues. The method by which providers are reimbursed influences this potential for self-sufficiency. Fee-for-service payments encourage provision of those services that are specifically covered and impede the provision of needed but uncovered services. Both Medicaid and Medicare work to the disadvantage of rural providers by paying a lower fee for the same services as compared with urban areas where prevailing reimbursement rates are higher.

The difference between rural and urban health care delivery is increased by new technological developments which quickly become accepted practice procedures. Rural hospitals frequently do not have the funds to pay for the needed capital expenditures, nor do they have enough patients to justify large fixed costs of equipment and personnel.

The future survival of rural health care, particularly rural hospitals, lies in expanding their services from the more traditional, inpatient approach to include new outpatient services. Home health care, wellness programs, ambulatory care, primary care, and emergency stabilization are just a few of the options available. Reimbursement strategies need to be changed to encourage the development of these options. Also, referral networks are needed with large urban medical centers for those patients who require the specialized care unavailable in the rural setting. Rural health care providers do not have the resources to offer a full range of health care services.

Participants in the prioritization survey pointed out the issue of licensing reforms. The involvement of health professionals in patient diagnosis and treatment decisions is generally regulated by licensing laws and codes of practice. Some allied health professionals (e.g., pharmacists, optometrists, etc.) suggest that changes in these laws and codes which would enlarge their roles in patient care and treatment would provide consumers with lower cost alternatives for care.

Delegation of physician tasks has always existed to some extent in medical practice. However, traditional medical delegation has not always included some tasks which are capable of delegation under close physician supervision. Basic physical examination, initial medical history taking, diagnosis and treatment of common illnesses, minor surgical procedures, and decisions to continue or modify prescribed treatment for convalescing or chronically ill patients often have not been delegated.

The use of physician assistants (PA) and nurse practitioners (NP) and expanding the roles of medical technologists, physical therapists, respiratory therapists, pharmacists, etc., can provide cost-effective health care while maintaining the quality of patient care. This concept of delegation of some of the traditional physician duties centers around a care provider who has some skills that can assist the doctor in performance of specified tasks.

He/she can be educated expeditiously, at less expense, and at more educational sites than the physician.

Physician accountability and supervision are always required for nonphysician providers when they are performing tasks traditionally performed by the physician. However, physician supervision may be indirect rather than direct and may be accomplished through various combinations of telephone contacts, standing orders, protocols, periodic physician visits, chart reviews, and regular audit of services delivered.

The number of nonphysician providers has increased significantly in the last decade, primarily with the use of NPs and PAs. However, further expansion in the use of the nonphysician provider will require an increased level of thoroughly specified and documented areas of responsibility and legal authority for them. It will also require major changes in the reimbursement policies of third-party payers.

REFERRAL ISSUES

This section identfies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: Indigent care financing.

Referred to Texas Department of Human Services, Bureau of Maternal and Child Health (TDH); Bureau of Community Health Services (TDH) and the Texas Health and Human Services Coordinating Council for appropriate action, evaluation and followup.

Issue 2: Rural access to care.

Referred to the Bureau of Community Health Services (TDH), Texas Rural Health Field Services, and Texas Hospital Association for appropriate action.

Issue 3: Professional and related licensing reforms.

Referred to the Texas Medical Association, Texas Department of Human Services, Bureau of Licensing and Certification (TDH), and various medical professional associations for action.

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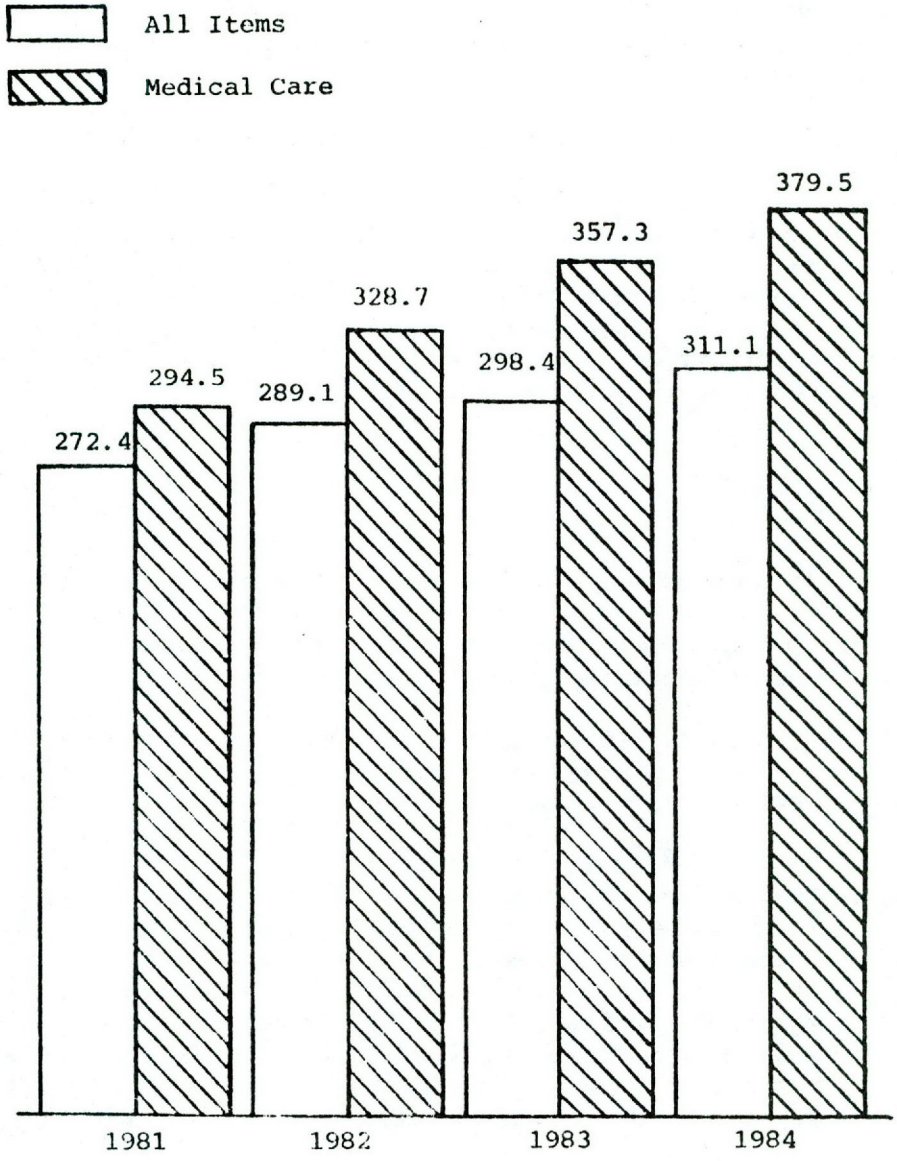
FIGURE 1

YEARLY CHANGE IN CONSUMER PRICE INDEX



Source: Source Book of Health Insurance Data, 1984-1985.

CHAPTER XIV - HEALTH PROFESSIONS

SUBJECT AREA BACKGROUND

About one-fourth of the agencies contacted through the policy analysis survey provided input regarding issues affecting health professions in Texas. Close to 40% of the 43 total respondents to the initial survey represented regional interests (16 COGs), with the remaining 27 respondents reflecting statewide concerns. The initial input resulted in the development of 12 primary issue statements. Almost one-half of these issues related to concerns regarding supply and distribution or education of health professionals. The prioritization survey received about double the response rate of the initial survey with 46% of the approximately 181 entities providing a response.

The respondents to the initial survey identified shortages of primary care physicians and nurses in some areas of the state as the priority issue. Statewide shortages were also identified for nurse practitioners, physician assistants, physical therapists, occupational therapists and psychiatrists. These five additional professions are discussed in the referral issues for this subject area. Four other referral issues are concerned with continuing education for health professionals and other training opportunities. The 11 referral issues are presented in the order identified through the prioritization survey.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: Continuing education should be encouraged to ensure quality of care and to promote the standardization of qualifications of health professionals throughout the state.

This issue is referred to the Texas Hospital Association, Texas Health Care Association, and Texas Home Health Care Association to promote voluntary continuing education programs for health professionals employed in health care facilities in Texas. In addition, the Texas Medical Association, Texas Nurses Association, Texas Dental Association, other health professional membership associations, and the appropriate licensing authorities for health professions are encouraged to provide support and recommendations regarding voluntary continuing education.

Issue 2: The perceived isolation of rural practitioners from innovations in health care delivery and medical technology.

Referred to Coordinating Board, Texas College and University Systems, Texas Hospital Association, Texas Medical Association, Texas Nurses Association and Texas Dental Association.

Issue 3: The underutilization of nurse practitioners and physician assistants.

Referred to Coordinating Board, Texas College and University System.

Issue 4: Licensing of nursing home aides to promote continuity of care in long-term care facilities.

This issue is referred to the Hospital & Professional Licensure Division and the Bureau of Long Term Care of the Texas Department of Health, the Health Care Association and the Texas Association of Homes for the Aging.

Issue 5: A reduction in clinical training opportunities in hospitals as a result of cost containment measures necessitated by recent changes in reimbursement policies of federal entitlement programs.

Referred to the Texas Hospital Association and Coordinating Board, Texas College and University System to develop measures to retain existing programs.

Issue 6: The limited physician placement programs to assist in the recruitment of physicians to physician shortage areas.

This issue is referred to the Texas Medical Association.

Issue 7: Unavailability of financial assistance programs for students in health professions education programs.

Referred to the Coordinating Board, Texas College and University System.

Issue 8: The shortage of psychiatrists, especially in state mental health/mental retardation facilities.

This issue is referred to the Texas Medical Association, Texas Board of Medical Examiners and the Texas Department of Mental Health and Mental Retardation.

Issue 9: The shortage of registered nurses prepared at the baccalaureate and graduate degree level.

This issue is referred to the Texas Nurses Association, Texas Board of Nurse Examiners, Texas Board of Vocational Nurse Examiners, and the Coordinating Board, Texas College and University System.

Issue 10: The inadequate supply of physical and occupational therapists.

This issue is referred to the Center for Health and Manpower Policy Studies of the University of Texas Health Science Center, School of Public Health, Houston, for evaluation, in collaboration with the Texas Board of Physical Therapy Examiners, Texas Physical Therapy Association, and Texas Occupational Therapy Association.

Issue 11: The general unavailability of appropriate gerontology training programs.

This issue is referred to the Coordinating Board, Texas College and University System for assessment of the need for additional training programs in Texas.

PRIORITY ISSUE SUPPORT

Factors Affecting Availability of Physician Resources

1. In-Migration

A large proportion of the growth in the physician supply in Texas is a result of the influx of physicians from other states and foreign countries. In 1985, the majority (58%) of the newly licensed physicians in Texas were graduates of medical schools outside of Texas or the United States (42.3% outside of Texas, but in the U.S., and 16.1% foreign schools) compared to 41.6% Texas medical school graduates (see Figure 1).

Approximately the same proportion of the total patient care physicians in primary care specialties practicing in Texas in 1985 had attended medical school outside of Texas. Fifty-six percent of this group were non-Texas medical school graduates (30.9% outside of Texas, but in the U.S., and 24.7% foreign schools) compared to 44.4% Texas medical school graduates.

2. Medical School Enrollment/Graduates

To increase the supply of physicians in the state, the number of medical schools in Texas doubled from four in 1968 to eight in 1977.

Medical school enrollment more than tripled since the 1968-69 academic year from 1458 total headcount enrollment to 4822 in 1985-86. Correspondingly, the number of medical school graduates has more than tripled from 319 in 1968-69 to 1157 in 1985-86 (see Figure 2).

The eight Texas medical schools are operating at their targeted enrollment levels, therefore, enrollment is expected to stabilize at the current rate of approximately 4800.

3. Graduate Medical Education

After obtaining a medical degree, graduates spend three to seven years in a postgraduate medical education residency program. The availability of residency programs in the state directly affects the number of Texas medical school graduates that remain in the state for graduate training

and the eventual establishment of a medical practice. Historically, Texas has had a shortage of residency programs. The number of first year positions available has been inadequate to accommodate the number of Texas medical school graduates (see Figure 3). In recognition of this shortage, the Ad Hoc Committee on Graduate Medical Education of the Texas Medical Association (TMA) recommended in 1977 that the number of postgraduate positions should approximate the number of graduates of Texas medical schools.[1] This 1977 recommendation is still appropriate, however, with a total of 1057 first year residency program positions offered in 1984 for 1128 Texas medical school graduates.

According to the Texas Medical Association Graduate Medical Education surveys, the number of residency program positions has increased by 23.4% since 1978. This increase provides a better opportunity for Texas graduates to remain in the state for graduate training. However, the number of graduates in Texas has also increased by 23.6% since 1978, virtually negating the impact of the 910 additional residency positions.

Fewer positions are filled by non-Texas graduates, however, as the proportion of Texas graduates rose from 42% in 1980 to 54% in 1984. In fact, 1984 was the only year since 1978 (the first year this data was collected by TMA) that Texas graduates represented the majority among physician residents.

An additional survey of medical school graduation candidates was conducted by TMA in Spring 1985. This survey indicated that 430 of the 1030 graduation candidates planned to leave the state to attend a postgraduate training program. Fifty-two percent of the 430 leaving the state were planning to attend a primary care residency program. An adequate number of residency programs is required to retain more of these Texas graduates who benefit from state subsidization of their medical education.

4. Physician Practice Habits

The projected oversupply of 70,000 physicians in the U.S. by 1990 identified by the GMENAC (Graduate Medical Education National Advisory Committee) study should be re-evaluated in light of the recent changes in physician practice habits according to a study by Freiman and Marder in 1984.[2] There has been a decline in the number of hours worked per week by office-based physicians over the decade of 1970-1980 of approximately 3% (average hours per week of 51.9 in 1970 dropped to 50.4 in 1980.) The decline was even greater for primary care physicians. The 1.5 hours per week decline would be equivalent in its impact to the effect of almost 8,000 physicians leaving the work force, demonstrating the impact that this decline can have on the projected oversupply of physicians.

Female physicians in office-based practice worked substantially fewer hours than their male counterparts. Therefore, increases in the number of female physicians, which are expected based on the increasing volume of female medical students, may reinforce the trend toward fewer hours in practice.

Trends away from office-based practices will also contribute to a further decline in the hours worked by physicians.

5. Factors Affecting Practice Location Selection

The lack of a community hospital, insufficient number of practicing physicians for adequate relief, spouse dissatisfaction with the community, and the absence of adequate clinical and technological support are cited as prime negative factors in the selection of an area for practice. These factors were identified by Zetzman and Stefanu in a 1977 study[3] of factors, characteristics and preferences affecting a physician's selection of a community for medical practice.

6. Projected Supply

The strong in-migration patterns and increasing educational trends of physicians are significant factors in projecting the supply of physicians in Texas in the future. The Center for Health and Manpower Policy Studies has produced physician supply projections to the year 2000 for Texas.[4] Assuming that the growth trend identified for 1981 to 1984 in Texas remains constant, the projection of active primary care physicians for metropolitan areas is 12,390. This represents an increase of 33% from 1985 to 2000. The projection for non-metropolitan areas is 2,340, an increase of 37% from 1985. The statewide projection for the year 2000 is 14,730, an increase of 34% from 1985.

Numbers regarding the projected physician supply, however, cannot predict the adequacy of the physician distribution in the state. Distribution patterns for physicians must continue to be monitored to ensure that future Texans have access to medical resources.

REFERENCES

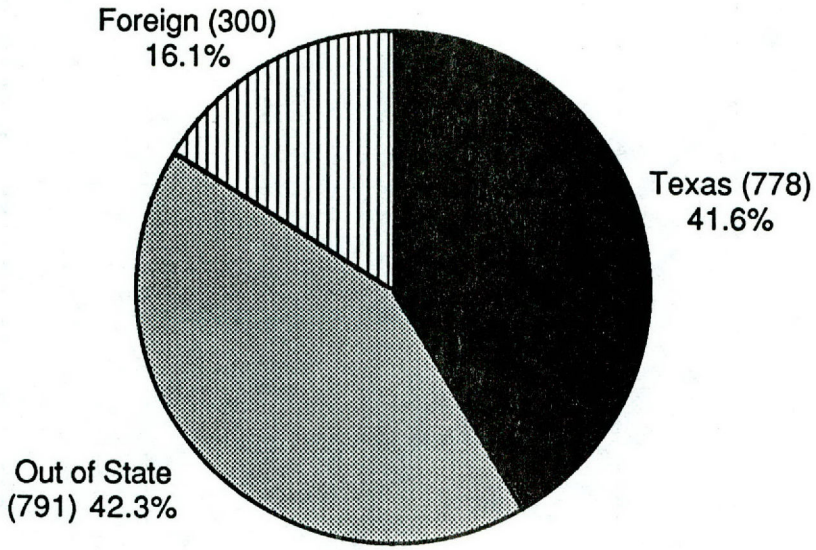
[1]Edward N. Brandt, Jr., M.D., Ph.D., "Physician Supply in Texas: An Analysis," Texas Medicine, July 1977, p. 68-74.

[2]Marc P. Freiman, Ph.D. and William D. Marder, A.M., "Changes in the Hours Worked by Physicians, 1970-1980," American Journal of Public Health, December 1984, p. 1348-1352.

[3]Marion R. Zetzman, Dr.P.H. and Constantine Stefanu, Ph.D., "Selecting a Community for Medical Practice," Texas Medicine, January 1977, p. 86-92.

[4]Center for Health and Manpower Policy Studies, School of Public Health, The University of Texas Health Science Center at Houston, Physician Manpower in Texas 1970-2000, p. 4A.9, 4A.10.

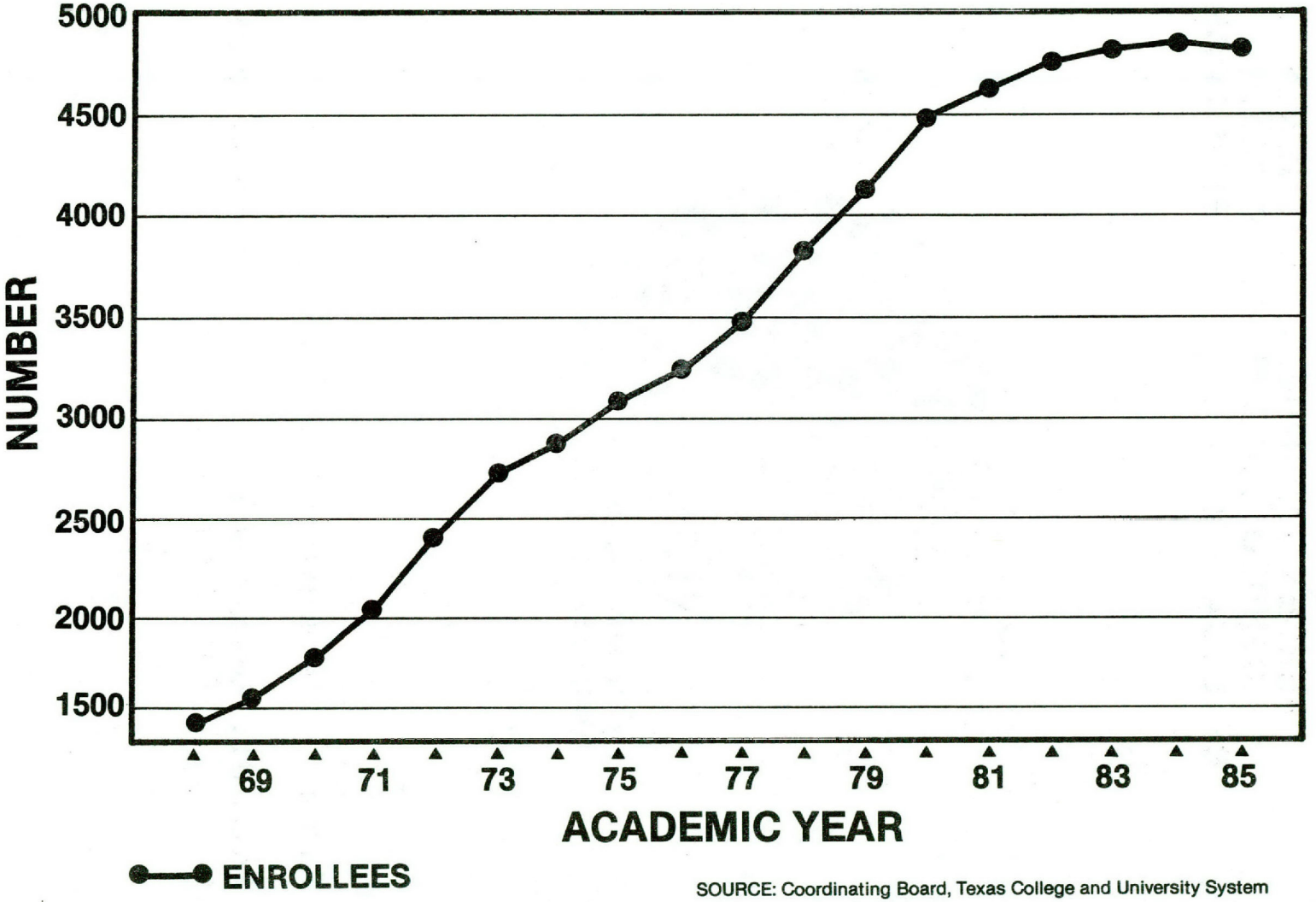
FIGURE 1
PERCENT (NUMBER) 1985 NEWLY-LICENSED PHYSICIANS IN TEXAS BY LOCATION OF MEDICAL EDUCATION



Source: Texas Board of Medical Examiners

Prepared by: Bureau of State Health Planning and Resource Development, Texas Department of Health

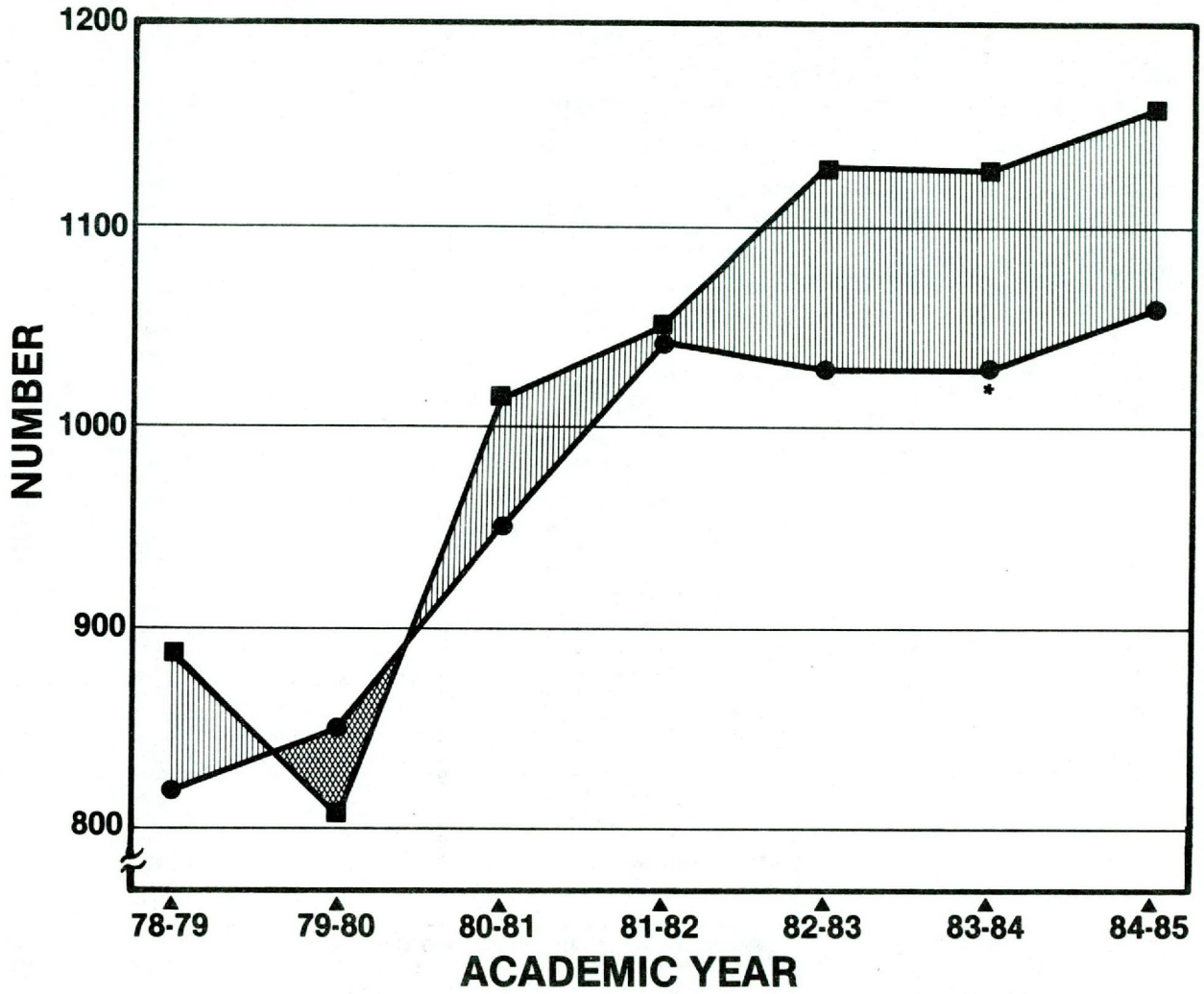
FIGURE 2
TEXAS MEDICAL SCHOOL ENROLLMENTS
1968-85



SOURCE: Coordinating Board, Texas College and University System

PREPARED BY: Bureau of State Health Planning and Resource Development
Texas Department of Health

FIGURE 3
TEXAS MEDICAL SCHOOL GRADUATES VS RESIDENCY PROGRAMS 1978-1984



GRADUATES

RESIDENCY PROGRAMS

*1983-1984 Residency Program data is unavailable

SOURCES: Graduates
Coordinating Board, Texas College and University System
Residency Programs
Texas Medical Association

PREPARED BY: Bureau of State Health Planning and Resource Development
Texas Department of Health

TABLE 1

NOTE: FOR COLUMN DEFINITIONS SEE PAGES IMMEDIATELY FOLLOWING THIS TABLE.

TEXAS DEPARTMENT OF HEALTH
PRIMARY CARE HEALTH MANPOWER SHORTAGE AREAS IN TEXAS
MAY 1986

CTY NUM	SERVICE AREA NUM	PHR/ HSA	STATE PLANNING REGION(COG)	COUNTY NAME/ SERVICE AREA NAME	OFFICIAL DEGREE OF SHORTAGE	HMSA DESG TYPE	DESIGNATION DATE
1	30	PHR 7	6	ANDERSON-BETO PRISON	2	FAC	11-30-84
1	31	PHR 7	6	ANDERSON-COFFIELD PRISON	3	FAC	11-30-84
5		PHR 4	3	ARCHER CO	2	WCO	03-28-84
6		PHR 1	1	ARMSTRONG CO	2	WCO	03-28-84
7		PHR 9	18	ATASCOSA CO	3	WCO	03-28-84
10		PHR 9	18	BANDERA CO	1	WCO	03-28-84
15	24	PHR 9	18	BEXAR-EAST SIDE	1	PT	03-28-84
15	25	PHR 9	18	BEXAR-SOUTHRN RURAL	1	PT	03-28-84
15	26	PHR 9	18	BEXAR-SOUTH SIDE	1	PT	03-28-84
15	27	PHR 9	18	BEXAR-WEST SIDE	2	PT	03-28-84
16		PHR 6	12	BLANCO CO	4	WCO	03-28-84
17		PHR 12	9	BORDEN CO	1	WCO	03-28-84
20	32	PHR 11	16	BRAZORIA-CLEMONS PRISON	1	FAC	11-30-84
20	33	PHR 11	16	BRAZ-DARRINGTON PRISON	2	FAC	11-30-84
20	34	PHR 11	16	BRAZ-RAMSEY I PRISON	3	FAC	11-30-84
20	35	PHR 11	16	BRAZ-RAMSEY II PRISON	1	FAC	11-30-84
20	36	PHR 11	16	BRAZ-RETRIEVE PRISON	1	FAC	11-30-84
20	48	PHR 11	16	BRAZ-RAMSEY III PRISON	1	FAC	11-30-84
23		PHR 1	1	BRISCOE CO	1	WCO	09-25-84
31		PHR 8	21	CAMERON CO	2	WCO	03-28-84
33		PHR 1	1	CARSON CO	2	WCO	03-28-84
35		PHR 1	1	CASTRO CO	1	WCO	03-28-84
36		PHR 11	16	CHAMBERS CO	4	WCO	04-18-85
50	49	PHR 6	23	CORYELL-HILL TOP PRISON	1	FAC	11-30-84
54		PHR 2	2	CROSBY CO	4	WCO	03-28-84
55		PHR 3	8	CULBERSON CO	4	WCO	04-25-86
57	16	PHR 5	4	DALLAS-WEST DALLAS	1	PT	03-28-84
57	19	PHR 5	4	DALLAS-FAIR PARK	1	PT	03-28-84
57	20	PHR 5	4	DALLAS-SOUTH DALLAS	4	PT	03-28-84
57	21	PHR 5	4	DALLAS-TRINITY	2	PT	03-28-84
57	22	PHR 5	4	DALLAS-LISBON	1	PT	03-28-84
57	23	PHR 5	4	DALLAS-SIMPSON STUART	1	PT	03-28-84
57	45	PHR 5	4	DALL-TARR IND POP GP	1	POPGRP	11-30-84
57	46	PHR 5	4	DALLAS-PARKLAND HOSP	1	FAC	05-20-83
59		PHR 1	1	DEAF SMITH CO	3	WCO	11-30-84
60		PHR 7	5	DELTA CO	2	WCO	11-30-84
63	10	PHR 2	2	DICKENS & KING COS	1	MLTCO	03-28-84
64	55	PHR 9	24	DIMMIT & ZAVALA COS	2	MLTCO	11-08-85
66		PHR 8	20	DUVAL CO	4	WCO	11-30-84
71	2	PHR 3	8	EL PASO-SOUTHEAST	1	PT	03-28-84

PREPARED BY: BUREAU OF STATE HEALTH PLANNING AND RESOURCE DEVELOPMENT

SOURCE: U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

HMSA DESG:
WCO WHOLE COUNTY
PT PART COUNTY
MLTCO MULTIPLE COUNTIES
FAC FACILITY
POPGRP POPULATION GROUP

TEXAS DEPARTMENT OF HEALTH
PRIMARY CARE HEALTH MANPOWER SHORTAGE AREAS IN TEXAS
MAY 1986

CTY NUM	SERVICE AREA NUM	PHR/ HSA	STATE PLANNING REGION(COG)	COUNTY NAME/ SERVICE AREA NAME	OFFICIAL DEGREE OF SHORTAGE	HMSA DESG TYPE	DESIGNATION DATE
71	17	PHR 3	8	EL PASO-SOUTH EL PASO	1	PT	03-28-84
79	37	PHR 11	16	FT BEND-JESTER II PRISON	2	FAC	11-30-84
79	50	PHR 11	16	FT BEND-JESTER III PRISON	1	FAC	11-30-84
82		PHR 9	18	FRIO CO	4	WCO	11-30-84
83		PHR 12	9	GAINES CO	4	WCO	03-28-84
84	14	PHR 11	16	GALVESTON-BOLIVAR PEN	1	PT	03-28-84
87		PHR 12	9	GLASSCOCK CO	1	WCO	03-28-84
88		PHR 8	17	GOLIAD CO	4	WCO	04-18-85
89	15	PHR 8	17	GONZALES-NIXON	2	PT	03-28-84
93	51	PHR 6	13	GRIMES-PACK I PRISON	1	FAC	11-30-84
93	52	PHR 6	13	GRIMES-PACK II PRISON	1	FAC	11-30-84
95	44	PHR 2	2	HALE-MIGRANT POP	1	POPGRP	02-25-86
100		PHR 10	15	HARDIN CO	3	WCO	11-30-84
108		PHR 8	21	HIDALGO CO	2	WCO	03-28-84
113	38	PHR 10	14	HOUSTON-EASTHAM PRISON	2	FAC	11-30-84
115		PHR 3	8	HUDSPETH CO	1	WCO	03-28-84
116	56	PHR 5	4	HUNT-POVERTY POP GRP	3	POPGRP	04-25-86
120		PHR 8	17	JACKSON CO	4	WCO	03-28-84
122	18	PHR 3	8	JEFF DAVIS & MARFA DIV	2	MLTCO	03-28-84
123	1	PHR 10	15	JEFFERSON-BEAUMONT	4	PT	03-28-84
123	3	PHR 10	15	JEFFERSON-PT ARTHUR	2	PT	03-28-84
128		PHR 9	18	KARNES CO	4	WCO	10-31-85
134		PHR 4	10	KIMBLE CO	3	WCO	09-27-84
135	10	PHR 2	2	KING(SEE DICKENS CO)	1	MLTCO	03-28-84
141		PHR 6	23	LAMPASAS CO	3	WCO	03-28-84
142		PHR 9	24	LA SALLE CO	1	WCO	03-28-84
149		PHR 8	20	LIVE OAK CO	2	WCO	03-28-84
151		PHR 12	9	LOVING	1	WCO	03-28-84
152	28	PHR 2	2	LUBBOCK-EAST LUBBOCK	1	PT	03-28-84
153		PHR 2	2	LYNN	2	WCO	03-28-84
157	39	PHR 6	13	MADISON-FERGUSON PRISON	2	FAC	11-30-84
160		PHR 4	10	MASON CO	1	WCO	03-28-84
162		PHR 9	24	MAVERICK CO	2	WCO	03-28-84
163		PHR 9	18	MEDINA CO	2	WCO	11-30-84
167	8	PHR 6	23	MILLS & SAN SABA COS	1	MLTCO	03-28-84
170		PHR 11	16	MONTGOMERY CO	4	WCO	03-28-84
173		PHR 2	2	MOTLEY CO	1	WCO	04-25-86
176		PHR 10	14	NEWTON CO	2	WCO	11-30-84
180		PHR 1	1	OLDHAM CO	1	WCO	03-28-84
185		PHR 1	1	PARMER CO	3	WCO	07-15-85
189	18	PHR 3	8	PRESIDIO-MARFA DIV.	2	MLTCO	03-28-84
189	47	PHR 3	8	PRESIDIO-PRES DIV.	2	PT	03-28-84

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PLANNING AND RESOURCE DEVELOPMENT

HMSA DESG:
WCO WHOLE COUNTY
PT PART COUNTY
MLTCO MULTIPLE COUNTIES
FAC FACILITY
POPGRP POPULATION GROUP

TABLE 1 - Page 3

TEXAS DEPARTMENT OF HEALTH
PRIMARY CARE HEALTH MANPOWER SHORTAGE AREAS IN TEXAS
MAY 1986

CTY NUM	SERVICE AREA NUM	PHR/ HSA	STATE PLANNING REGION(COG)	COUNTY NAME/ SERVICE AREA NAME	OFFICIAL DEGREE OF SHORTAGE	HMSA DESG TYPE	DESIGNATION DATE
190		PHR 7	6	RAINS CO	2	WCO	03-28-84
195		PHR 12	9	REEVES CO	2	WCO	11-30-84
196		PHR 8	20	REFUGIO CO	2	WCO	11-04-85
202		PHR 10	14	SABINE CO	2	WCO	03-28-84
204		PHR 10	14	SAN JACINTO CO	1	WCO	03-28-84
206	8	PHR 6	23	SAN SABA(SEE MILLS CO)	1	MLTCO	03-28-84
214		PHR 8	19	STARR CO	2	WCO	03-28-84
218		PHR 4	10	SUTTON CO	2	WCO	10-31-85
219		PHR 1	1	SWISHER CO	4	WCO	09-25-84
220	5	PHR 5	4	TARRANT-POLY	1	PT	03-28-84
220	6	PHR 5	4	TARRANT-STOP SIX	4	PT	03-28-84
222		PHR 12	9	TERRELL CO	1	WCO	03-28-84
228		PHR 10	14	TRINITY CO	2	WCO	03-28-84
233		PHR 9	24	VAL VERDE CO	2	WCO	03-28-84
234		PHR 7	6	VAN ZANDT CO	3	WCO	09-27-84
236	40	PHR 11	16	WALKER-DIAGNOSTIC PRISON	3	FAC	11-30-84
236	41	PHR 11	16	WALKER-ELLIS PRISON	2	FAC	11-30-84
236	42	PHR 11	16	WALKER-GOREE PRISON	2	FAC	11-30-84
236	43	PHR 11	16	WALKER-WYNNE PRISON	2	FAC	11-30-84
236	53	PHR 11	16	WALKER-HUNTSVILLE PRISON	1	FAC	11-30-84
237		PHR 11	16	WALLER CO	4	WCO	03-28-84
238		PHR 12	9	WARD CO	4	WCO	03-28-84
240		PHR 8	19	WEBB CO	3	WCO	03-28-84
245		PHR 8	21	WILLACY CO	1	WCO	03-28-84
247		PHR 9	18	WILSON CO	3	WCO	03-28-84
251		PHR 2	2	YOAKUM CO	1	WCO	03-28-84
253		PHR 8	19	ZAPATA CO	1	WCO	03-28-84
254	55	PHR 9	24	ZAVALA(SEE DIMMIT CO)	2	MLTCO	11-08-85
TOTAL							109

PREPARED BY: BUREAU OF STATE HEALTH
PLANNING AND RESOURCE DEVELOPMENT

HMSA DESG:
WCO WHOLE COUNTY
PT PART COUNTY
MLTCO MULTIPLE COUNTIES
FAC FACILITY
POPGRP POPULATION GROUP

DEFINITIONS: TABLE 1 - PRIMARY CARE HEALTH MANPOWER SHORTAGE AREAS IN TEXAS

Listing of primary care Health Manpower Shortage Areas in Texas as designated by the U.S. Department of Health and Human Services.

DATA SOURCES

Column 1 COUNTY NUMBER - Three digit county code (sequential code 1-254).

Column 2 SERVICE AREA NUMBER - Service area numbers are assigned to multiple county and subcounty designations. There are currently 48 service area designations, including the following: four multiple county designations (consisting of two whole counties designated as one service area), 20 subcounty geographic area designations, 21 facility designations, and three population group designations. The service area numbers range from 1 to 56. Listings are not included for service area numbers 4, 7, 9, 11, 12, 13 and 29 due to the de-designation of these areas.

Column 3 PHR - Public Health Region or Health Service Area (HSA). There are a total of 12 regions/areas in Texas.

Column 4 STATE PLANNING REGION - There are 24 SPRs that are coterminous to the regions established for Council of Governments (COGs).

Column 5 COUNTY NAME/SERVICE AREA NAME - County name for all areas listed and the service area name for multiple county and subcounty designations.

Column 6 OFFICIAL DEGREE-OF-SHORTAGE - Degree-of-shortage group assignments issued by the Office of Data Analysis and Management, Bureau of Health Professions, Department of Health and Human Services upon initial designation or designation update. This assignment is made based on the population to primary care physician ratio and the presence or absence of unusually high needs for primary medical care services. Group one represents areas with highest ratios, group 4, the lowest.

Column 7 HMSA DESIGNATION TYPE - One of the five categories shown below:

Geographic Area

WCO - Whole county.
PT - Portion of a county.
MLTCO - Multiple whole counties designated as one service area.

Facility

FAC - Public or nonprofit private medical facility.

Population group

POPGRP - Includes poverty, Medicaid-eligible, medically indigent, migrant workers, Indians/Alaskan Natives and other population groups.

Column 8 DESIGNATION DATE - The date written notification of designation was issued by DHHS for original designations or designation updates.

CHAPTER XV - DATA NEEDS

SUBJECT AREA BACKGROUND

Health policy makers and program managers must, out of necessity, rely on existing sources of health and health-related data for use in the decision making process. Even though a wide variety of information currently exists, there are still problems associated with the types, usefulness, and applicability of these data for health planning purposes. The following sections briefly address a few of these concerns.

