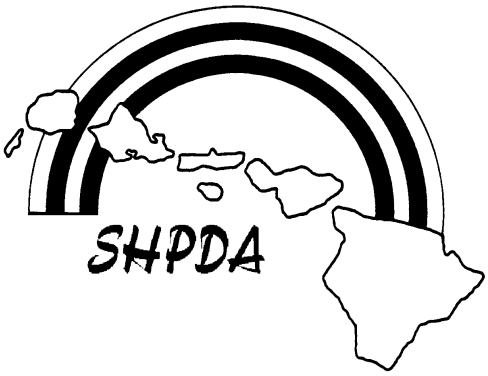
STATE OF HAWAII

HEALTH SERVICES AND FACILITIES PLAN

State Health Planning and Development Agency



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State of Hawaii

Health Services and Facilities Plan

This publication was produced by the State Health Planning and Development Agency in collaboration with its Statewide Health Coordinating Council's Plan Development Committee and its regional Subarea Health Planning Councils.

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Table of Contents

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Chapter 1: Introduction

The Health Services and Facilities Plan As Required by Law

The Health Services and Facilities Plan (HSFP) is a guiding document for both the Certificate of Need (CON) process and health care planning in Hawaii. State Health Planning and Development Agency (SHPDA) is mandated to develop and periodically revise the HSFP:

> *Hawaii Revised Statutes (HRS) §323D-15. State Health Services and Facilities Plan.* There shall be a state health services and facilities plan which shall address the health care needs of the State, including inpatient care, health care facilities, and special needs. The plan shall depict the most economical and efficient system of care commensurate with adequate quality of care, and shall include standards for utilization of health care facilities and major medical equipment. The plan shall provide for the reduction or elimination of underutilized, redundant, or inappropriate health care facilities and health care services.

Goals of the HSFP

Specific goals of this edition of the HSFP are consistent with the purpose of SHPDA. In addition, the goals reflect current issues facing Hawaii's health care environment, and include:

- Focus on increasing cost-effective access to necessary health care services. Access is distinguished from convenience.
- Promote the financial viability of the health care delivery system.
- Encourage optimization of services and expensive technology by ensuring that supply meets the need and costs are reasonable.
- Promote regionalization of services where appropriate.

Public Input and Hearings

As with many of SHPDA activities, public hearings are conducted on the proposed HSFP or any amendments. In addition, SHPDA staff coordinates and consults with advisory committees consisting of volunteers from a broad cross-section of the community when developing and preparing the plan.

Purpose and Role of SHPDA

The purpose of SHPDA is stated in HRS §323D-1:

> The purpose of this chapter is to establish a health planning and resources development program to promote accessibility for all the people of the State to quality health care services at reasonable cost.

To accomplish its purpose, HRS §323D-12 authorizes SHPDA to:

- Administer the state's certificate of need program
- Develop and implement the state's HSFP
- Conduct studies and investigations regarding the causes of health care costs
- Promote the sharing of facilities or services by health care providers to achieve economies of scale and restrict unusual costly services
- Conduct coordinated health planning activities and determine health needs of the state

Certificate of Need Program

Under HRS §323D-43(c) and Hawaii Administrative Rules (HAR) §11-186, a certificate of need is required to construct, expand, eliminate, initiate or modify a health care facility or service. As part of the CON application, twelve areas grouped into six categories must be addressed as set forth in §11-186-15:

- Relation to the State Plan
- Need and Accessibility
- Quality
- Cost and Finances
- Relation to the Existing Health Care System
- Availability of Resources

CON Standard Review and Advisory Panels

CON applications are either subject to a standard review or administrative review. For a standard review, three advisory panels must each review the application prior to SHPDA's final decision. HAR §11-186-45. For further details of the review process, refer to Chart 1, entitled "Typical Standard Application Review Flowchart."

The three advisory panels recommend approval, conditional approval, or disapproval to SHPDA. The advisory panels are:

- Subarea Health Planning Councils (SACs)
- Certificate of Need (CON) Review Panel
- Statewide Health Coordinating Council (SHCC)

Each panel represents a broad cross-section of the respective subareas that includes consumers, private businesses, state agencies, health care insurers and health care providers. All members of the SACs and the SHCC are nominated by the Governor, approved by the Senate, and appointed by the Governor. Members of the Certificate of Need Review Panel are nominated and approved by the SHCC.

Public Input

Pursuant to HAR §11-186-47, all advisory panel meetings reviewing standard CON applications are open to the public and the public may provide written testimony and/or testify during the meeting.

CON Administrative Review

SHPDA may also conduct an administrative review for CON applications if the application meets one or more of the following criteria:

- Bed or service changes that have a capital expense of $1,000,000 or less, and have an increased annual operating expense of less than $500,000
- An acquisition of a health care facility or service which will result in a lower annual operating expense
- Any change of ownership, where the change is from one entity to another substantially related entity
- An additional location of an existing service or facility
- Any proposal that will not have a significant impact on the health care system

Comprehensive Health Planning Activities

In conjunction with its statewide council and subarea councils, SHPDA conducts health planning activities as well as identify statewide health needs. Under HRS §323D-12, SHPDA may conduct studies or investigations that include sources of health care costs, identifying new health services, and determining whether there are redundant, excessive, or inappropriate services or facilities. SHPDA also prepares reports and recommendations for emerging health issues.

Hawaii's Current Health Care Environment

Need and Accessibility

Acute care and long-term care bed supplies.
Both Hawaii's acute care and long-term care bed supplies are lower than the national rates (Table 1). In particular, the shortage is sharply felt in the long-term care services market (23 beds per 1,000 population ages 65 years and older versus 47 beds per 1,000), with Hawaii ranking second to the bottom (48th) in the nation (Table 1). If no long-term care beds are available, many patients needing these beds are waitlisted and often occupy acute care beds. Hospitals do not recoup the full costs for waitlisted patients. This also impacts the supply of acute care beds for patients who need acute care.

Waitlisted patients.
A waitlisted patient is a patient who is ready for hospital discharge or is no longer in need of acute care, but who cannot be discharged or transferred into a skilled nursing facility or intermediate care facility and must remain in the hospital. As a result, while awaiting discharge or placement, waitlisted patients remain in the higher cost hospital setting or more expensive acute care bed. The majority of the waitlisted patients are elderly (65 and older) and are covered by Medicare.

Health insurance coverage.
Hawaii's Prepaid Health Care Act (PHCA) of 1974 (HRS Chapter 393) requires that nearly all employers[1] provide health insurance to their employees who work 20 hours or more a week for four consecutive weeks. Pursuant to HRS §393-13, the Act requires that employers contribute 50% of the premium cost for single coverage and the employee contributes the remainder of the balance. However, the employee's share cannot exceed 1.5% of gross wages.

Prior to enactment of the PHCA in the early 1970s, Hawaii's uninsured rates were near 30%. When the Act was implemented in 1974, uninsured rates dropped to 5%. Today, the uninsured rate has increased and ranges from 8 to 10% (Table 2). Nonetheless, Hawaii is still considered to have one of the lowest uninsured rates in the nation, ranking second in 2006.

In 2006, private and public health insurance covered an estimated 91% of Hawaii residents (Table 2). Approximately 75% of the population is covered by private health insurance and 30% is covered by public-sponsored insurance. Public-sponsored health insurance includes: Medicare (federal government's coverage for the elderly), Medicaid/Quest (state and federal funds), and TRICARE (federal government's coverage for the military).

Financial Health of Health Care Facilities

A financial crisis.
The health care industry is the fourth largest industry in Hawaii, representing approximately 6.6% of the state's gross domestic product in 2007.[2] Many health services are not adequately reimbursed. For example, expenses have exceeded net patient revenues for Hawaii's acute care hospitals since 2000.

For expenses not covered, health care facilities have relied on additional sources of funding such as investment income, philanthropy, government subsidies, asset sales, and other non-patient revenues to remain viable. Health care facilities have also reduced costs by consolidating services, reducing, discontinuing or selling unprofitable service lines, reducing administrative overhead, and reducing patient length of stay. It should be noted that government hospitals face greater financial challenges because, unlike their private for-profit and non-profit counterparts, they cannot rely on investment income or asset sales.