The most outstanding characteristic of many existing data sets is the programmatic orientation of the related data collection activities. Health and human service programs collect data to satisfy programmatic reporting requirements. These requirements, i.e. age groups, ethnic/racial categories, etc., rarely are consistent between programs. Comparison of these data sets is difficult, if not impossible, and is further complicated by two additional factors. Most importantly, programs collect data only on the people they serve. Data on eligible participants are certainly necessary, but these data are of limited use in analyzing and determining needs in a population-based approach. Secondly, it is extremely difficult to track recipients of multi-agency services. The Indigent Health Care and Treatment Act passed by the 69th Texas Legislature partially addressed this issue by authorizing the Texas Department of Human Services to implement a computerized integrated eligibility services program in conjunction with the Texas Department of Health.

The size of the health planning data system is of significant concern in terms of both the analysis and management of the data. Mortality data provide an excellent example for this concern. Consider a project that examines the ten leading causes of death by the following categories:

1. Age <1 year, 1-14 years, 15-44 years, 45-64 years, 65+ years
2. Ethnicity/Race - anglo, black, Hispanic
3. Geographic Area - 24 state planning regions

Based on this fairly simplistic categorization scheme, 3,600 individual data items are created. Each individual data item (or number) produced represents the number of deaths in a region for a specific cause, age group, and ethnic/racial category. If sex determination were added, the number of data items automatically doubles to 7,200. The purpose of this example is to illustrate the importance of focusing on specific data needs. The types and extent of information gathered to meet health planning data needs must be well chosen and limited or the data quickly become overwhelming.

Technology is another important factor in the health planning data system. The various sources of data often have different computer support systems. Some programs are not computerized; there are constant advances in computer technology. Programs and agencies are at different stages in technological development. These types of problems can usually be overcome. However, they deserve mention because of their implication on

staff time, budgets, etc. in making "existing" data useable for health planning activities. For example, the Texas Cancer Registry Program must incorporate a variety of data gathering techniques in the collection of cancer patient information from hospitals in the state. Full implementation of the registry program was recommended in the 1985-86 Texas Cancer Plan. However, funding through legislative appropriations and through the Cancer Council's award of Cancer Resource Funds has allowed full implementation of the complex program in only seven of 12 public health regions.

There are certain kinds of data that just do not exist within the health planning data system. For example, there are virtually no data on the nutritional status of the Texas population. Obviously programs such as the Women's, Infants, and Children (WIC) Supplemental Food Program collect information on their clients. However, these provide little insight into the nutritional problems of the population as a whole. In fact, the Senate Interim Committee on Hunger and Nutrition, created by the 68th Texas Legislature, recognized the importance of nutrition monitoring and surveillance systems in its report Faces of Hunger in the Shadow of Plenty. The "1990 Objectives" program also acknowledges the need for such data to provide a basis for planning and allocation of resources for effective health-related programs. The same lack of data is a problem in many areas of health planning activities when an accurate determination of the handicapped, disabled, and other special at-risk populations needs to be made.

The last area of consideration in the health planning data system is cost. Special studies and surveys could provide the missing, essential data needed for health planning activities. For example, the Texas Rehabilitation Commission attempted to get funding for a special survey of the disabled population in the state in the last legislative session. However, in the current era of funding shortages, the project was not successful in obtaining legislative support. The Council on Disabilities is legislatively charged with promoting such a survey and is still pursuing the issue. In support of future state funding requests, the Early Childhood Development (ECI) Program within the Texas Department of Health is using federal grant money to plan and implement pilot projects that identify, refer, and track high-risk infants. The development and implementation of new data collection systems such as these are expensive; however, modifications to existing systems are also costly because of the implications on staff training, data processing support, and maintenance of the continuity of data over time.

In conclusion, the purpose of the Data Needs section of SHP 87 is to identify one of these priority deficiencies within the health planning data system and to develop a strategy to alleviate the problem.

REFERRAL ISSUES

This section identifies major issues of concern in this subject area not selected by the SHCC as the priority issue, but worthy of consideration within the parameters of the plan development process and referred by the SHCC to proponent organizations for appropriate action.

Issue 1: Incomplete data on the incidence and prevalence of cancer.

Currently no data collection system provides complete statewide data on the incidence and prevalence of cancer in Texas. This issue is referred to the Texas Department of Health, the Cancer Council, and other relevant organizations such as M. D. Anderson Hospital in Houston.

Issue 2: The status of data on high-risk infants.

Many high risk infants are not being identified and referred for services. This issue is referred to the Texas Department of Human Services and the Texas Department of Health.

Issue 3: The status of emergency medical services systems data.

The Emergency Medical Services (EMS) System's data collection and reporting mechanisms need improvement in order to provide an appropriate basis for program planning and evaluation. This issue is referred to the Bureau of Emergency Management, Texas Department of Health and to the EMS Patient Evacuation Study Committee's sucessor, if created.

Issue 4: Identification of health and social service beneficiaries.

Information on recipients of multi-agency services is necessary for policy-makers and program managers in assessing the need for health and social services. This issue is referred to the Texas Department of Human Services and the Texas Department of Health.

Issue 5: Limited data regarding nutritional status.

Virtually no information exists on the nutritional status of various population groups in Texas. This issue is referred to the Texas Department of Human Services, the Texas Department of Health, the Texas Department on Aging, and the Texas Dietetic Association.

Issue 6: The unidentified disabled population.

There is a severe lack of data on the incidence and prevalence of disabling conditions in the state. This issue is referred to the Council on Disabilities and its member agencies.

PRIORITY ISSUE SUPPORT

There are two aspects of injury and injury surveillance data which need to be stressed. The first is a further elaboration of the significance of injuries in context of the state's overall mortality experience.

Overall statistics on causes of death are dominated by the fact that most deaths occur in the older population, typically over the age of 65. In

1984, for example, 65 percent of all Texas resident deaths occurred in this age group. As a result, the impact of the major causes of death is greatly influenced by mortality occurring late in life.

Evaluating mortality in this manner assumes that in terms of societal costs, each instance of death is equal. From this perspective, the death of an individual at age 25 is viewed no differently from that of an individual at age 70. However, if the societal costs of these two events were to be compared, the age at death would have to be taken into consideration. The potential contribution to society of the younger individual is much greater simply because more time is available for productivity.

One method of measuring this differential in possible societal contribution is to calculate years of potential life lost. This technique is a means of examining premature death and relating its incidence to the various causes of mortality. In measuring the principal causes of early death, it is assumed that the average productive lifespan is, at minimum, those years prior to retirement. Using deaths occurring between the ages of one and 65 years, it is possible to calculate the years of potential life lost. First, the average age at death by cause is computed by multiplying grouped mortality data by the midpoint of their respective age intervals, summing these products, and dividing by total deaths ages one through 64. Second, the years of potential life lost are obtained by subtracting the average age at death from 65 and multiplying the result by total deaths ages one through 64. Each death, in effect, is weighted according to its age of occurrence.

Figure 1 compares the outcome of this technique with overall mortality statistics. The impact of chronic ailments such as cancer, heart diseases, and cerebrovascular disease is significantly decreased when age at death is considered. However, the role of injuries is greatly intensified. In 1984, injuries caused 10 percent of total deaths in Texas but were responsible for 47 percent of total years of potential life lost.

The second aspect of injury and injury surveillance data is the need for population-based injury morbidity data. Mortality data are excellent indicators of the magnitude of the injury problem in Texas. However, these data are of limited use in the estimation of the incidence and severity of non-fatal injuries in the state. The major causes of injury-related deaths may or may not be the primary causes of non-fatal injuries. The incidence of non-fatal injuries is significantly higher as well. Table 1 illustrates the difference in injury incidence rates for children and youth by level of treatment required. For this age group, over 800 emergency room visits are required for every injury related fatality. Similar estimates for the general population place this ratio at 400 to one. Therefore, in order to design effective injury control programs, it is essential that population-based injury morbidity data be collected.

TABLE 1

INCIDENCE OF INJURIES OF CHILDREN UNDER 20 YEARS BY LEVEL OF TREATMENT

UNITED STATES, 1980-81

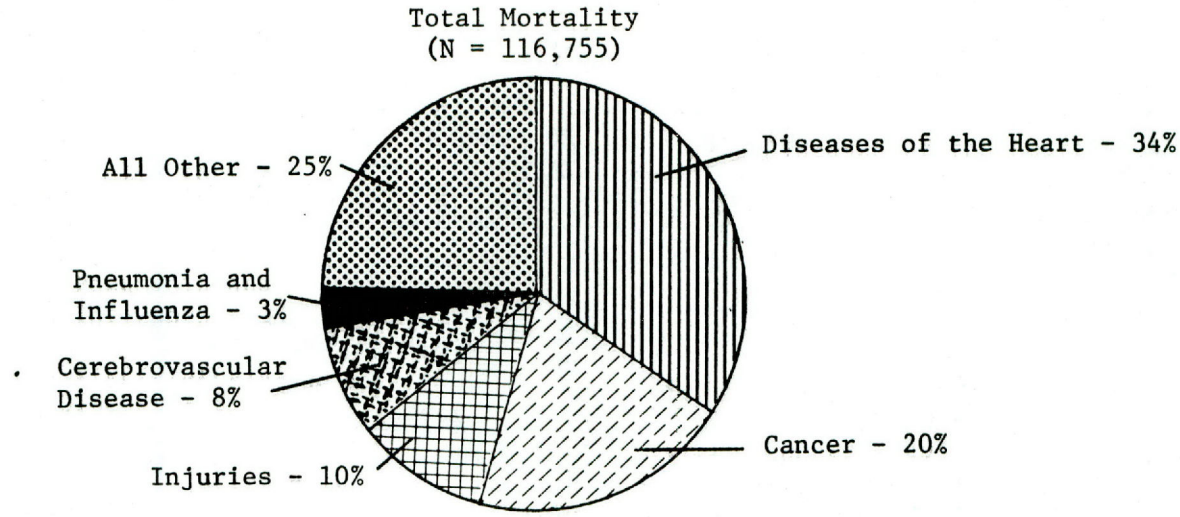
Level of Treatment	Incidence Rate (per 10,000 children and youths)	Source*
Injuries leading either to restricted activity or any level of treatment	3,800	NCHS
Emergency room treatment for injuries	2,160	SCIPP
Hospital admissions for injuries	113	SCIPP
Deaths from injuries	2.6	SCIPP

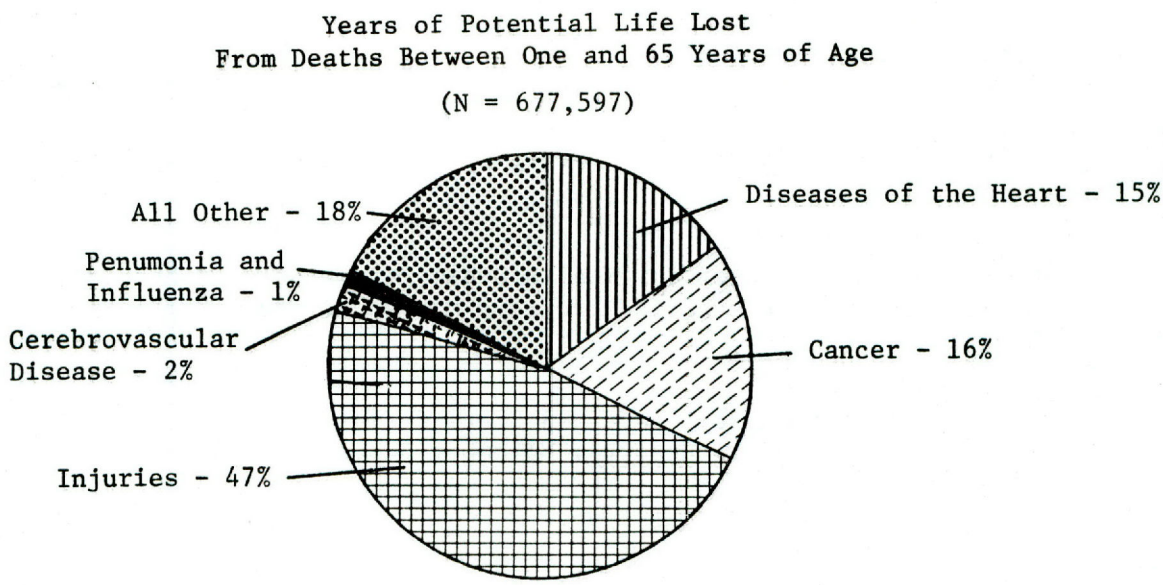
*NCHS = National Center for Health Statistics; SCIPP = Statewide Childhood Injury Prevention Program, Massachusetts Department of Health

Source: "Injury Surveillance - A State Perspective," Public Health Reports; November-December, 1985.

FIGURE 1

LEADING CAUSES OF DEATH
PERCENTAGE DISTRIBUTION OF TOTAL MORTALITY
AND YEARS OF POTENTIAL LIFE LOST
TEXAS, 1984





Source: Texas Vital Statistics, 1984
Texas Department of Health

Prepared By: Bureau of State Health Planning
and Resource Development
Texas Department of Health

CHAPTER XVI - MATERNAL AND CHILD HEALTH

The following exhibits supplement the discussion presented in the plan.

EXHIBIT 1

RECOMMENDATIONS OF THE SELECT COMMITTEE ON TEENAGE PREGNANCY AND PROGRESS MADE IN THEIR IMPLEMENTATION

During the Sixty-Seventh Legislative Session of 1981, service providers for teen parents and pregnant adolescents worked and consulted with the legislative leadership, who then appointed a Select Committee on Teenage Pregnancy. The charge of the Committee was to study the issues and problems of teen pregnancy and develop recommendations for future action by the state. Representative Mary Polk was named chairperson of the Committee and its findings were presented to the Legislature in October of 1982. Ten separate recommendations regarding various areas of service delivery were included in the final report. It has been approximately three years since the recommendations were made and many of them have been implemented. This portion of the study will report on the progress made in their implementation.

Recommendation I: The Select Committee recommended development of a central office of Adolescent Pregnancy and Parenthood within the Department of Human (Resources) Services. The recommendation included guidelines for the types of responsibilities which should be undertaken in this office. These responsibilities included:

* Set guidelines for a data collection system to be used by all state agencies that assist children and youth. This information should be compiled in a "Youth Status Report" to be prepared annually;
* Gather data on services available to youth dealing with sexuality, pregnancy, and parenthood;
* Plan, implement, monitor,and evaluate programs and policies for adolescents in the areas of sexuality, pregnancy, and parenthood. The information obtained should be used to advise and make recommendations to state agencies providing the services;
* Recommend and provide grant funds for projects which promote a reduction of unintended pregnancy and premature parenthood; and
* Assure that every state-sponsored program has an adequate evaluation mechanism in place to document cost effectiveness of programs. At least 2 percent of the allocation was to be utilized for this purpose.

Progress: Many of the components of this recommendation have been implemented on a small scale in separate programs. Data collection for children and youth is becoming more complete. However, a central inter-agency program has not been established among the health and human service agencies to deal with the issues specifically surrounding adolescent pregnancy. Although there has been a greater program emphasis placed on programs for maternal and child health, local programs for teen parents are developed only in the rare case that there is a surplus of resources. A "Youth Status Report" has not yet been compiled; however, the Texas Health and Human Services Coordinating Council is preparing a Report on services for Children and Youth in Texas to be completed in the fall of 1986.

Recommendation II: This recommendation called for the establishment of a comprehensive family life curriculum within the public education system. The recommendation contained specific guidelines concerning the methods for implementing the program. The guidelines for level of instruction for each

scholastic level, sexual abuse awareness programs, emphasis on the role of males and the teen's parents, and qualifications for instructors.

Progress: The state educational reform program, which was passed in the Sixty-Eighth Legislature, Second Called Session did not address any development of the curriculum discussed in this recommendation. For grades kindergarten through sixth, curriculum for family life education has not altered significantly. The Texas Health Department has stepped up its efforts to provide trained health educators in this area for use by schools and community groups. Curricula dealing with parenting, child care and family responsibility are given brief exposure in the school health courses but are discussed mainly in elective courses in the Vocational Home Economics branch of the education system. These courses place an emphasis on parenting and the roles and relationships of males and females in family development.

Recommendation III: This recommendation asks for a legislative mandate stating that all state-sponsored services be provided in an accessible and confidential manner to minors. The recommendation contained specific guidelines for satisfying the mandate which included outreach requirements, service requirements, clinic hour requirements and the establishment of "Teenline" or information hotline.

Progress: Outreach efforts have greatly increased in the various programs. Literature is available for many of the programs and media coverage is being addressed by several programs. For example, the Texas Department of Health has developed a public service announcement which deals with parent/child discussions of reproductive information and TDH hopes to expand air time throughout the state. Most clinics are presently required to offer the counseling programs described in the recommendation and some of the larger cities provide a separate teen clinic during a time of day when a student can attend.

Recommendation IV: The Select Committee recommended that both male and female teen parents be allowed to remain under the auspices of special education until they complete high school. It stressed that the funds should be utilized to develop day care, transportation for teens and their children to and from day care, school-based day care, and parenting education programs.

Progress: Day care and educational programs specifically designed to meet the needs of the teen parent or pregnant adolescent are not available on a state-wide basis. Most of the school districts have either not been able to afford these programs or have not identified it as a community priority.

Medicaid-sponsored day care services are not available at a level required to meet the needs of the teen parent population. In many cases, accessibility barriers to day care cause more hardship than if the student were to care for the child at home. Special education transportation is not available to all teen parents and teen mothers are usually placed in the regular education programs after six weeks of post-partum leave.

Recommendation V: This recommendation requests that the State Board of Insurance prepare and present a report to the Legislature concerning the feasibility of requiring all private insurance providers to provide dependent minor prenatal delivery and post-partum care coverage.

Progress: House Concurrent Resolution 84, enacted by the Sixty-Eighth Legislature, mandated the Board of Insurance to undertake the study described in the Select Committee's report. The findings were presented to the Sixty-Ninth Legislature. In summary, the Board of Insurance found that optional coverage for dependent minors who require prenatal, delivery, and post-partum care is available through most providers. It also reported that thirty day coverage of pregnancy-related costs, including any complications, is provided by most companies. The main conclusion of the report was that private insurance is available for dependent minors if their parent can afford it. The board concluded that in most cases pregnancy of a dependent minor is an unanticipated cost for most families, and is therefore not purchased by the parent. It may not be affordable to many of families who need the service.

Recommendation VI: This recommendation called for the expansion of the Title XIX Medicaid program to allow reimbursement for prenatal care for first-time mothers.

Progress: This expansion was implemented at the state level during the fall of 1984 in conjunction with a federal mandate. There is no data available at this time regarding the impact of the expansion.

Recommendation VII: The intent of this recommendation is that provider outreach and counseling efforts increase to present adoption as a viable option for pregnant adolescents. This includes the assurance of Medicaid reimbursement for prenatal care whether or not the child is placed through adoption.

Progress: It is difficult to ascertain if outreach efforts for adoption have increased. Medicaid will reimburse costs associated with prenatal care and delivery whether or not the child is placed with another family as long as there is no other payor available, such as a maternity home or adoption agency. Most adoption agencies do provide adequate counseling services for teens.

Recommendation VIII: This recommendation suggested that family planning for teenagers should be given high priority in the state agencies serving teens.

Progress: Both the Texas Department of Health and the Department of Human Services have placed a high priority on services for pregnant teenagers.

There will always be a problem of having available dollars to match the level of need for this particular population. This report and the progress made towards implementing the recommendations of the Select Committee are evidence of the concern for teen parents.

Recommendation IX: The Select Committee recommended the appointment of a Legislative committee to study child day care needs in Texas.

Progress: This issue was studied by the House Committee on Human Resources. The report on child day care was completed during the interim before the 69th Legislature. Three separate recommendations were made in the Committee's final report. Their first recommendation regarding the increase in funding for the Child Care Facilities Licensure Division of Department of Human Resources, was enacted by the Sixty-Ninth Legislature. Fees for licensure were increased and designated for the State General Revenue Fund. The other recommendations which concerned methods to gauge future needs of the day care system, were not approved in the last Legislative session.

Recommendation X: The last recommendation suggested statutory changes to allow the State to collect child support from non-paying parents.

Progress: In November of 1983, Texas voters approved a constitutional amendment which would allow garnishment of wages from non-paying parents. Recently, the Office of the Attorney General has been involved in an aggressive campaign to develop community awareness of the problem.

Source: Texas Health and Human Services Coordinating Council, Final Report on Adolescent Pregnancy and Parenting - October]985, p. 16-17.

EXHIBIT 2

TEEN PARENT INITIATIVE

BRIEFING DOCUMENT

January 1986

Family Self-Support Branch
and
Research and Demonstration Division
Office of Research, Demonstration and Evaluation

Office of Programs
Texas Department of Human Services
P. O. Box 2960
Austin, Texas 78769

(512) 450-4140

PURPOSE

Seven state agencies are taking action on a long-standing concern--the need for a comprehensive, coordinated effort to serve pregnant and parenting teens in Texas. The agencies involved are:

Texas Department of Community Affairs (TDCA),
Texas Department of Health (TDH),
Texas Department of Human Services (TDHS),
Texas Department of Mental Health and Mental Retardation (MHMR),
Texas Education Agency (TEA),
Texas Health and Human Services Coordinating Council (THHSCC), and
Texas Youth Commission (TYC)

Through participation in an interagency council, these agencies propose to develop and implement a unified state-wide initiative.

The goal of the initiative is to increase the self-sufficiency of pregnant and parenting teens by developing and implementing a comprehensive service delivery package that ensures the availability of public resources through the cooperative efforts of multiple state and local agencies.

The Teen Parent Initiative seeks to avoid duplication of service, strengthen linkages among existing organizations, and support rather than supplant individual, family and community initiatives. The initiative will provide a mechanism to coordinate fragmented and single-purpose efforts into a stronger, united approach to the problem of teenage pregnancy.

APPROACH

The purpose of the Teen Parent Initiative is to coordinate resources at the state-level that will support the efforts of community-based programs. The approach for accomplishing that purpose is described in the following subsections entitled assumptions, method and phases.

ASSUMPTIONS

The design of the Teen Parent Initiative is based upon the following assumptions:

(1) **The best method of increasing the self-sufficiency of teen parents is through a wholistic approach that addresses all areas of need simultaneously.** At a minimum, each teen parent should have access to these services:

- **health care for mother and child,** including pre- and post-natal care, pediatric care, pregnancy prevention, and health and nutrition counseling

- **education,** including public and special schools, general equivalency diploma (GED) programs, life skills, and family life training

- **job training and employment,** including vocational education, job training, and employment assistance.

- **temporary financial and social support services** including AFDC, food stamps, WIC, day care, transportation, and support and counseling services

In addition, other forms of support such as increased parental involvement, peer groups, and mentors or advocates may be important in helping teen parents become self-sufficient.

(2) **Community-based initiatives that develop and coordinate comprehensive service delivery programs for teen parents offer the best means for institutionalizing services to this population.** Currently, services to teen parents in most communities in Texas are fragmented so that duplications and gaps in services are common. If communities could do a better job of pooling existing resources, they could serve teen parents more efficiently and effectively. Locally initiated efforts to coordinate services are more likely to have desired long-term effects on teen parents than are state or federal efforts because they will generate more community support for continuing the services and will do a better job of addressing local concerns.

(3) **The most efficient way for communities to deliver services to teen parents is to designate one organization, agency, or council to coordinate service delivery through a centralized case management system.** This local entity would serve as the central agency for locating pregnant and parenting teens and helping them through the service delivery system. The agency would employ case managers who may be supported extensively by volunteers. The agency could provide one or more direct services or could merely broker the services of other agencies.

(4) **State-level resources for teen parents also should be more carefully coordinated and directed toward the goal of supporting community-based initiatives.** The four state agencies involved in the Teen Parent Initiative will continue to have responsibilities for serving teen parents; they could do this more efficiently if they addressed the task jointly and used their resources to develop and support community programs.

(5) **The implementation of the Teen Parent Initiative will be a protracted effort lasting at least five to ten years.** To implement a program of this magnitude will require action by state agency boards and the legislature, as well as by local elected officials and the boards of independent school districts, private industry councils, and other local service providers.

METHOD

The method for carrying out the initiative may be categorized by two broad levels of intervention--state-level resources and coordination, and community-based initiatives.

State-level resources and coordination is defined as participation of state agencies, dedication of resources, and the commitment to a unified plan of operation. The following tasks are proposed for the first year of operation:

1. Develop a method to establish coordination between state agencies through the establishment of an interagency council.

2. Research and analyze existing service delivery by identifying existing services and restrictions and institute methods to target these services to teen population.

3. Conduct and assess two pilot projects by developing methods for evaluating pilot sites.

4. Determine essential components of service delivery package by conducting research on state of the art models and methods, analyzing existing service delivery, analyzing pilots to determine effective elements of service delivery, and comparing information.

5. Develop recommendations for future direction by determining policy and procedure changes, drafting legislation and appropriation requests, determining need for continued funding.

Community-based initiatives are represented by service delivery providers, interested groups and associations, and local agencies and schools. This community network should be responsible for a unified service delivery. The following tasks outline the operation at the local level for the first year.

- Develop method to ensure coordination of services by identifying existing services and securing agreement at the local level on method of operation.

- Conduct pilot projects in El Paso and Houston which will yield information to help suggest the design of a teen parent demonstration.

- Ensure linkages with state agencies by cooperating with direction of the initiative, securing technical assistance from state agencies, providing information on existing linkages or other special partnerships, and identifying and communicating barriers.

PHASES

The Teen Parent Initiative is designed to proceed through three phases that provide a logical, systematic planning framework. Information gained during this process will ensure that teens receive the services they require to become self-sufficient, that communities receive valuable assistance in developing and operationalizing their programs, and that statewide programs are comprehensive and efficient.

Planning And Pilot Phase

The first year, beginning September 1985, emphasizes planning and developing a comprehensive service package through an extensive literature research, analysis of existing service delivery systems in the state, and conducting pilot projects. Evaluation of this information is expected to suggest the design of an optimum teen parent delivery model. Recommendations resulting from this evaluation will be used to modify agency policies, to form a basis for legislative and appropriation requests, and to develop guidelines for a demonstration of the model.

Demonstration Phase

This three-year phase will include a demonstration and evaluation of the optimum service delivery models developed in the planning phase. Results of an evaluation of the demonstrations will provide information needed for implementing a statewide program. Other efforts proposed in this phase include developing support for the statewide initiative through local groups and associations, and providing information and support to legislative efforts.

Implementation Phase

This phase will implement a statewide, comprehensive program that was carefully developed and tested, and supported by organizations and agencies across the state.

CHAPTER XVII - THE MEDICAL LIABILITY SYSTEM

PRIORITY ISSUE SUPPORT

Medical Malpractice Liability Insurance System

Liability insurance is purchased by health professionals (doctors, nurses, therapists, etc.) and health care facilities (hospitals, nursing homes) for financial protection in case of a lawsuit. (See Exhibit 1 for major medical malpractice insurance writers in Texas).

The malpractice system begins to function when a patient receives an injury in the course of medical treatment and believes the injury is caused by negligent care. The injured party can bring action against the provider, seeking financial compensation for the economic losses and disabilities resulting from the injury. At this point, the insurance and legal systems come into play.

Most malpractice disputes never reach the courtroom, but are resolved through the insurance claims settlement process. But, if the parties involved cannot agree on a settlement, they go to court.

Insurance Industry

An aura of mystery typically surrounds the insurance industry. Few purchasers of insurance understand where their premium dollars go, and where their protection actually lies.

The insurance industry normally functions in a cyclical manner. Insurance companies cut their premium rates when interest rates are high to increase the volume of business and to raise more cash for investments. When interest rates are low, and thus investment income is also low, they raise the premium rates. (See Figure 1).

Insurance companies don't absorb losses; but rather distribute losses. The reinsurance system is a mechanism to distribute losses. Reinsurance is insurance for insurance companies.

Primary insurers retain only a small portion of major risks, approximately 20%, and reinsure the remaining 80% in the international market for a premium. Reinsurers then keep perhaps 40% and "retrocede" the rest at a lesser premium to other reinsurers and investors. (See Figure 2).

The dominant force in the reinsurance market by far, is Lloyd's of London, with 65% of the American reinsurance market. Foreign reinsurers are not subject, of course, to state or federal regulation. When reinsurance is not available, insurance companies cannot afford to accept high risks.

Nationally, while the insurance industry claimed a loss for 1985 ($5.5 billion), consumer groups, citing accounting practices, investment income, and federal income tax laws (Table 1) point to an actual profit of $6.6 billion.

Insurance Regulation

What is the purpose of insurance regulation? The purpose of insurance regulation, protecting the public interest, involves assuring:

1. the solvency of insurance companies so that future claims can be met,
2. that rates are neither excessive, inadequate, or unfairly discriminatory, and
3. that market availability is present for those who need insurance and can reasonably qualify for it.

Four basic approaches to ratemaking are used in Texas: state-made (deviations are allowed), bureau-made, independent filing (medical malpractice falls here), and not regulated.

In Ratemaking in Texas, a report from the State Board of Insurance to the 69th Legislature, it is noted that in several lines of insurance, some types of insurers are not subject to rate-regulatory statutes. The report states "it is apparent that any exemption from regulation has the effect of weakening regulation. The extent to which these exemptions reduce the overall effectiveness of rate regulation in Texas would be difficult to estimate, but should certainly be studied further to see if additional controls are needed. It should at least be recognized that a significant volume of premiums is written under these exemptions or by non-admitted companies, which are also exempt from regulation."

The report goes on to state that the "objective of the optimal ratemaking system should be to combine effective rate regulation with significant pricing flexibility." An advantage exists in allowing competition.

The Civil Justice System

Many point to the tort system as a means to correct this affordability and availability problem of professional liability insurance. Torts are civil wrongs (other than the breaking of a contract) done by an individual, a corporation, or a government, to another. They are handled through the civil jurisprudence system through lawsuits filed by the injured person. The tort system has evolved from the early 1800's (English common law) and has, for the most part, withstood the tests of time. Decisions on civil liability assessment are entrusted to 12 persons (a jury) who are representatives of the community.

Is litigation increasing? Are awards up? Conflicting data emerge in response to this question. The Rand Corporation's Institute for Civil Justice (nearly 50% of this organization's contributors were insurance companies, as well as other corporations such as Bristol Myers, General Electric, General Foods, IBM, XEROX, and Sears Roebuck and Co.) has published many reports analyzing the civil justice system. Rand Statistics do not indicate a civil justice system out of control.

Their data states:

- the number of lawsuits filed per capita has remained stable for the last 20 years, and
- half of all awards are less than $8,000.

In regard to medical malpractice:

- voluntary settlements dispose of 90% of claims filed, and
- medical malpractice cases are declining.

In contrast, data from Jury Verdicts Research, Inc., from Ohio, indicate a definite increase in the number of civil lawsuits filed and million dollar awards. They state the number of civil lawsuits in state courts, from 1977 to 1981, grew four times as fast as the population of the United States. Preliminary figures from 1985 indicate that the average verdict in medical malpractice cases also exceeded $1 million for the first time.

Another recent study on punitive damages from the American Bar Foundation, published in The National Law Journal, found the median award for punitive damages to be less than $50,000. Attention must be paid to the terms "average" and "median". One problem with using an average is that it can allow a distortion of commonly-awarded amounts. A small number of huge verdicts can distort the "average-award" upward.

Several state legislatures have passed tort reform efforts. Testimony presented before the Joint Senate/House Committee on Liability Insurance and Tort Law indicates that major tort reforms in the area of statute of limitations, collateral source rule, and joint and several liability, did not alleviate the medical malpractice availability and affordability problem in Iowa.

REFERENCES

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EXHIBIT 1

MAJOR MEDICAL MALPRACTICE INSURANCE WRITERS IN TEXAS

DOCTORS

Medical Protective, Fort Wayne, Indiana. Telephone: (219) 485-9622, 5814 Reed Road, Fort Wayne, Indiana 46815

American Physicians Insurance Exchange, Austin. Telephone: (512) 328-1520, 1301 S. Capitol of Texas Highway, Austin, Texas 78746. Dallas Telephone: (214) 559-4800, 2205 Turtle Creek Boulevard, Dallas, Texas 75219

Insurance Corporation of America, Houston. Telephone: (713) 871-8100, 4294 San Felipe, Suite 300, Houston, Texas 77027 or P.O. Box 56308, Houston, Texas 77256

St. Paul Insurance Company, St. Paul, Minnesota. Telephone: (612) 221-7911, 385 Washington, St. Paul, Minnesota 55102

Texas Medical Liability Trust, (TMA) Austin. Telephone: (512) 454-6781, 6300 La Calma, Austin, Texas 78752

Texas Medical Liability Insurance Underwriting Association (Texas JUA), Austin. Telephone: (512) 452-4370, 1016 La Posada, Austin, Texas 78752

Professional Mutual, Kansas City, Missouri. Telephone: (816) 523-1835, 2 East Gregory Boulevard, P.O. Box 8470, Kansas City, Missouri 64114

HOSPITALS

Texas Hospital Insurance Exchange, Austin. Telephone: (512) 461-5775, 6225 Highway 290 East, Suite 201, Austin, Texas 78723 or P.O. Box 14626, Austin, Texas 78761

St. Paul Insurance Company, St. Paul, Minnesota. Telephone: (612) 221-7911, 385 Washington, St. Paul, Minnesota 55102

The Hartford Insurance Group, Hartford, Connecticut. Telephone: (203) 547-5000, Hartford Plaza, Hartford, Connecticut 06115

Source: State Board of Insurance, Research and Information Services

EXHIBIT 2

MEDICAL PRACTICE ACT OF TEXAS
DISCIPLINARY ACTIONS

Sec. 4.12. Except as otherwise provided in Section 4.01, if the board finds any person to have committed any of the acts set forth in Section 3.08 of this Act, it may enter an order imposing one or more of the following:

(1) deny the person's application for a license or other authorization to practice medicine;

(2) administer a public or private reprimand;

(3) suspend, limit, or restrict the person's license or other authorization to practice medicine, including limiting the practice of the person to or by the exclusion of one or more specified activities of medicine;

(4) revoke the person's license or other authorization to practice medicine;

(5) require the person to submit to care, counseling, or treatment of physicians designated by the board as a condition for the initial, continued, or renewal of a license or other authorization to practice medicine;

(6) require the person to participate in a program of education or counseling prescribed by the board;

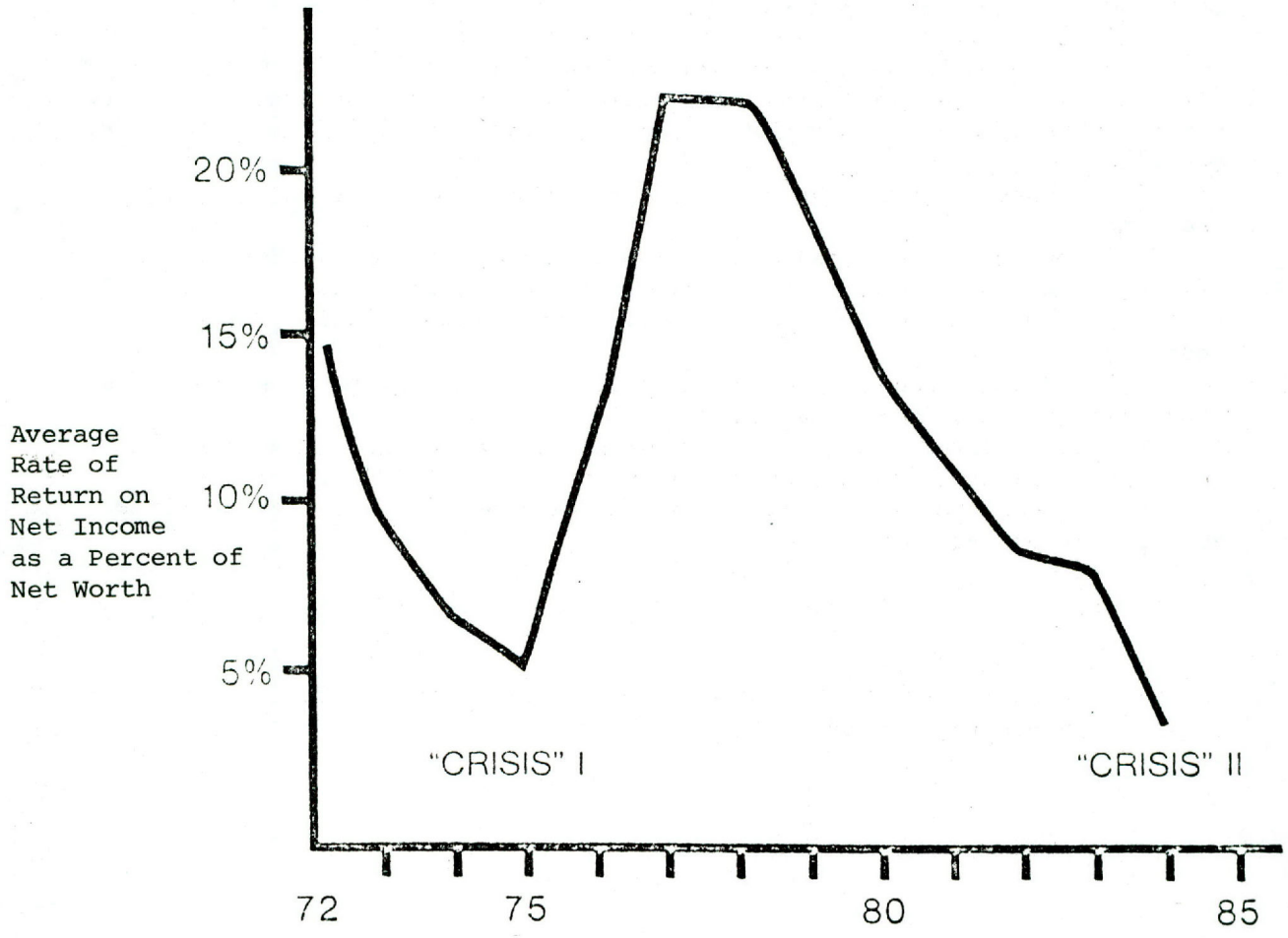
(7) require the person to practice under the direction of a physician designated by the board for a specified period of time; or

(8) require the person to perform public service considered appropriate by the board.

Source: Medical Practice Act of Texas, Texas State Board of Medical Examiners, January 1984

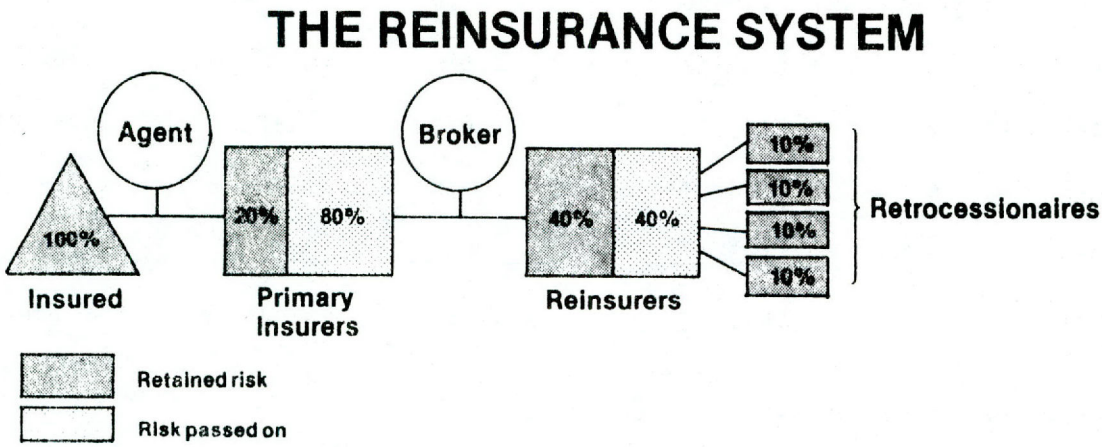
FIGURE 1

TRENDS IN PROPERTY/CASUALTY INSURANCE INDUSTRY



Source: U.S. General Accounting Office

FIGURE 2



Source: Texas State Board of Insurance

TABLE 1

PROPERTY/CASUALTY INSURANCE INDUSTRY
FEDERAL INCOME TAX
SIX P/C COMPANY GROUPS: 1980-1984
(IN MILLIONS OF DOLLARS)

	UNDERWRITING GAIN	INVESTMENT GAIN	TOTAL GAINS	FEDERAL INCOME TAX
ALLSTATE	($1,594)	$ 3,521	$1,928	($ 530)
FIREMAN'S FUND	(1,461)	2,176	715	(489)
HARTFORD	(1,478)	2,871	1,393	(622)
CRUM & FORSTER	(1,015)	1,452	437	(27.4)
HOME	(1,460)	1,910	450	(69)
CNA	(1,344)	1,642	288	(49)
TOTAL*	($8,352)	$13,572	$5,221	($1,786)

*Differences in totals due to rounding

NOTE: Parenthesis indicate a negative number. For example, Hartford's total gain was $1,393 million, and federal income tax was ($622) million. Hartford paid no tax and received a check for $622 million in tax credits from the federal government.