The industry is also not reimbursed for many benefits provided to the community. Health care facilities incur losses when providing charity care for the underserved and uninsured, trauma and emergency services 24/7, health and wellness promotion, disease management programs, services for the elderly and adolescents, and medical residency training.

If health care facilities are not financially solvent, they will be situated in a difficult position by trying to allocate scarce resources without compromising investments in quality initiatives, or the ability to respond to market changes or industry challenges. If reimbursements continue to decline as health care costs rise, health care facilities will have less access to low-cost capital and bond insurance, be forced to reduce services or declare bankruptcy and shut down.

Workforce Shortages

The United States Department of Health and Human Services labor statistics indicate that Hawaii is well below the national rate of health care practitioners and technicians per 100,000 population, ranking at the bottom fifth (45th place) in the nation (Table 3).

Physicians.
The rate of physicians in Hawaii, however, is greater than the national rate. Data from the American Medical Association (AMA) indicate Hawaii had more physicians per 100,000 than the national rate in 2006. Hawaii ranked seventh in the nation (Table 3). Specifically, Hawaii's statewide rates for both active physicians (Table 6) and physicians providing patient care (Table 5-6) per 100,000 were greater than the national rates. In direct contrast, the rates for Hawaii's neighbor island active physicians and physicians

providing patient care was well below the national rates (Tables 5-6). Hawaii's percentage of active women physicians was not different from the national numbers (Table 8).

The AMA data indicates there is a maldistribution of physicians across the state where several physician specialties are below the national rates. For example, in 2006, the rates per 100,000 for physicians providing patient care in cardiovascular disease and gastroenterology were below the national rates statewide and among every county (Table 5). On the neighbor islands, certain specialties are under-represented compared to Honolulu County. For example, Hawaii County has the lowest rate of orthopedic surgeons (4 per 100,000); while Maui has the lowest rate of adult psychiatrists (6.4 per 100,000) and Kauai has no gastroenterologists (Table 5).

Aging and inactive physician workforce.
It appears that Hawaii's physician workforce is also aging. In 2006, approximately 20% of Hawaii's physician workforce was 65 years old and older, slightly above the national percentage and ranking 11th in the nation (Table 3). For Honolulu County, the rate of physicians ages 65-74 is approximately 41 per 100,000, well above the national rate of 30.1 per 100,000 (Table 6).

Twenty-four percent of Hawaii's physicians ages 65-74 and 43% of physicians age 75 and over also reported they were inactive (Table 7).[3] These percentages were similar nationally. This means that approximately 75% of physicians ages 65-74 and 60% of physicians age 75 and over hold active licenses. However, while these physicians may have active licenses, it is not clear and is unlikely that they are still providing patient care.

Limitations to AMA data.
While the AMA data suggests that Hawaii, overall, has a sufficient physician workforce supply despite an aging physician workforce and a maldistribution of physician specialists statewide, this may not be accurate. There are limitations to the AMA data. The AMA data is self-reported and does not indicate the number of physicians limiting the volume of patients accepted nor the number and types of medical insurance accepted. The AMA data also reports many aging physicians as active but these physicians may not be providing patient care. Consequently, a physician workforce study has been commissioned with the John A. Burns School of Medicine to develop a more detailed methodology to identify practicing physician's statewide and specific shortages.

Other health care professionals.
As mentioned earlier, Hawaii is also well-below the national average for other health professions, ranking 45th in the nation in 2006 (Table 3). These health professionals include registered nurses, licensed practical and vocational nurses, physical therapists,

physician assistants, emergency medical technicians, paramedics, aides, and assistants. Hawaii particularly ranks low compared to the national average in rates per 100,000 for registered nurses (37th), licensed practical and vocational nurses (41st), physical therapists (41st), and EMTs and paramedics (43rd) (Table 3).

However, Hawaii also had a higher rate of dentists per 100,000 than the national average, ranking second in the nation, as well as pharmacists, ranking sixth in the nation (Table 3). The neighbor islands, however, are below the national rate for dental care Currently, all neighbor islands are designated as Dental Health Professional Shortage Areas by the Federal Health Resource and Service Administration.

Key Issues Driving Change in Health Care

Geographical challenges.
Hawaii is the only state that is an archipelago, entirely surrounded by bodies of water. There are eight main islands and all are inhabited with the exception of Kahoolawe.

Honolulu County is the most populous, consisting of about 71 percent of the resident population in the state (Table 4). Honolulu County has 11 acute care hospitals, 32 long-term care facilities, and 18 facilities providing specialty care. In 2004, about 80 percent of Hawaii's physicians were practicing in Honolulu.[4]

Access to health care resources on the neighbor islands have similar limitations and challenges of rural areas across the nation. In addition to being geographically remote, these rural island areas:

- Pay higher costs for goods and services
- Offer fewer economic opportunities
- Have a higher aging population
- Have a fluctuating population of temporary residents; and
- Must pay incentives to recruit and retain health care professionals.

Because of the limited number of specialist physicians in rural island areas, specialists either fly to the neighbor islands to see patients or patients fly to Oahu. While the neighbor islands lack adequate specialists, they do have a higher number of family practice and general medicine physicians per capita than on Oahu (Table 5).

Growing and aging population.
Demographic growth, especially Hawaii's aging population, is accelerating the expansion of health care facilities and some communities have struggled to keep up with its growing needs such as long-term care beds. The full impact of the aging population will begin in 2010 when the first wave of Baby Boomers reach retirement age. The population for the state grew 15% from 1990 to 2007 (Table 4). Most of that growth

occurred outside of Honolulu County where the population increased by 22% in Kauai, 40% in Maui, and 42% in Hawaii (Table 4). Current projections indicate that the neighbor islands will grow at a rate faster than Honolulu County over the next 25 years.

Rising costs.
Health care costs are rising. In 1975, health care costs were 8% of the nation's gross domestic product. Today, health care costs have doubled to 16% and overall health care spending is rising 8% compounded annually.

Mitigating factors.
Other factors that will strain the health care system include the growing federal deficit, the first group of 80 million Baby Boomers that will start receiving Medicare beginning in 2010, and health insurance premiums rising from 8% to 10% each year.[5] Federal cuts in Medicare will force health care providers to shift costs to other payors.

Inadequate reimbursements.
Our current reimbursement system is primarily based on specialty care. Providers are compensated on the volume of patients and number and type of procedures. For example, surgical procedures in orthopedics and cardiology receive higher reimbursements while chronic disease management and other types of preventative care receive lower reimbursements. Primary care physicians receive less compensation than specialists, and may have to work longer hours to cover their costs.[6]

Changing relationships.
Nationally, relationships between hospitals and physicians are changing. Many non-profit hospitals face intense competition in key service areas such as orthopedics and cardiology from physicians, regional health care providers, and for-profit companies who are providing these services. For example, higher reimbursement outpatient services offered by hospitals are now being offered by physician-owned facilities and clinics. This practice could impact the financial ability of hospitals, particularly the safety net hospitals, in providing other vital services to the community that generate little or no reimbursements. As a result, affected hospitals may be forced to reduce or eliminate important services. In addition, as more physicians compete directly with hospitals for patients, physicians may be less willing to serve on medical staff committees, provide emergency on-call coverage or carry out other voluntary activities that accompany hospital admitting privileges.

Quality concerns.
Quality of care is a growing concern among consumers. The Institute of Medicine has reported that between 44,000 to 98,000 Americans die each year from preventable medical errors. More people die from lapses of quality than from breast cancer, AIDS, or motor vehicle accidents. Medical errors have also created a financial strain for hospitals.

For example, medication-related errors for hospitalized patients cost roughly $2 billion annually.[7]

The Joint Commission on Accreditation of Healthcare Organizations or JCAHO, the nation's predominant standards-setting and accrediting body in health care, has strengthened efforts to increase patient safety. This includes ensuring patient safety-related standards, establishing national patient safety goals, and providing quality monitoring, checks and reports. Other organizations, such as the Institute for Health Care Improvement, have launched the 100,000 Lives and the 5 Million Lives Campaigns to reduce incidents of medical harm in U.S. hospitals.