Source: U.S. General Accounting Office, "Tax Administration: Information on How the Property/Casualty Insurance Industry is Taxed, " October 1985.

CHAPTER XVIII - SPECIALIZED MEDICAL SERVICES, NATIONAL HEALTH PLANNING GUIDELINES (NHPG) AND FACILITY BED PROJECTIONS

INTRODUCTION

The information in this chapter annex is designed to support and elaborate the subject matter presented in Chapter XVIII of the 1987 State Health Plan (SHP) for Texas.

Existing federal laws and regulations governing the operation of the health planning program require the State Health Planning and Development Agency (SHPDA) to address the resource standards of the National Health Planning Guidelines (NHPG) and to make bed projections for certain types of medical facilities. In addition, the SHCC has selected two additional specialized medical services for presentation, i.e., magnetic resonance imaging and trauma centers.

For convenience of presentation in the SHP and in this chapter annex, the materials have been grouped as indicated in the Listing of Chapter Annexes.

Background Information Regarding Bed Projection Ranges

P.L. 93-641 as amended includes a requirement to make bed projections for certain specified types of medical facilities. In this year's SHP, projections are made for short term community hospitals (under 30 days average length of stay) and for nursing homes.

The projection of short term hospital beds must be developed taking into account the resource standards of NHPG 1 & 2. Accordingly, the bed projection ranges for 1991 and NHPG 1 & 2 are presented together.A description of the bed projection methodology is also presented.

In the long term institutional care area, the Statewide Health Coordinating Council (SHCC) decided to present bed projections for nursing homes. Accordingly this chapter annex contains a description of the methodology and also nursing home bed projection ranges for 1991.

Background Information Regarding The NHPG And Resource Standards

The 93rd Congress set forth in Section 1501 of the National Health Planning and Resource Development Act of 1974, P.L. 93-641, that the Secretary of the Department of Health, Education and Welfare (DHEW) (now the Department of Health and Human Services (DHHS)) issue guidelines concerning national health planning policy. In addition, the legislation stated the guidelines were to include standards respecting the appropriate supply, distribution and organization of health resources.

DHHS indicated that the NHPG as developed are to serve a dual purpose (1) to be used by the federal government to clarify and rationalize health policy and (2) to assist local and state planning agencies in carrying out their responsibilities in the development of area and state health plans. Per DHHS, the overall aim of the NHPG is to achieve equal access to quality care at a reasonable cost. The NHPG and standards issued on March

28, 1978 focus on two primary areas: (1) cost containment, i.e., cost must be restrained in order to preserve resources needed for improved prevention, better access to services, and high quality of care and (2) quality enhancement, i.e., quality can be enhanced by insuring sufficient volume to maintain highly skilled and experienced personnel. The regulations emphasize the need for a balance between the needs of state and local agencies to take into account unique local health conditions and the need for the federal government to provide leadership and guidance.

Initially, the regulations required that plans developed after 1978 must address the NHPG and be "consistent with" the resource standards. "Consistent with" was stated to mean that target levels expressed in plans could not be higher than the maximum levels nor lower than minimum levels unless specific adjustments were justified on the basis of a thorough analysis. The regulations specify various types of adjustments which can be made. The allowable adjustments are primarily designed to be applied at the local level by individual health systems agencies. In fact, the federal legislation and guideance specified that health systems agencies are responsible for addressing the NHPG and for making adjustements to the standards where appropriate. Since the SHP was intended to be developed in large part from the individual health systems plans (HSPs), the SHP was also required to reflect the NHPG. With the phase-out of the health systems agencies in Texas, the SHPDA is required to continue to address the NHPG and consider appropriate adjustments.

P.L. 96-79 modified the "consistent with" requirement to "must take into account" the NHPG and resource standards. Essentially this means that the SHP must consider the NHPG and resource standards and justify any deviations therefrom with an appropriate rationale. As stated in previous Texas SHPs, it is believed the NHPG and resource standards are of most use when recognized and applied as their name implies, general guidelines, and not arbitrary common denominator type standards applicable to all circumstances. They should be used primarily as guides to our planning efforts in each of the respective subject areas covered by the NHPG.

Full citation of the individual NHPG and resource standards with supporting documentation are presented in the sections to follow.

MAGNETIC RESONANCE IMAGING

The following Guidance is presented as developed by the Magnetic Resonance Imaging Advisory Committee of the SHCC; Approved by the SHCC, November 8, 1985; and approved by the governor, December 16, 1985.

MAGNETIC RESONANCE IMAGING (MRI)
GUIDANCE FOR ACQUISITION, INTRODUCTION AND USE IN TEXAS

PURPOSE

The guidance is intended to provide assistance to health care providers who intend to offer MRI services to patients in the state.

The guidance seeks to:

1. encourage the existence of sufficient MRI diagnostic capabilities to meet the needs of the state;

2. help to ensure that MRI services are provided in a coordinated manner within the area to be served;

3. promote study/research and education/training in the role and utilization of MRI devices; and

4. promote the education and training of health care personnel in the operation of MRI equipment.

NEED STATEMENT

Provider should demonstrate that the proposed project is necessary to benefically meet the health systems needs of the community and define the medical service area in which the service is to be provided. The need statement should include the planned utilization of the MRI devices, including the number of patients projected to be examined during the first through fifth years of operation.

AVAILABILITY/ACCESSIBILITY

MRI services should be accessible to all patients residing within the area in which the service is to be provided.

Provider should establish and document cooperative agreements/arrangements with other facilities in order to facilitate the accessibility of MRI services regardless of the patient's referral source.

Provider should demonstrate via referral agreements an acceptable method of patient transportation with the appropriate level of medical supervision between the provider's facility and the referring institution.

QUALITY/CONTINUITY/STAFFING

The importance of continuity of care and of serving the best interests of the patient cannot be overemphasized in terms of an increase in survival probabilities of patients. Accordingly, MRI facilities which are part of an integrated diagnostic treatment system offering a wide range of imaging techniques, professional expertise and treatment measures is of great import, and the following should be considered:

Provider should indicate how the proposed MRI service will improve diagnostic capabilities, lessen risk and discomfort to the patient, and enhance the outcome of the treatment process for the patient.

Provider should document that it has a referral base volume adequate to maintain a cost-effective operation.

Provider's medical staff should include or have referral access to subspecialists appropriate to the patients' needs as identified by MRI diagnosis.

Provider should offer assurances that overall responsibility for the operation of the MRI unit and the interpretation of resultant data is placed with a physician competent by training and experience in the procedure.

Provider should integrate its MRI services with a broad spectrum of other diagnostic imaging modalities and medical expertise.

Provider should demonstrate that necessary support services are available.

Provider should offer assurances that the staff assigned to operate the MRI device has had adequate and appropriate training and has the expertise to assure safe, effective and appropriate use of the device.

Provider is encouraged to offer the availability of the MRI staff for training of medical students, residents and other trainees. The MRI staff should also be available for training and continuing education programs related to practicing physicians, physicists, technologists and support staff, both internal and external to the facility.

PHYSICAL PLANT DESIGN AND SAFETY MEASURES

Provider should offer assurances that the safety of patients and staff will be ensured and that the MRI devices will conform to FDA guidelines.

Provider should develop a safety manual which will ensure the safety of the patients, staff and others. The MRI staff should be thoroughly trained in this regard, including procedures to be followed during emergency situations.

Provider should offer assurances that the MRI operational area will be of such design and construction as to conform to accepted architectural and engineering guidelines for life safety and handicap code compliance and FDA approved standards.

COST FACTORS

In addition to recognizing the role of MRI services as an improved diagnostic tool to enhance patients' treatment outcome, provider should indicate that the project will promote cost-effective treatment and potentially reduce the need for repetitive diagnostic services.

Since cost data are not generally available at this time to predict cost efficiency and effectiveness, cost factors should be calculated and appropriate records maintained to identify them. This will help to provide information to determine whether or not the acquisition of MRI services will, over time, reduce the cost of health care.

DATA COLLECTION

Provider should recognize its responsibility to serve as a source of empirical data in order to contribute to prudent planning for MRI services by providing MRI operational information to the State Health Planning and Development Agency.

OTHER CONSIDERATIONS

Provider should develop a schedule for the implementation and operation of the MRI service, including initiation date and percentage of time the equipment will be used for clinical applications and research/training applications.

Provider should document FDA approval or Investigational Review Board approval of the MRI device.

Provider should offer evidence that educational literature will be developed for potential patients and their families in order to educate them to the MRI service, and should assure that such material will be periodically updated to reflect the most current MRI imaging status.

EXHIBIT 1

MRI Special Advisory Committee Members

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Physicist

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Southwest Research Institute
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33 years experience in NMR - expertise
in biologic effect of NMR

TRAUMA CENTERS

The following graphs illustrate the impact of trauma as a health problem in Texas.

Figure 1: Texas Deaths By Cause and Age. Demonstrates the overwhelming impact of trauma as the cause of death in persons below the age of 45.

Figure 2: Death from Trauma. Illustrates motor vehicle accidents as the cause of the highest percent of deaths due to trauma in Texas.

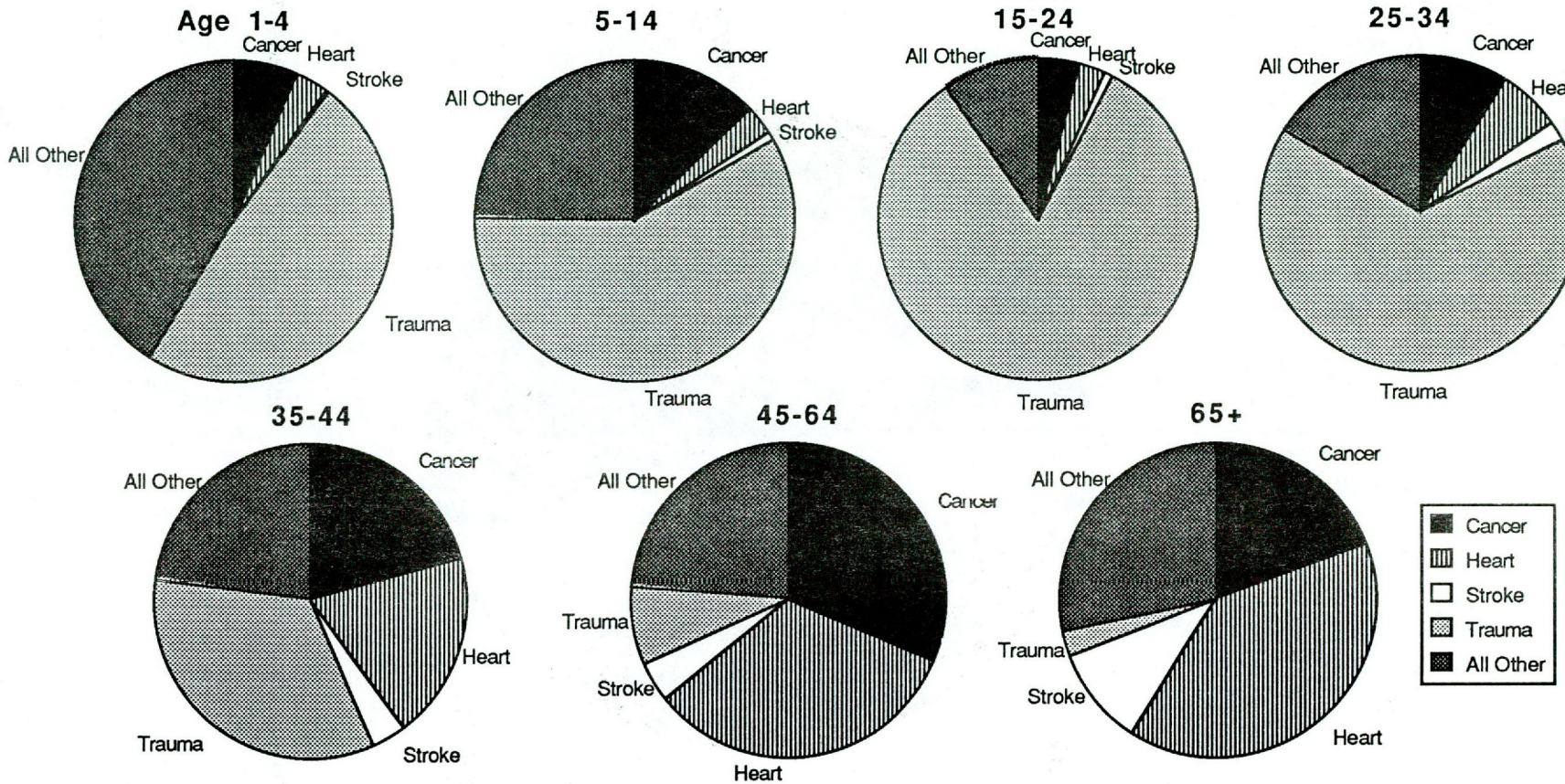
Table 1: Motor Vehicle Related Deaths, Texas. This table lists by state planning region (SPR) the number of motor vehicle deaths per 100,000 population and per 1000 motor vehicle injuries.

Figure 3: Motor Vehicle Deaths per 1,000 Injuries, Texas. Illustrates by graph the number of motor vehicle deaths (MVD) per 1000 injuries.

Figure 4: Motor Vehicle Deaths by SPR. Illustrates the number of MVD by SPR.

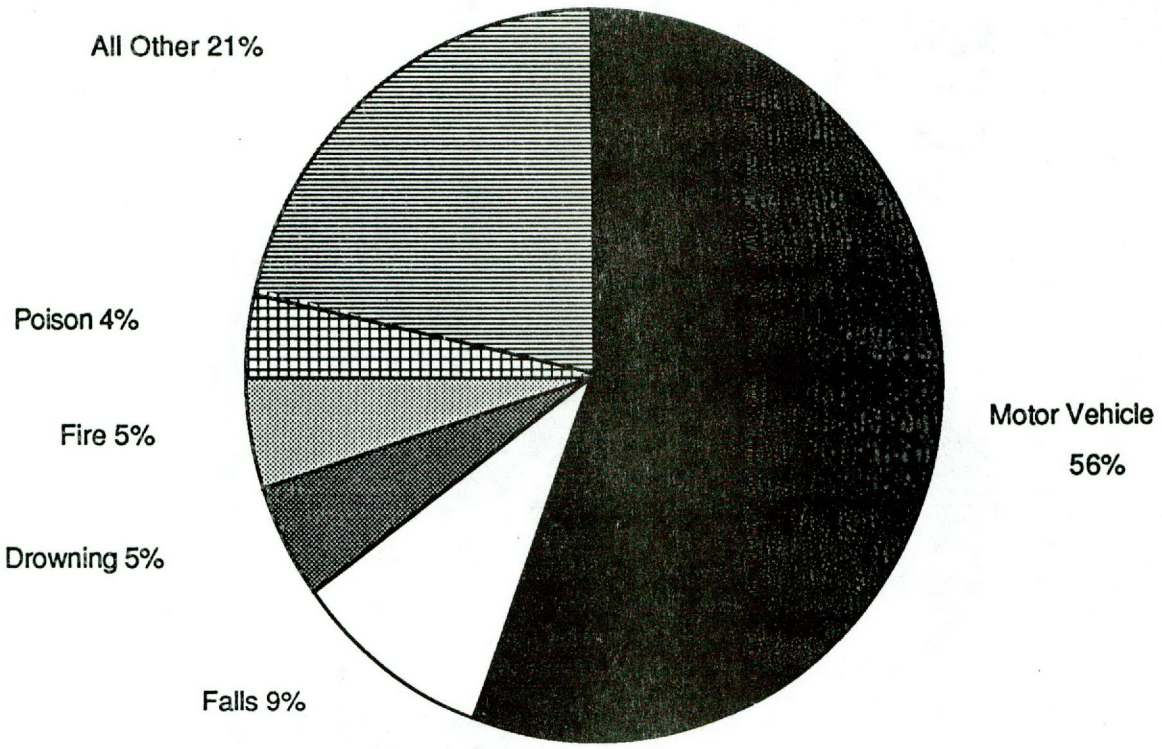
Figure 5: Motor Vehicle Deaths per 100,000 Population, Texas. Illustrates the number of MVD per 100,000 population.

Figure 1
Texas Deaths by Cause and Age



Source: Texas Department of Health, Bureau of Emergency Management, 1984.

FIGURE 2
DEATHS FROM TRAUMA



Source: Texas Department of Health, Bureau of Emergency Management, 1984.

TABLE 1

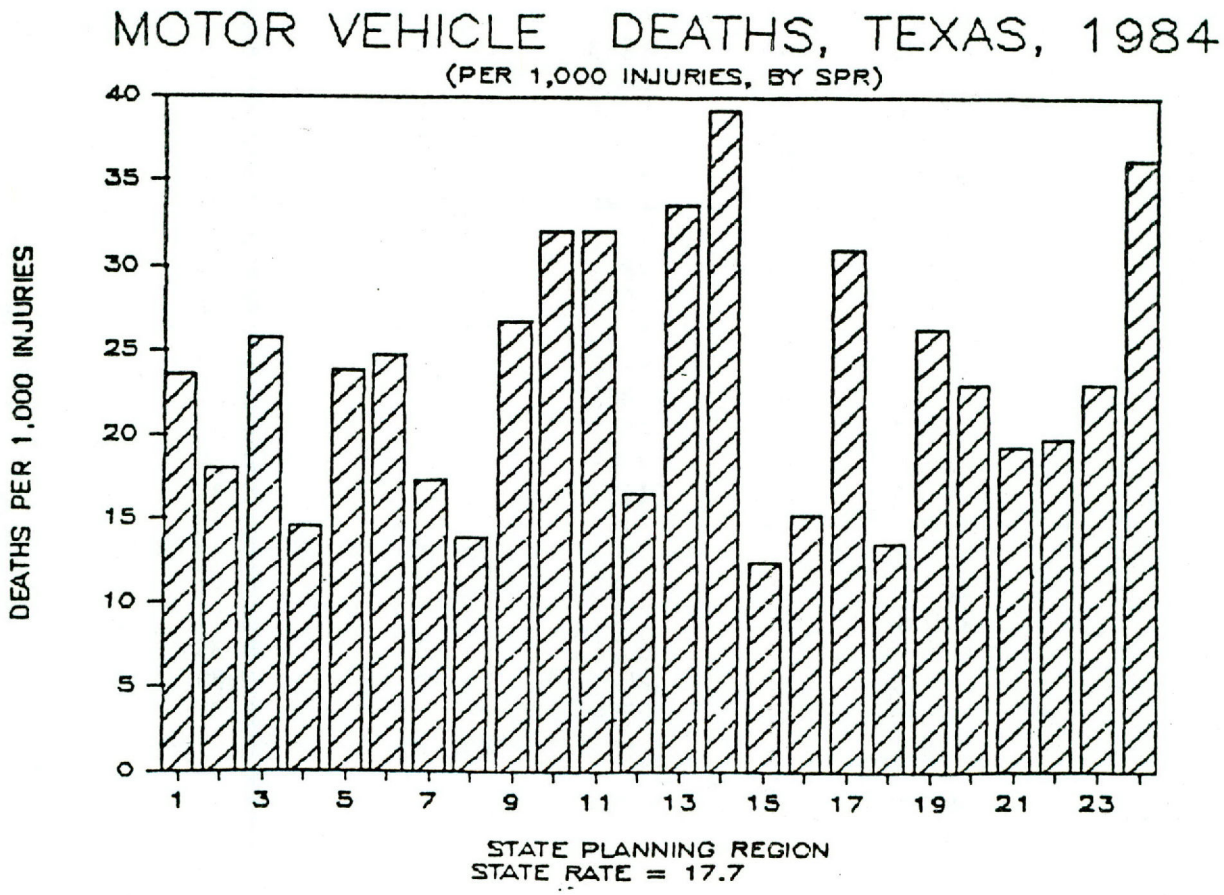
MOTOR VEHICLE RELATED DEATHS, TEXAS, 1984

BY STATE PLANNING REGION

SPR	'84 POP	MVDTHS	MVINJRS	MVDS/100,000	MVDTHS/1000INJ
1	392068	116	4926	29.59	23.55
2	374348	90	4998	24.04	18.01
3	227939	57	2219	25.01	25.69
4	3439796	800	54963	23.26	14.56
5	247077	63	2646	25.50	23.81
6	636040	206	8312	32.39	24.78
7	329062	78	4481	23.70	17.41
8	554845	111	7929	20.01	14.00
9	402058	130	4853	32.33	26.79
10	141064	58	1803	41.12	32.17
11	272999	101	3148	37.00	32.08
12	745892	263	15812	35.26	16.63
13	211230	83	2468	39.29	33.63
14	302056	112	2853	37.08	39.26
15	390576	60	4783	15.36	12.54
16	3862943	789	51424	20.42	15.34
17	173818	67	2156	38.55	31.08
18	1335539	296	21729	22.16	13.62
19	161191	36	1363	22.33	26.41
20	508180	141	6102	27.75	23.11
21	605513	117	6035	19.32	19.39
22	145971	40	2020	27.40	19.80
23	292078	64	2774	21.91	23.07
24	137404	35	963	25.47	36.34
TOTAL	15889687	3913	220760	24.63	17.73

Source: Texas Department of Health, Bureau of Emergency Management, 1984.

FIGURE 3



Source: Texas Department of Health, Bureau of Emergency Management, 1984.

FIGURE 4

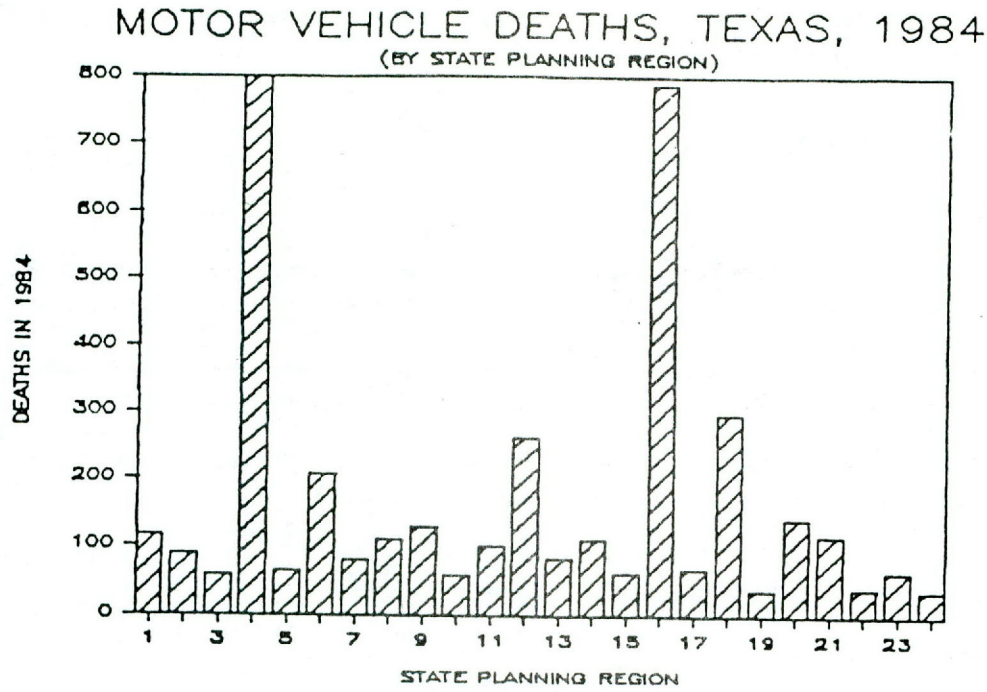
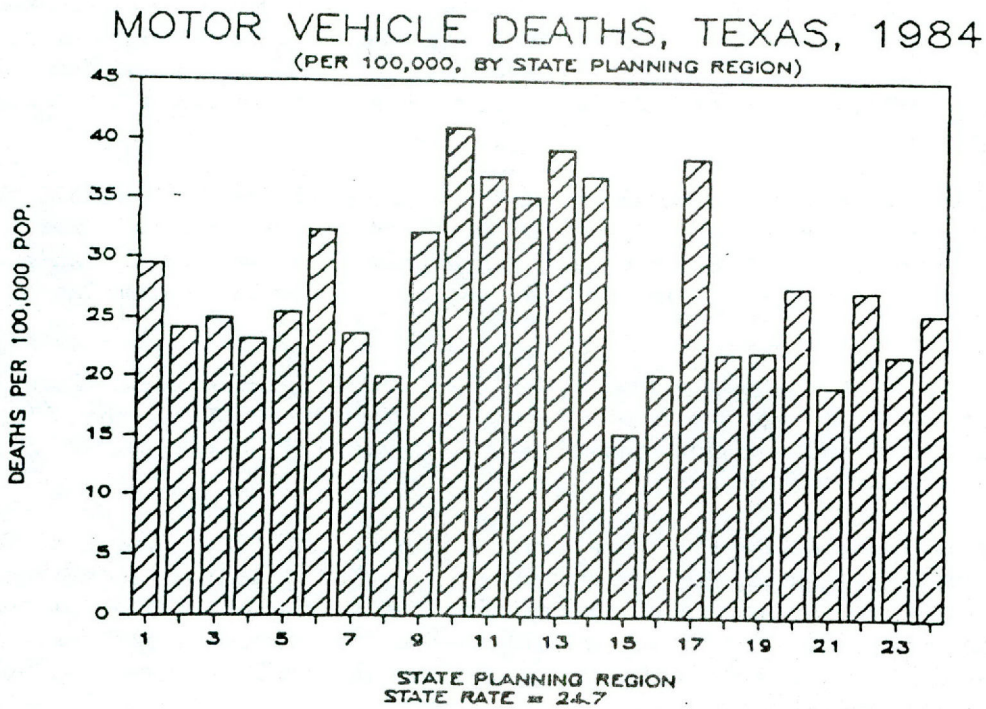


FIGURE 5



Source: Texas Department of Health, Bureau of Emergency Management, 1984.

PERINATAL SERVICES (NHPG 3 & 4)

Guidelines 3 and 4 and their resource standards are quoted from CFR 42, Part 121 as follows:

"Guideline #3 - Obstetrical Services

Standards

(1) Obstetrical services should be planned on a regional basis with linkage among all obstetrical services and with neonatal services.

(2) Hospitals providing care for complicated obstetrical problems (Levels II and III) should have at least 1,500 births annually.

(3) There should be an average annual occupancy rate of at least 75% in each unit with more than 1,500 births per year."

"Guideline #4 - Neonatal Special Care Units

Standards

(1) Neonatal services should be planned on a regional basis with linkages with obstetrical services.

(2) The total number of neonatal intensive and intermediate care beds should not exceed 4 per 1,000 live births per year in a defined neonatal service area. An adjustment upward may be justified when the rate of high-risk pregnancies is unusually high, based on analyses by the health systems agency.

(3) A single neonatal special care unit (Level II or III) should contain a minimum of 15 beds. An adjustment downward may be justified for a Level II unit when travel time to an alternate unit is a serious hardship due to geographic remoteness, based on analyses by the health systems agency."

Background The above quoted NHPG Resource Standards were discussed in summary form at the statewide level in Chapter XVIII of the SHP. The tables to follow provide additional data at the state planning region (SPR) level.

Determinations as to the level of care provided have been made by the individual hospitals, as reflected in the TDH Hospital Questionnaires. This serves as the source of information for this plan. Hospital beds are licensed in Texas without consideration of specialized use. Beds designated by the hospitals as operating obstetrical beds are used to address the obstetrical guideline standards.

The Task Force on Regionalization of Specialized Medical Services is currently considering the feasibility of a regionalized system of

perinatal care. The first step in the development of such a system is to determine levels of care for hospital units which provide services to both mothers and newborns. Formal designation of individual hospital units in terms of levels of care will enhance the overall design for regionalization and help encourage the use of the most appropriate level of care through the proper referral of patients.

However, a system for formal designation does not currently exist. Therefore, we must rely, at this time, on the previously mentioned method of self-designation. Lacking comprehensive guidelines for defining Level II and III units, individual hospitals that provide Level III services may actually vary significantly from one another when the types of services delivered are closely examined. In an effort to more accurately determine the scope of specialized perinatal service available in Texas, the task force has requested an in-depth survey of services provided at hospitals throughout the state. This is currently being conducted.

Conclusions and recommendations concerning regionalization of perinatal services will be developed by the task force and will be used for further developmental planning in this subject area.

TABLE 2
HOSPITALS WITH
LEVEL II OR LEVEL III OBSTETRICAL UNITS

SPR	LEVEL II UNITS			LEVEL III UNITS			TOTALS FOR LEVEL II AND III UNITS		
	TOTAL	1500 OR MORE BIRTHS	75% OR GREATER OCCUPANCY	TOTAL	1500 OR MORE BIRTHS	75% OR GREATER OCCUPANCY	TOTAL	1500 OR MORE BIRTHS	75% OR GREATER OCCUPANCY
1	0	0	0	1	1	0	1	1	0
2	4	1	0	1	1	1	5	2	1
3	1	1	0	0	0	0	1	1	0
4	18	3	4	7	7	5	25	10	9
5	3	1	2	0	0	0	3	1	2
6	4	2	0	0	0	0	4	2	0
7	2	1	0	0	0	0	2	1	0
8	3	1	1	2	2	2	5	3	3
9	5	2	1	1	0	0	6	2	1
10	2	0	0	1	0	0	3	0	0
11	1	1	1	0	0	0	1	1	1
12	1	0	0	3	3	1	4	3	1
13	4	1	1	0	0	0	4	1	1
14	7	0	0	0	0	0	7	0	0
15	5	1	0	0	0	0	5	1	0
16	23	7	4	5*	5*	3*	28*	12*	7*
17	3	0	0	0	0	0	3	0	0
18	11	2	1	4	3	3	15	5	4
19	0	0	0	1	1	1	1	1	1
20	3	1	1	1	1	0	4	2	1
21	3	1	1	2	1	0	5	2	1
22	2	0	0	0	0	0	2	0	0
23	3	0	0	1	1	1	4	1	1
24	3	0	0	1	0	0	4	0	0
STATE TOTAL	111	26(23%)	17(15%)	31*	26*(83%)	17*(54*)	142*	52*(36%)	34*(23%)

SOURCE: 1984 INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

* INCLUDES ONE UNLICENSED STATE-OWNED FACILITY

TABLE 3

HOSPITALS WITH
LEVEL II AND III OBSTETRICAL UNITS
WITH LESS THAN 20 BEDS

SPR	LEVEL II					LEVEL III					TOTAL LEVEL II AND III				
	NO BEDS	1-5 BEDS	6-10 BEDS	11-19 BEDS	TOTAL	NO BEDS	1-5 BEDS	6-10 BEDS	11-19 BEDS	TOTAL	NO BEDS	1-5 BEDS	6-10 BEDS	11-19 BEDS	TOTAL
2	1	1	0	1	3	0	0	0	0	0	1	1	0	1	3
4	1	0	5	8	14	0	0	0	0	0	1	0	5	8	14
5	0	0	1	1	2	0	0	0	0	0	0	0	1	1	2
6	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
7	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
8	1	0	0	1	2	0	0	0	0	0	1	0	0	1	2
9	1	1	1	0	3	0	0	0	0	0	1	1	1	0	3
10	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
12	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
13	1	1	1	0	3	0	0	0	0	0	1	1	1	0	3
14	0	2	2	2	6	0	0	0	0	0	0	2	2	2	6
15	0	0	1	1	2	0	0	0	0	0	0	0	1	1	2
16	5	0	1	3	9	0	0	0	0	0	5	0	1	3	9
17	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
18	1	3	3	1	8	0	0	0	0	0	1	3	3	1	8
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	1	2	3	0	0	0	0	0	0	0	1	2	3
22	0	1	0	1	2	0	0	0	0	0	0	1	0	1	2
23	1	1	0	1	3	0	0	0	1	1	1	1	0	2	4
24	0	2	0	1	3	0	0	1	0	1	0	2	1	1	4
STATE TOTAL	13	13	19	25	70	0	0	1	1	2	13	13	20	26	72

SOURCE: 1984 INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

TABLE 4

OBSTETRICAL UNITS AND UTILIZATION DATA

SPR	NO. REPORTING DELIVERIES	NO. WITHOUT OB BEDS	NO. WITH 1 - 5 OB BEDS	TOTAL NO. OB BEDS REPORTED	TOTAL OB ADMISSIONS	TOTAL DELIVERIES	DELIVERIES IN HOSPITALS WITHOUT OB BEDS	DELIVERIES IN HOSPITALS WITH 1 - 5 OB BEDS
1	18	5	3	140	7171	6800	297	295
2	18	3	7	166	8036	7005	262	739
3	15	5	7	64	3770	3540	217	695
4	50	6	9	937	68566	62469	953	1078
5	10	1	4	77	5135	4687	38	298
6	21	3	10	173	9935	8761	140	777
7	24	9	11	72	5095	5054	791	672
8	10	2	2	184	10519	10458	406	155
9	18	5	6	130	9005	8291	478	1005
10	4	2	2	9	169	153	9	21
3	1	1	0	0	14	14	14	0
10	6	0	4	52	2758	2362	0	86
11	13	3	7	70	4995	4027	136	574
12	17	3	5	202	15068	12705	338	372
13	8	4	2	30	3601	3287	619	156
14	15	1	7	102	3500	3285	53	473
15	8	1	1	155	6430	5236	139	16
16	59*	12*	9	1219*	76587*	72755*	3131	1121
17	11	2	4	81	3304	3100	105	446
18	21	4	4	384	26694	22914	284	546
19	3	0	1	38	4162	3403	0	564
20	11	2	1	166	8415	9400	493	240
21	11	1	0	146	11002	9882	67	0
22	5	0	2	41	2447	2224	0	284
23	10	4	2	61	3987	3524	243	126
24	4	0	2	34	2178	1842	0	529
STATE TOTAL	391*	79*(20%)	112(28%)	4733*	302543*	277178*	9213(3%)	11268(4%)

SOURCE: 1984 INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

* INCLUDES ONE UNLICENSED STATE-OWNED FACILITY

TABLE 5

HOSPITALS WITH
LEVEL II AND LEVEL III NEONATAL UNITS

SPR	LEVEL II UNITS		UNITS WITH LEVEL II AND LEVEL III BEDS		TOTAL UNITS LEVEL II AND/OR LEVEL III BEDS	
	NO. UNITS	15 OR MORE BEDS	NO. UNITS	15 OR MORE BEDS	NO. UNITS	15 OR MORE BEDS
1	1	0	1	0	2	0
2	1	0	0	0	1	0
3	1	0	0	0	1	0
4	21	2	10	4	31	6
5	3	0	0	0	3	0
6	2	1	1	0	3	1
7	2	0	1	0	3	0
8	3	1	3	0	6	1
9	4	0	1	0	5	0
10	2	0	0	0	2	0
11	1	0	0	0	1	0
12	3	0	3	2	6	2
13	3	0	0	0	3	0
14	5	0	0	0	5	0
15	4	1	0	0	4	1
16	23	6	6*	2*	29*	8*
17	2	0	1	0	3	0
18	8	1	3	1	11	2
19	1	0	1	0	2	0
20	3	1	1	0	4	1
21	4	0	2	0	6	0
22	2	0	0	0	2	0
23	4	1	1	1	5	2
24	1	0	0	0	1	0
STATE TOTAL	104	14(13%)	35**	10(29%)	139	24(17%)

* INCLUDES ONE UNLICENSED STATE-OWNED HOSPITAL
** 32 (91%) OF THE TOTAL 35 UNITS INCLUDE LEVEL II UNITS

SOURCE: 1984 INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

PEDIATRIC SERVICES (NHPG 5 & 6)

Guidelines 5 and 6 and their resource standards are quoted from CFR 42, Paragraph 121 as follows:

"Guideline #5, Pediatric Inpatient Services - Number of Beds

Standard

> There should be a minimum of 20 beds in a pediatric unit in urbanized areas. An adjustment may be justified when travel time to an alternate unit exceeds 30 minutes for 10% or more of the population, based on analysis by the health systems agency."

"Guideline #6, Pediatric Inpatient Services - Occupancy Rates

Standard

> Pediatric units should maintain average annual occupancy rates related to the number of pediatric beds (exclusive of neonatal special care units) in the facility. For a facility with 20-39 pediatric beds, the average annual occupancy rate should be at least 65%; for a facility with 40-79 pediatric beds, the rate should be at least 70%; for facilities with 80 or more pediatric beds, the rates should be at least 75%."

The above quoted NHPG Resource Standards were mentioned in summary form at the statewide level in Chapter XVIII of the SHP. The tables to follow provide additional data at the state planning region (SPR) levels. The information in these tables will allow preliminary evaluation regarding the availability of pediatric inpatient services in specific areas throughout the state.

Further evaluation of this subject area will be made by the Task Force on Regionalization of Specialized Medical Services.

TABLE 6

HOSPITALS WITH PEDIATRIC UNITS IN URBANIZED AREAS
BY SIZE AND OCCUPANCY GROUPINGS

SPR	URBANIZED AREA	# HOSP.WITH UNITS OF 20 OR MORE BEDS	#HOSPITALS MEETING OCCUPANCY STANDARDS	HOSPITAL PEDIATRIC UNITS BY SIZE AND MEETING OCCUPANCY STANDARDS					
				20-39 BED UNITS		40-79 BED UNITS		80+ BED UNITS	
				TOTAL FACS	WITH 65% OCC	TOTAL FACS	WITH 70% OCC	TOTAL FACS	WITH 75% OCC
1	AMARILLO	1	1	1	1	0	0	0	0
2	LUBBOCK	2	1	2	1	0	0	0	0
3	WICHITA FALLS	0							
4	DALLAS - FORT WORTH	7	1	2	1	4	0	1	0
5	TEXARKANA	1	0	1	0	0	0	0	0
6	LONGVIEW	0							
6	TYLER	1	0	1	0	0	0	0	0
7	ABILENE	1	0	1	0	0	0	0	0
8	EL PASO	4	1	3	1	1	0	0	0
9	ODESSA	2	0	2	0	0	0	0	0
9	MIDLAND	0							
10	SAN ANGELO	1	0	1	0	0	0	0	0
11	WACO	1	0	1	0	0	0	0	0
12	AUSTIN	1	1	1	1	0	0	0	0
13	BRYAN - COLLEGE STATION	0							
15	BEAUMONT	1	1	1	1	0	0	0	0
15	PORT ARTHUR	0							
16	TEXAS CITY - LA MARQUE	1	0	1	0	0	0	0	0
16	GALVESTON	1*	1*	0	0	0	0	1*	1*
16	HOUSTON	11*	2*	7*	2*	3	0	1	0
17	VICTORIA	1	1	1	1	0	0	0	0
18	SAN ANTONIO	7	0	3	0	3	0	1	0
19	LAREDO	1	1	1	1	0	0	0	0
20	CORPUS CHRISTI	3	0	2	0	0	0	1	0
21	BROWNSVILLE	2	0	2	0	0	0	0	0
21	HARLINGEN - SAN BENITO	0							
21	MCALLEN - PHARR - EDINBURG	1	0	1	0	0	0	0	0
22	SHERMAN - DENISON	0							
23	KILLEEN	0							
23	TEMPLE	1	0	1	0	0	0	0	0
STATE TOTAL	30 URBANIZED AREAS	52*	11*	36*	10*	11	0	5*	1*
	PERCENT MEETING STANDARDS:		21%		28%		0%		20%

* INCLUDES UNLICENSED PEDIATRIC BEDS IN STATE-OWNED HOSPITALS

SOURCES: 1. URBANIZED AREA DATA FROM 'GENERAL POPULATION CHARACTERISTICS, U.S. DEPT. OF COMMERCE, BUREAU OF CENSUS
2. FACILITIES DATA FROM 1984 INTEGRATED FACILITIES FILE, TDH

TABLE 7
HOSPITALS WITH AND WITHOUT PEDIATRIC BEDS
1984

SPR	# HOSP.WITHOUT PED. BEDS BUT REPT. PED. UTIL.		# HOSPITALS WITH PEDIATRIC BEDS		# HOSPITALS WITH 1 - 19 PEDIATRIC BEDS		# HOSPITALS WITH 20 - 39 PEDIATRIC BEDS		# HOSPITALS WITH 40 - 79 PEDIATRIC BEDS		# HOSPITALS WITH 80+ PEDIATRIC BEDS	
	METRO	NON-METRO	METRO	NON-METRO	METRO	NON-METRO	METRO	NON-METRO	METRO	NON-METRO	METRO	NON-METRO
1	1	8	3	2	2	1	1	1	0	0	0	0
2	3	7	2	2	0	2	2	0	0	0	0	0
3	1	6	2	2	2	2	0	0	0	0	0	0
4	18	5	29	2	20	2	4	0	4	0	1	0
5	0	6	1	2	0	2	1	0	0	0	0	0
6	2	11	5	1	4	1	1	0	0	0	0	0
7	1	19	1	0	0	0	1	0	0	0	0	0
8	1	1	5	0	2	0	2	0	1	0	0	0
9	0	5	3	5	1	5	2	0	0	0	0	0
10	0	5	1	1	0	1	1	0	0	0	0	0
11	1	7	1	2	0	2	1	0	0	0	0	0
12	4	3	3	2	2	2	1	0	0	0	0	0
13	0	5	2	1	2	1	0	0	0	0	0	0
14	0	8	0	4	0	4	0	0	0	0	0	0
15	2	0	6	0	5	0	1	0	0	0	0	0
16	17	11	28	1	10	1	13	0	3	0	2*	0
17	0	7	2	2	1	2	1	0	0	0	0	0
18	2	2	10	3	5*	3	2	0	2	0	1	0
19	0	0	2	1	1	1	1	0	0	0	0	0
20	3	2	4	2	1	1	2	1	0	0	1	0
21	1	1	9	0	6*	0	3	0	0	0	0	0
22	0	1	2	2	2	2	0	0	0	0	0	0
23	1	3	2	1	1	1	1	0	0	0	0	0
24	0	1	0	2	0	2	0	0	0	0	0	0
STATE TOTAL	58	124	123	40	67*	38	41	2	10	0	5*	0
	182 (52%)		163 (47%)		105		43		10		5	

SOURCE: 1984 INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

* INCLUDES UNLICENSED STATE-OWNED FACILITIES

TABLE 8
PEDIATRIC BED UTILIZATION DATA

SPR	HOSPITALS WITHOUT PED.BEDS REPORTING PED. UTILIZATION			HOSPITALS WITH PEDIATRIC BEDS REPORTING PEDIATRIC UTILIZATION															
				1 - 19 BEDS				20 - 39 BEDS				40 - 79 BEDS				80 + BEDS			
	HOSP	ADM	DAYS	HOSP	BEDS	ADM	DAYS	HOSP	BEDS	ADM	DAYS	HOSP	BEDS	ADM	DAYS	HOSP	BEDS	ADM	DAYS
1	9	1038	3195	3	23	319	6641	2	60	2358	9368	0	0	0	0	0	0	0	0
2	10	944	2887	2	4	92	326	2	64	3629	14096	0	0	0	0	0	0	0	0
3	7	397	1244	4	43	1638	5458	0	0	0	0	0	0	0	0	0	0	0	0
4	23	3372	10378	22	217	8544	35163	4	94	4218	17001	4	222	10015	49388	1	117	6217	30544
5	6	1430	4065	2	10	690	2520	1	26	1688	6031	0	0	0	0	0	0	0	0
6	13	1823	5720	5	40	1651	5024	1	24	1408	4487	0	0	0	0	0	0	0	0
7	20	1664	4955	0	0	0	0	1	31	1813	5984	0	0	0	0	0	0	0	0
8	2	366	1159	2	22	1133	3946	2	57	1692	15407	1	40	2791	10325	0	0	0	0
9	5	790	1885	6	34	1776	6477	2	70	2202	7331	0	0	0	0	0	0	0	0
10	5	205	278	1	2	37	90	1	21	1197	3926	0	0	0	0	0	0	0	0
11	8	486	1567	2	10	251	808	1	31	2164	7332	0	0	0	0	0	0	0	0
12	7	525	1834	4	9	464	1308	1	27	1508	7677	0	0	0	0	0	0	0	0
13	5	514	1471	3	10	778	3134	0	0	0	0	0	0	0	0	0	0	0	0
14	8	1225	3946	4	31	954	3056	0	0	0	0	0	0	0	0	0	0	0	0
15	2	258	907	5	69	2529	10512	1	31	2462	8336	0	0	0	0	0	0	0	0
16	28	4372	17452	11	108	5725	20596	13*	384	10562	54533	3	159	6220	44774	2*	355	16224	84914
17	7	561	1759	3	17	1208	5244	1	24	1450	5778	0	0	0	0	0	0	0	0
18	4	389	1336	8*	59	1210	10523	2	65	2903	12381	2	100	3946	17065	1	160	6239	36039
19	0	0	0	2	12	663	1720	1	32	1994	7786	0	0	0	0	0	0	0	0
20	5	551	1710	2	19	656	2555	3	85	1503	15753	0	0	0	0	1	85	4329	19608
21	2	1337	5712	6*	57	1432	5747	3	78	3054	12973	0	0	0	0	0	0	0	0
22	1	83	257	4	17	1166	3048	0	0	0	0	0	0	0	0	0	0	0	0
23	4	236	592	2	8	451	1292	1	21	1176	4929	0	0	0	0	0	0	0	0
24	1	4	0	2	16	848	2921	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	182	22570	74309	105*	837	34215	138109	43*	1225	48981	221109	10	521	22972	121552	5*	717	33009	171105

* INCLUDES UNLICENSED STATE-OWNED FACILITIES

SOURCE: 1984 INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

OPEN HEART SURGERY AND DIAGNOSTIC CARDIAC CATHETERIZATION (NHPG 7 & 8)

Guidelines 7 & 8 and their resource standards are quoted from CFR 42, Part 121 as follows:

"Guideline #7 - Open Heart Surgery Standard - NHPG 7

Standards

(1) There should be a minimum of 200 open heart procedures performed annually, within three years after initiation, in any institution in which open heart surgery is performed for adults.

(2) There should be a minimum of 100 pediatric heart operations annually, within three years after initiation, in any institution in which pediatric open heart surgery is performed, of which at least 75 should be open heart surgery.

(3) There should be no additional open heart units initiated unless each existing unit in the health service area(s) is operating and is expected to continue to operate at a minimum of 350 open heart surgery cases per year in adult services or 130 pediatric open heart cases in pediatric services."

"Guideline #8 - Cardiac Catheterization

Standards

(1) There should be a minimum of 300 cardiac catheterizations, of which at least 200 should be intracardiac or coronary artery catheterizations, performed annually in any adult cardiac catheterization unit within three years after initiation.

(2) There should be a minimum of 150 pediatric cardiac catheterizations performed annually in any unit performing pediatric cardiac catheterizations within three years after initiation.

(3) There should be no new cardiac catheterization unit opened in any facility not performing open heart surgery.

(4) There should be no additional adult cardiac atheterization unit opened unless the number of studies per year in each existing unit in the health service area(s) is greater than 500 and no additional pediatric unit opened unless the number of studies per year in each existing unit is greater than 250."[1]

Background

Open heart surgery for heart and coronary artery disease and diagnostic cardiac catheterization represent a marked advance in patient care. These procedures require very costly, highly specialized manpower and facility resources. Therefore, every effort needs to be made to limit duplication of area services, while maintaining accessible, quality care. Minimum case loads are essential to maintain and strengthen required technical skills.

The National Health Planning Guidelines standards are based on recommendations of the Inter-Society Commission on Heart Disease Resources. In units that offer services for children, lower targets are indicated because of the special needs involved with the pediatric patient. The indicated levels for pediatric procedures are consistent with the recommendation of the Pediatric Cardiology Section of the American Academy of Pediatrics (November 1975).

In some areas, open heart surgical teams are operating at more than one institution. For these hospitals, the guidelines may be applied to the combined number of open heart procedures performed by the team if it is justifiable in light of the requirements of Section 121.6(B) of the NHPG. In such cases, a minimum of 75 open heart procedures per facility are recommended in order to maintain quality care. This is consistent with the recommendations of the American College of Surgeons (March 1973).

Frequently, a patient undergoing diagnostic cardiac catheterization is later recommended for open heart surgery. Although institutional referral patterns exist in some areas, diagnostic cardiac catheterization services need to be located within a facility in which open heart surgery is performed.

Current Status - Open Heart Surgery

Cardiac surgery may be "open heart" or "closed heart" procedures. The term open heart surgery refers to procedures in which a mechanical pump temporarily performs the functions of the patient's heart, allowing the surgeon to repair a lesion within the heart or the coronary arteries. Operations that do not require the use of a mechanical pump are designated as closed heart procedures.[2]

Few medical specialties have shown the phenomenal progress that cardiovascular surgery has made during the past several decades. The heart lung bypass machine was first used in the 1950s for open heart surgery that dealt with congenital defects or valve repairs. In the late 1960's a new procedure, aorto-coronary bypass surgery, was perfected and still accounts for the majority of current open heart surgery.[3] In the 1970s, the development of an alternative procedure, percutaneous transluminal angioplasty (PTA), allowed for the restoration of blood flow to major coronary arteries without the need for conventional open heart surgery. PTA is not meant to replace surgery in every instance. It should be recognized as an alternative to surgery in selected cases.[4]

Of the twenty-four State Planning Regions (SPR) in Texas, seven or twenty-nine percent of the regions had no adult open heart services; seventeen or seventy-one percent of the regions had no pediatric open heart services in 1984. However, only twenty-six or fifty-two percent of the facilities offering adult open heart surgery services and three or nineteem percent of the facilities offering pediatric open heart surgery services met the NHPG standards. (see Tables 9 and 10 and Figures 6 and 7.)

If an assumption of the presence of a regional surgical team is made, twelve or seventy-one percent of the SPRs with adult open heart facilities and three or forty-seven percent of the SPRs with pediatric open heart facilities met the NHPG standards. Table 11 is a summary of utilization rates by SPR, including a state mean.

Current Status - Diagnostic Cardiac Catheterization

Specialized cardiac care services include diagnostic cardiac catheterization. Diagnostic cardiac catheterization is a set of special diagnostic procedures used to examine the heart and the blood vessels which supply the heart. Two categories of procedures are usually included under "diagnostic cardiac catheterization." Coronary arteriography is the passage of a thin tube through major blood vessels into the coronary arteries, followed by injection of an x-ray opaque fluid that allows visualization of the coronary arteries with special x-ray equipment to determine if and where the vessels are obstructed. Left or right heart cardiac catheterization is the passage of a thin tube into one of the heart chambers to perform physiologic measurements of heart function. Both procedures are considered to be invasive and have associated risks.[5]

The technique of diagnostic cardiac catheterization permits direct measurement of intracardiac pressures, valve function, structure, flow-patterns and vascular anatomy. Prior to cardiac surgery, definitive information is needed, and usually diagnostic cardiac catheterization is required.[6]

Diagnostic adult cardiac catheterization services are available in twenty or eighty-three percent of the state's planning regions. However, pediatric cardiac catheterization services are available only in ten or forty-two percent of the SPRs. Of the sixty-four facilities offering adult diagnostic cardiac catheterization services in 1984, fifty-two or eighty-one percent meet the NHPG standards. Of the twenty-three facilities offering pediatric cardiac catheterization services, four or seventeen percent meet the NHPG standards. (see Tables 9 & 10 and Figures 6 and 7.)

Recommendations:

1. Continue data gathering efforts by the Texas Department of Health to determine: (1) the number of procedure rooms within each facility, (2) the location of surgical teams serving more than one facility, (3) the accessibility of services, and (4) the availability and type of procedure rooms.

2. Use the recommendations of the Task Force on Regionalization of Specialized Health Services, when developed, to guide further developmental activities in this subject area.

3. In the interim pending adoption of the task force recommendations, continue to use the existing NHPG Resource Standards as guidelines for

open heart surgery and cardiac catheterization services unless variations can be justified and documented.

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The Southwest Center for Urban Research. Open Heart Surgery Criteria and Standards: A Compilation. Houston, Texas: Texas Health Facilities Commission, September 1979.

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Report of the Regional Cardiac Care Committee. San Francisco, California: Bay Area Comprehensive Health Planning Council, June 1976.

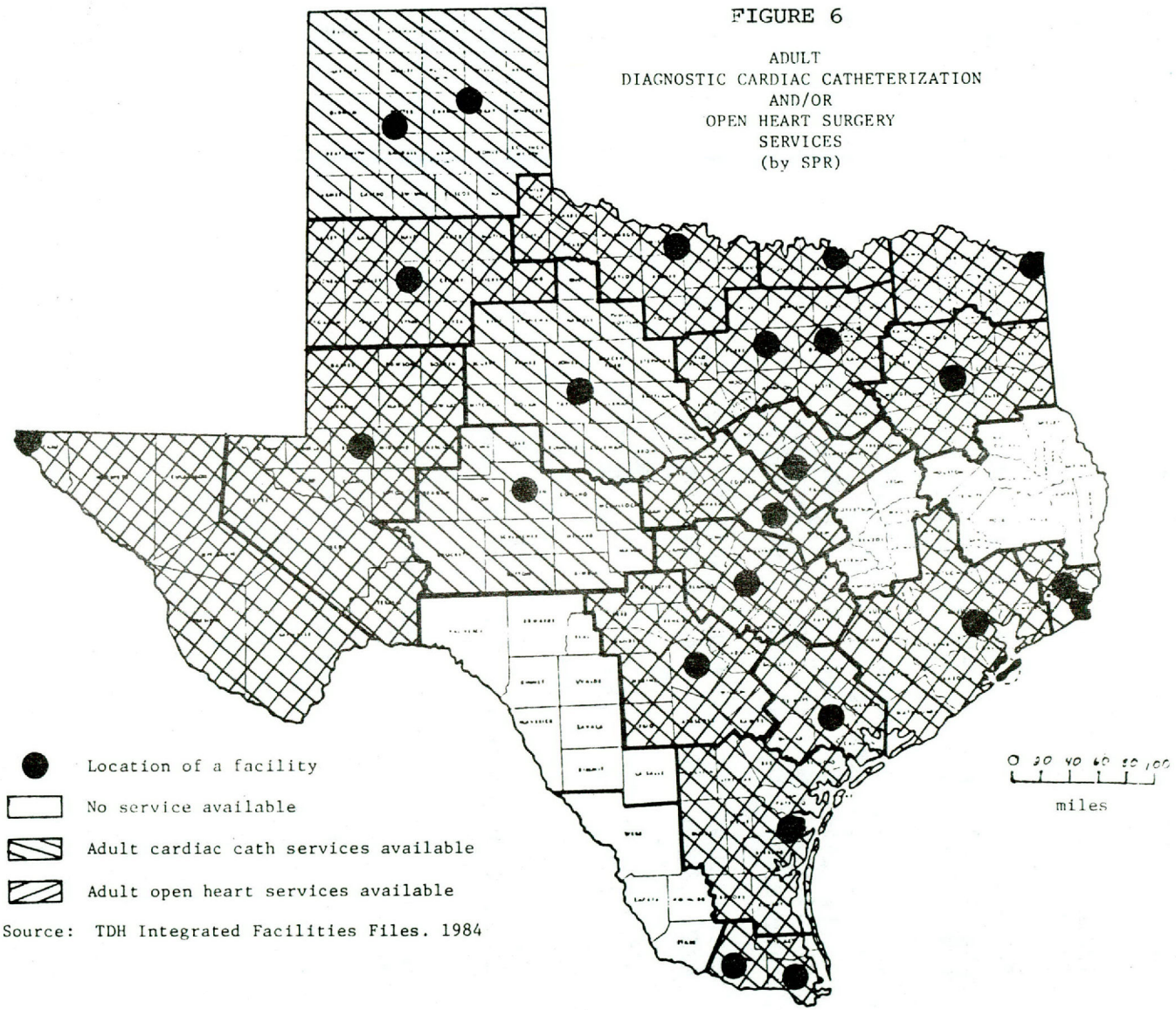
The Southwest Center for Urban Research. Cardiac Catheterization Criteria and Standards: A Compilation. Houston, Texas: Texas Health Facilities Commission, September 1979.

Appendix A to the Texas State Health Plan 1985. Austin, Texas: Texas Department of Health, 1985.

The Texas State Health Plan 1985. Austin, Texas; Texas Department of Health, 1985.

FIGURE 6

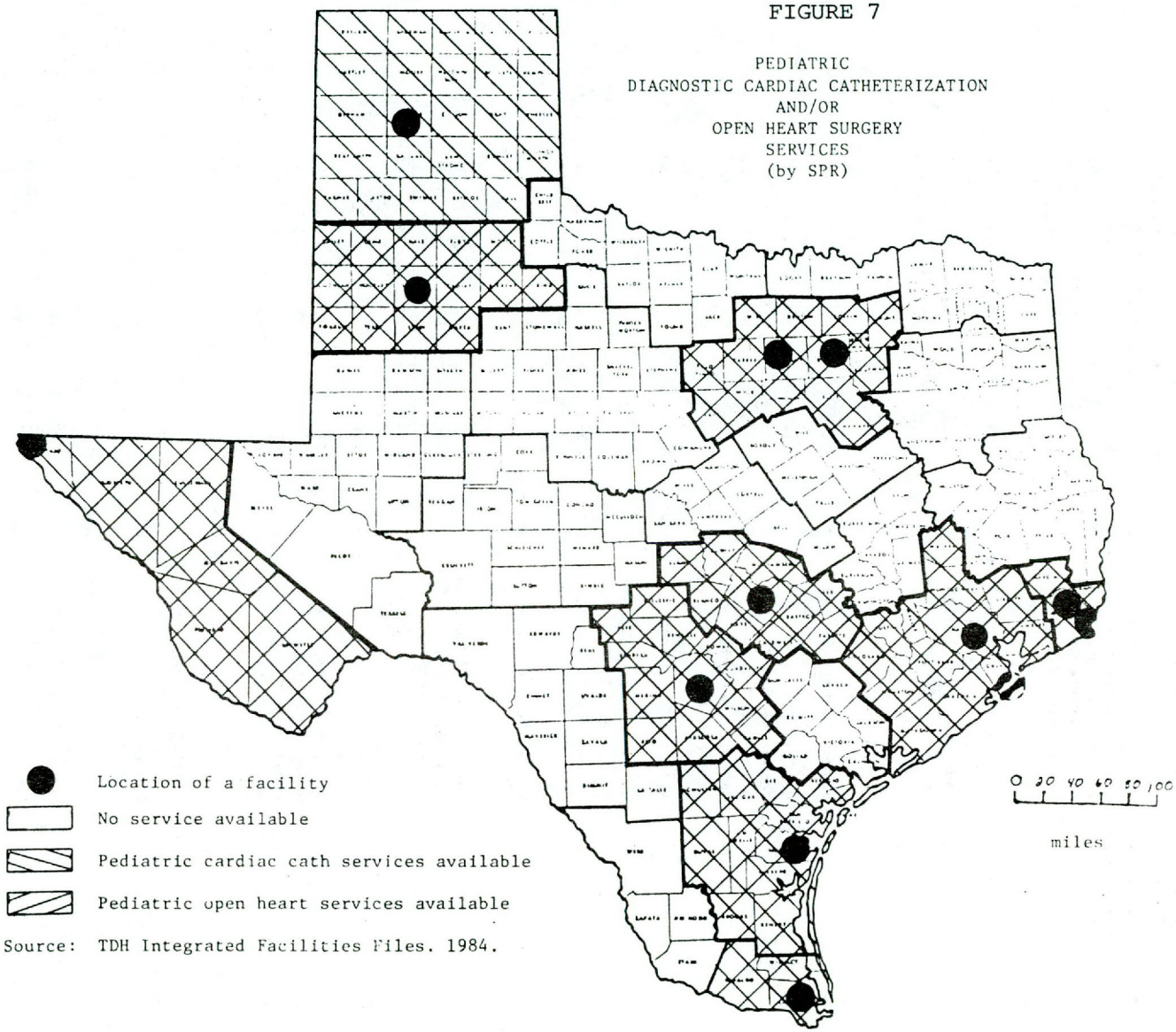
ADULT
DIAGNOSTIC CARDIAC CATHETERIZATION
AND/OR
OPEN HEART SURGERY
SERVICES
(by SPR)



Source: TDH Integrated Facilities Files. 1984

FIGURE 7

PEDIATRIC
DIAGNOSTIC CARDIAC CATHETERIZATION
AND/OR
OPEN HEART SURGERY
SERVICES
(by SPR)



Source: TDH Integrated Facilities Files, 1984.

TABLE 9

ADULT DIAGNOSTIC CARDIAC CATHETERIZATION AND OPEN HEART FACILITIES AND UTILIZATION 1983-1984

STATE PLANNING REGION	FACILITY	TOTAL PROCEDURES			
		CARDIAC CATH.		OPEN HEART	
		1983	1984	1983	1984
1	High Plains Baptist Hospital	249	390	110	147
	St. Anthony's Hospital	863	839	---	316
	Heart Institute of Care*	315	266	NA	NA
	total	1427	1495	110	463
2	Lubbock General Hospital	456	239	44	42
	Methodist Hospital	4597	2523	372	426
	South Park Hospital**	152	61	NA	NA
	St. Mary of the Plains Hospital	1292	1433	223	257
	total	6497	4256	639	725
3	Bethania Hospital @	742	425	148	142
4	Baylor University Medical Center	3522	1800	995	582
	Robert H. Dedman Medical Center	229	353	NA	NA
	Medical City	1437	1413	541	437
	Methodist Medical Center	689	741	231	180
	Midway Park General Hospital	240	167	NA	NA
	Parkland Memorial Hospital @	776	315	109	108
	Presbyterian of Dallas	880	902	441	370
	St. Paul Hospital	1458	1111	527	384
	All Saints Episcopal Hospital	442	---	NA	NA
	Arlington Memorial Hospital @	425	370	147	178
	Dallas/Ft. Worth Medical Center **	62	58	NA	NA
	Harris Hospital	490	1240	491	408
	Medical Plaza Hospital @	1404	1047	4	NA
	total	12934	9517	3486	2647
5	Wadley Regional Medical Center @	382	244	NA	136
6	Mother Frances Hospital @	NA	653	NA	155
	U.T. Health Science Center Hospital** @	164	217	NA	60
	total	164	870	NA	215
7	Humana Hospital	250	307	NA	NA
8	Vista Hills Hospital @	289	321	43	68
	Hotel Dieu Hospital @	405	96	75	50
	Providence Memorial Hospital @	674	---	110	---
	Sierra Memorial Hospital @	640	450	213	214
	Sun Towers Hospital	374	388	223	93
	total	2382	1255	664	425
9	Medical Center Hospital @	1510	827	125	195
10	No service	NA	NA	NA	NA
11	Providence Hospital @	815	937	167	149
12	Brackenridge Hospital @	1629	1612	151	198
	Seton Medical Center	729	804	280	252
	total	2358	2416	431	450
13	No service	NA	NA	NA	NA
14	No service	NA	NA	NA	NA
15	St. Elizabeth Hospital	1163	1198	306	278
	St. Mary of Port Arthur @	458	696	44	51
	The Baptist Hosp. of So. East Texas @	360	368	62	45
	total	1981	2262	412	374

TABLE 9- Page 2
ADULT DIAGNOSTIC CARDIAC CATHETERIZATION
1983-1984

STATE PLANNING REGION	FACILITY	TOTAL PROCEDURES CARDIAC CATH 1983	CARDIAC CATH 1984	OPEN HEART 1983	OPEN HEART 1984
16	Mainland Center Hospital	306	920	NA	NA
	U.T. Medical Branch	982	581	230	219
	Ben Taub General Hospital	276	1038	45	38
	Diagnostic Center Hospital	327	331	NA	NA
	Humana Hospital	436	670	68	289
	Medical Center Del Oro Hosp. @	462	319	55	33
	Memorial City General Hosp. @	503	419	NA	53
	Memorial Hospital Southwest	792	962	333	264
	Park Plaza Hospital @	778	215	76	NA
	Pasadena Bayshore	270	319	NA	NA
	Spring Branch Memorial	845	912	299	287
	St. Joseph Hospital	838	736	299	191
	St. Luke Episcopal Hospital	6567	7556	4202	3147
	The Methodist Hospital	13232	11798	1806	1568
	total	26614	26776	7343	6089
17	Citizens Memorial Hospital** @	256	244	32	27
18	Baptist Medical Center	738	729	203	235
	Medical Center Hospital	576	348	75	110
	Nix Memorial Hospital **	136	NA	NA	NA
	Humana Hospital San Antonio	2594	1009	348	232
	Santa Rosa Medical Center	828	931	280	238
	Southwest Texas Meth. Hosp.	1456	1224	296	284
	St. Luke Lutheran Hospital**	110	72	NA	NA
	total	6438	4313	1202	1190
19	No service	NA	NA	NA	NA
20	Memorial Medical Center @	415	444	94	110
	Spohn Hospital	1418	1143	288	301
	total	1833	1587	322	411
21	Valley Baptist Medical Center	980	4438	195	221
	McAllen Methodist Hospital** @	37	262	11	96
	State Totals	1017	4700	206	317
22	Texona Medical Center	354	350	NA	NA
23	Scott & White Memorial Hospital@	1744	2186	132	128
24	No service	NA	NA	NA	NA
	State Totals	69,442	64,967	15,419	14,056

Legend:

* freestanding facility
** NHPG not met at least one year for cardiac catheterization
@ NHPG not met at least one year for open heart
NA service not available

Source: TDH Integrated Facilities Files. 1983, 1984.

TABLE 10

PEDIATRIC DIAGNOSTIC CARDIAC CATHETERIZATION AND OPEN HEART FACILITIES AND UTILIZATION
1983-1984

STATE PLANNING REGION	FACILITY	TOTAL PROCEDURES CARDIAC CATH. 1983	CARDIAC CATH. 1984	OPEN HEART 1983	OPEN HEART 1984
1	High Plains Baptist Hospital**@	---	56	---	---
	St. Anthony's Hospital**	---	18	NA	NA
	total	---	74	---	---
2	Lubbock General Hospital**@	76	95	27	28
	Methodist Hospital**@	---	---	4	0
	total	76	95	31	28
3	No service	NA	NA	NA	NA
4	Baylor University Medical Center**@	5	5	58	18
	Children's Medical Center	359	394	295	151
	Harris Hospital	196	229	61	158
	total	560	628	414	327
5	No service	NA	NA	NA	NA
6	No service	NA	NA	NA	NA
7	No service	NA	NA	NA	NA
8	Sierra Medical Center**	3	5	NA	NA
	Sun Tower Hospital**@	---	---	---	0
	total	3	5	---	0
9	No service	NA	NA	NA	NA
10	No service	NA	NA	NA	NA
11	No service	NA	NA	NA	NA
12	No service	NA	NA	NA	NA
13	No service	NA	NA	NA	NA
14	No service	NA	NA	NA	NA

PEDIATRIC DIAGNOSTIC CARDIAC CATHETERIZATION AND OPEN HEART FACILITIES AND UTILIZATION
1983-1984

STATE PLANNING REGION	FACILITY	TOTAL PROCEDURES: CARDIAC CATH. 1983	CARDIAC CATH. 1984	OPEN HEART 1983	OPEN HEART 1984
15	St. Elizabeth Hospital**@	13	8	8	12
	St. Mary of Port Arthur**	---	1	NA	NA
	total	13	9	8	12
16	University of Texas Medical Branch@	120	71	41	35
	Ben Taub General Hospital**@	---	---	54	4
	Texas Children's Hospital	907	799	620	201
	Humana Hospital**@	---	---	49	---
	St. Joseph Hospital**@	---	---	10	11
	Spring Branch Hospital**	---	---	NA	NA
	The Methodist Hospital**@	---	---	---	---
	total	1027	870	775	251
17	No service	NA	NA	NA	NA
18	Medical Center**	97	49	82	41
	Santa Rosa Medical Center**	114	134	109	79
	Southwest Texas Methodist Hospital**	0	37	NA	NA
	total	211	220	191	120
19	No service	NA	NA	NA	NA
20	Edna Driscall Children's Hospital	317	319	190	63
21	Valley Baptist Hospital**@	9	16	0	1
22	No service	NA	NA	NA	NA
23	No service	NA	NA	NA	NA
24	No service	NA	NA	NA	NA
	State Totals	2,216	2,236	1,609	802

Legend:

** NHPG not met at least one year for cardiac catheterization
@ NHPG not met at least one year for open heart
NA service not available

Source: TDH Integrated Facilities Files. 1983,1984.

TABLE 11

DIAGNOSTIC CARDIAC CATHETERIZATION AND OPEN HEART SURGERY UTILIZATION
Rates in Procedures per
100,000 Population
1983-1984

STATE PLANNING REGION	ADULT				PEDIATRIC			
	CARDIAC CATH.		OPEN HEART		CARDIAC CATH.		OPEN HEART	
	1983	1984	1983	1984	1983	1984	1983	1984
1	371	388	29	119	NA	19	NA	NA
2	1730	1121	170	191	20	25	9	7
3	331	189	66	63	250	279	185	145
4	388	279	111	85	NA	NA	NA	NA
5	154	96	NA	54	NA	NA	NA	NA
6	26	131	NA	34	NA	NA	NA	NA
7	78	95	NA	NA	NA	NA	NA	NA
8	439	225	122	76	1	1	NA	NA
9	418	225	35	53	NA	NA	NA	NA
10	NA	NA	NA	NA	NA	NA	NA	NA
11	298	337	61	54	NA	NA	NA	NA
12	333	327	61	104	NA	NA	NA	NA
13	NA	NA	NA	NA	NA	NA	NA	NA
14	NA	NA	NA	NA	NA	NA	NA	NA
15	255	584	107	96	3	2	2	3
16	1053	710	202	161	28	23	NA	7
17	152	142	19	16	NA	NA	NA	NA
18	496	326	93	90	16	17	15	9
19	NA	NA	NA	NA	NA	NA	NA	NA
20	369	315	65	82	64	63	38	13
21	176	779	36	53	2	3	NA	NA
22	243	238	NA	NA	NA	NA	NA	NA
23	606	740	46	43	NA	NA	NA	NA
24	NA	NA	NA	NA	NA	NA	NA	NA
State Mean	417	372	82	81	48	48	50	31

NA data/services not available

Source: TDH Integrated Facilities File, 1983, 1984.

RADIATION THERAPY (NHPG 9)

Guideline 9 and its resource standards are quoted from CFR 42, Part 121 as follows:

"Guideline #9 - Radiation therapy

Standards

(1) A megavoltage radiation therapy unit should serve a population of at least 150,000 persons and treat at least 300 cancer cases annually, within three years after initiation.

(2) There should be no additional megavoltage units opened unless each existing megavoltage unit in the health service area(s) is performing at least 6,000 treatments per year.

(3) Adjustments downward may be justified when travel time to an alternate unit is a serious hardship due to geographic remoteness, based on analyses by the health systems agency."

Background

Radiation therapy is a field within medicine which employs the use of high energy radiation for the treatment of disease, primarily cancer. It may be used in combination with surgery and/or chemotherapy, depending on the characteristics of the tumor or neoplasm. Studies have shown that at least 50% of new cancer patients each year undergo radiation therapy, either alone or in combination with the other treatments.

In recent years, the development of linear accelerators has allowed radiation therapy facilities to provide a broad range of therapeutic energies. High energy units deliver a higher therapeutic dose to the tumor mass with minimized adverse side effects and a more precise therapy beam with less scatter-radiation than teletherapy units. Linear accelerators are more costly to purchase, operate and maintain than teletherapy units. However, teletherapy units are the unit of choice for certain types of tumors. While the guideline standards address the minimum size population to be served per unit and the minimum level of service expected from each unit, the problem of location of facilities and type of equipment to best serve both the densely populated urban areas and sparsely populated rural areas of Texas is not addressed.

Current Status

Table 12 provides 1984 resource and utilization data for each state planning region (SPR) in Texas. Table 13 is an inventory of 1984 facilities providing radiation therapy services. This table also provides data concerning number of units in each facility, number of cancer cases and number of treatments. Table 14 provides type of megavoltage unit and capacity of unit data for each facility.

Figure 8 illustrates service areas, based upon an 80-mile radius, for facilities providing radiation therapy services during 1984. The Laredo-Webb County area appears as the only metropolitan area in Texas which remains without radiation therapy services.

Currently there are three state sponsored organizations studying the prevention, incidence, and treatment of cancer and the need for treatment facilities. The Legislative Task Force on cancer was established by the 68th Legislature to provide a short term and long term plan for cancer care in Texas. The short term plan was prepared and presented to the 69th Legislature.[1]

The Texas Cancer Council was established and funded by Senate Bill 53 of the 69th Legislature. It is the responsibility of the council to coordinate cancer services, develop a grant program and distribute funds to implement the Texas Cancer Plan.

The Task Force on Regionalization of Specialized Medical Services was created by the Statewide Health Coordinating Council (SHCC) to study the feasibility of regionalization of special medical services and make recommendations concerning these specialized services. Radiation therapy is one of the areas of study assigned by the SHCC.

In addition to the three organizations listed above, the staff of University of Texas M.D. Anderson Hospital and the Texas Department of Health are active in studying cancer care resources. In 1978, 1980 and 1982 a comprehensive publication, Impact of Cancer on Texas,[2] was prepared and published. It documents the incidence and distribution of cancer in Texas and provides an inventory of diagnostic and treatment facilities and support services available.

Discussion/Conclusions:

Table 15 provides two projections of the number of units which will be needed in 1991. The first is based upon the 1984 use rate and 6000 annual treatments per unit and the second is calculated by dividing the projected population for each SPR by 150,000. However, factors other than simple population to unit ratio or current use rate will affect the actual number of units needed in an SPR. Facilities which serve as referral centers will of necessity require more units and units with higher megavoltage capacity. Nevertheless, unnecessary duplication of facilities and fragmentation of the patient volume should be avoided both to support quality care and to provide cost-effective utilization.

The projections presented in Table 15 are provided as a guide for planning. However, decisions concerning units should be made based upon local circumstances. Example of factors which should be considered are as follows:

1. SPR 24 has a widely scattered population and is without a large metropolitan city located within its borders. It is doubtful that this area could support a megavoltage therapy unit with expensive equipment and staff.

2. SPR 16 serves as a referral center for the state as a whole and also for out-of-state patients. Number of units to serve this expanded population will justifiably exceed that projected for the population of the SPR. M.D. Anderson Cancer Center in Houston, with a total of 11 units and 54,734 treatments in 1984, serves the entire state plus patients from other states and other countries. A study by the staff of the center covering a two week period showed that over 50% of its clientele came from outside the SPR.

3. SPR 22 lies within the 80 mile radius of units of SPR 4. Many cancer patients in SPR 22 are referred by their family physicians to facilities in SPR 4, with its greater capacity for care.

In order to properly project the need for radiation therapy units across the state, there is a need for additional data. Examples of desired data are as follows:

1. Cancer incidence rates for each SPR area.
2. Number of cancer cases treated annually.
3. County of residence of patients receiving services.
4. Number and location of professional medical personnel, i.e., oncologists, radiologists, etc.

The above examples illustrate the need for planning of facilities and units based upon analysis of each SPR rather than a simple population to unit ratio or use rate projection. Data concerning the incidence of cancer and county of residence should become available in the near future. House Bill 4 of the 69th Legislature amends the Texas Cancer Control Act to require hospitals to furnish certain information to the Cancer Register of the Texas Department of Health related to medical care provided cancer patients.

The reports and activities of the organizations mentioned above should provide guidance and recommendations for the prevention, detection, referral and treatment of cancer in Texas and the resources requirements. Factors which should be addressed by these organizations should include but not be limited to the following:

1. The feasibility of regional centers which provide cancer treatment including surgery, chemotherapy and radiation therapy services.

2. The development of staffing and equipment criteria for determined "levels of care" provided by treatment facilities and the assignment of levels of care to facilities.

3. The geographic location of facilities with various levels of care.

4. Transfer-referral agreements needed to assure patient access to quality care based on patient need.

5. Patient needs for transportation.

6. Need for low cost accommodations for patients and family to reduce non-medical expenses of care.

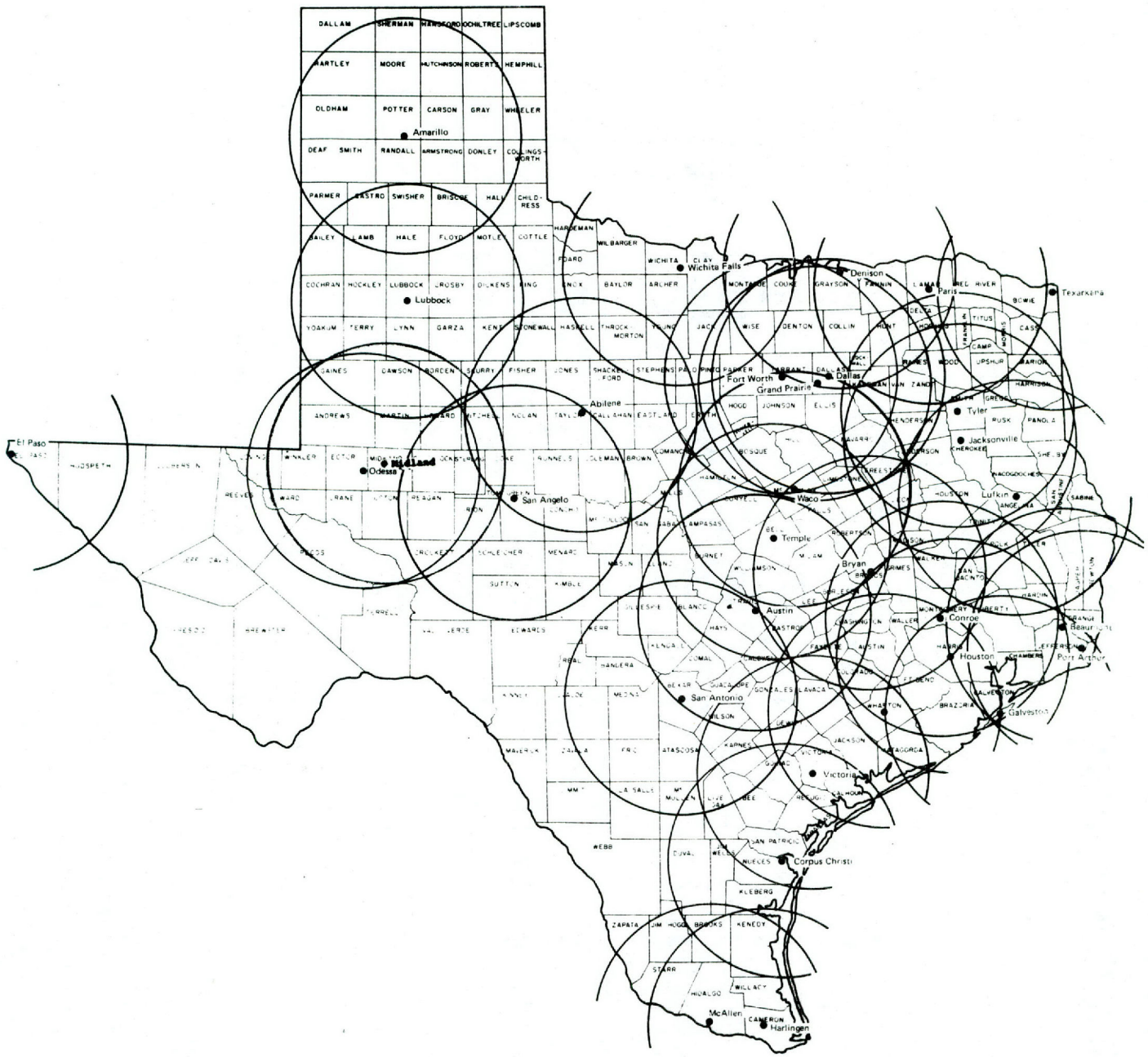
The staff of the Bureau of State Health Planning and Resource Development of TDH will continue its efforts to collect data and update the attached tables in order to provide the organizations mentioned above and cancer treatment providers with the information necessary to assist in planning and providing quality and accessible cancer care services to Texas residents.