Health Care Trends

Consumer Directed Health Care and Health Savings Accounts

In response to rising health costs, there is a movement to shift the responsibility of costs from the insurance companies, health plans, and employers to consumers. Called Consumer Directed or Consumer Driven Health Care, the purpose is to encourage consumers to make more value-driven health care spending decisions by giving consumers more information and control of how they spend their money for health care. Options such as health savings accounts offered by employers allow employees to allocate a portion of their salary tax-free into a health savings account that can only be used towards health related services and treatment as decided by the employee. Such plans can take various forms, but commonly employers will offer a high-deductible health insurance policy coupled with health savings accounts. Currently, about 3 million people are enrolled in these plans.

Access to Information and Transparency

Through the Internet, access to medically-related websites allow consumers to learn about disease mechanisms and treatment options as well as provider pricing and performance data for physicians and hospitals. Consumers will be able to 'shop around' as they compare and evaluate clinical performance and service as well as how much they will be charged.

Pay-for-performance

To deliver better, safer, and more efficient health care, financial incentives are being awarded to physicians, hospitals, medical groups, and other health care providers by the federal government and health insurers for meeting certain performance measures based on established standards of care for quality and efficiency. To reinforce quality performance, the federal government through organizations such as JCAHO and certain

health plans has made performance measures on hospitals and physicians publicly available on the Internet.

Technology

Most hospitals or health facilities have established electronic accounting, billing, charge management, claims processing, and decision support systems. Rapid advances in health care technology and procedures have created new challenges for hospitals and health care systems in determining how to integrate these technologies to optimize clinical and operational performance. As a result, many facilities, including ones in Hawaii, are considering or have invested in electronic medical records (EMRs), computerized physician order entry (CPOE) systems, robotic automation, telemedicine, integrated medical devices, and online health care system as described below:

- *EMRs* increase record keeping efficiency, allows for remote access, reduces errors, and collects population data to identify trends and measure performance.

- *CPOE* systems directly impact patient safety by reducing interpretation errors associated with paper or verbal orders. CPOE systems provide real time access to relevant clinical and decision support information, reduces duplicate tests, eliminates duplicate prescriptions, and reduces patients' length of stay due to adverse drug reactions.

- *Robotic devices* automate manual tasks. They test specimens in medical laboratories, deliver materials in the hospital, automatically fill prescriptions, and assist in performing specific surgical processes.

- *Telemedicine* allows patients to be viewed and assessed in a remote location. It increases access for those in rural and remote areas or for persons unable to travel.

- *Integrated medical devices* directly link into information systems to centralize patient data. Data on patients' health may be entered into the medical record directly from medical devices.

- *Online health care system* provides access to physicians from home using Web-based videoconferencing, secure chat, and telephone.

In addition, Health Information Exchange (HIE) efforts have been initiated and implemented in several states. HIE is the sharing of clinical and administrative data electronically across organizations within a region or community. The goal of HIE is to improve the quality of patient care through the efficient, timely access of clinical information.

OVERVIEW OF SUBSEQUENT CHAPTERS

The revision of the HSFP is a dynamic and ongoing process. As statutorily required by HRS §323D-12, the standards for utilization of health care facilities and major medical equipment have been updated as well as the priorities statewide and for each of the SAC regions. Specific challenges to health services and facilities statewide and within each region were identified and are being addressed as individual chapters. Thus far, this includes long-term care services, behavioral health, and primary care. As new issues of concern arise, they will be added to HSFP.

ENDNOTES

[1] HRS §393-5 lists the following categories of employers that are excluded from the Prepaid Health Care Act: Government services, seasonal employment approved by the State Department of Labor & Industrial Relations, insurance agents and real estate salespersons paid solely by commission, and sole proprietors with no employees.

[2] Healthcare Association of Hawaii. " Issues Impacting Hawaii's Hospitals, Nursing Facilities, Home Care and Hospice Providers." Honolulu, Hawaii: Healthcare Association of Hawaii, October 2008.

[3] Inactive includes physicians who are retired, semi-retired, working part-time or temporarily not in practice.

[4] HMSA Foundation and Hawaii Health Information Corporation (2006). Health Trends in Hawaii: A Profile of the Health Care System. Honolulu, Hawaii: HMSA Foundation, p. 88.