REFERENCES

1. Legislative Task Force on Cancer in Texas, Texas Cancer Plan, Immediate Needs and Priorities, 1985-1986, submitted October 4, 1984.

2. The Interagency Center for Cancer Prevention and Control, The Texas Department of Health and The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Impact of Cancer on Texas, Third Edition, 1984.

FIGURE 8
AREAS COVERED BY MEGAVOLTAGE
RADIATION THERAPY FACILITIES



Circles represent approximately 80 miles from the city in which the megavoltage radiation therapy unit is located.

Source: 1984 Integrated Facilities File, TDH

TABLE 12

RADIATION THERAPY FACILITY UNIT
AND UTILIZATION DATA FOR 1984

SPR	FACILITIES	UNITS	TREATMENTS	AVERAGE TREATMENTS PER UNIT	1984 POPULATION	TREATMENTS PER 1000 POPULATION
1	1	4	14938	3735	390211	38.28
2	1	2	7714	3857	379674	20.32
3	1	2	1950	975	225234	8.66
4	9	22	137401	6246	3412635	40.26
5	2	4	8995	2249	253019	35.55
6	2	4	16188	4047	640226	25.28
7	1	2	9870	4935	324832	30.38
8	2	3	13100	4367	557453	23.50
9	2	3	8058	2686	367906	21.90
10	1	1	3987	3987	137950	28.90
11	1	2	7753	3877	277711	27.92
12	2	4	24575	6144	732675	33.54
13	1	1	1600	1600	185207	8.64
14	1	1	875	875	309420	2.83
15	3	3	10228	3409	387603	26.39
16	12	32	164187	5131	3772774	43.52
17	1	1	5366	5366	171314	31.32
18	4	8	42649	5331	1323369	32.23
19	NO FACILITIES				159735	
20	2	3	4900	1633	503522	9.73
21	2	3	21054	7018	603437	34.89
22	1	1	5710	5710	146890	38.87
23	1	3	12475	4158	295580	42.21
24	NO FACILITIES				142171	
STATE TOTAL	53	109	523573	4803	15700548	33.35

SOURCES: FACILITY AND UTILIZATION DATA FROM 1984 INTEGRATED FACILITIES FILE, TDH

POPULATION FROM TDH POPULATION DATA SYSTEM

TABLE 13
INVENTORY OF 1984 RADIATION THERAPY
FACILITIES, UNITS AND TREATMENTS

SPR	HOSP	FS	NAME	COUNTY	MEGAVOLTAGE UNITS	CANCER CASES	TREATMENTS
1	X		ST. ANTHONYS HOSPITAL	POTTER	4	647	14938
SPR TOTAL	1	0			4	647	14938
2	X		METHODIST HOSPITAL	LUBBOCK	2	552	7714
SPR TOTAL	1	0			2	552	7714
3	X		WICHITA GENERAL HOSPITAL	WICHITA	2	45	1950
SPR TOTAL	1	0			2	45	1950
4	X		BAYLOR UNIV MEDICAL CENTER	DALLAS	5	1281	25664
		X	WADLEY INST OF MOLECULAR MED	DALLAS	1	236	3011
	X		HUMANA HOSP MED CITY DALLAS	DALLAS	1	NAV	7650
	X		METHODIST MEDICAL CENTER	DALLAS	1	452	7360
	X		PARKLAND MEMORIAL HOSPITAL	DALLAS	2	303	889
	X		PRESBYTERIAN HOSP OF DALLAS	DALLAS	2	793	13680
	X		ST PAUL MEDICAL CENTER	DALLAS	2	NAV	24307
		X	MONCRIEF RADIATION CTR	TARRANT	6	2042	43324
		X	ARLINGTON CANCER TRTMT CTR-	TARRANT	2	380	11516
SPR TOTAL	6	3			22	5487	137401
5	X		WADLEY REGIONAL MEDICAL CENT	BOWIE	1	249	3365
		X	RADIOLOGY CENTER OF PARIS, I	LAMAR	3	700	5630
SPR TOTAL	1	1			4	949	8995
6		X	TRAVIS CLINIC FDN	CHEROKEE	1	NAV	36
		X	EAST TX CANCER CTR	SMITH	3	742	16152
SPR TOTAL	0	2			4	742	16188
7	X		HENDRICK MEDICAL CENTER	TAYLOR	2	463	9870
SPR TOTAL	1	0			2	463	9870
8		X	EL PASO CANCER TREATMENT CTR	EL PASO	2	422	13100
	X		PROVIDENCE MEMORIAL HOSPITAL	EL PASO	1	NAV	NAV
SPR TOTAL	1	1			3	422	13100
9	X		MEDICAL CENTER HOSPITAL	ECTOR	1	319	4297
	X		MIDLAND MEMORIAL HOSPITAL	MIDLAND	2	176	3761
SPR TOTAL	2	0			3	495	8058

INVENTORY OF 1984 RADIATION THERAPY
FACILITIES, UNITS AND TREATMENTS

SPR	HOSP	FS	NAME	COUNTY	MEGAVOLTAGE UNITS	CANCER CASES	TREATMENTS
10	X		SHANNON WEST TEXAS MEM HOSP	TOM GREEN	1	193	3987
SPR TOTAL	1	0			1	193	3987
11	X		HILLCREST BAPTIST MEDICAL CT	MCLENNAN	2	345	7753
SPR TOTAL	1	0			2	345	7753
12		X	ALLAN SHIVERS RAD THERAPY CT	TRAVIS	3	876	22011
	X		ST DAVID'S COMMUNITY HOSPITA	TRAVIS	1	NAV	2564
SPR TOTAL	1	1			4	876	24575
13		X	E. A. ELMENDORF, M.D.	BRAZOS	1	NAV	1600
SPR TOTAL	0	1			1	NAV	1600
14	X		MEMORIAL HOSPITAL	ANGELINA	1	175	875
SPR TOTAL	1	0			1	175	875
15	X		PARK PLACE HOSPITAL	JEFFERSON	1	100	2450
	X		ST ELIZABETH HOSPITAL	JEFFERSON	1	237	4836
	X		THE BAPTIST HOSP OF SE TEX	JEFFERSON	1	120	2942
SPR TOTAL	3	0			3	457	10228
16	X		UNIV OF TEXAS MED BRANCH HOS	GALVESTON	3	728	16815
		X	BAYLOR COLL OF MED-DEPT OF R	HARRIS	1	1160	6442
	X		MEMORIAL CITY GEN HOSP CORP.	HARRIS	2	250	6550
	X		MEMORIAL SOUTHWEST HOSPITAL	HARRIS	2	327	10630
	X		PARK PLAZA HOSPITAL	HARRIS	2	537	11286
		X	PEAKWOOD PROFESSIONAL BLDG.	HARRIS	2	336	7599
	X		ST JOSEPH HOSPITAL	HARRIS	2	768	11757
	X		THE METHODIST HOSPITAL	HARRIS	4	1550	31734
	X		UNIV OF TEXAS ANDERSON HOSP	HARRIS	11	2548	54734
	X		MEDICAL CENTER HOSPITAL	MONTGOMERY	1	75	3189
	X		GULF COAST MEDICAL CENTER	WHARTON	1	NAV	3451
SPR TOTAL	9	2			31	8279	164187

Table 13 - Page 3
INVENTORY OF 1984 RADIATION THERAPY
FACILITIES, UNITS AND TREATMENTS

SPR	HOSP	FS	NAME	COUNTY	MEGAVOLTAGE UNITS	CANCER CASES	TREATMENTS
17	X		CITIZENS MEDICAL CENTER	VICTORIA	1	329	5366
SPR TOTAL	1	0			1	329	5366
18	X		BAPTIST MEDICAL CENTER	BEXAR	1	NAV	8844
		X	CANCER THERAPY & RESEARCH CT	BEXAR	4	1780	31504
	X		NIX MEDICAL CENTER	BEXAR	1	94	1729
	X		SANTA ROSA MEDICAL CENTER	BEXAR	2	NAV	572
SPR TOTAL	3	1			8	2427	42649
20	X		MEMORIAL MEDICAL CENTER	NUECES	1	178	3236
	X		SPOHN HOSPITAL	NUECES	2	1749	1664
SPR TOTAL	2	0			3	1927	4900
21	X		VALLEY BAPTIST MEDICAL CENTE	CAMERON	1	200	4346
21		X	RIO GRANDE CANCER TREATMENT	HIDALGO	2	614	16708
SPR TOTAL	1	1			3	814	21054
22	X		TEXOMA MEDICAL CENTER	GRAYSON	1	287	5710
SPR TOTAL	1	0			1	287	5710
23	X		SCOTT AND WHITE MEM HOSPITAL	BELL	3	806	12475
SPR TOTAL	1	0			3	806	12475
STATE TOTAL	39	13	TOTAL OF 52 FACILITIES IN 30 COUNTIES		108	26717	523573

Source: 1984 Intergrated Facilities File, TDH

TABLE 14

CAPACITY OF MEGAVOLTAGE UNITS BY FACILITY

SPR	NAME	COUNTY	TOTAL UNITS	GENERATORS			
				LINEAR ACCELERATORS		TELETHERAPY UNITS	
				MEGAVOLTAGE LESS THAN OR EQUAL TO 6	MEGAVOLTAGE GREATER THAN OR EQUAL TO 10	CO60	CE137
1	ST. ANTHONYS HOSPITAL	POTTER	4	3	1	0	0
2	METHODIST HOSPITAL	LUBBOCK	2	1	1	0	0
3	WICHITA GENERAL HOSPITAL	WICHITA	2	1	0	1	0
4	BAYLOR UNIV MEDICAL CENTER	DALLAS	5	1	2	1	1
	WADLEY INST OF MOLECULAR MED	DALLAS	1	1	0	0	0
	HUMANA HOSP MED CITY DALLAS	DALLAS	1	1	0	0	0
	METHODIST MEDICAL CENTER	DALLAS	1	1	0	0	0
	PARKLAND MEMORIAL HOSPITAL	DALLAS	2	1	0	1	0
	PRESBYTERIAN HOSP OF DALLAS	DALLAS	2	1	1	0	0
	ST PAUL MEDICAL CENTER	DALLAS	2	1	1	0	0
	MONCRIEF RADIATION CTR	TARRANT	6	2	3	1	0
	ARLINGTON CANCER TRTMT CTR-	TARRANT	2	1	1	0	0
5	WADLEY REGIONAL MEDICAL CENT	BOWIE	1	0	0	1	0
	RADIOLOGY CENTER OF PARIS, I	LAMAR	3	1	0	2	0
6	TRAVIS CLINIC FDN	CHEROKEE	1	1	0	0	0
	EAST TX CANCER CTR	SMITH	3	1	1	1	0
7	HENDRICK MEDICAL CENTER	TAYLOR	2	0	0	2	0
8	EL PASO CANCER TREATMENT CTR	EL PASO	2	0	1	1	0
	PROVIDENCE MEMORIAL HOSPITAL	EL PASO	1	1	0	0	0
9	MEDICAL CENTER HOSPITAL	ECTOR	1	1	0	0	0
	MIDLAND MEMORIAL HOSPITAL	MIDLAND	2	1	1	0	0
10	SHANNON WEST TEXAS MEM HOSP	TOM GREEN	1	1	0	0	0
11	HILLCREST BAPTIST MEDICAL CT	MCLENNAN	2	0	1	1	0
12	ALLAN SHIVERS RAD THERAPY CT	TRAVIS	3	1	1	1	0
	ST DAVID'S COMMUNITY HOSPITA	TRAVIS	1	0	0	1	0
13	E. A. ELMENDORF, M.D.	BRAZOS	1	0	0	1	0
14	MEMORIAL HOSPITAL	ANGELINA	1	0	0	1	0

TABLE 14 - Page 2
CAPACITY OF MEGAVOLTAGE UNITS BY FACILITY

SPR	NAME	COUNTY	TOTAL UNITS	GENERATORS			
				LINEAR ACCELERATORS		TELETHERAPY UNITS	
				MEGAVOLTAGE LESS THAN OR EQUAL TO 6	MEGAVOLTAGE GREATER THAN OR EQUAL TO 10	CO60	CE137
15	PARK PLACE HOSPITAL	JEFFERSON	1	0	0	1	0
	ST ELIZABETH HOSPITAL	JEFFERSON	1	0	0	1	0
	THE BAPTIST HOSP OF SE TEX	JEFFERSON	1	0	0	1	0
16	UNIV OF TEXAS MED BRANCH HOS	GALVESTON	3	1	1	1	0
	BAYLOR COLL OF MED-DEPT OF R	HARRIS	1	0	0	1	0
	MEMORIAL CITY GEN HOSP CORP.	HARRIS	2	1	1	0	0
	MEMORIAL SOUTHWEST HOSPITAL	HARRIS	2	1	0	1	0
	PARK PLAZA HOSPITAL	HARRIS	2	1	0	1	0
	PEAKWOOD PROFESSIONAL BLDG.	HARRIS	2	0	0	2	0
	ST JOSEPH HOSPITAL	HARRIS	2	0	1	1	0
	THE METHODIST HOSPITAL	HARRIS	4	0	2	2	0
	UNIV OF TEXAS ANDERSON HOSP	HARRIS	11	2	4*	5	0
	MEDICAL CENTER HOSPITAL	MONTGOMERY	1	0	0	1	0
	GULF COAST MEDICAL CENTER	WHARTON	1	0	0	1	0
17	CITIZENS MEDICAL CENTER	VICTORIA	1	0	0	1	0
18	BAPTIST MEDICAL CENTER	BEXAR	1	0	0	1	0
	CANCER THERAPY & RESEARCH CT	BEXAR	4	1	1	2	0
	NIX MEDICAL CENTER	BEXAR	1	0	0	1	0
	SANTA ROSA MEDICAL CENTER	BEXAR	2	1	0	1	0
20	MEMORIAL MEDICAL CENTER	NUECES	1	0	0	1	0
	SPOHN HOSPITAL	NUECES	2	1	0	1	0
21	VALLEY BAPTIST MEDICAL CENTE	CAMERON	1	0	0	1	0
	RIO GRANDE CANCER TREATMENT	HIDALGO	2	0	1	1	0
22	TEXOMA MEDICAL CENTER	GRAYSON	1	0	0	1	0
23	SCOTT AND WHITE MEM HOSPITAL	BELL	3	1	1	1	0
STATE TOTAL	TOTAL OF 53 FACILITIES		108	33	27*	47	1

*Includes one betatron unit

Source: 1984 Intergrated Facilities File, TDH

TABLE 15

MEGAVOLTAGE RADIATION THERAPY UNIT PROJECTIONS

SPR	UNITS	TREATMENTS PER 1000 POPULATION*	1991 POPULATION	1991 PROJECTED UNITS	
				BASED ON USE RATE**	BASED ON 150,000 POPULATION***
1	4	38.28	443844	2	3
2	2	20.32	416453	1	3
3	2	8.66	238588	0	2
4	22	40.26	4111121	22	27
5	4	35.55	291076	1	2
6	4	25.28	802691	3	5
7	2	30.38	363863	1	2
8	3	23.50	685891	2	5
9	3	21.90	429405	1	3
10	1	28.90	160246	1	1
11	2	27.92	314268	1	2
12	4	33.54	947882	4	6
13	1	8.64	220213	0	1
14	1	2.83	382005	0	3
15	3	26.39	418439	1	3
16	31	43.52	4963082	29	33
17	1	31.32	194073	1	1
18	8	32.23	1537960	7	10
19		NO FACILITIES	209230		
20	3	9.73	564622	1	4
21	3	34.89	817771	4	5
22	1	38.87	158327	1	1
23	3	42.21	368410	2	2
24		NO FACILITIES	183089		
STATE TOTAL	108	33.35	19222549	85	128

* FROM TABLE 1

** PROJECTED TREATMENTS/7500 TREATMENTS PER YEAR = UNITS

*** 1991 POPULATION/150,000 = UNITS

Sources: 1984 Integrated Facilities File, TDH and Population Data System, TDH

END STAGE RENAL DISEASE (NHPG 11)

Guideline 11 and its resource standards are quoted from CFR 42, Part 121 as follows:

Standard

"The Health Systems Plans established by HSAs should be consistent with standards and procedures contained in the DHEW regulations governing conditions for coverage of suppliers of end-stage renal disease services, 20 CPR Part 405, Subpart V."[1]

Background

The Federal End Stage Renal Disease (ESRD) program was created according to Section 2991 of the Social Security Amendments of 1972 (Public Law 92-603). This legislation extends Medicare benefits to anyone requiring kidney dialysis or transplantation so long as that individual is: (1) fully or currently insured or entitled to monthly benefits under Title II of the Social Security Act, or (2) is the spouse or dependent child of an individual so insured or entitled to such monthly benefits. Further legislation in 1974 extended eligibility for Medicare benefits based on the diagnosis of ESRD to individuals under 65 years of age who were either disability beneficiaries with ESRD or were eligible solely on the basis of ESRD.

The Chronic Renal Disease (CRD) Program under Medicare was designed to provide reimbursement for eighty percent of all medical costs for transplant and dialysis patients. Dialysis patients have a ninety-day waiting period before they are eligible for CRD benefits while transplant benefits begin immediately.

The 1972 Amendments also established an ESRD network responsible for data collection and classification of facilities according to 20 CFR, Part 405, Subpart U, Section 405. 2122 and related sections. In Texas, this network is ESRD Network 11, and it deals with a data population of all patients undergoing dialysis treatment in Texas facilities, whether they are receiving federal Medicare benefits or state KHP benefits. The data maintained by the KHP relates only to those ESRD patients receiving KHP benefits.

In 1973, the Texas Legislature created the Texas Kidney Health Program (KHP) to augment the Medicare program. The KHP provides benefits during the pre-Medicare waiting period, including up to thirty days prior to the first dialysis and up to a maximum of $15,000. An additional $350 per month is available for medication and transportation. For transplant patients, the program pays the cost of Cyclosporin-A, an immunosuppressant drug, and eighty percent of Medicare allowable charges up to $30,000 per year for recipients who do not qualify for Medicare coverage.[2]

Three types of ESRD facilities as defined in the NHPG are: 1) a renal dialysis facility (RDF) "is a unit which is approved to furnish dialysis service(s) to ESRD patients."; 2) A renal dialysis center (RDC) is "a

hospital unit which is approved to furnish the full spectrum of diagnostic, therapeutic, and rehabilitative services, except renal transplantation..."; 3) A renal transplant center (RTC) is "a hospital unit which is approved to furnish transplantation and other medical and surgical specialty services ..., including inpatient dialysis..."[3] (See Table 16).

Current Status - Dialysis

The two major treatment options for ESRD are transplantation and dialysis. Currently, transplantation is a solution for a minority of patients, but with major advances of the recent past in transplantation techniques and immunosuppressive drugs, its use may grow in the future, However, at present the vast majority of patients undergo regular dialysis treatment, during which the patient's blood is cleansed of accumulated waste products.

As of June 30, 1985, eighty-seven percent - 4,801 of Texas dialysis patients chose a form of dialysis known as hemodialysis. The patient's blood is pumped from the body by a machine, subjected to dialysis, and then returned to the body in a continuous extracorporeal blood loop. Dialysis occurs as the blood passes through a dialyzer or artificial kidney. Patients must undergo this treatment usually three times per week in sessions running about 3 1/2 - 5 hours each. This method can be performed at a hospital - based center, in a free standing facility, or at home.[4]

A major alternative form of dialysis, chosen by eleven percent - 597 of Texas dialysis patients is continuous ambulatory peritoneal dialysis (CAPD). In this modality, dialysis occurs within the patient's body across the peritoneal membrane. CAPD requires a manual exchange of fluid every four to six hours, but it can be done at home and it frees the patient from dependency on a dialysis machine.

Continuous cycling peritoneal dialysis (CCPD) is the newest concept in dialysis treatment and was chosen by two percent - 69 of dialyis patients in Texas. This concept involves a process similar to that of CAPD except that all but one of the dialysate exchanges is accomplished at night while the patient is sleeping.[5]

Currently, seventy-three ESRD facilities provide dialysis services to the state's dialysis patients. Every state planning region has at least one ESRD facility, although patients in west Texas must travel some distance to a facility. Placement of additional facilities in this area is hampered by the lack of sufficient ESRD patients to support a facility. In contrast, certain areas of the state exhibit a concentration of facilities. Six counties contain twenty-six facilities which provide dialysis services to 3031 of the state's patients. This means that thirty-six percent of the state's facilities provide dialysis services to fifty-five percent of the state's patients (see Table 17 and Figure 9.) Service distribution is one of the facets of Texas ESRD services that the Task Force on Regionalization of Specialized Medical Services is examining.

Even though every state planning region has at least one dialysis facility, these facilities are sometimes located at a considerable distance from some of their patients. Because only thirteen percent - 666 of Texas dialysis patients utilize home care methods, accessibility to an ESRD facility is an important concern.

Current Status - Transplantation

Kidney transplantation is one of two major therapy methods for those suffering from ESRD. In 1982, more than 5,300 kidney transplants were performed in the United States. In 1984, nine hospitals in Texas perform from fourteen to one hundred thirteen transplants each, yearly, and three more facilities established transplant services in 1985. The total number of procedures performed in Texas has steadily increased from 372 transplants in 1982 to 438 transplants in 1984 (see Table 18.)

As increasing numbers of transplants have been performed, survival rates of both the patient and the kidney graft have improved.

Transplant Retention Rates

	One Year	Three Years
Related donors	75%	67%
Unrelated donors	56%	45%

The reason that overall survival is better for patients who have related donors is due to less chance for kidney rejection. Kidney graft rejection exacts a huge toll on the patient because of increased stress, higher likelihood of infection, and, consequently, higher mortality. However, due to improved immunosuppression, graft retention rates have shown progressive and substantial increases.[6]

The major contributor to this improvement is the use of the drug Cyclosporine-A. It is a metabolite of a Norwegian fungus and is the first of a new series of immunopharmacologic agents. Cyclosporin's critical factor is its effectiveness in suppression of the immune reaction responsible for rejecting foreign tissues (transplants), while allowing the body to manufacture other immune system components which fight infection. Previously, the suppression of the entire immune system to reduce rejection frequently resulted in death to infection. Cyclosporin's selective suppression of the immune system is a quantum leap forward in transplant technology.[7]

Several barriers stand in the way of kidney transplantation. First, it appears that transplant recipients have a higher rate of malignancies than nontransplant patients. The second barrier is the cost of transplantation procedures and the question of who pays for them. Third, the availability and procurement of kidneys for transplant requires organ banks receiving cooperation at five levels of public and professional activity:

public education, hospital preparedness, surgical training, organ preservation and transportation, and centralized coordinating and dispatching.[8]

Another concern voiced through a survey conducted by the Task Force on Regionalization of Specialized Medical Services, (TFRSMS), is the availability of federal and state funding for the continuation of ESRD Network 11 and the Kidney Health Program (KHP). The state's nephrologists and dialysis facilities were surveyed as to the effects on Texas ESRD services of further funding cuts or discontinuation of Network #11 or the KHP. Preliminary analysis indicates a majority of respondents believe that further cutbacks would result in a decrease in quality of care, in a curtailment of patient services, and in the possible closing of some facilities, which would severely limit accessibility of services.

Recommendations

1. Review funding projections and priorities to insure that programs providing essential benefits for ESRD patients do not fall short of their needs.

2. With the cessation of ESRD Network #11, the Kidney Health Program should be prepared to assume the data gathering and quality control functions of Network #11 and to request funding to support this responsibility.

3. Use the recommendations made by the Task Force on the Regionalization of Specialized Medical Services, when developed, to guide further developmental actions in this subject area.

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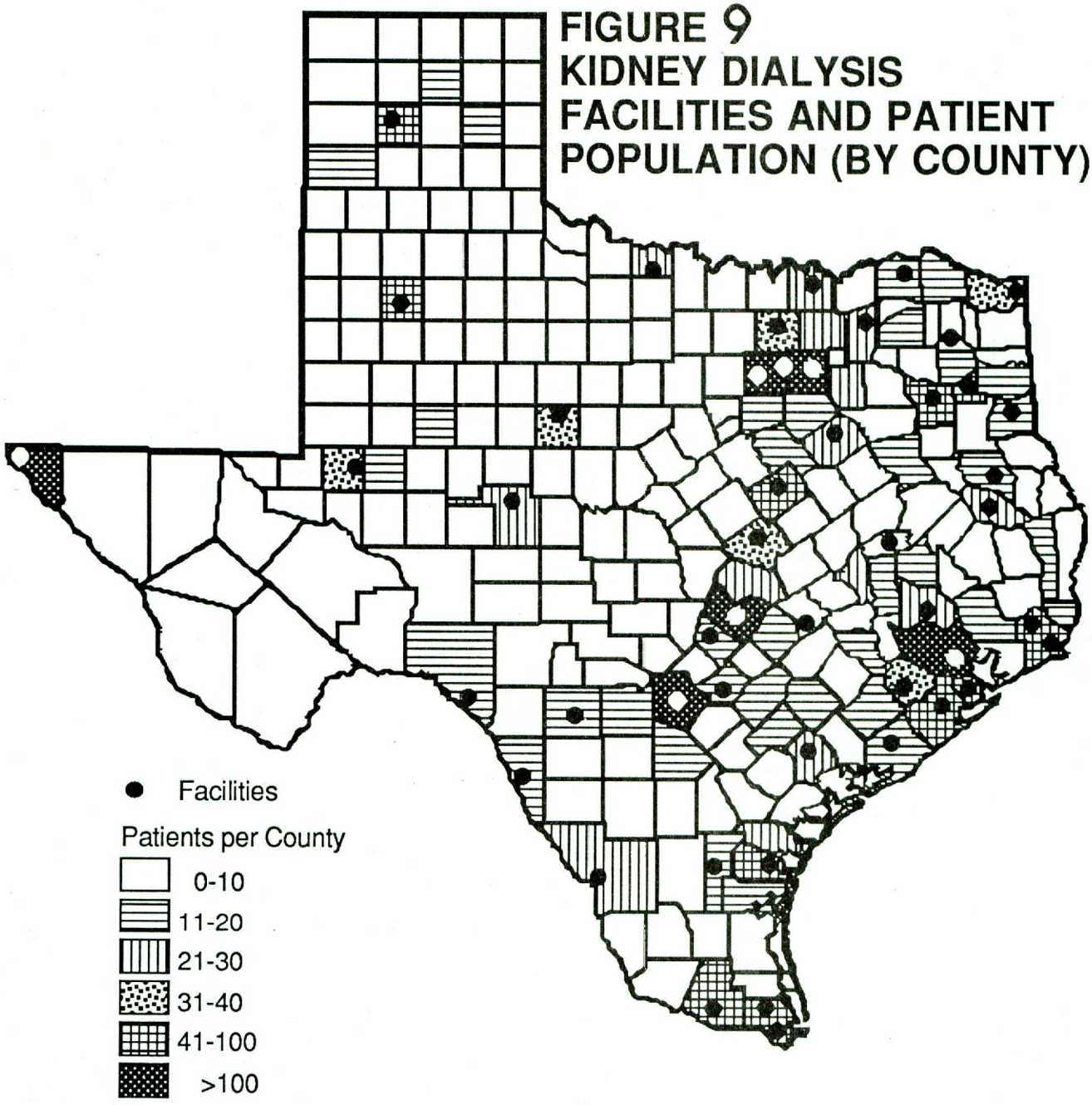
FIGURE 9
KIDNEY DIALYSIS FACILITIES AND PATIENT POPULATION (BY COUNTY)



Source: ESRD Network #11
Prepared by: Bureau of State Health Planning and Resource Development

TABLE 16

MEDICARE APPROVED ESRD FACILITIES BY SPR[1]

SPR[1]	Renal Transplant Centers	Renal Dialysis Centers	Renal Dialysis Facilities	TOTAL
1		1	1	2
2	1[2]	1	1	3[3]
3			1	1
4	2	6	11	17[4]
5		1	1	2
6		1	3	4
7			2	2
8		1		1
9		1	1	2
10		1	1	1
11			1	1
12	1	1	3	4[4]
13			2	2
14		1	2[5]	3
15		1	1	2
16	3	5	12	17[4]
17		1		1
18	2	2	6	9[4]
19			1	1
20		1	2	3
21			3	3
22			1	1
23			1	1
24			3	3
State	9	25	59	86

Legend:

[1]State Planning Region

[2]This Renal Transplant Center is on conditional status.

[3]Includes one Renal Transplant Center which has no dialysis stations.

[4]Renal Transplant Centers are in the same facility as the Renal.

[5]Includes the Camp Cullen Children's Dialysis Center at Trinity which is only used for campers during the summer months.

Source: ESRD Network No. 11 Directory, March 5, 1985.

TABLE 17

RENAL DIALYSIS FACILITIES/CENTERS
AND PATIENT LOAD
1985

SPR	FACILITY - CENTER		TOTAL PATIENTS
1	High Plains Dialysis Center		107
	St. Anthony's Hospital		9
		Total	116
2	South Plains Dialysis Center		154
3	North Texas Dialysis Center		42
4	Medical Arts Clinic Association		39
	Children's Medical Center		12
	Dallas Kidney Disease Center		293
	Dallas North Dialysis Center		94
	Oak Cliff Dialysis Center		112
	Southwestern Dialysis Center		253
	Denton Dialysis Clinic, Inc.		34
	Dialysis Associates		279
	Mid-Cities Dialysis Center		72
	Greenville Dialysis Center		39
	Stephenville Hospital		4
		Total	1231
5	St. Joseph's Hospital		50
	Texarkana Regional Dialysis Center		79
		Total	129
6	Carthage Dialysis Center		15
	Good Shepherd Hospital		66
	Pittsburg Medical Surgical Hospital		10
	W. W. Wise Regional Dialysis Center		124
		Total	215
7	Abilene Area Dialysis Center		68
8	Hotel Dieu Hospital		269
9	Medical Center Hospital		1
	Permian Basin Dialysis Center		73
		Total	74
10	St. John's Hospital		50
11	Brazos Kidney Dialysis Center		113
12	Austin Diagnostic Clinic		215
	Austin Diagnostic Clinic - Giddings		27
	Austin Diagnostic Clinic - San Marcos		20
		Total	262
13	Bryan Nephrology Center		39
	Madison County Medical Center ESRD		19
		Total	58
14	Memorial Hospital of Lufkin		48
	Memorial Hospital - Nacogdoches		24
		Total	72

TABLE 17 - Page 2

RENAL DIALYSIS FACILITIES/CENTERS
AND PATIENT LOAD - 1985 - Page Two

SPR	FACILITY - CENTER		TOTAL PATIENTS
15	Golden Triangle Dialysis Center		116
	St. Mary's Hospital		28
		Total	144
16	Angleton-Danbury Dialysis Center		26
	Matagorda General Hospital		20
	Island Dialysis Center		62
	U.T. Medical Branch		78
	Ben Taub General Hospital		10
	Diagnostic Clinic		87
	Gulf Coast Dialysis Center		202
	Hermann Hospital		117
	Jacinto Towers Artificial Kidney Center		60
	Methodist Hospital		140
	Southeast Kidney Center		63
	St. Joseph Dialysis Center		87
	Texas Children's Hospital		12
	West Houston Dialysis Center		80
	Zimmerman Medical Clinic Dialysis Center		102
	Rosenberg Dialysis Facility		39
	Cypress Creek Dialysis Center		56
		Total	1241
17	De Tar Hospital Renal Dialysis		80
18	Kerrville Kidney Disease Center		24
	Bexar County Hospital District		60
	Kidney Disease Clinic		86
	San Antonio Kidney Disease Clinic		135
	Santa Rosa Medical Center		156
	Southside Kidney Disease Clinic		81
	Kidney Disease Clinic - Seguin		32
		Total	574
19	Laredo Kidney Center		29
20	South Texas Kidney Center		19
	Coastal Bend Renal Dialysis Facility		116
	Spohn Hospital		80
		Total	215
21	Valley Hemodialysis Center		37
	W. W. Wise Memorial Center		60
	Valley Hemodialysis Center - McAllen		102
		Total	199
22	W. W. Wise Memorial Dialysis Center		48
23	Scott & White Artificial Kidney Unit		74
24	Val Verde Memorial Hospital		15
	Eagle Pass Kidney Disease Clinic		36
	Kidney Disease Clinic		26
		Total	77
		State Total	5934

Source: ESRD Network #11, June 30, 1985.

TABLE 18

RENAL TRANSPLANT CENTERS IN TEXAS

SPR		TRANSPLANTS 1983	TRANSPLANTS 1984
2	Health Science Center Lubbock, Texas	0	0
4	Methodist Hospital Dallas, Texas	62	113
4	Parkland Hospital Dallas, Texas	53	60
12	Brackenridge Hospital Austin, Texas	21	14
16	Hermann Hospital Houston, Texas	112	113
16	Methodist Hospital Houston, Texas	25	29
16	UT Medical Branch Galveston, Texas	80	72
18	Bexar County Hospital San Antonio, Texas	55	19
18	Humana Hospital San Antonio, Texas	--	18
	TOTALS	408	438

Source: ESRD Network No. 11.

SHORT TERM BED PROJECTIONS (NHPG 1 & 2)

Short Term Hospital Bed Supply Ratio and Occupancy Rates (NHPG 1 & 2) and Short Term Institutional Care Bed Projection Ranges

Introduction

Short term institutional care is inpatient care provided to the general public by community general and special hospitals. The average length of stay of a short term hospital is less than 30 days. In 1984, in Texas, there were 532 such hospitals with 73,455 beds. Collectively, they provided 15.1 million patient days of care, with an average daily census of 41,368. Of these facilities, 61% (326) were of 100 or less beds in size. Yet these facilities accounted for only 18% of the total patient days. By contrast, the 23 hospitals with 501 or more beds, comprising 4% of short term hospitals, provided 27% of total patient days. Of the 326 facilities with 100 beds or less, 218 (67%) were in rural areas.

The Texas Department of Health as the SHPDA has been charged with responsibility for developing a methodology for determining the number of short term care hospital beds that will be required in Texas in future years. The SHPDA formed an advisory group, the Technical Advisory Group on Bed Need Methodology, to assist in development of this methodology. The Technical Advisory Group was composed of ten persons from various sections of the state who were familiar with the problems posed by developing bed projections. (See Exhibit 2 for a list of Advisory Group Members.)

Bed Projection Methodology

Description of the Data Bases:

Two types of hospital data are used in the bed projection method. These are patient origin data and facilities data. In addition, population estimates are used. These data will be described in turn.

The most recent patient origin study was conducted by the Texas Hospital Association (THA) from October of 1983 to September of 1984, and is referred to as the Patient Origin Study III. Previous Patient Origin/ Destination Studies were conducted by the Texas Department of Health, Bureau of State Health Planning and Resource Development, in 1979-1980, and in 1981-1982, in conjunction with THA.

Patient origin data reports where patients originated, and specifically, what county patients resided in before admission. Some 95% of the 532 hospitals reported patient origin information for at least one quarter of the reporting period. For those 27 hospitals which did not supply this information, about half had patient origin information from the 1981-1982 study. The other half were matched with a similar facility, whose patient origin information was used instead.

The patient origin information was used to allocate patient days to the counties from which patients originated. In addition, the patient origin

information was used to determine what admission patterns existed. Admission pattern areas (APAs) were delineated by grouping together those counties which showed that at least a certain minimum percentage (30%) of residents in one county went for treatment in a facility in another county.

The facilities data consist of measures of utilization and bed capacity for each of the 532 short term facilities in Texas. These data were collected by the Texas Department of Health, Bureau of State Health Planning and Resource Development. TDH requests that all hospital facilities complete the Hospital Data Questionnaire each year.

The population data used in projecting beds for 1991 are from the TDH population projections.

Description of the methodology:

The bed projection methodology is basically a use rate methodology. It is described as a four step procedure below. (This methodology is also briefly summarized in Exhibit 3.)

The first step involves calculating the short term hospital use rates predicted for 1991. The use rate, also referred to as utilization rate, is the number of patient days generated in short term hospitals per 1000 persons in the population in one year. Two use rates were calculated for the 1991 projection year. One rate calculated is an expected upper bound to the possible use rates. The second rate estimated is an expected lower bound to the possible 1991 use rates.

The second step consists of applying each of the predicted use rates to population estimates for 1991, to obtain the number of short term hospital patient days projected for that year. This is done by multiplying the use rates by the population that has been projected for 1991.

In the third step, the projected patient days are divided by 365, to obtain the projected average daily census of hospitals in 1991.

The fourth step entails arriving at an estimate of the number of short term hospital beds that are required in 1991. This estimate is obtained by dividing the average daily census by the desired occupancy rate. An example is shown below.

In this example, an estimate of the number of short term hospital beds required in 1991 for a single county is obtained by calculating an upper and lower bound to the 1991 use rate for the population of that county.

Here, the bed projection methodology is used to obtain an estimate of the number of short term hospital beds required in 1991. In this example, data from only one county is included in the calculations. While this example is for one county and the methodology calculates patient days at that level, actual projections are presented at the state planning region (SPR) level and at the Admission Pattern Areas (APAs) level in the 1987 SHP.

Step One -- Calculation of Use Rates:

Two 1991 use rates are calculated to produce an upper and lower bound.

There are several factors thought to contribute to the observed decline in the utilization rate over the past few years. This trend, described in greater detail below, will affect the 1991 use rate. The upper bound is based on the actual 1984 utilization rate. The lower bound is based on extending the observed decline from 1982 to 1984 in patient days per thousand. In Texas, the rate of decline was about 7.7% per year. We expect the actual 1991 utilization rate to be somewhere between these two use rates.

In this example, County 1 generated 2000 patient days in 1984 and the 1984 population of county 1 was 50,000. The upper bound use rate, measured in terms of patient days per 1000 persons in the population in the county, is calculated as follows.

$$\frac{2{,}000}{50{,}000} \times 1000 = 40 \text{ patient days per } 1000$$

The calculation of the lower bound use rate is as follows. Suppose the average decline per year from 1982 to 1984 for this geographical area is 7.4%. Then in the seven years from 1984 to 1991, the 1991 use rate will be (1.0 - 0.074) to the seventh power, multiplied by the 1984 use rate. That is, the 1991 use rate will be 58.38% of the 1984 use rate. This works out to about 23 patient days per 1000. So, we can be reasonably confident that the 1991 use rate will be between 40 and 23 patient days per 1000, for this hypothetical county.

Step Two -- Calculation of Patient Days:

Short term hospital patient days are projected for 1991, by applying the current use rate to population estimates for 1991. The 1991 estimated population of County 1 is 65,000. The number of patient days projected for 1991 is calculated below:

Upper bound:

(40 patient days/1000) x 65,000 = 2600 patient days projected for 1991

Lower bound:

(23 patient days/1000) x 65,000 = 1495 patient days projected for 1991

Step Three -- Calculation of Average Daily Census:

The projected average daily census of short term hospitals in 1991 is obtained by dividing the total number of patient days by the number of days in the year.

Upper bound:

2600 patient days / 365 = 7.1 average daily census projected for 1991

Lower bound:

1495 patient days / 365 = 4.1 average daily census projected for 1991

Step Four -- Calculation of Estimated Beds Required:

The estimate of the number of short term hospital beds required in 1991 is calculated by dividing the average daily census by the desired occupancy rate. If 80% is the desired occupancy rate, the number of beds projected to be required in 1991 is calculated as follows:

Upper bound:

7.1 average daily census / .80 = 8.9 beds required in 1991

Lower bound:

4.1 average daily census / .80 = 5.1 beds required in 1991

The Calculation of Patient Days:

The use rates are multiplied by the 1991 population projections to obtain estimates of patient days generated in 1991. Patient day projections are calculated for each county. Patient days generated by patients with out-of-state residence were allocated back to the county of the facility. Finally, the patient day projections for counties are aggregated at the state planning region (SPR) level, the Admission Pattern Area level, and the state level.

The Calculation of Beds to be Projected for 1991

Weighted occupancy rates were calculated. The reason for weighting by number of beds is that it results in the average being a valid representation of the occupancy rate. An alternate method of calculation would be to not weight hospitals, regardless of hospital size. But this would result in invalid averages. This can be seen from an example of a 1000 bed hospital with a 90% occupancy being averaged with a 50 bed hospital which happens to have a 30% occupancy. An unweighted average is 60% (90% plus 30% divided by 2). In contrast, a weighting of occupancy rates by hospital size results in an average of 87.1%. Weighting by hospital size gives an accurate reflection of actual occupancy rate overall. (See also exhibit 4.)

The formula for desired occupancy is based on the average weighted occupancy rate and a minimum desired occupancy rate for each hospital. This formula resulted in a lower estimate of beds than would have been obtained if the simple weighted occupancy of all hospitals was used. The reason for specifying a minimum desired occupancy rate is that the actual occupancy rates are generally less than the ideal occupancy of 80% set by the National Health Planning Guidelines (NHPG). When an occupancy rate is less than the ideal, a bed projection based on the lesser rate results in a higher estimate of beds, than if the ideal occupancy rate were used. The formula for desired occupancy substitutes a minimum rate whenever a hospital's rate falls below this minimum. The minimum rates chosen were the state average of occupancy rates of all hospitals in the same size class. Five classes of hospitals based on facility size were distinguished

for the 1987 SHP. The smallest class, from 1 to 50 beds, had a weighted average of a 43.4% occupancy rate. The largest class, of more than 500 beds, had a 66.6% occupancy rate. The three other classes, of from 51 to 100, 101 to 250, and 251 to 500, had 45.6%, 53.7%, and 60.2% occupancy rates respectively (Table 23.)

Calculating the desired occupancy rate using the formula involved substituting the minimum rate for hospitals falling below the minimum. If a facility's occupancy rate was below the average for its class size, it would be assigned the class size average as a desired occupancy, rather than its actual occupancy rate. The bed projections obtained using these desired occupancy rates are lower and more conservative estimates than those obtained using the actual occupancy rates.

The use of Admission Pattern Areas for doing bed projections.

One change to the bed projection methodology involves the use of Admission Pattern Areas (APAs) for making bed projections. The APAs provide bed projections for smaller, self-contained areas. The Admission Pattern Area is defined as an area that is relatively self-contained with regard to where residents go for short term hospitalization. Many of the residents within an APA utilize the hospitals within the area. In addition, many patients in the hospitals within the area are residents of the area.

A key point about the APAs is that they are identified by analyzing patient origin information. A computer program is used to group counties together based on a certain minimum percentage of shared trade of two or more counties. For example, suppose that the minimum percentage of shared trade is set at 30%. If 30% or more of county A's residents were hospitalized in county B, a group is identified. This group is referred to as an Admission Pattern Area. If a third county, county C, has 30% or more of its residents hospitalized in county B, then this county would also be included in the group.

For the 1987 SHP, analysis was done using the 1983-1984 Texas Hospital Association Patient Origin Study III data. The results from this analysis are 143 APAs, which are shown in Figure 10. This analysis is based on a 30% minimum association criterion. There are 27 groups of counties and 116 single counties. Exhibit 5-A shows which counties make up each APA. Exhibit 5-B is a list of the counties showing the corresponding APA.

The factors expected to impact hospital utilization rates.

A number of factors are affecting and are expected to continue to impact hospital utilization rates. The factors considered include the initiation of a prospective payment system (PPS) and diagnosis related groups (DRGs) by the federal government for most Medicare patients, the development of health maintenance organizations (HMOs), the emphasis on ambulatory surgery centers, the reimbursement policies of insurance companies, and the increased emphasis on health promotion and the development of healthy lifestyles.

In lieu of an analysis of the impact of each of these factors, the present methodology makes use of a trend analysis of utilization rates. This

analysis is believed to measure the collective impact of these factors on utilization rates. The impact of all factors should be reflected in the data analyzed, from 1980 through 1984. Because DRGs started in October of 1983, their impact is reflected in the 1984 data. About two thirds of the short term facilities switched to DRGs in fiscal year 1984, and thus the 1984 data reflects that portion of the effect of DRGs.

We have analyzed the 1980, 1981, 1982, 1983, and 1984 data for trends in hospital utilization in Texas, and the results are as follows. The utilization rate is shown in Figure 11. The utilization rate (number of patient days per 1000 in the population) is shown to be declining from 1981 to 1984. Table 19 shows the actual utilization rate. Utilization declined very little (-0.1%) from 1980 to 1981. The decline was greater from 1981 to 1982 (-1.1%); and there was a larger decrease from 1982 to 1983 (-4.9%). The decrease from 1983 to 1984 was 10.2%.

The other utilization measures do not show the decline from 1981 to 1982, but all three do show a decline from 1982 to 1984 (Tables 20, 21, and 22).

Based on these statistics, the lower bound of 1991 utilization was judged to be a continuation of the trend starting in 1982 to 1984 (Figure 11). This trend in Texas is represented by about a 7.7% yearly decrease in utilization. Because there are regional differences in utilization rates, projections for the SPRs and for the APAs were based on trends calculated separately for the geographical regions.

This method of using upper and lower bounds for the utilization rate is based on the assumption that the 1991 utilization rate will be somewhere between the most current rate known (1984 data) and a rate predicted from information about the utilization decline from 1982 to 1984.

National Health Planning Guidelines

Existing federal laws and regulations require that the National Health Planning Guidelines (NHPG) be taken into account in the development of the State Health Plan. NHPG #1 and #2 address the supply of non-federal general hospital beds and therefore, must be considered in developing estimates of future bed requirements. These federal guidelines are reproduced below.

Guideline #1, General Hospitals - Bed Supply

Standard: (Based on licensed beds as required by the NHPG)

"There should be less than four non-federal, short-stay hospital beds for each 1,000 persons in a health service area except under extraordinary circumstances. For purposes of this section, short-stay hospital beds include all non-federal,short-stay hospital beds (including general medical-surgical, children's, obstetric, psychiatric, and other short-stay specialized beds). Conditions which may justify adjustment in this ratio for a health service area include:

"(1) Age: Individuals 65 years of age and older have a higher hospital utilization rate - up to four times that of the general population

than any age group. Bed population ratios for health services areas in which the percentage of elderly people is significantly higher (more than 12% of the population) than the national average may be planned at a higher ratio, based on analysis by the health systems agency.

"(2) Seasonal population fluctuations Large seasonal variations in hospital utilization may justify higher ratios. Plans should reflect vacation and recreation patterns as well as the needs of migrant workers and other factors causing unusual seasonal variations.

"(3) Rural areas Hospital care should be accessible within a reasonable period of time. For example, in rural areas in which a majority of the residents would otherwise be more than 30 minutes travel time from a hospital, the health systems agency may determine, based on an analysis, that a bed population ratio of greater than 4.0 per 1,000 persons may be justified.

"(4) Urban areas Large number of beds in one part of Standard Metropolitan Statistical Area (SMSA) may be compensated for by fewer beds in other parts of the SMSA.

"(5) Areas with referral hospitals: In the case of referral institutions, which provide a substantial portion of specialty services to individuals not residing in the area, the health systems agency may exclude from its computations of bed population ratio the beds utilized by referred patients who reside outside both the SMSA and the health service area in which the facility is located."

Guideline #2, General Hospitals - Occupancy rate

Standard:

"There should be an average annual rate for medically necessary hospital care of at least 80% for all non-federal, short-stay hospital beds considered together in a health service area, except under extraordinary circumstances. Conditions which may justify an adjustment to this standard for a health service area include:

"(1) Seasonal population fluctuations: In some areas, the influx of people for vacation of other purposes may require a greater supply of hospital beds than would otherwise be needed. Large seasonal variations in hospital utilization which can be predicted through hospital and health insurance records may justify an average annual occupancy rate lower than 80% based on analyses by the health systems agency.

"(2) Rural areas: Lower average occupancy rates are usually required by small hospitals to maintain empty beds to accommodate normal fluctuations of admissions. In rural areas with significant numbers of small (fewer than 4,000 admissions per year) hospitals, an average occupancy rate of less than 80% may be justified, based on the analysis by the health systems agency."

Application of Guidelines to Bed Need Methodology NHPG #1 states that there should be a maximum of four beds for every 1,000 persons. However, adjustment to this ratio are allowed for certain situations. Many of these

adjustments are taken into account with the use rate methodology reviewed in the previous section.

More beds are allowed under NHPG #1 for seasonal population fluctuations. Seasonal population fluctuations refer to situations in which there are extended periods during the year when the daily census is considerably higher than the rest of the year. An example would be a hospital in a resort area that has a low daily census September through May but a high census throughout the summer. The use rate methodology projects beds based on an average daily census computed over the entire year. Therefore, seasonal population are not considered in the development of use rates. However, seasonal population fluctuations are taken into account with the occupancy rates discussed under NHPG #2.

NHPG #1 also allows for more beds/1,000 for rural areas and, in certain situations, for urban areas. Rural and urban areas are considered in the use rate methodology presented here because the methodology is applied separately to each county based upon residents of the county. Therefore, some counties may generate a use rate resulting in more beds per 1,000 than other county residents.

NHPG #2 states that there should be an annual occupancy rate of at least 80% except under extraordinary circumstances. Extraordinary circumstances are defined as seasonal population fluctuations and rural areas (because of the smaller sized hospitals in these areas). As indicated previously, the size of facilities was considered when determining occupancy rates for the various areas, with lower occupancy rates allowed for smaller hospitals. Furthermore, occupancy rates used in projecting beds were based on current occupancy rates and if significant seasonal population fluctuations occurred, they should be reflected in these current rates.

There are several other reasons to expect lower occupancy rates in Texas. NHPG occupancy standards are determined by using licensed beds. Therefore, the occupancy rates used in determining the bed projections are based on 1984 occupancy rates for licensed beds. In Texas, however, licensed beds are not always equal to operating beds; some facilities may have more licensed beds than operating beds. Therefore, if occupancy rates are calculated based on licensed beds, occupancy rate may appear lower than they actually are. Another reason for low occupancy rates is that many urban areas in Texas are undergoing a rapid increase in population due to the much publicized "sun belt" migration. The population increases have resulted in new hospitals in these rapidly growing areas and it may take several years for these new hospitals to gain community acceptance, i.e., their occupancy rates should gradually increase as more physicians and individuals become familiar with, and begin to utilize the new facilities.

Finally, the advantage of providing a range in occupancy rates, as stated earlier, is to follow local circumstances that may occur to be taken into account. As noted earlier, there may be particular circumstances not taken into account by the methodology that dictate more (or fewer) beds than expected on the basis of past utilization. These anomalies can be taken into account by using the upper (or lower) range of projected beds.

In summary, it appears that the use rate methodology as presented here allows for considerable adjustments to beds per thousand ratios and

occupancy levels based on a variety of local circumstances.

Results

Table 23 shows facility data by bed size and the metropolitan versus non-metropolitan distinction. Table 24 shows the number of licensed beds and number of operating beds as of December 31, 1984. Table 25 has facility and bed data as of January 31, 1986. There was an increase in beds, from 73,455 to 76,125, from 1984 to 1986. There was a decrease in the bed ratio, from 4.7 to 4.6 beds per thousand. The average weighted occupancy for short term facilities was 56.3% in 1984. The average weighted occupancy with a minimum level was 61.8%. Using the occupancy rate based on the minimum level results in more conservative estimates of bed demand in 1991. Table 26-A shows the bed projections by SPRs. The upper bound use rate predicted for 1991 is 962 patient days per thousand, while the lower bound is 564 per thousand. The 564 patient days per thousand was calculated based on analyzing the change in the utilization rate in Texas from 1982 to 1984. Note that the use rate differs between SPRs. The 1991 upper bound use rate, which is in fact the observed 1984 use rate, ranges from 1,400 patient days per thousand for SPR 22 to 654 patient days for SPR 21. The 1991 lower bound use rate, based on the trend observed for each SPR from 1982 to 1984, ranges from 932 patient days per thousand for SPR 2, to 339 patient days for SPR 8.

The use rate also differs between Admission Pattern Areas (APAs), as shown in Table 26-B. This table shows 143 APAs, determined through use of a 30% minimum between-county movement of residents to facility. Some 116 of these APAs are single counties. These single counties are not associated with other counties because of what the 1984 patient origin data indicated about their admission patterns. The data indicated that for each of these counties, no other county was receiving 30% or more of the county residents for short term care, and that less than 30% of the residents of any other county who received short term care came to this particular county for care.

The data for the APAs should be interpreted with caution because in many cases the APA reflect the utilization of only a single short term hospital. Some 72 of the APAs have just one short term care facility. Four of the APAs have no facilities.

Both Tables 26-A and 26-B show the totals for the state. The upper and lower bound use rates for the state result in a range from 81,658 beds being required for 1991, to 47,763 beds. Table 27-A shows, for each State Planning Region, the number of licensed beds as of January 31, 1986, the number of beds under construction, and the number of beds under plan review. In addition, Table 27-A shows the upper and lower bound projected beds for 1991 and the number of additional beds required or in excess in 1991. The upper bound of the 1991 utilization rate results in an additional 3,809 beds being required in 1991. The lower bound of the 1991 utilization rate results in 30,086 beds being in excess in 1991. Table 27-B shows the same statistics for each of the Admission Pattern Areas. Both the number of additional and the number of excess should be interpreted with caution, as will be discussed below.

Discussion

It is not expected that utilization will decrease by 7.7% every year from 1985 to 1991. Instead the decrease is expected to be between 0% and 7.7% per year. The result of this prediction is that it is expected that the utilization rate in 1991 will be somewhere between 962 and 564 patient days per thousand for the state of Texas. From this it follows that, as shown in Table 27-A, the number of additional or excess bed in 1991 is a range from 3,809 beds being required to 30,086 being excess.

It should be noted that this range is somewhat misleading because it fails to include consideration of the number of nonconforming beds known to be included among the licensed beds. It is estimated that some 7,644 nonconforming beds exist. Nonconforming beds are licensed beds that do not meet standards related to the Life Safety Code (LSC), construction standards, or appropriate design criteria. To accept nonconforming beds as a portion of beds that are used to determine what is required, is to perpetuate a lack of suitable, physically safe and appropriate facilities. The information available on nonconforming beds is shown in Table 28.

EXHIBIT 2

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EXHIBIT 3

SUMMARY OF USE RATE METHODOLOGY

Step 1: Compute use rate, which is measured in patient days per thousand in the population per year.

$$\frac{\text{Patient days}}{\text{Population}} \times 1000 = \text{Use Rate}$$

Step 2: Compute Projected Patient Days, given a predicted use rate and a future population size.

Use Rate x (Future Population / 1000) = Projected Patient Days

Step 3: Compute Projected Average Daily Census

Projected Patient Days / 365 = Projected Average Daily Census

Step 4: Compute the required number of beds.

$$\frac{\text{Projected Average Daily Census}}{(\text{Desired Occupancy Rate \% / 100})} = \text{Required number of beds}$$

Note that

$$\text{Occupancy rate \%} = \frac{\text{Average Daily census}}{\text{Number of Beds}} \times 100\%$$

EXHIBIT 4

COMPUTATION OF WEIGHTED OCCUPANCY RATES

An example showing the difference between an average occupancy rate and an average occupancy rate weighted by bed size* is provided below:

Facility	Average Daily Census	Number of Beds	Occupancy Rate	Beds x Occupancy Rate
1	15	30	50%	1500
2	22	40	55%	2200
3	255	300	85%	25500
Total	292	370	190	29200

$$\text{Average occupancy} = \frac{\text{Occupancy rates}}{\text{\# of Facilities}} = \frac{190}{3} = 63.33\%$$

$$\text{Average weighted occupancy} = \frac{\text{Beds x Occupancy}}{\text{Beds}} = \frac{29200}{370} = 78.92\%$$

If we then plug the weighted occupancy rate (expressed as a proportion) into the bed projection formula,

$$\frac{\text{Average Daily Census}}{(\ \%\ \text{Occupancy} / 100\ )} = \text{Beds}$$

we can come up with the actual number of beds for the area:

$$\frac{292}{.7892} = 370$$

However, if we use the simple average occupancy, we project more beds than actually exist:

$$\frac{292}{.6333} = 461$$

*The average occupancy rate weighted by bed size for an area can be calculated by dividing the average daily census for the area by the total number of beds for that area.

EXHIBIT 5-A

COUNTIES WITHIN ADMISSION PATTERN AREAS (APAs)
BASED ON A 30% MINIMUM LEVEL[1]

APA	COUNTY
1	Anderson
2	Andrews
3	Angelina
4	Aransas, Brooks, Duval, Jim Wells, Live Oak, Nueces, San Patricio
5	Archer, Clay, Wichita
6	Armstrong, Carson, Dallam, Donley, Hall, Hartley, Hutchinson, Lipscomb, Moore, Ochiltree, Oldham, Potter, Randall, Sherman, Swisher
7	Atascosa, Bandera, Bexar, Dimmit, Edwards, Frio, Guadalupe, Karnes, Kendall, Kerr, La Salle, McMullen, Medina, Real, Uvalde, Wilson, Zavala
8	Austin, Brazoria, Chambers, Fort Bend, Harris, Liberty, Montgomery, San Jacinto Waller
9	Bailey
10	Bastrop, Burnet, Caldwell, Hays, Llano, Travis, Williamson
11	Baylor
12	Bee
13	Bell, Coryell
14	Blanco
15	Borden
16	Bosque
17	Bowie
18	Brazos
19	Brewster, El Paso, Hudspeth, Jeff Davis, Presidio
20	Briscoe, Cochran, Crosby, Dawson, Dickens, Fisher, Gaines, Garza, Hockley Kent, Lamb, Lubbock, Lynn Motley, Terry
21	Brown
22	Burleson
23	Calhoun
24	Callahan, Haskell, Taylor
25	Cameron, Willacy
26	Camp
27	Cass
28	Castro
29	Cherokee
30	Childress
31	Coke, Concho, Crockett, Glasscock, Irion, Reagan, Runnels, Schleicher, Sterling, Sutton, Tom Green
32	Coleman
33	Collin, Dallas, Denton, Ellis, Hunt, Kaufman, Rockwall
34	Collingsworth
35	Colorado
36	Comal
37	Comanche
38	Cooke
39	Cottle
40	Crane
41	Culberson
42	Deaf Smith
43	Delta, Lamar, Red River
44	De Witt

EXHIBIT 5-A - PAGE 2

COUNTIES WITHIN ADMISSION PATTERN AREAS (APAs)
BASED ON A 30% MINIMUM LEVEL[1]

APA	COUNTY
45	Eastland
46	Ector
47	Erath
48	Falls
49	Fannin, Grayson
50	Fayette
51	Floyd
52	Foard
53	Franklin
54	Freestone
55	Galveston
56	Gillespie
57	Goliad, Victoria
58	Gonzales
59	Gray, Roberts
60	Gregg, Upshur
61	Grimes
62	Hale
63	Hamilton
64	Hansford
65	Hardeman
66	Hardin, Jefferson, Orange
67	Harrison
68	Hemphill
69	Henderson, Smith, Van Zandt, Wood
70	Hidalgo
71	Hill
72	Hood, Johnson, Parker, Tarrant
73	Hopkins
74	Houston
75	Howard
76	Jack
77	Jackson
78	Jasper
79	Jim Hogg, Webb, Zapata
80	Jones
81	Kenedy, Kleberg
82	Kimble
83	King, Stonewall
84	Kinney, Val Verde
85	Knox
86	Lampasas
87	Lavaca
88	Lee
89	Leon
90	Limestone
91	McCulloch
92	McLennan
93	Madison
94	Marion
95	Martin
96	Mason
97	Matagorda
98	Maverick
99	Menard
100	Midland
101	Milam
102	Mills
103	Mitchell
104	Montague
105	Morris
106	Nacogdoches, Shelby
107	Navarro
108	Newton
109	Nolan
110	Palo Pinto
111	Panola
112	Parmer
113	Pecos
114	Polk
115	Rains
116	Reeves
117	Refugio
118	Robertson
119	Rusk
120	Sabine
121	San Augustine
122	San Saba
123	Scurry
124	Shackleford
125	Somervell
126	Starr
127	Stephens
128	Terrell
129	Throckmorton
130	Titus

EXHIBIT 5-A - PAGE 3

COUNTIES WITHIN ADMISSION PATTERN AREAS (APAs)
BASED ON A 30% MINIMUM LEVEL[1]

APA	COUNTY
131	Trinity, Walker
132	Tyler
133	Upton
134	Ward
135	Washington
136	Wharton
137	Wheeler
138	Wilbarger
139	Winkler
140	Wise
141	Yoakum
142	Young
143	Loving

NOTE (1) 30% minimum between-county movement, residence to facility

SOURCE: Texas Hospital Association Patient Origin Study III, 1983-1984

EXHIBIT 5-B

ADMISSION PATTERN AREA (APA) ASSIGNMENTS FOR COUNTIES BASED ON A 30% MINIMUM LEVEL[1]

COUNTY	APA CODE	COUNTY	APA CODE	COUNTY	APA CODE
Anderson	1 *	Cooke	38	Hamilton	63
Andrews	2 *	Coryell	13	Hansford	64 *
Angelina	3	Cottle	39 *	Hardeman	65
Aransas	4	Crane	40 *	Hardin	66
Archer	5	Crockett	31	Harris	8
Armstrong	6	Crosby	20	Harrison	67 *
Atascosa	7	Culberson	41 *	Hartley	6
Austin	8	Dallam	6	Haskell	24
Bailey	9 *	Dallas	33	Hays	10
Bandera	7	Dawson	20	Hemphill	68 *
Bastrop	10	Deaf Smith	42 *	Henderson	69
Baylor	11 *	Delta	43	Hidalgo	70
Bee	12 *	Denton	33	Hill	71
Bell	13	De Witt	44	Hockley	20
Bexar	7	Dickens	20	Hood	72
Blanco	14 *	Dimmit	7	Hopkins	73 *
Borden	15 **	Donley	6	Houston	74
Bosque	16	Duval	4	Howard	75
Bowie	17	Eastland	45	Hudspeth	19
Brazoria	8	Ector	46	Hunt	33
Brazos	18	Edwards	7	Hutchinson	6
Brewster	19	Ellis	33	Irion	31
Briscoe	20	El Paso	19	Jack	76 *
Brooks	4	Erath	47	Jackson	77
Brown	21 *	Falls	48	Jasper	78
Burleson	22 *	Fannin	49	Jeff Davis	19
Burnet	10	Fayette	50 *	Jefferson	66
Caldwell	10	Fisher	20	Jim Hogg	79
Calhoun	23 *	Floyd	51	Jim Wells	4
Callahan	24	Foard	52 *	Johnson	72
Cameron	25	Fort Bend	8	Jones	80
Camp	26 *	Franklin	53 *	Karnes	7
Carson	6	Freestone	54	Kaufman	33
Cass	27	Frio	7	Kendall	7
Castro	28 *	Gaines	20	Kenedy	81 *
Chambers	8	Galveston	55	Kent	20
Cherokee	29	Garza	20	Kerr	7
Childress	30 *	Gillespie	56 *	Kimble	82 *
Clay	5	Glasscock	31	King	83 *
Cochran	20	Goliad	57	Kinney	84 *
Coke	31	Gonzales	58 *	Kleberg	81 *
Coleman	32 *	Gray	59 *	Knox	85 *
Collin	33	Grayson	49	Lamar	43
Collingsworth	34 *	Gregg	60	Lamb	20
Colorado	35	Grimes	61 *	Lampasas	86 *
Comal	36 *	Guadalupe	7	La Salle	7
Comanche	37	Hale	62	Lavaca	87
Concho	31	Hall	6	Lee	88 *

ADMISSION PATTERN AREA (APA) ASSIGNMENTS FOR COUNTIES
BASED ON A 30% MINIMUM LEVEL[1]

COUNTY	APA CODE	COUNTY	APA CODE	COUNTY	APA CODE
Leon	89 *	Palo Pinto	110 *	Swisher	6
Liberty	8	Panola	111 *	Tarrant	72
Limestone	90	Parker	72	Taylor	24
Lipscomb	6	Parmer	112 *	Terrell	128 **
Live Oak	4	Pecos	113	Terry	20
Llano	10	Polk	114 *	Throckmorton	129 *
Loving	143 **	Potter	6	Titus	130 *
Lubbock	20	Presidio	19	Tom Green	31
Lynn	20	Rains	115 **	Travis	10
McCulloch	91 *	Randall	6	Trinity	131
McLennan	92	Reagan	31	Tyler	132 *
McMullen	7	Real	7	Upshur	60
Madison	93 *	Red River	43	Upton	133
Marion	94	Reeves	116 *	Uvalde	7
Martin	95 *	Refugio	117 *	Val Verde	84 *
Mason	96 *	Roberts	59 *	Van Zandt	69
Matagorda	97	Robertson	118 *	Victoria	57
Maverick	98 *	Rockwall	33	Walker	131
Medina	7	Runnels	31	Waller	8
Menard	99 *	Rusk	119	Ward	134 *
Midland	100	Sabine	120 *	Washington	135
Milam	101	San Augustine	121 *	Webb	79
Mills	102 *	San Jacinto	8	Wharton	136
Mitchell	103 *	San Patricio	4	Wheeler	137
Montague	104	San Saba	122 *	Wichita	5
Montgomery	8	Schleicher	31	Wilbarger	138 *
Moore	6	Scurry	123 *	Willacy	25
Morris	105	Shackelford	124 *	Williamson	10
Motley	20	Shelby	106	Wilson	7
Nachogdoches	106	Sherman	6	Winkler	139 *
Navarro	107 *	Smith	69	Wise	140
Newton	108 *	Somervell	125 *	Wood	69
Nolan	109 *	Starr	126 *	Yoakum	141 *
Nueces	4	Stephens	127 *	Young	142
Ochiltree	6	Sterling	31	Zapata	79
Oldham	6	Stonewall	83 *	Zavala	7
Orange	66	Sutton	31		

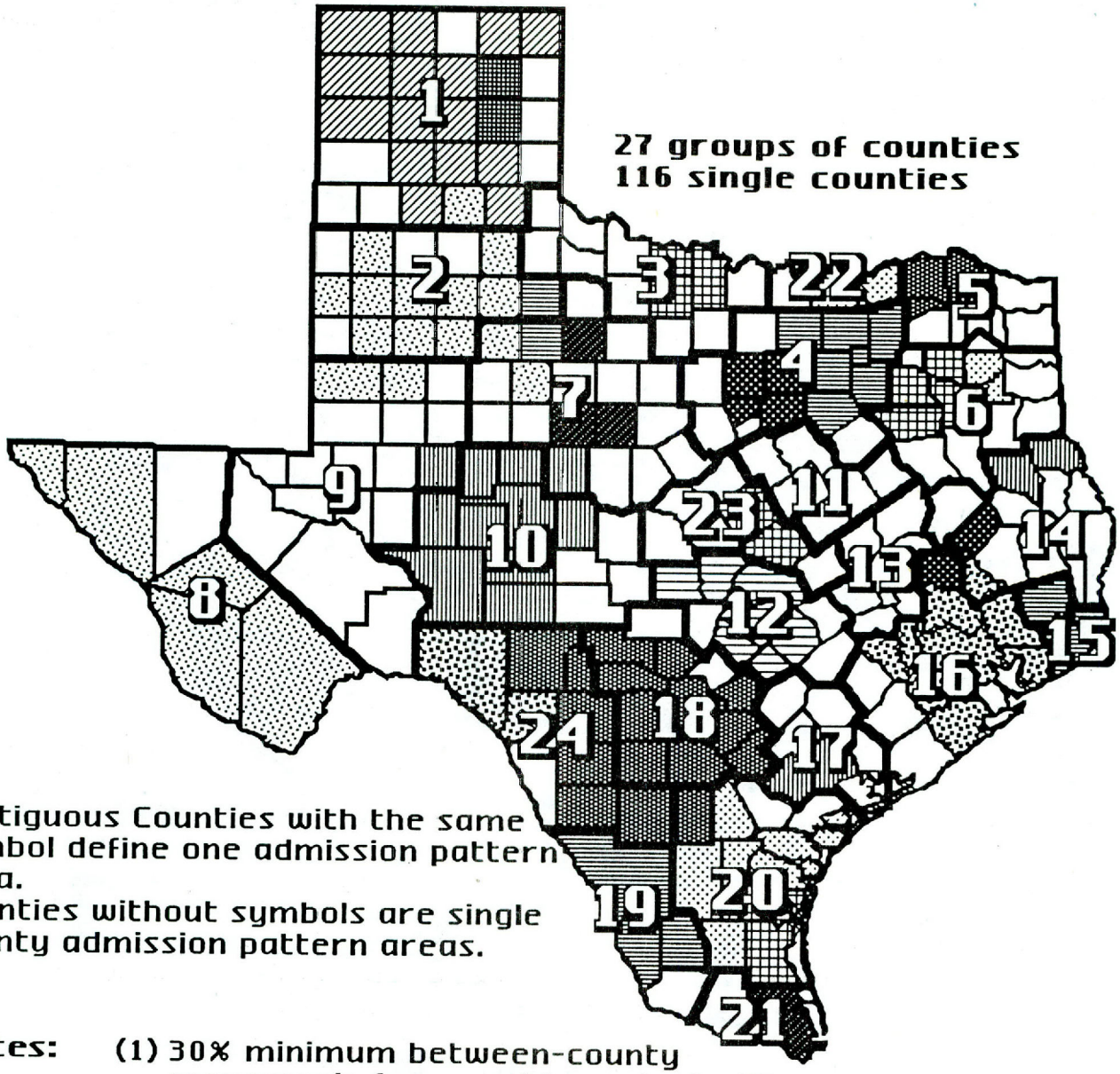
NOTE (1) 30% minimum between-county movement, residence to facility.

* APA with single facility
** APA with no facility

SOURCE: Texas Hospital Association Patient Origin Study III, 1983-1984

FIGURE 10

143 Admission Pattern Areas with 30% minimum level [1]



Contiguous Counties with the same symbol define one admission pattern area.
Counties without symbols are single county admission pattern areas.

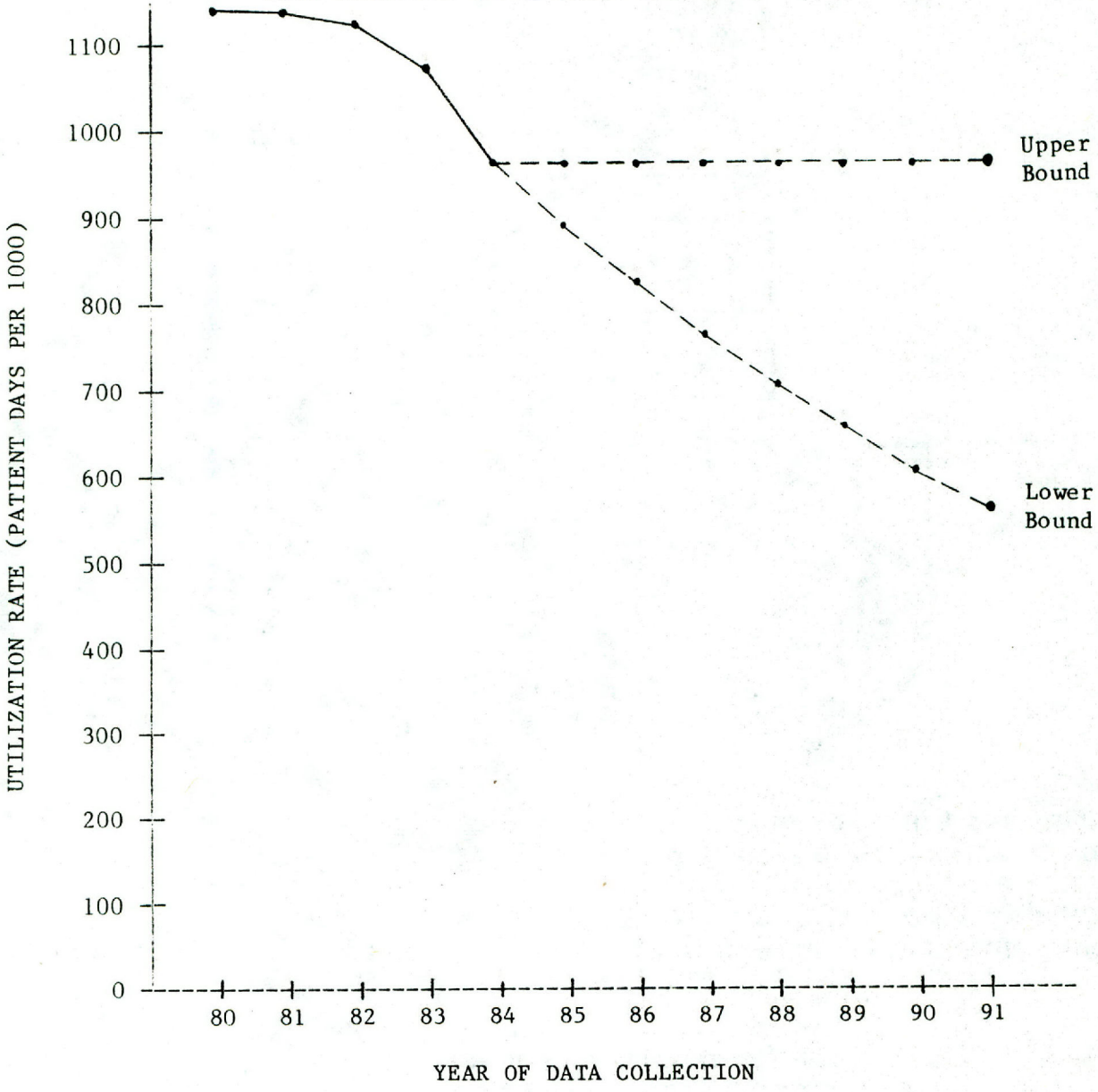
Notes: (1) 30% minimum between-county movement, from residence to facility

(2) Numbers on map represent the 24 State Planning Regions.

Source: Texas Hospital Association Patient Origin Study III, October 1983-September 1984

FIGURE 11

ACTUAL TEXAS SHORT TERM HOSPITAL UTILIZATION RATES 1980-1984, WITH UPPER AND LOWER BOUND PREDICTIONS FOR 1991



Note: Utilization rate is measured in patient days per 1000 in the population.

Source: Integrated Facilities File, Texas Department of Health

TABLE 19

TREND ANALYSIS OF SHORT TERM HOSPITALS IN TEXAS:
UTILIZATION RATES, 1980-1984

YEAR	UTILIZATION	% CHANGE FROM PREVIOUS YEAR
1980	1139	
1981	1138	-0.1
1982	1126	-1.1
1983	1071	-4.9
1984	962	-10.2

Note: Utilization rate is measured in patient days per 1000 in the population per year.

Source: Integrated Facilities File, Texas Department of Health

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TABLE 20

TREND ANALYSIS OF SHORT TERM HOSPITALS IN TEXAS:
NUMBER OF PATIENT DAYS, 1980-1984

YEAR	PATIENT DAYS (millions)	% CHANGE FROM PREVIOUS YEAR
1980	16.21	
1981	16.58	2.3
1982	16.83	1.5
1983	16.44	-2.3
1984	15.10	-8.2

Source: Integrated Facilities File, Texas Department of Health

TABLE 21

TREND ANALYSIS OF SHORT TERM HOSPITALS IN TEXAS:
NUMBER OF ADMISSIONS, 1980-1984

YEAR	NUMBER OF ADMISSIONS (millions)	% CHANGE FROM PREVIOUS YEAR
1980	2.530	
1981	2.526	-0.2
1982	2.569	1.7
1983	2.537	-1.2
1984	2.432	-4.1

Source: Integrated Facilities File, Texas Department of Health

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TABLE 22

TREND ANALYSIS OF SHORT TERM HOSPITALS IN TEXAS:
AVERAGE LENGTH OF STAY FOR EACH YEAR 1980-1984

YEAR	AVERAGE LENGTH OF STAY	% CHANGE FROM PREVIOUS YEAR
1980	6.4	
1981	6.6	3.1
1982	6.6	0.0
1983	6.5	-1.5
1984	6.3	-3.0

Note: Average length of stay is in days.