[5] Healthcare Financial Management Association in partnership with GE Healthcare Financial Services. "Healthcare Payment: Goals, Trends, and Strategies." Financing the Future III: Report 1. Westchester, Illinois: Healthcare Financial Management Association, 2007, p. 1.

[6] Bodenheimer, T., Berenson, R.A., Rudolf, P. "The Primary Care-Specialty Income Gap: Why It Matters." Ann. Int. Med. 2007; 146: 301-06. URL: http://www.annals.org/cgi/reprint/146/4/301.pdf.

[7] Healthcare Financial Management Association in partnership with GE Healthcare Financial Services. "Healthcare Payment: Goals, Trends, and Strategies." Financing the Future III: Report 1. Westchester, Illinois: Healthcare Financial Management Association, 2007, p. 2.

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Chapter 2: Thresholds and Suboptimization Clause

HRS § 323D-12 mandates that the HSFP must include standards for utilization of health care facilities and major medical equipment. Capacity (utilization) thresholds for certain standard categories of health care services are established to guide the initial determination of need for a service area.

Forecasting service use employs patient origin data and use rates of existing services and market share forecasting that takes into account actual utilization data. The number of new beds or new services is based on a need methodology that is reliable, probative, and substantial. Prevalence, presentation, and modality rates and average lengths of stay are modified as appropriate for different funding sources such as public funding or private-pay or private insurance funding.

UNIT/SERVICE	CAPACITY THRESHOLD
Computed Tomography (CT) Unit	For a new unit/service, the minimum annual utilization for each provider in the service area is 7,000 CT procedures per unit, and the utilization of the new unit/service is projected to meet the minimum utilization rate by the third year of operation. For expansion of existing units/services, the provider's utilization is an average of at least 8,500 CT procedures per year per unit.
Magnetic Resonance Imaging (MRI) Unit	For a new unit/service, the minimum annual utilization for each provider in the service area is 2,700 procedures per unit, and the utilization of the new unit/service is projected to meet the minimum utilization rate by the third year of operation. For expansion of existing units/services, the provider's utilization is an average of at least 3,200 MRI procedures per year per unit.
Positron Emission Tomography (PET) Unit	For a new unit/service, the minimum annual utilization for each provider in the service area is 600 procedures per unit, and the utilization of the new unit/service is projected to meet the minimum utilization rate by the third year of operation. For expansion of existing units/services, the provider's utilization is an average of at least 720 procedures per year per unit.
Lithotripsy Unit	For a new unit/service, the minimum annual utilization for each provider in the service area is 670 procedures per unit, and the utilization of the new unit/service is projected to meet the minimum utilization rate by the third year of operation. For expansion of existing units/services, the providers' utilization is an average of at least 800 procedures per year per unit.
Chronic Renal Dialysis	For a new unit/service, the minimum annual utilization for each provider in the service area is 600 treatments per unit, and the utilization of the new unit/service is projected to meet the minimum utilization rate by the third year of operation.