Source: Integrated Facilities File, Texas Department of Health

TABLE 23

SHORT TERM CARE FACILITY AND UTILIZATION DATA
BY HOSPITAL SIZE AND AREA GROUPINGS
LICENSED BEDS*
1984

BED SIZE	METRO					NON-METRO					ALL AREAS				
	FACILITIES		BEDS			FACILITIES		BEDS			FACILITIES		BEDS		
	NO.	PER-CENT	NO.	PER-CENT	OCC. RATE	NO.	PER-CENT	NO.	PER-CENT	OCC. RATE	NO.	PER-CENT	NO.	PER-CENT	OCC. RATE
1 - 50	46	15.7	1623	2.7	48.3	152	63.6	5138	37.9	41.8	198	37.2	6761	9.2	43.4
51 - 100	62	21.2	4668	7.8	47.9	66	27.6	5064	37.3	43.3	128	24.1	9732	13.2	45.6
101 - 250	110	37.5	18425	30.8	53.6	20	8.4	3050	22.5	53.1	130	24.4	21475	29.2	53.7
251 - 500	52	17.7	18233	30.4	60.4	1	.4	308	2.3	43.1	53	10.0	18541	25.2	60.2
500+	23	7.8	16946	28.3	66.5	0	.0	0	.0	.0	23	4.3	16946	23.1	66.6
STATE TOTAL	293	100.0	59895	100.0	58.7	239	100.0	13560	100.0	44.9	532	100.0	73455	100.0	56.3

SOURCE: 1984 INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

*INCLUDES FIVE UNLICENSED STATE OWNED SHORT-TERM CARE HOSPITALS WITH 1998 OPERATING BEDS

TABLE 24

SHORT-TERM FACILITY AND UTILIZATION DATA
1984

SPR	POPULATION	PATIENT DAYS	AVERAGE DAILY CENSUS	USE RATE	LICENSED BEDS*				OPERATING BEDS			
					NUMBER	FACILITIES	OCCUPANCY RATE	RATIO	NUMBER	FACILITIES	OCCUPANCY RATE	RATIO
1	390211	391065	1071	1002	1862	21	57.5	4.772	1806	21	59.3	4.628
2	379674	466227	1277	1228	2394	24	53.4	6.305	2234	24	57.2	5.884
3	225234	242255	664	1076	1309	18	50.7	5.812	1224	18	54.2	5.434
4	3412635	3319501	9095	973	15452	91	58.9	4.528	13441	91	67.7	3.939
5	253019	314855	863	1244	1648	14	52.3	6.513	1419	14	60.8	5.608
6	640226	566011	1551	884	2849	27	54.4	4.450	2540	27	61.1	3.967
7	324832	346752	950	1067	1812	26	52.4	5.578	1665	26	57.1	5.126
8	557453	400169	1096	718	2387	15	45.9	4.282	1897	15	57.8	3.403
9	367906	274719	753	747	1518	18	49.6	4.126	1400	18	53.8	3.805
10	137950	147190	403	1067	819	14	49.2	5.937	802	14	50.3	5.814
11	277711	279626	766	1007	1447	17	52.9	5.210	1429	17	53.6	5.146
12	732675	507381	1390	693	2379	19	58.4	3.247	2232	19	62.3	3.046
13	185207	119526	327	645	704	10	46.5	3.801	655	10	50.0	3.537
14	309420	252878	693	817	1410	18	49.1	4.557	1349	18	51.4	4.360
15	387603	429675	1177	1109	2265	11	52.0	5.844	2110	11	55.8	5.444
16	3772774	4057189	11116	1075	18797	87	59.1	4.982	16805	87	66.1	4.454
17	171314	196787	539	1149	1076	13	50.1	6.281	1007	13	53.5	5.878
18	1323369	1326490	3634	1002	6176	31	58.8	4.667	5595	31	65.0	4.228
19	159735	107315	294	672	491	4	59.9	3.074	475	4	61.9	2.974
20	503522	494204	1354	981	2428	14	55.8	4.822	2262	14	59.9	4.492
21	603437	373133	1022	618	1728	14	59.2	2.864	1661	14	61.5	2.753
22	146890	187768	514	1278	879	8	58.5	5.984	849	8	60.6	5.780
23	295580	236522	648	800	1336	13	48.5	4.520	1155	13	56.1	3.908
24	142171	62145	170	437	289	5	58.9	2.033	289	5	58.9	2.033
STATE TOTAL	15700548	15099383	41368	962	73455	532	56.3	4.678	66301	532	62.4	4.223

SOURCE: INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

*INCLUDES FIVE UNLICENSED STATE-OWNED SHORT-TERM CARE HOSPITALS WITH 1998 OPERATING BEDS

TABLE 25

SHORT-TERM FACILITY AND BED DATA
LICENSED BEDS
1986

SPR	1986 POPULATION	NUMBER FACILITIES	LICENSED BEDS*	BED RATIO
1	403328	21	1953	4.842
2	388863	24	2492	6.408
3	228402	17	1284	5.622
4	3589707	91	16616	4.629
5	262853	14	1670	6.353
6	681314	28	3010	4.418
7	334483	25	1786	5.340
8	590593	14	2364	4.003
9	382793	19	1644	4.295
10	143513	14	814	5.672
11	286993	17	1447	5.042
12	785447	19	2387	3.039
13	193105	10	672	3.480
14	327462	18	1406	4.294
15	395482	11	2283	5.773
16	4070462	87	18966	4.659
17	177214	13	1160	6.546
18	1379779	34	6919	5.015
19	172238	4	507	2.944
20	519255	14	2431	4.682
21	657679	14	1845	2.805
22	149916	8	929	6.197
23	313188	12	1251	3.994
24	152392	5	289	1.896
STATE TOTAL	16586461	533	76125	4.590

SOURCE: INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH
JANUARY 31, 1986

*INCLUDES FIVE UNLICENSED STATE-OWNED SHORT-TERM CARE HOSPITALS
WITH 1998 OPERATING BEDS

TABLE 26-A

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY STATE PLANNING REGIONS (SPRs)

Projections are based on upper and lower bound use rates. The upper bound is the 1984 utilization rate, while the lower bound is a trend-predicted 1991 utilization rate.

SPR	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTIMATED BOUNDS	PROJECTED USE RATE	PROJECTED PATIENT DAYS	PROJECTED AVERAGE DAILY CENSUS	PROJECTED BED DEMAND	PROJECTED BED RATIO
1	443,844	60.7	UPPER	1,052	466,803	1,279	2,107	4.7
			LOWER	761	337,580	925	1,524	3.4
2	416,453	61.1	UPPER	1,120	466,630	1,278	2,092	5.0
			LOWER	932	388,124	1,063	1,740	4.2
3	238,588	56.4	UPPER	1,170	279,181	765	1,356	5.7
			LOWER	710	169,490	464	823	3.5
4	4,111,121	62.8	UPPER	941	3,869,907	10,602	16,870	4.1
			LOWER	590	2,426,882	6,649	10,580	2.6
5	291,076	57.3	UPPER	1,311	381,599	1,045	1,824	6.3
			LOWER	748	217,854	597	1,041	3.6
6	802,691	58.3	UPPER	976	783,706	2,147	3,684	4.6
			LOWER	447	358,713	983	1,686	2.1
7	363,863	56.5	UPPER	1,192	433,871	1,189	2,105	5.8
			LOWER	671	244,048	669	1,184	3.3
8	685,891	59.4	UPPER	723	496,176	1,359	2,289	3.3
			LOWER	339	232,678	637	1,074	1.6
9	429,405	56.9	UPPER	842	361,677	991	1,741	4.1
			LOWER	355	152,233	417	733	1.7
10	160,246	56.2	UPPER	1,069	171,363	469	836	5.2
			LOWER	610	97,801	268	477	3.0
11	314,268	60.1	UPPER	1,079	339,169	929	1,546	4.9
			LOWER	702	220,669	605	1,006	3.2
12	947,882	63.9	UPPER	734	695,437	1,905	2,982	3.1
			LOWER	565	535,762	1,468	2,297	2.4

TABLE 26-A - PAGE 2

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY STATE PLANNING REGIONS (SPRs)

SPR	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTIMATED BOUNDS	PROJECTED USE RATE	PROJECTED PATIENT DAYS	PROJECTED AVERAGE DAILY CENSUS	PROJECTED BED DEMAND	PROJECTED BED RATIO
13	220,213	51.3	UPPER	910	200,314	549	1,070	4.9
			LOWER	457	100,696	276	538	2.4
14	382,005	56.6	UPPER	1,155	441,040	1,208	2,134	5.6
			LOWER	503	192,170	526	930	2.4
15	418,439	60.8	UPPER	1,168	488,731	1,339	2,203	5.3
			LOWER	497	207,857	569	937	2.2
16	4,963,082	64.2	UPPER	1,003	4,977,044	13,636	21,241	4.3
			LOWER	491	2,436,424	6,675	10,398	2.1
17	194,073	58.0	UPPER	1,228	238,345	653	1,125	5.8
			LOWER	725	140,609	385	664	3.4
18	1,537,960	64.7	UPPER	927	1,426,166	3,907	6,038	3.9
			LOWER	609	937,370	2,568	3,969	2.6
19	209,230	64.9	UPPER	793	165,953	455	700	3.3
			LOWER	585	122,449	335	517	2.5
20	564,622	62.2	UPPER	1,027	579,703	1,588	2,555	4.5
			LOWER	586	330,952	907	1,459	2.6
21	817,771	61.3	UPPER[1]	654	534,748	1,465	2,391	2.9
			LOWER	665	543,792	1,490	2,431	3.0
22	158,327	61.3	UPPER	1,400	221,649	607	990	6.3
			LOWER	755	119,557	328	534	3.4
23	368,410	58.4	UPPER	655	241,221	661	1,132	3.1
			LOWER	492	181,185	496	850	2.3
24	183,089	59.4	UPPER	765	140,075	384	646	3.5
			LOWER	440	80,645	221	372	2.0
TOTAL[2]								
	19,222,549	61.8	UPPER	962	18,400,511	50,412	81,658	4.3
			LOWER	564	10,775,541	29,522	47,763	2.5

Notes: (1) SPR 21 has a trend-predicted 1991 utilization rate that is actually higher than the 1984 rate, unlike the trend for all other SPRs. This results in the predicted value obtained using the formula for the lower bound being higher than the value obtained for the

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY STATE PLANNING REGIONS (SPRS)

upper bound of the 1991 utilization rate.

(2) Totals for average weighted occupancy with minimum level, for projected use rate, and for projected bed ratio are obtained from data aggregated at the state level, rather than being sums across SPRs of these statistics. Totals for projected patient days, for projected average daily census, and for projected bed demand are obtained from the sums across SPRs of these statistics.

Sources:

(1) 1984 Integrated Facilities File, Texas Department of Health.
(2) Texas Hospital Association Patient Origin Study III, October 1983-September 1984.
(3) TDH Population Data System, Bureau of State Health Planning and Resource Development, Texas Department of Health.

TABLE 26-B

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

Projections are based on upper and lower bound use rates. The upper bound is the 1984 utilization rate, while the lower bound is a trend predicted 1991 utilization rate.

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTIMATED BOUNDS	PROJECTED USE RATE	PROJECTED PATIENT DAYS	PROJECTED AVERAGE DAILY CENSUS	PROJECTED BED DEMAND	PROJECTED BED RATIO
1	58,015	60.5	UPPER	1,023	59,359	163	269	4.6
			LOWER	468	27,170	74	123	2.1
2	20,165	53.7	UPPER	1,193	24,061	66	123	6.1
			LOWER	502	10,128	28	52	2.6
3	89,106	63.1	UPPER	1,015	90,408	248	392	4.4
			LOWER	442	39,393	108	171	1.9
4	487,136	63.4	UPPER	1,058	515,556	1,412	2,229	4.6
			LOWER	604	294,331	806	1,272	2.6
5	141,475	63.8	UPPER	936	132,357	363	568	4.0
			LOWER	568	80,353	220	345	2.4
6	333,135	63.5	UPPER	1,027	341,986	937	1,477	4.4
			LOWER	742	247,315	678	1,068	3.2
7	1,533,285	64.8	UPPER	935	1,433,627	3,928	6,064	4.0
			LOWER	611	936,595	2,566	3,962	2.6
8	4,576,936	63.8	UPPER	968	4,429,065	12,134	19,010	4.2
			LOWER	474	2,167,433	5,938	9,303	2.0
9	8,178	43.4	UPPER	817	6,685	18	42	5.2
			LOWER	680	5,560	15	35	4.3
10	902,183	64.6	UPPER	706	636,763	1,745	2,699	3.0
			LOWER	544	490,560	1,344	2,079	2.3
11	4,915	60.7	UPPER	2,594	12,750	35	58	11.7
			LOWER	1,575	7,740	21	35	7.1
12	31,360	54.3	UPPER	853	26,763	73	135	4.3
			LOWER	487	15,279	42	77	2.5

TABLE 26-B - PAGE 2

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTI-MATED BOUNDS	PROJEC-TED USE RATE	PROJEC-TED PATIENT DAYS	PROJEC-TED AVERAGE DAILY CENSUS	PROJEC-TED BED DEMAND	PROJEC-TED BED RATIO
13	299,629	63.2	UPPER	529	158,431	434	687	2.3
			LOWER	397	119,000	326	516	1.7
14	6,738	47.8	UPPER	1,263	8,507	23	49	7.2
			LOWER	973	6,554	18	38	5.6
15[1]	1,130		UPPER	116	131	0		
			LOWER	49	55	0		
16	17,169	49.5	UPPER	1,376	23,633	65	131	7.6
			LOWER	896	15,376	42	85	5.0
17	85,492	57.6	UPPER	1,419	121,320	332	577	6.8
			LOWER	810	69,262	190	329	3.9
18	116,563	54.7	UPPER	605	70,543	193	353	3.0
			LOWER	304	35,462	97	178	1.5
19	682,104	59.5	UPPER	724	494,116	1,354	2,273	3.3
			LOWER	340	231,712	635	1,066	1.6
20	385,053	61.8	UPPER	1,130	435,123	1,192	1,929	5.0
			LOWER	898	345,703	947	1,532	4.0
21	45,865	53.7	UPPER	1,149	52,688	144	269	5.9
			LOWER	646	29,636	81	151	3.3
22	17,128	43.4	UPPER	968	16,588	45	105	6.1
			LOWER	487	8,339	23	53	3.1
23	22,012	45.6	UPPER	1,071	23,584	65	142	6.4
			LOWER	632	13,913	38	84	3.8
24	148,527	68.0	UPPER	963	143,082	392	577	3.9
			LOWER	542	80,482	220	324	2.2
25	350,649	65.3	UPPER	689	241,495	662	1,013	2.9
			LOWER	700	245,579	673	1,030	2.9
26	12,302	45.6	UPPER	1,347	16,576	45	100	8.1
			LOWER	617	7,587	21	46	3.7

TABLE 26-B - PAGE 3

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTI-MATED BOUNDS	PROJEC-TED USE RATE	PROJEC-TED PATIENT DAYS	PROJEC-TED AVERAGE DAILY CENSUS	PROJEC-TED BED DEMAND	PROJEC-TED BED RATIO
27	37,818	54.2	UPPER	875	33,092	91	167	4.4
			LOWER	500	18,892	52	96	2.5
28	11,145	43.4	UPPER	957	10,661	29	67	6.0
			LOWER	692	7,709	21	49	4.4
29	48,486	61.6	UPPER	1,740	84,362	231	375	7.7
			LOWER	796	38,613	106	172	3.5
30	8,348	45.6	UPPER	1,141	9,527	26	57	6.9
			LOWER	693	5,784	16	35	4.2
31	154,033	57.1	UPPER	1,094	168,535	462	808	5.2
			LOWER	623	95,898	263	460	3.0
32	11,046	66.2	UPPER	1,700	18,779	51	78	7.0
			LOWER	956	10,563	29	44	4.0
33	2,710,954	62.6	UPPER	897	2,433,081	6,666	10,640	3.9
			LOWER	563	1,525,825	4,180	6,673	2.5
34	5,038	54.3	UPPER	1,382	6,963	19	35	7.0
			LOWER	999	5,035	14	25	5.0
35	21,500	53.0	UPPER	1,330	28,594	78	148	6.9
			LOWER	651	13,998	38	72	3.4
36	58,380	53.7	UPPER	782	45,637	125	233	4.0
			LOWER	514	29,996	82	153	2.6
37	14,266	62.5	UPPER	1,154	16,464	45	72	5.1
			LOWER	649	9,261	25	41	2.8
38	34,040	55.2	UPPER	1,128	38,381	105	191	5.6
			LOWER	608	20,703	57	103	3.0
39	3,034	51.2	UPPER	1,822	5,528	15	30	9.7
			LOWER	1,106	3,356	9	18	5.9
40	6,279	43.4	UPPER	1,071	6,726	18	42	6.8
			LOWER	451	2,831	8	18	2.8

TABLE 26-B - PAGE 4

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTI-MATED BOUNDS	PROJEC-TED USE RATE	PROJEC-TED PATIENT DAYS	PROJEC-TED AVERAGE DAILY CENSUS	PROJEC-TED BED DEMAND	PROJEC-TED BED RATIO
41	3,787	43.4	UPPER	561	2,126	6	13	3.5
			LOWER	263	997	3	6	1.7
42	24,318	45.6	UPPER	768	18,667	51	112	4.6
			LOWER	555	13,500	37	81	3.3
43	76,436	59.3	UPPER	1,543	117,932	323	545	7.1
			LOWER	881	67,327	184	311	4.1
44	20,223	51.1	UPPER	1,272	25,730	70	138	6.8
			LOWER	751	15,179	42	81	4.0
45	22,062	45.0	UPPER	1,618	35,691	98	217	9.8
			LOWER	910	20,076	55	122	5.5
46	154,261	64.1	UPPER	764	117,857	323	504	3.3
			LOWER	322	49,607	136	212	1.4
47	30,089	52.2	UPPER	1,330	40,012	110	210	7.0
			LOWER	834	25,092	69	132	4.4
48	20,250	51.4	UPPER	1,290	26,115	72	139	6.9
			LOWER	839	16,991	47	91	4.5
49	124,287	62.4	UPPER	1,469	182,532	500	801	6.4
			LOWER	792	98,457	270	432	3.5
50	22,174	51.0	UPPER	1,365	30,278	83	163	7.3
			LOWER	1,052	23,326	64	125	5.6
51	10,004	43.4	UPPER	1,110	11,101	30	70	7.0
			LOWER	923	9,233	25	58	5.8
52	2,319	43.4	UPPER	1,594	3,697	10	23	10.1
			LOWER	968	2,244	6	14	6.1
53	10,140	45.6	UPPER	1,081	10,962	30	66	6.5
			LOWER	617	6,258	17	38	3.7
54	23,940	63.0	UPPER	1,527	36,545	100	159	6.6
			LOWER	993	23,777	65	103	4.3

TABLE 26-B - PAGE 5

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTI-MATED BOUNDS	PROJEC-TED USE RATE	PROJEC-TED PATIENT DAYS	PROJEC-TED AVERAGE DAILY CENSUS	PROJEC-TED BED DEMAND	PROJEC-TED BED RATIO
55	230,552	69.4	UPPER	1,476	340,258	932	1,344	5.8
			LOWER	722	166,567	456	658	2.9
56	18,400	50.6	UPPER	909	16,722	46	91	4.9
			LOWER	597	10,991	30	59	3.2
57	97,398	62.9	UPPER	1,202	117,056	321	510	5.2
			LOWER	709	69,056	189	301	3.1
58	18,672	64.4	UPPER	1,151	21,482	59	91	4.9
			LOWER	679	12,673	35	54	2.9
59	28,439	61.1	UPPER	1,367	38,883	107	174	6.1
			LOWER	989	28,119	77	126	4.4
60	179,425	55.4	UPPER	924	165,724	454	820	4.6
			LOWER	423	75,854	208	375	2.1
61	17,890	63.1	UPPER	1,442	25,790	71	112	6.3
			LOWER	725	12,964	36	56	3.1
62	44,128	55.0	UPPER	984	43,417	119	216	4.9
			LOWER	818	36,112	99	180	4.1
63	10,118	44.2	UPPER	1,468	14,856	41	92	9.1
			LOWER	1,103	11,159	31	69	6.8
64	6,380	43.4	UPPER	1,434	9,149	25	58	9.0
			LOWER	1,037	6,617	18	42	6.5
65	6,641	47.4	UPPER	2,260	15,009	41	87	13.1
			LOWER	1,372	9,112	25	53	7.9
66	418,439	60.8	UPPER	1,168	488,731	1,339	2,203	5.3
			LOWER	497	207,857	569	937	2.2
67	63,851	53.7	UPPER	584	37,295	102	190	3.0
			LOWER	267	17,070	47	87	1.4
68	10,209	43.4	UPPER	816	8,329	23	53	5.1
			LOWER	590	6,024	17	38	3.7

TABLE 26-B - PAGE 6

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTI-MATED BOUNDS	PROJEC-TED USE RATE	PROJEC-TED PATIENT DAYS	PROJEC-TED AVERAGE DAILY CENSUS	PROJEC-TED BED DEMAND	PROJEC-TED BED RATIO
69	333,893	62.9	UPPER	989	330,100	904	1,439	4.3
			LOWER	453	151,092	414	659	2.0
70	467,122	57.8	UPPER[2]	627	292,734	802	1,387	3.0
			LOWER	637	297,685	816	1,411	3.0
71	29,408	45.3	UPPER	1,577	46,382	127	281	9.5
			LOWER	1,026	30,177	83	183	6.2
72	1,261,517	64.0	UPPER	1,007	1,270,250	3,480	5,440	4.3
			LOWER	631	796,595	2,182	3,411	2.7
73	32,438	68.9	UPPER	1,098	35,629	98	142	4.4
			LOWER	627	20,340	56	81	2.5
74	30,277	45.2	UPPER	1,077	32,621	89	198	6.5
			LOWER	469	14,214	39	86	2.8
75	29,520	51.5	UPPER	960	28,335	78	151	5.1
			LOWER	404	11,927	33	63	2.1
76	8,441	43.4	UPPER	1,623	13,702	38	86	10.2
			LOWER	986	8,319	23	52	6.2
77	14,372	43.7	UPPER	1,276	18,343	50	115	8.0
			LOWER	753	10,821	30	68	4.7
78	40,512	48.2	UPPER	1,375	55,711	153	317	7.8
			LOWER	599	24,274	67	138	3.4
79	164,230	64.6	UPPER	848	139,319	382	590	3.6
			LOWER	626	102,798	282	436	2.7
80	20,402	47.9	UPPER	1,565	31,928	87	183	8.9
			LOWER	880	17,959	49	103	5.0
81	35,592	53.7	UPPER	717	25,531	70	130	3.7
			LOWER	410	14,576	40	74	2.1
82	4,455	43.4	UPPER	1,069	4,763	13	30	6.7
			LOWER	610	2,718	7	17	3.8

TABLE 26-B - PAGE 7

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTI-MATED BOUNDS	PROJEC-TED USE RATE	PROJEC-TED PATIENT DAYS	PROJEC-TED AVERAGE DAILY CENSUS	PROJEC-TED BED DEMAND	PROJEC-TED BED RATIO
83	3,202	43.4	UPPER	1,659	5,312	15	33	10.5
			LOWER	1,010	3,235	9	20	6.4
84	52,660	57.0	UPPER	551	29,027	80	140	2.6
			LOWER	317	16,711	46	80	1.5
85	5,233	43.4	UPPER	1,709	8,946	25	56	10.8
			LOWER	962	5,032	14	32	6.1
86	17,048	44.6	UPPER	771	13,141	36	81	4.7
			LOWER	579	9,871	27	61	3.6
87	21,396	51.4	UPPER	1,490	31,886	87	170	8.0
			LOWER	879	18,811	52	100	4.7
88	16,787	43.4	UPPER	1,064	17,858	49	113	6.7
			LOWER	820	13,757	38	87	5.2
89	11,768	43.4	UPPER	2,070	24,362	67	154	13.1
			LOWER	1,041	12,246	34	77	6.6
90	23,564	44.9	UPPER	1,285	30,275	83	185	7.8
			LOWER	836	19,697	54	120	5.1
91	9,425	45.3	UPPER	897	8,452	23	51	5.4
			LOWER	512	4,824	13	29	3.1
92	199,937	69.2	UPPER	893	178,572	489	707	3.5
			LOWER	581	116,182	318	460	2.3
93	13,428	45.6	UPPER	1,054	14,149	39	85	6.3
			LOWER	530	7,113	19	43	3.2
94	14,068	43.4	UPPER	695	9,781	27	62	4.4
			LOWER	318	4,477	12	28	2.0
95	5,009	43.4	UPPER	1,149	5,754	16	36	7.2
			LOWER	483	2,422	7	15	3.0
96	4,381	43.4	UPPER	1,140	4,993	14	31	7.2
			LOWER	650	2,850	8	18	4.1

TABLE 26-B - PAGE 8

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTI-MATED BOUNDS	PROJEC-TED USE RATE	PROJEC-TED PATIENT DAYS	PROJEC-TED AVERAGE DAILY CENSUS	PROJEC-TED BED DEMAND	PROJEC-TED BED RATIO
97	55,860	50.8	UPPER	1,023	57,137	157	308	5.5
			LOWER	501	27,970	77	151	2.7
98	59,139	77.1	UPPER	653	38,598	106	137	2.3
			LOWER	376	22,222	61	79	1.3
99	2,336	43.4	UPPER	1,077	2,516	7	16	6.8
			LOWER	615	1,436	4	9	3.9
100	110,367	71.2	UPPER	756	83,405	229	321	2.9
			LOWER	318	35,106	96	135	1.2
101	28,425	44.4	UPPER	1,176	33,433	92	206	7.3
			LOWER	883	25,112	69	155	5.5
102	5,345	47.4	UPPER	1,640	8,768	24	51	9.5
			LOWER	1,232	6,586	18	38	7.1
103	9,582	57.8	UPPER	1,377	13,199	36	63	6.5
			LOWER	775	7,424	20	35	3.7
104	20,321	48.3	UPPER	1,354	27,523	75	156	7.7
			LOWER	822	16,709	46	95	4.7
105	18,844	51.0	UPPER	1,268	23,895	65	128	6.8
			LOWER	724	13,642	37	73	3.9
106	83,741	58.7	UPPER	1,176	98,455	270	460	5.5
			LOWER	512	42,899	118	200	2.4
107	42,420	53.7	UPPER	907	38,464	105	196	4.6
			LOWER	569	24,121	66	123	2.9
108	16,049	43.4	UPPER	963	15,461	42	97	6.1
			LOWER	420	6,737	18	42	2.6
109	19,994	45.6	UPPER	1,184	23,679	65	142	7.1
			LOWER	666	13,319	36	80	4.0
110	20,642	67.6	UPPER	1,326	27,376	75	111	5.4
			LOWER	832	17,168	47	70	3.4

TABLE 26-B PAGE 9

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTI-MATED BOUNDS	PROJEC-TED USE RATE	PROJEC-TED PATIENT DAYS	PROJEC-TED AVERAGE DAILY CENSUS	PROJEC-TED BED DEMAND	PROJEC-TED BED RATIO
111	30,278	45.6	UPPER	741	22,450	62	135	4.5
			LOWER	339	10,276	28	62	2.0
112	13,617	43.4	UPPER	623	8,481	23	53	3.9
			LOWER	450	6,133	17	39	2.8
113	17,441	43.4	UPPER	834	14,541	40	92	5.3
			LOWER	351	6,120	17	39	2.2
114	43,496	85.6	UPPER	1,187	51,621	141	165	3.8
			LOWER	517	22,492	62	72	1.7
115[1]	7,084		UPPER	805	5,704	16		
			LOWER	369	2,611	7		
116	15,930	45.6	UPPER	777	12,377	34	74	4.7
			LOWER	327	5,209	14	31	2.0
117	9,719	43.4	UPPER	1,229	11,942	33	75	7.7
			LOWER	701	6,818	19	43	4.4
118	15,809	48.7	UPPER	1,353	21,388	59	120	7.6
			LOWER	680	10,752	29	61	3.8
119	55,289	51.8	UPPER	947	52,373	143	277	5.0
			LOWER	434	23,972	66	127	2.3
120	11,104	43.4	UPPER	1,448	16,079	44	101	9.1
			LOWER	631	7,006	19	44	4.0
121	10,171	43.4	UPPER	1,563	15,902	44	100	9.9
			LOWER	681	6,929	19	44	4.3
122	7,845	43.4	UPPER	1,225	9,614	26	61	7.7
			LOWER	920	7,221	20	46	5.8
123	23,465	45.6	UPPER	1,255	29,453	81	177	7.5
			LOWER	706	16,567	45	100	4.2
124	5,625	43.4	UPPER	1,251	7,037	19	44	7.9
			LOWER	704	3,958	11	25	4.4

TABLE 26-B PAGE 10

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTI-MATED BOUNDS	PROJEC-TED USE RATE	PROJEC-TED PATIENT DAYS	PROJEC-TED AVERAGE DAILY CENSUS	PROJEC-TED BED DEMAND	PROJEC-TED BED RATIO
125	7,280	50.8	UPPER	1,403	10,210	28	55	7.6
			LOWER	880	6,403	18	35	4.7
126	45,000	67.8	UPPER	578	26,016	71	105	2.3
			LOWER	427	19,196	53	78	1.7
127	13,302	45.6	UPPER	1,396	18,566	51	112	8.4
			LOWER	785	10,443	29	63	4.7
128[1]	1,565		UPPER	655	1,025	3		
			LOWER	276	432	1		
129	2,196	43.4	UPPER	2,599	5,707	16	36	16.4
			LOWER	1,462	3,210	9	20	9.2
130	29,908	53.7	UPPER	1,237	37,007	101	189	6.3
			LOWER	706	21,127	58	108	3.6
131	67,359	63.0	UPPER	1,149	77,377	212	336	5.0
			LOWER	549	36,994	101	161	2.4
132	23,145	63.9	UPPER	1,306	30,233	83	130	5.6
			LOWER	569	13,173	36	57	2.4
133	4,799	43.4	UPPER	1,348	6,471	18	41	8.5
			LOWER	568	2,724	7	17	3.6
134	15,821	43.4	UPPER	849	13,431	37	85	5.4
			LOWER	357	5,653	15	36	2.3
135	27,627	45.6	UPPER	943	26,058	71	157	5.7
			LOWER	474	13,099	36	79	2.8
136	45,279	64.5	UPPER	1,154	52,247	143	222	4.9
			LOWER	565	25,577	70	109	2.4
137	8,809	55.3	UPPER	2,202	19,399	53	96	10.9
			LOWER	1,593	14,029	38	69	7.9
138	17,528	45.6	UPPER	1,344	23,556	65	141	8.1
			LOWER	816	14,301	39	86	4.9

TABLE 26-B - PAGE 11

1991 BED PROJECTIONS FOR SHORT TERM HOSPITALS
BY ADMISSION PATTERN AREAS (APAs)

APA	PROJECTED POPULATION	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL	ESTIMATED BOUNDS	PROJECTED USE RATE	PROJECTED PATIENT DAYS	PROJECTED AVERAGE DAILY CENSUS	PROJECTED BED DEMAND	PROJECTED BED RATIO
139	12,925	45.6	UPPER	945	12,215	33	73	5.7
			LOWER	398	5,142	14	31	2.4
140	38,219	56.5	UPPER	1,180	45,111	124	219	5.7
			LOWER	740	28,290	78	137	3.6
141	10,630	43.4	UPPER	1,169	12,426	34	78	7.4
			LOWER	972	10,336	28	65	6.1
142	25,566	52.1	UPPER	1,468	37,531	103	197	7.7
			LOWER	891	22,785	62	120	4.7
143[1]	119		UPPER	0	0	0		
			LOWER	0	0	0		
TOTALS[3]								
	19,222,549	61.8	UPPER	962	18,400,511	50,412	81,658	4.3
			LOWER	564	10,775,541	29,522	47,763	2.5

Notes: (1) APAs 15, 115, 128 and 143 do not show occupancy, projected bed bed ratio because there are no licensed short term care facilities in these areas.
(2) APA 70 has a trend-predicted 1991 utilization rate that is actually higher than the 1984 rate, unlike the trend for all other SPRs. This results in the predicted value obtained using the formula for the lower bound being higher than the value obtained for the upper bound of the 1991 utilization rate.
(3) Totals for average weighted occupancy with minimum level, for projected use rate, and for projected bed ratio are obtained from data aggregated at the state level, rather than being sums across APAs of these statistics. Totals for projected patient days, for projected daily census, and for projected bed demand are obtained from the sums across SPRs, and are presented instead because they are more reliable.

Sources:
(1) 1984 Integrated Facilities File, Texas Department of Health.
(2) Texas Hospital Association Patient Origin Study III, October 1983-September 1984.
(3) TDH Population Data System, Bureau of State Health Planning and Resource Development, Texas Department of Health.

TABLE 27-A

HOSPITAL BED GOALS FOR 1991
BY STATE PLANNING REGIONS (SPRs)

	1986*			1991			
SPR	LICENSED BEDS	BEDS UNDER CON-STRUC-TION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
1	1,953	0	0	UPPER	2,107	154	106
				LOWER	1,524	(429)	
2	2,492	173	58	UPPER	2,092	(631)	284
				LOWER	1,740	(983)	
3	1,284	49	0	UPPER	1,356	23	206
				LOWER	823	(510)	
4	16,616	731	63	UPPER	16,870	(540)	1,579
				UPPER	10,580	(6830)	
5	1,670	0	0	UPPER	1,824	154	60
				LOWER	1,041	(629)	
6	3,010	0	29	UPPER	3,684	645	280
				LOWER	1,686	(1353)	
7	1,786	0	0	UPPER	2,105	319	155
				LOWER	1,184	(602)	
8	2,364	6	4	UPPER	2,289	(85)	194
				LOWER	1,074	(1300)	
9	1,644	1	0	UPPER	1,741	96	232
				LOWER	773	(872)	
10	814	0	0	UPPER	836	22	47
				LOWER	477	(337)	
11	1,447	0	0	UPPER	1,546	99	202
				LOWER	1,006	(441)	
12	2,387	166	0	UPPER	2,982	429	72
				LOWER	2,297	(256)	
13	672	0	0	UPPER	1,070	398	3
				LOWER	538	(134)	
14	1,406	0	0	UPPER	2,134	728	212
				LOWER	930	(476)	
15	2,283	0	28	UPPER	2,203	(108)	47
				LOWER	937	(1374)	

TABLE 27-A - PAGE 2

HOSPITAL BED GOALS FOR 1991
BY STATE PLANNING REGIONS (SPRs)

	1986*			1991			
SPR	LICENSED BEDS	BEDS UNDER CONSTRUCTION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
16	18,966	170	0	UPPER	21,241	2105	1,826
				LOWER	10,398	(8738)	
17	1,160	0	0	UPPER	1,125	(35)	329
				LOWER	664	(496)	
18	6,919	0	9	UPPER	6,038	(890)	982
				LOWER	3,969	(2959)	
19	507	46	0	UPPER	700	147	86
				LOWER	517	(36)	
20	2,431	0	23	UPPER	2,555	101	414
				LOWER	1,459	(995)	
21	1,845	52	101	UPPER	2,391	393	36
				LOWER	2,326	328	
22	929	15	0	UPPER	990	46	91
				LOWER	534	(410)	
23	1,251	0	0	UPPER	1,132	(119)	176
				LOWER	850	(401)	
24	289	0	0	UPPER	646	357	25
				LOWER	372	83	
TOTALS[2]:							
	76,125	1,409	315	UPPER	81,658	3,809	7,644
				LOWER	47,763	(30,086)	

* January 31,1986

SOURCES: (1) 1984 Integrated Facilities File, Texas Department of Health
(2) 1983-1984 Patient Origin Study III, Texas Hospital Association
(3) TDH Population Data System, Bureau of State Health Planning and Resource Development, Texas Department of Health

NOTES: (1) Licensed bed count includes 1998 beds in five unlicensed state-owned facilities which provide short-term hospital care.
(2) The sum of the SPR projections do not add up to the totals shown because of rounding error.

TABLE 27-B

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

APA[1]	1986* LICENSED BEDS	1986* BEDS UNDER CONSTRUCTION	1986* BEDS IN PLAN REVIEW	1991 BOUNDS	1991 TOTAL PROJECTED BEDS	1991 ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
1	124			UPPER	269	145	29
				LOWER	123	(1)	
2	114			UPPER	123	9	74
				LOWER	52	(62)	
3	399			UPPER	392	(7)	167
				LOWER	171	(228)	
4	2,150		23	UPPER	2,229	56	368
				LOWER	1,272	(901)	
5	671	55		UPPER	568	(158)	131
				LOWER	345	(381)	
6	1,508			UPPER	1,477	(31)	61
				LOWER	1,068	(440)	
7	6,853		9	UPPER	6,064	(798)	1,007
				LOWER	3,962	(2,900)	
8	16,571	80		UPPER	19,010	2,359	1,766
				LOWER	9,303	(7,348)	
9	31			UPPER	42	11	0
				LOWER	35	4	
10	2,295	166		UPPER	2,699	238	54
				LOWER	2,079	(382)	
11	49			UPPER	58	9	0
				LOWER	35	(14)	
12	73			UPPER	135	62	0
				LOWER	77	2	
13	910			UPPER	687	(223)	130
				LOWER	516	(394)	
16	104			UPPER	131	27	0
				LOWER	85	(19)	

TABLE 27-B - PAGE 2

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

APA[1]	1986* LICENSED BEDS	1986* BEDS UNDER CONSTRUCTION	1986* BEDS IN PLAN REVIEW	1991 BOUNDS	1991 TOTAL PROJECTED BEDS	1991 ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
17	621			UPPER	577	(44)	0
				LOWER	329	(292)	
18	337			UPPER	353	16	0
				LOWER	178	(159)	
19	2,339	6	4	UPPER	2,273	(76)	194
				LOWER	1,066	(1,283)	
20	2,291	173	58	UPPER	1,929	(593)	233
				LOWER	1,532	(990)	
21	218			UPPER	269	51	0
				LOWER	151	(67)	
22	37			UPPER	105	68	0
				LOWER	53	16	
23	75			UPPER	142	67	73
				LOWER	84	9	
24	685			UPPER	577	(108)	90
				LOWER	324	(361)	
25	856		101	UPPER	1,013	56	30
				LOWER	1,030	73	
26	49			UPPER	100	51	18
				LOWER	46	(3)	
27	171			UPPER	167	(4)	51
				LOWER	96	(75)	
28	46			UPPER	67	21	0
				LOWER	49	3	
29	254			UPPER	375	121	70
				LOWER	172	(82)	
30	75			UPPER	57	(18)	0
				LOWER	35	(40)	

TABLE 27-B - PAGE 3

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

	1986*				1991		
APA[1]	LICENSED BEDS	BEDS UNDER CONSTRUCTION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
31	753			UPPER	808	55	35
				LOWER	460	(293)	
32	46			UPPER	78	32	3
				LOWER	44	(2)	
33	10,643	335	14	UPPER	10,640	(352)	1,026
				LOWER	6,673	(4,319)	
34	25			UPPER	35	10	28
				LOWER	25	0	
35	123	4		UPPER	148	21	0
				LOWER	72	(55)	
36	116			UPPER	233	117	0
				LOWER	153	37	
37	65			UPPER	72	7	0
				LOWER	41	(24)	
38	132			UPPER	191	59	0
				LOWER	103	(29)	
40	28			UPPER	42	14	27
				LOWER	18	(10)	
41	25			UPPER	13	(12)	0
				LOWER	6	(19)	
42	77			UPPER	112	35	15
				LOWER	81	4	
43	487			UPPER	545	58	1
				LOWER	311	(176)	
44	94			UPPER	138	44	1
				LOWER	81	(13)	
45	190			UPPER	217	27	0
				LOWER	122	(68)	

TABLE 27-B - PAGE 4

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

	1986*			1991			
APA[1]	LICENSED BEDS	BEDS UNDER CONSTRUCTION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
46	490	1		UPPER	504	13	4
				LOWER	212	(279)	
47	134			UPPER	210	76	0
				LOWER	132	(2)	
48	168			UPPER	139	(29)	18
				LOWER	91	(77)	
49	797	15		UPPER	801	(11)	91
				LOWER	432	(380)	
50	60			UPPER	163	103	0
				LOWER	125	65	
51	60			UPPER	70	10	20
				LOWER	58	(2)	
52	24			UPPER	23	(1)	8
				LOWER	14	(10)	
53	51			UPPER	66	15	0
				LOWER	38	(13)	
54	109			UPPER	159	50	63
				LOWER	103	(6)	
55	1,754	86		UPPER	1,344	(496)	60
				LOWER	658	(1,182)	
56	61			UPPER	91	30	0
				LOWER	59	(2)	
57	755			UPPER	510	(245)	216
				LOWER	301	(454)	
58	42			UPPER	91	49	0
				LOWER	54	12	
59	126			UPPER	174	48	0
				LOWER	126	0	

TABLE 27-B - PAGE 5

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

	1986*			1991			
APA[1]	LICENSED BEDS	BEDS UNDER CONSTRUCTION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
60	637			UPPER	820	183	26
				LOWER	375	(262)	
61	57			UPPER	112	55	0
				LOWER	56	(1)	
62	218			UPPER	216	(2)	39
				LOWER	180	(38)	
63	75			UPPER	92	17	0
				LOWER	69	(6)	
64	28			UPPER	58	30	0
				LOWER	42	14	
65	82			UPPER	87	5	0
				LOWER	53	(29)	
66	2,283		28	UPPER	2,203	(108)	47
				LOWER	937	(1,374)	
67	145			UPPER	190	45	0
				LOWER	87	(58)	
68	26			UPPER	53	27	0
				LOWER	38	12	
69	1,463		29	UPPER	1,439	(53)	48
				LOWER	659	(833)	
70	989	52		UPPER[2]	1,387	346	6
				LOWER	1,411	370	
71	194			UPPER	281	87	0
				LOWER	183	(11)	
72	5,406	396	49	UPPER	5,440	(411)	534
				LOWER	3,411	(2,440)	
73	100			UPPER	142	42	0
				LOWER	81	(19)	

TABLE 27-B - PAGE 6

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

	1986*			1991			
APA[1]	LICENSED BEDS	BEDS UNDER CON-STRUC-TION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
74	117			UPPER	198	81	14
				LOWER	86	(31)	
75	201			UPPER	151	(50)	49
				LOWER	63	(138)	
76	49			UPPER	86	37	0
				LOWER	52	3	
77	85			UPPER	115	30	19
				LOWER	68	(17)	
78	201			UPPER	317	116	4
				LOWER	138	(63)	
79	463	46		UPPER	590	81	86
				LOWER	436	(73)	
80	144			UPPER	183	39	8
				LOWER	103	(41)	
81	136			UPPER	130	(6)	0
				LOWER	74	(62)	
82	18			UPPER	30	12	0
				LOWER	17	(1)	
83	25			UPPER	33	8	0
				LOWER	20	(5)	
84	93			UPPER	140	47	0
				LOWER	80	(13)	
85	28			UPPER	56	28	10
				LOWER	32	4	
86	36			UPPER	81	45	29
				LOWER	61	25	
87	109			UPPER	170	61	20
				LOWER	100	(9)	

TABLE 27-B - PAGE 7

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

	1986*			1991			
APA[1]	LICENSED BEDS	BEDS UNDER CONSTRUCTION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
88	32			UPPER	113	81	18
				LOWER	87	55	
89	36			UPPER	154	118	0
				LOWER	77	41	
90	115			UPPER	185	70	41
				LOWER	120	5	
91	50			UPPER	51	1	0
				LOWER	29	(21)	
92	757			UPPER	707	(50)	80
				LOWER	460	(297)	
93	52			UPPER	85	33	0
				LOWER	43	(9)	
94	37			UPPER	62	25	0
				LOWER	28	(9)	
95	26			UPPER	36	10	3
				LOWER	15	(11)	
96	18			UPPER	31	13	12
				LOWER	18	0	
97	153			UPPER	308	155	0
				LOWER	151	(2)	
98	77			UPPER	137	60	0
				LOWER	79	2	
99	30			UPPER	16	(14)	0
				LOWER	9	(21)	
100	381			UPPER	321	(60)	0
				LOWER	135	(246)	
101	168			UPPER	206	38	1
				LOWER	155	(13)	

TABLE 27-B - PAGE 8

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

	1986*			1991			
APA[1]	LICENSED BEDS	BEDS UNDER CONSTRUCTION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
102	29			UPPER	51	22	0
				LOWER	38	9	
103	39			UPPER	63	24	30
				LOWER	35	(4)	
104	96	-6		UPPER	156	66	0
				LOWER	95	(5)	
105	75			UPPER	128	53	8
				LOWER	73	(2)	
106	433			UPPER	460	27	0
				LOWER	200	(233)	
107	198			UPPER	196	(2)	0
				LOWER	123	(75)	
108	48			UPPER	97	49	0
				LOWER	42	(6)	
109	85			UPPER	142	57	0
				LOWER	80	(5)	
110	120			UPPER	111	(9)	0
				LOWER	70	(50)	
111	91			UPPER	135	44	65
				LOWER	62	(29)	
112	34			UPPER	53	19	2
				LOWER	39	5	
113	51			UPPER	92	41	22
				LOWER	39	(12)	
114	45			UPPER	165	120	8
				LOWER	72	27	
116	62			UPPER	74	12	0
				LOWER	31	(31)	

TABLE 27-B - PAGE 9

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

APA[1]	1986* LICENSED BEDS	1986* BEDS UNDER CONSTRUCTION	1986* BEDS IN PLAN REVIEW	1991 BOUNDS	1991 TOTAL PROJECTED BEDS	1991 ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
117	49			UPPER	75	26	19
				LOWER	43	(6)	
118	33			UPPER	120	87	0
				LOWER	61	28	
119	210			UPPER	277	67	24
				LOWER	127	(83)	
120	36			UPPER	101	65	0
				LOWER	44	8	
121	48			UPPER	100	52	19
				LOWER	44	(4)	
122	33			UPPER	61	28	16
				LOWER	46	13	
123	99			UPPER	177	78	5
				LOWER	100	1	
124	24			UPPER	44	20	18
				LOWER	25	1	
125	26			UPPER	55	29	0
				LOWER	35	9	
126	44			UPPER	105	61	0
				LOWER	78	34	
127	54			UPPER	112	58	4
				LOWER	63	9	
129	30			UPPER	36	6	14
				LOWER	20	(10)	
130	165			UPPER	189	24	0
				LOWER	108	(57)	
131	174			UPPER	336	162	0
				LOWER	161	(13)	

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

	1986*				1991		
APA[1]	LICENSED BEDS	BEDS UNDER CONSTRUCTION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
132	49			UPPER	130	81	0
				LOWER	57	8	
133	36			UPPER	41	5	23
				LOWER	17	(19)	
134	49			UPPER	85	36	0
				LOWER	36	(13)	
135	120			UPPER	157	37	3
				LOWER	79	(41)	
136	221			UPPER	222	1	0
				LOWER	109	(112)	
137	83			UPPER	96	13	0
				LOWER	69	(14)	
138	100			UPPER	141	41	0
				LOWER	86	(14)	
139	85			UPPER	73	(12)	18
				LOWER	31	(54)	
140	89			UPPER	219	130	19
				LOWER	137	48	
141	43			UPPER	78	35	4
				LOWER	65	22	
142	138			UPPER	197	59	67
				LOWER	120	(18)	
TOTALS[3]:							
	76,125	1,409	315	UPPER	81,658	3,809	7,644
				LOWER	47,763	(30,086)	

* January 31, 1986

Notes: (1) APAs 15, 115, 128 and 143 do not show occupancy, projected bed ratio because there are no licensed short term care facilities in these areas. APAs 14 and 39 do not show occupancy, projected bed ratios because short term care facilities in these areas were closed by 1986.

HOSPITAL BED GOALS FOR 1991
BY ADMISSION PATTERN AREAS (APAs)

(2) APA 70 has a trend-predicted 1991 utilization rate that is actually higher than the 1984 rate, unlike the trend for all other SPRs. This results in the predicted value obtained using the formula for the lower bound being higher than the value obtained for the upper bound of the 1991 utilization rate.
(3) Totals for average weighted occupancy with minimum level, for projected use rate, and for projected bed ratio are obtained from data aggregated at the state level, rather than being sums across APAs of these statistics. Totals for projected patient days, for projected daily census, and for projected bed demand are obtained from the sums across SPRs, and are presented instead because they are more reliable.

Sources:
(1) 1984 Integrated Facilities File, Texas Department of Health.
(2) Texas Hospital Association Patient Origin Study III, October 1983-September 1984.
(3) TDH Population Data System, Bureau of State Health Planning and Resource Development, Texas Department of Health.

TABLE 28

CONFORMING AND NON-CONFORMING BEDS IN SHORT TERM CARE FACILITIES IN TEXAS IN 1986*

STATE PLANNING REGION	NUMBER OF CONFORMING BEDS	NUMBER OF NON-CONFORMING BEDS		NUMBER OF NON-CONFORMING BEDS IN EACH OF THREE TYPES OF HOSPITALS		
		TOTAL	IN RURAL HOSPITALS	JCAH APPROVED	MEDICARE CERTIFIED	NOT JCAH APPD NOR MEDICARE CERTIFIED
1	1,929	106	62	64	106	0
2	2,206	284	102	191	284	0
3	1,211	206	75	131	206	0
4	14,411	1,579	23	1,435	1,545	34
5	1,631	60	60	14	22	38
6	2,843	280	254	208	280	0
7	1,833	155	115	53	155	0
8	2,198	194	0	186	194	0
9	1,402	232	228	150	232	0
10	790	47	47	0	47	0
11	1,303	202	122	139	202	0
12	2,407	72	72	40	72	0
13	701	3	3	3	3	0
14	1,267	212	212	167	212	0
15	2,305	47	0	47	47	0
16	17,979	1,826	0	1,678	1,723	72
17	904	329	113	309	329	0
18	5,793	982	171	889	960	22
19	401	86	0	86	86	0
20	1,957	414	75	387	414	0
21	1,926	36	0	30	30	6
22	797	91	6	28	91	0
23	1,108	176	46	159	176	0
24	292	25	25	0	25	0
TOTAL	69,594	7,644	1,811	6,394	7,441	172

SOURCE: 1986 INTEGRATED FACILITIES FILE, TEXAS DEPARTMENT OF HEALTH

NOTES: *AS OF JANUARY 31, 1986

NURSING HOME BED PROJECTIONS

Introduction

The Texas Department of Health as the SHPDA has been charged with responsibility for developing a methodology to determine the number of nursing home beds that will be required in Texas in future years.

In 1984, there were some 1000 nursing and custodial homes with a total of 101,627 licensed beds in Texas. These facilities provided 29.6 million days of care with an average daily census of 81,020. The bed to population ratio was 66.5 per 1000 persons age 65 or older. In 1986, the number of facilities is 1,004, and the bed to population ratio is 63.4 per 1000 population 65 or over.

Methodology

The nursing home bed projection methodology developed by the SHPDA and adopted by the SHCC is virtually the same as that used in projecting bed requirements for short term care hospitals. The application of this methodology involves four basic steps. First, the predicted 1991 use rates are determined; i.e., the number of patient days generated for every 1,000 persons in the population in one year is determined. These use rates are then applied to population estimates for the projection year to determine the number of patient days that would be generated in that year. The projected patient days are then divided by 365 to provide a projected average daily census. Finally, the average daily census is divided by desired occupancy rate to give an estimate of the number of beds that will be needed.

The methodology differs in two ways from that used for the previous 1985 SHP. Upper and lower bounds to the predicted 1991 use rates are determined. This was done because of the drop in the utilization rate, of about 3.2% yearly, from 1981 to 1984. The upper bound is in fact the 1984 utilization rate. The lower bound is predicted from the amount of change observed from 1982 to 1984, for each SPR. The second way that the present methodology differs from the previous SHP is that a desired level of occupancy is based on setting a minimum of 90% and a maximum of 95% occupancy for every nursing/custodial home. This results in a more conservative estimate of beds required in 1991, because the 1984 weighted average occupancy is 81.6%. By setting a 90% minimum level, those nursing/custodial homes that average less than 90% occupancy are regarded as having 90% for the purpose of the 1991 projections. Because the desired occupancy is higher than the actual occupancy, fewer beds will be projected as required in 1991.

An example. In this example, an estimate of the number of nursing home beds is projected for 1991. Separate use rates are calculated for each of three age groups to increase the accuracy of the projections. Data from only one county is included in the calculations. While this example is for one county and the methodology calculates patient days at that level, projections are presented at the state planning region level in the SHP.

Step One -- Calculation of Use Rates:

Upper and lower bounds of nursing home use rates for 1991 are determined for each of three age groups, below 65 years, 65 to 74, and 75-plus. The upper bound use rates are based on 1984 data. The lower bound use rates are trend predicted, based on the change in utilization rates from 1982 to 1984. In this example, only upper bounds are calculated. The lower bounds are derived from the upper bounds by multiplying the 1984 use rates by the proportion that 1991 use rates are predicted to be, if the 1982-1984 decrease in the utilization rate continues for seven more years.

In this example, county 1 generated 9,211 nursing home patient days in 1984 in the 0-64 years age group, 27,492 patient days in the 65-74 age group, and 123,791 patient days in the 75-plus age group. The current population counts for these three age groups are 34,498 (below 65), 3,495 (65-74), and 2,497 (75-plus) persons. The three use rates, measured in terms of patient days per 1000 persons in each age group in the population, are calculated as follows.

Using the upper bound use rates as an example:

Under 65 group: $\frac{9,211}{34,498} \times 1000 = 267$ patient days per 1000 of the under 65 population

65 to 74 group: $\frac{27,492}{3,495} \times 1000 = 7866$ patient days per 1000 of the 65 to 74 population

75-plus group: $\frac{123,791}{2,497} \times 1000 = 49,576$ patient days per 1000 of the 75-plus population

Step Two -- Calculation of Patient Days:

Nursing home patient days are projected for 1991, by applying the 1991 use rates to population estimates for 1991. The 1991 estimated populations of the three age groups in County 1 are 51,285 for the under 65 group, 3,590 for the 65 to 74 group, and 3,140 for the 75-plus group. The number of patient days projected for 1991 are calculated below:

Under 65 group:

(267 patient days/1000) x 51,285 = 13,693 patient days

65 to 74 group:

(7866 patient days/1000) x 3,590 = 28,239 patient days

75-plus group:

(49,576 patient days/1000) x 3,140 = $\frac{155,669 \text{ patient days}}{197,601 \text{ total patient days projected for 1991}}$

Step Three -- Calculation of Average Daily Census:

The projected average daily census of nursing homes in 1991 is obtained by dividing the total number of patient days by 365.

197,601 patient days / 365 = 541 average daily census projected for 1991

Step Four -- Calculation of Estimated Beds Needed:

The estimate of the number of nursing home beds needed in 1991 is calculated by dividing the average daily census by the desired occupancy rate. If a 90% occupancy rate is chosen, the number of beds projected to be needed in 1991 is calculated as follows:

541 average daily census / .90 = 602 beds needed in 1991

Rationale for the use of upper and lower bounds for the 1991 utilization rate:

Upper and lower bounds were calculated because of the decrease in the utilization rate. There has been an observed decline in the utilization rate since at least 1979. As depicted in Figure 12 on the following page, utilization decreased at an average of 3.2% yearly from 1981 to 1984. The decrease appears to be due to several factors: the tightening of patient eligibility requirements for increasingly limited Medicaid funds; the discontinuance of funds for new patients at the ICF-II (custodial care) level; the increase in personal care beds; and the expansion of home health services. It is anticipated that these factors will continue to impact utilization over the next five years. Each of these factors will be considered in turn.

The tightening of patient eligibility requirements for Medicaid resulted in a decrease in the number of patients eligible for nursing home care. Another relevant factor is the moratorium that the Texas Department of Human Services (TDHS) has adopted on Medicaid certification of new beds coming on line in nursing homes. This was done in response to the elimination of the certificate of need process as of September 1, 1985 and limited Medicaid funds. The permanent moratorium includes exemptions for certain listed circumstances. TDHS intends to develop rules for lifting the moratorium for areas with high occupancy rates. This moratorium should restrain increases in nursing home beds and may, thereby, have a negative impact on utilization. TDHS anticipates that utilization of nursing home care may be unaffected, but occupancy rates in established facilities may increase.

As shown in Table 29, the number of Medicaid recipients decreased every year from 1979 to 1983, then increased somewhat between 1983 and 1985. The cumulative change from the fiscal year 1980 to fiscal year 1985 is -5.2%. The discontinuance of admission of new patients at the ICF-II level is reflected in the 16,943 ICF II patients in 1979 being reduced to 4,050 in 1985 (see Table 30). The continued phase-out of this category of reimbursement should have a negative impact on nursing home utilization over the next five years.

There is a continuing effort to divert patients from unnecessary institutionalization through the use of alternatives such as home health care and adult day health care. The number of licensed home health agencies has increased greatly in the last few years, to approximately 950 in January, 1985, as shown in Table 31. Much of this increase occurred in the last three years, with about 70% of the 1985 agencies being licensed since 1982. However, during the last six months of 1985, there was a decrease in the number of licensed agencies as many agencies failed to renew their licenses, even though more hospital-based agencies were established (see Chapter IX annex in Appendix A for additional discussion).

Table 32 shows the growth in licensed personal care beds, from 202 in 1980 to 3,784 in 1986. Finally, as shown in Table 33, the number and capacity of licensed adult day care centers has also increased rapidly in the last few years (see Chapter IX annex, in Appendix A for more discussion).

If the tightened Medicaid eligibility requirements, the discontinuance of admission of new ICF-II patients, the increase in personal care beds, and the expansion of home health services continues, then nursing home use rates will probably continue to decrease. However, if these trends are flattening out, as some of the data indicate, then nursing home utilization may stabilize at its current rate. At the same, there are predictions that full implementation of the Medicare DRG system in hospitals will result in patients being released "sicker and quicker" and thus increase the demand for nursing home beds, with skilled beds particularly important.

In the absence of definitive information regarding future trends in utilization rates, a range of bed projections is provided. The lower bound of the projection range is based on the assumption that utilization will continue to decrease. The upper bound of the range is based on the assumption that the 1984 utilization rate will continue through 1991.

Description of Data Bases The Nursing Home Patient Origin Survey (NHPOS) was conducted in the spring of 1985. All nursing homes in the State of Texas were asked to provide information on their patient census as of April 1, 1985 (excluding ICF-MR patients). Information was collected on patients' county of residence and age.

The TDH also requests all nursing homes to complete the Nursing and Custodial Home Data Questionnaire each year. This instrument collects data on the number of patient days accumulated over the year for several levels of care. In this methodology, patient days accumulated in all levels of care (nursing and custodial) were utilized with the exception of ICF-MR days of care. Population figures used in the bed need methodology are from TDH population projections.

Computation of Use Rates The NHPOS was used to determine the percentage of a facility's total patient days to allocate back to each county based on patient residence. In other words, a pattern was obtained for each facility showing the percentage of that facility's patients from each county. This pattern was then used for allocating patient days reported in the Nursing and Custodial Home Data Questionnaire to counties. For example, if 10% of facility #1's patients came from county #1, then 10% of the patient days reported for facility #1 on the Nursing and Custodial Home Data were alloted to county #1.

Information on patient age collected in the NHPOS was retained when allocating patient days back to counties. That is, if the NHPOS indicated that 10% of facility #1's admissions originated in county #1 and that 2% were between the ages of 65-74 and and 8% were 75 years of age older, then 2% of facility #1's patient days would be allocated to the 65-74 year age group in county #1 and 8% of the patient days for the facility #1 would be allocated to the 75 and older age group for county #1.

NHPOS admissions of out-of-state residents were added to admissions for the county in which the facility was located. Therefore, county estimates of 1984 patient days derived from these admission patterns included patient days generated in that county's facilities by out-of- state residents. Otherwise, patient days generated by the out-of-state residents would not have been considered and estimates of patient days for 1991 would, therefore, have been under-estimates.

Results

The tables presented show results for each SPR and the state. Table 34 shows the 1984 nursing/custodial home utilization information as of December 31, 1984. Table 35 has the number of beds and the bed ratio for 1986 licensed nursing and custodial homes. Table 36 shows the 1991 nursing/custodial bed projections. Bed projections are done using upper and lower bound use rates for 1991. Table 37 has the nursing home bed goals. These show how many licensed beds exist in 1986, how many are under plan review or under construction and will be "added", and the total beds projected for 1991. Table 37 also shows how many additional beds will be required or how many will be excess in 1991.

Discussion

The bed projection methodology applied here provides estimates of the number of bed required for nursing/custodial home care in 1991. The number of beds required depends on the utilization rate and the number of people in Texas in 1991. Given the uncertainty of how much further the utilization rate will continue to decrease, what has been presented is a range defined by upper and lower bounds. The upper bound is the 1984 utilization rate. Given the trend observed from 1982 to 1984, it is unlikely the utilization rate will increase above the 1984 level. The lower bound is based on the assumption that the 1982 to 1984 decrease in the use rate will continue in Texas at about a 3.2% rate per year.

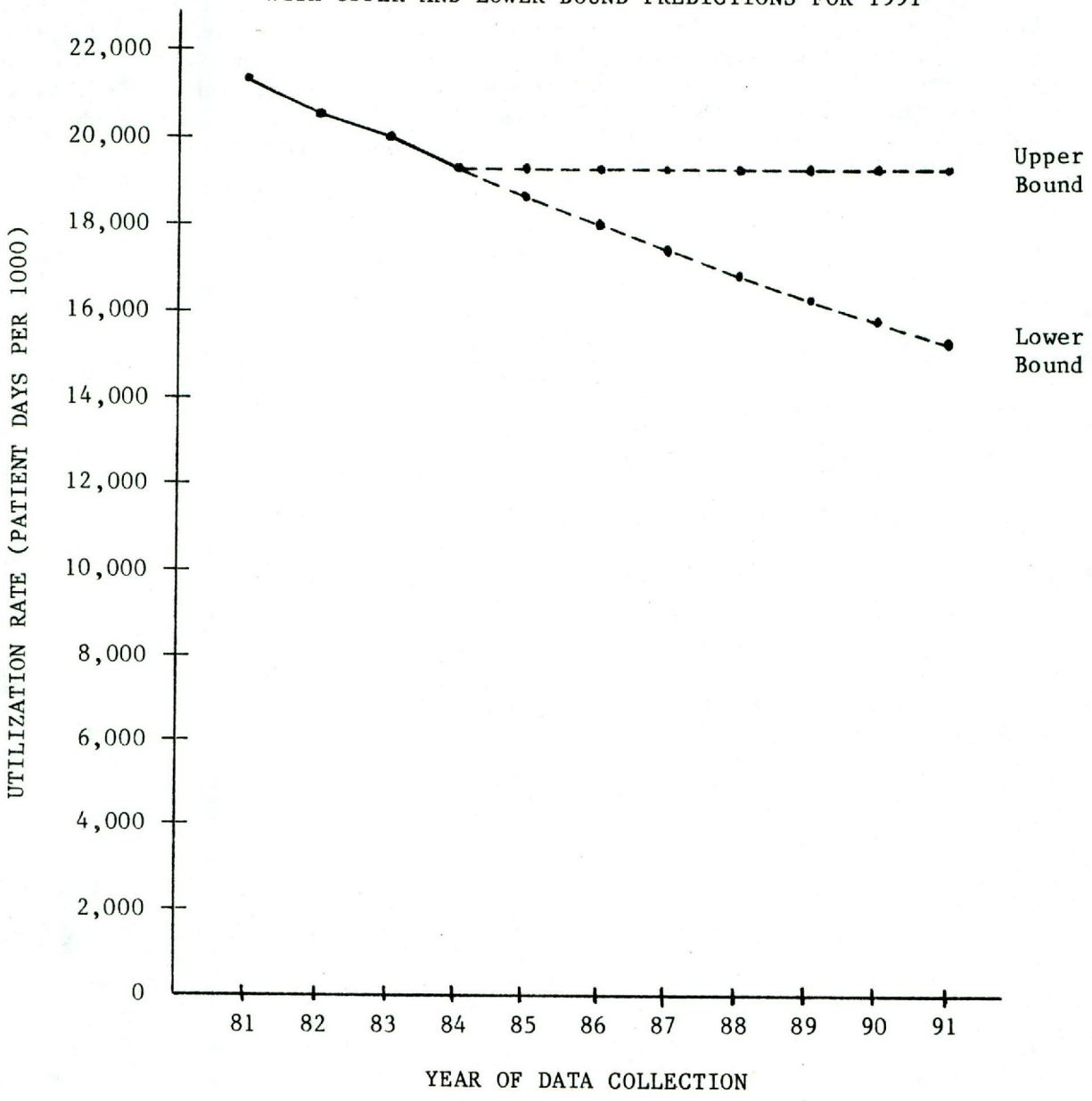
It is not expected that utilization will decrease by 3.2% every year from 1985 to 1991. Instead, the decrease is expected to be between 0% and 3.2% per year. The result of this prediction is that the utilization rate in 1991 will be somewhere between 19,907 and 16,032 patient days per thousand in the population 65 and older in the state of Texas. From this it follows that, as shown in Table 37, the number of additional or excess bed in 1991 is a range from 4,554 beds being required to 17,165 being excess. However, this range is somewhat misleading because it fails to include consideration of the number of nonconforming beds known to be included among the licensed beds. It is estimated that some 9,810 nonconforming beds exist. The

information available on nonconforming beds is shown in Table 38.

Nonconforming beds are licensed beds that do not meet the Life Safety Code (LSC), construction standards, or appropriate design criteria. It would not be a prudent policy to base determinations of bed requirements solely on excesses of licensed beds that include nonconforming beds. To accept nonconforming beds as a portion of beds that are used to determine what is required, is to perpetuate a lack of suitable, physically safe and appropriate facilities.

FIGURE 12

ACTUAL TEXAS NURSING/CUSTODIAL HOME UTILIZATION RATES 1981-1984, WITH UPPER AND LOWER BOUND PREDICTIONS FOR 1991



Note: Utilization rate is measured in total patient days per year per 1000 in the population 65 or older.

Source: Integrated Facilities File, Texas Department of Health

TABLE 29

AVERAGE NUMBER OF MEDICAID RECIPIENTS[1]

Year[2]	Average Monthly Recipients	Percent Change
1979-1980	319,368	
1980-1981	318,276	-0.3%
1981-1982	309,556	-2.7%
1982-1983	297,559	-3.9%
1983-1984	301,091	1.0%
1984-1985	302,646	0.5%

1979-1980 to 1984-1985 cumulative change is -5.2%

Notes: (1) Excludes AFDC (Aid to Families with Dependent Children) recipients.
(2) Based on fiscal year from September 1 to August 31.

Source: Data Support Division, 1980-1985 Annual Reports, Texas Department of Human Services

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TABLE 30

NURSING HOME ICF II[1] PATIENTS

Year[2]	Number of Patients
1979	16,943
1980	15,115
1981	11,078
1982	9,292
1983	7,239
1984	5,805
1985	4,050

Note: (1) Intermediate Care Facility, level 2 (Custodial)
(2) As of August 31st.

Source: Aged and Disabled Budget Section, Division of Services to Aged and Disabled, Texas Department of Human Services

TABLE 31

NUMBER OF LICENSED HOME HEALTH AGENCIES

Year[1]	Number of Agencies
1979	1
1980	160
1981	181
1982	272
1983	453
1984	713
1985	947

Notes: (1) As of December 31st of each year

Source: Health Facility Licensure & Certification Division, Texas Department of Health

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TABLE 32

NUMBER OF LICENSED PERSONAL CARE BEDS

Year[1]	Number of Beds
1980	202
1981	545
1982	778
1983	1,334
1984	2,554
1985	2,741
1986	3,784

Note: (1) As of January 15th of each year

Source: Quality Standards Division,
Texas Department of Health

TABLE 33

CAPACITY OF LICENSED ADULT DAY CARE FACILITIES

Year[1]	Health Day Care[2] Capacity	Day Care Capacity
1982	326	--
1983	810	14
1984	1087	15
1985	1128	480
1986	1272	480

Notes: (1) As of January 15th of each year
(2) Day care facilities providing health care

Source: Quality Standards Division, Texas Department of Health

TABLE 34

1984 NURSING-CUSTODIAL HOME UTILIZATION DATA

SPR	NUMBER OF FACILITIES	POPULATION 65+	PATIENT DAYS	AVERAGE DAILY CENSUS	USE RATE	OCCUPANCY RATE	LICENSED BEDS	BED RATIO POPULATION 65+
1	36	44534	717184	1965	16104	78.23	2706	60.8
2	34	38411	648799	1778	16891	74.50	2463	64.1
3	43	34715	956249	2620	27546	74.74	3611	104.0
4	196	304294	6343861	17380	20848	81.21	22124	72.7
5	35	39756	1044646	2862	26276	82.94	3489	87.8
6	69	92776	2073300	5680	22347	83.68	6892	74.3
7	57	51857	1207161	3307	23279	76.36	4646	89.6
8	11	40654	384712	1054	9463	83.85	1257	30.9
9	22	32754	511685	1402	15622	74.17	1921	58.6
10	19	19172	442429	1212	23077	81.46	1488	77.6
11	37	45180	1137450	3116	25176	85.02	3666	81.1
12	57	71603	1587046	4348	22165	82.73	5480	76.5
13	15	23828	519242	1423	21791	72.88	1952	81.9
14	31	46499	843602	2311	18142	90.81	2545	54.7
15	21	42392	724147	1984	17082	85.53	2434	57.4
16	113	252094	3912962	10720	15522	83.42	13212	52.4
17	19	23037	615440	1686	26715	88.93	1896	82.3
18	76	137916	2670587	7317	19364	84.74	8671	62.9
19	3	14157	114994	315	8123	73.61	428	30.2
20	24	48965	838161	2296	17118	80.10	2867	58.6
21	22	57692	608493	1667	10547	78.31	2129	36.9
22	23	24712	699754	1917	28316	82.03	2337	94.6
23	31	29069	824182	2258	28353	80.33	2811	96.7
24	6	13049	146096	400	11196	68.60	602	46.1
STATE TOTAL	1000	1529116	29572182	81020	19339	81.58	101627	66.5

SOURCE: INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

TABLE 35

1986 LICENSED NURSING/CUSTODIAL HOME BEDS*

SPR	NURSING BEDS	CUSTODIAL BEDS	TOTAL BEDS	BEDS PER POPULATION 65+
1	2817	0	2817	60.4
2	2446	0	2446	61.1
3	3564	14	3578	101.2
4	22412	139	22551	69.9
5	3708	0	3708	90.6
6	6977	44	7021	71.9
7	4617	0	4617	87.4
8	1211	0	1211	27.2
9	1853	69	1922	54.9
10	1503	0	1503	75.3
11	3666	0	3666	79.1
12	5434	20	5454	71.7
13	1832	0	1832	74.0
14	2818	0	2818	57.0
15	2394	40	2434	54.7
16	13027	231	13258	48.9
17	1900	0	1900	79.1
18	8491	283	8774	59.6
19	428	0	428	28.3
20	2987	0	2987	57.4
21	2021	0	2021	31.9
22	2325	0	2325	91.4
23	2839	0	2839	93.4
24	602	0	602	42.9
STATE TOTAL	101872	840	102712	63.4

* AS OF JANUARY 31, 1986

SOURCE: INTEGRATED FACILITIES FILE
TEXAS DEPARTMENT OF HEALTH

TABLE 36

1991 BED PROJECTIONS FOR NURSING/CUSTODIAL HOMES
BY STATE PLANNING REGIONS (SPRS)

Projections are based on upper and lower bound use rates. The upper bound is the 1984 utilization rate, while the lower bound is a trend-predicted 1991 utilization rate.

SPR	PROJECTED POPULATION 65+	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL[1]	ESTIMATED BOUNDS	PROJECTED USE RATE 65+	PROJECTED PATIENT DAYS[1]	PROJECTED AVERAGE DAILY CENSUS[1]	PROJECTED BED DEMAND[1]	PROJECTED BED RATIO 65+
1	52,620	90.8	UPPER	17,110	900,339	2,467	2,717	51.6
			LOWER	14,650	770,860	2,112	2,326	44.2
2	44,480	90.4	UPPER	17,930	797,531	2,185	2,418	54.4
			LOWER	15,893	706,923	1,937	2,143	48.2
3	37,041	90.8	UPPER	30,052	1,113,170	3,050	3,357	90.6
			LOWER	27,963	1,035,765	2,838	3,124	84.3
4	372,400	91.5	UPPER	21,638	8,058,070	22,077	24,141	64.8
			LOWER	16,327	6,080,215	16,658	18,215	48.9
5	43,916	91.5	UPPER	27,786	1,220,261	3,343	3,653	83.2
			LOWER	26,295	1,154,780	3,164	3,457	78.7
6	111,284	91.8	UPPER	22,580	2,512,809	6,884	7,500	67.4
			LOWER	20,671	2,300,345	6,302	6,866	61.7
7	55,510	91.0	UPPER	25,758	1,429,835	3,917	4,305	77.6
			LOWER	19,297	1,071,155	2,935	3,225	58.1
8	55,388	91.7	UPPER[2]	9,692	536,813	1,471	1,605	29.0
			LOWER	10,130	561,100	1,537	1,677	30.3
9	41,370	90.7	UPPER	17,289	715,243	1,960	2,160	52.2
			LOWER	13,876	574,041	1,573	1,734	41.9
10	22,044	91.6	UPPER[2]	23,830	524,720	1,438	1,570	71.2
			LOWER	25,611	564,575	1,547	1,690	76.6
11	49,112	91.6	UPPER	25,932	1,273,596	3,489	3,809	77.6
			LOWER	23,654	1,161,717	3,183	3,474	70.7
12	88,494	91.3	UPPER	23,467	2,076,697	5,690	6,233	70.4
			LOWER	17,368	1,536,921	4,211	4,613	52.1

TABLE 36 - PAGE 2

1991 BED PROJECTIONS FOR NURSING/CUSTODIAL HOMES
BY STATE PLANNING REGIONS (SPRS)

SPR	PROJECTED POPULATION 65+	AVERAGE WEIGHTED OCCUPANCY WITH MIN. LEVEL[1]	ESTIMATED BOUNDS	PROJECTED USE RATE 65+	PROJECTED PATIENT DAYS[1]	PROJECTED AVERAGE DAILY CENSUS[1]	PROJECTED BED DEMAND[1]	PROJECTED BED RATIO 65+
13	27,232	91.2	UPPER	21,579	587,633	1,610	1,766	64.9
			LOWER	19,952	543,346	1,489	1,633	60.0
14	57,544	91.9	UPPER	18,484	1,063,655	2,914	3,171	55.1
			LOWER	18,405	1,059,120	2,902	3,157	54.9
15	49,737	91.8	UPPER	17,479	869,357	2,382	2,593	52.1
			LOWER	13,901	691,392	1,894	2,063	41.5
16	324,963	91.1	UPPER	16,285	5,291,995	14,499	15,917	49.0
			LOWER	11,881	3,860,773	10,577	11,612	35.7
17	26,621	92.3	UPPER	27,492	731,854	2,005	2,172	81.6
			LOWER	22,804	607,065	1,663	1,802	67.7
18	171,208	91.5	UPPER	19,521	3,342,185	9,157	10,011	58.5
			LOWER	14,519	2,485,847	6,811	7,446	43.5
19	17,972	90.0	UPPER	9,932	178,489	489	543	30.2
			LOWER	5,541	99,583	273	303	16.9
20	60,108	90.5	UPPER	18,186	1,093,098	2,995	3,311	55.1
			LOWER	13,970	839,698	2,301	2,543	42.3
21	79,592	91.4	UPPER	11,073	881,288	2,415	2,642	33.2
			LOWER	8,267	658,015	1,803	1,973	24.8
22	27,224	91.3	UPPER	26,244	714,454	1,957	2,143	78.7
			LOWER	19,634	534,521	1,464	1,603	58.9
23	34,024	91.6	UPPER	28,496	969,550	2,656	2,900	85.2
			LOWER	24,411	830,574	2,276	2,484	73.0
24	17,005	90.4	UPPER	16,586	282,046	773	855	50.3
			LOWER	11,820	201,005	551	609	35.8
TOTAL[3]								
	1,866,889	91.3	UPPER	19,907	37,164,688	101,821	111,493	59.7
			LOWER	16,032	29,929,332	81,998	89,774	48.1

Notes: (1) Average weighted occupancy with minimum level, projected patient days, projected average daily census, and projected bed demand are based on utilization by all ages, not just those 65 years and older.

(2) SPRs 8 and 10 have trend-predicted 1991 utilization rates that are actually higher than the 1984 rates, unlike the trend for the other SPRs. This results in the predicted value obtained using the formula for the lower bound being higher than the value obtained for the upper bound of the 1991 utilization rate.

(3) Totals for average weighted occupancy with minimum level (90%), for projected use rate 65+, and for projected bed ratio 65+ are obtained from data aggregated at the state level, rather than being sums across SPRs of these statistics. Totals for projected patient days, for projected daily census, and for projected bed demand are obtained from the sums across SPRs, and are presented instead because they are more reliable.

Sources: (1) 1984 Integrated Facilities File, Texas Department of Health.
(2) 1985 Nursing Home Patient Origin Survey, Bureau of State Health Planning and Resource Development, TDH, April 1985.
(3) TDH Population Data System, Bureau of State Health Planning and Resource Development, Texas Department of Health.

TABLE 37

NURSING/CUSTODIAL HOME BED GOALS FOR 1991

	1986*			1991			
SPR	LICENSED BEDS	BEDS UNDER CONSTRUCTION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
1	2,817	286	0	UPPER	2,717	(386)	363
				LOWER	2,326	(777)	
2	2,446	7	0	UPPER	2,418	(35)	407
				LOWER	2,143	(310)	
3	3,578	72	0	UPPER	3,357	(293)	30
				LOWER	3,124	(526)	
4	22,581	641	250	UPPER	24,141	669	1,188
				LOWER	18,215	(5,257)	
5	3,708	210	20	UPPER	3,653	(285)	151
				LOWER	3,457	(481)	
6	7,021	0	60	UPPER	7,500	419	32
				LOWER	6,866	(215)	
7	',617	93	0	UPPER	4,305	(405)	864
				LOWER	3,225	(1,485)	
8	1,211	0	0	UPPER[1]	1,605	394	146
				LOWER	1,677	466	
9	1,922	0	60	UPPER	2,160	178	32
				LOWER	1,734	(248)	
10	1,503	0	0	UPPER[1]	1,570	67	94
				LOWER	1,690	187	
11	3,666	95	0	UPPER	3,809	48	4'0
				LOWER	3,474	(287)	
12	5,454	164	0	UPPER	6,233	615	1,153
				LOWER	4,613	(1005)	
13	1,832	0	0	UPPER	1,766	(66)	220
				LOWER	1,633	(199)	
14	2,818	30	180	UPPER	3,171	143	4
				LOWER	3,157	129	

NURSING/CUSTODIAL HOME BED GOALS FOR 1991

	1986*			1991			
SPR	LICENSED BEDS	BEDS UNDER CON-STRUC-TION	BEDS IN PLAN REVIEW	BOUNDS	TOTAL PROJECTED BEDS	ADDITIONAL BEDS OR (EXCESS)	EXISTING NON-CONFORMING BEDS*
15	2,434	24	0	UPPER	2,593	135	442
				LOWER	2,063	(395)	
16	13,258	692	172	UPPER	15,917	1,795	1,902
				LOWER	11,612	(2,510)	
17	1,900	240	0	UPPER	2,172	32	192
				LOWER	1,802	(338)	
18	8,774	402	80	UPPER	10,011	755	1,443
				LOWER	7,446	(1,810)	
19	428	0	0	UPPER	543	115	0
				LOWER	303	(125)	
20	2,987	120	0	UPPER	3,311	204	87
				LOWER	2,543	(564)	
21	2,021	60	239	UPPER	2,642	322	0
				LOWER	1,973	(347)	
22	2,325	0	0	UPPER	2,143	(182)	396
				LOWER	1,603	(722)	
23	2,839	0	0	UPPER	2,900	61	167
				LOWER	2,484	(355)	
24	602	0	0	UPPER	855	253	78
				LOWER	609	7	
TOTALS							
	102,742	3,136	1,061	UPPER	111,493	4,554	9,810
				LOWER	89,774	(17,165)	

* January 31,1986

NOTE: (1) SPR 8 and 10 have a trend predicted 1991 utilization rate that is actually higher than the 1984 rate, unlike the trend for other SPRs.

SOURCES: (1) 1984 Integrated Facilities File, Texas Department of Health
(2) 1985 Nursing Home Patient Origin Survey, Bureau of State Health Planning and Resource Development, TDH, April 1985
(3) TDH Population Data System, Bureau of State Health Planning and Resource Development, Texas Department of Health

TABLE 38

CONFORMING AND NON-CONFORMING BEDS IN NURSING HOMES IN TEXAS IN 1986*

STATE PLANNING REGION	NUMBER OF CONFORMING BEDS	NUMBER OF NON-CONFORMING BEDS	NUMBER OF NON-CONFORMING BEDS IN RURAL NURSING HOMES
1	2,345	363	209
2	2,035	407	219
3	3,464	30	30
4	21,353	1,188	263
5	3,543	151	151
6	6,952	32	32
7	4,045	864	818
8	1,018	146	40
9	1,896	32	32
10	1,384	94	59
11	3,273	419	0
12	4,380	1,153	311
13	1,616	220	220
14	2,810	4	4
15	2,048	442	0
16	11,330	1,902	447
17	1,984	192	192
18	7,402	1,443	358
19	428	0	0
20	2,925	87	87
21	2,082	0	0
22	1,956	396	196
23	2,684	167	103
24	1,504	78	78
TOTAL	94,457	9,810	3,849

SOURCE: 1986 INTEGRATED FACILITIES FILE, TEXAS DEPARTMENT OF HEALTH

NOTES: *AS OF JANUARY 31, 1986

Texas Statewide Health Coordinating Council