	For expansion of existing units/services, the provider's utilization is an average of at least 720 treatments per year per unit.
Radiation Therapy Unit	For a new unit/service, the minimum annual utilization for each provider in the service area is 7,200 procedures per unit and the utilization of the new unit/service is projected to meet the minimum utilization rate by the third year of operation. For expansion of existing units/services, the provider's utilization is at least 8,600 procedures per year per unit.
Gamma Knife	For a new unit/service, the minimum annual utilization rate for each provider in the service area is 335 procedures per unit and the utilization of the new unit/service is projected to meet the minimum utilization rate by the third year of operation. For expansion of existing units/services, the provider's unit utilization rate is an average of at least 400 procedures per year per unit.
Adult Cardiac Catheterization Unit	For a new service/unit, the minimum annual utilization for each provider in the service area is 1,000 diagnostic-equivalent procedures per unit, and the utilization of the new unit/service is projected to meet the minimum utilization rate by the third year of operation. For expansion of existing units/services, the providers' annual utilization is an average of at least 1,200 diagnostic-equivalent procedures per unit per year. Maximum capacity of a cardiac catheterization unit is 1,500 diagnostic equivalent procedures per year per unit, based on 6 diagnostic equivalent procedures per day, 5 days a week for 50 weeks a year. Cardiac catheterization utilization shall be determined by counting all therapeutic, pediatric or electrophysiology procedures as two (2) diagnostic equivalents, and other procedures as one (1) diagnostic equivalent. For diagnostic catheterizations, only one (1) diagnostic procedure will be counted per patient visit in the cardiac catheterization unit regardless of the number of procedures performed.
Open Heart Surgery	For a new service, the minimum annual utilization for each provider in the service area is 350 adult or 130 pediatric open-heart operations per year, and the new unit/service is projected to meet a utilization rate of at least 200 adult or 100 pediatric open-heart operations in the third year of operation.
Freestanding Ambulatory Surgery Center (less than 24 hours stay)	A collaborative arrangement shall be made with an existing acute care hospital in the county. This collaboration shall, without limitation: a. Include a transfer agreement b. Commit to support all training and recruitment of health care personnel for the benefit of the area c. Commit to enhance the EMS and trauma care systems of the area by using the ASC, when necessary, for cases such as natural disaster or pandemic.
Medical/Surgical Bed	For new or additional SHPDA-approved medical/surgical beds, the minimum annual occupancy rate for each provider in the service area must be 75% based on the number of licensed medical/surgical beds.
Obstetric Bed	For new or additional SHPDA-approved OB beds, the minimum annual occupancy rate for each provider in the service area must be 75% based on the number of licensed OB beds.
Psychiatric Bed	For a new or additional SHPDA-approved psychiatric beds, the average annual occupancy rate for licensed beds for each service provider in the service area is at least 80% for adult (age 18 and over) programs and at

	least 75% for children (ages 17 and younger) programs. The minimum bed size of a new acute psychiatric unit in a general acute facility is 8 beds. Children and adolescents are treated in units that are programmatically and physically distinct from adult patient units. Unit - refers to acute care hospital licensed beds that are dedicated to the treatment of psychiatric patients. These licensed beds are situated in a distinct part of the acute care hospital (a separate wing, nursing unit, contiguous nursing units, floor, or building), and staffed and supported by health care professionals with essential expertise and experience to properly care for and treat psychiatric patients.
Substance Abuse/Chemical Dependency Bed	For a new or additional SHPDA-approved special treatment facility beds that are designated for substance abuse/chemical dependency treatment, the average annual occupancy rate for licensed beds for each service provider in the service area is at least 75% . Children and adolescents ages 17 and younger are treated in units that are programmatically and physically distinct from adults (age 18 and over) patients units, except where the units are designed as parent/child treatment units.
Inpatient Rehabilitation Bed	For new or additional SHPDA-approved inpatient rehabilitation beds, the minimum annual occupancy rate for each provider in the service area must be 85% based on the number of licensed beds.
Long-term Care Bed	1. Define target population 2. National utilization rates should be applied to the estimated target population to determine need 3. Need estimates should be compared to current Hawaii licensed long-term care bed usage Compare current and anticipated licensed long-term care bed usage in service area

It is recognized that some service areas may not meet the required threshold for a health care service. Sub-optimum utilization may be proposed if the benefits clearly outweigh the costs to the community of duplicating or under-using services, facilities, or technologies.

Benefits are defined as the form of improved access for the service area(s) population combined with significant improvement in quality and/or significant reduction in cost to the public.

In addition, beyond regional factors, thresholds may be modified to:

- Incorporate current and best clinical practices;
- Allow for the cost-effective transition and capital investment in moving traditional inpatient services to outpatient modalities;
- Allow for the cost-effective introduction of modern technology to replace existing technology;
- Address the documented needs of an actual population rather than basing care design on statistical generalizations;

- Create opportunities for price reduction through competition, without sacrificing quality or cost-effectiveness of care; and
- Encourage innovation in improving health care services that contribute to enhancing a community's health status.

Examples of situations where sub-optimum utilization was allowed by SHPDA include:

- CT for Molokai General Hospital: The population size of Molokai is too small to ever meet the threshold standard to justify a CT. However, concerns about access and quality of care (CT is a standard of care for hospitals) outweighed the sub-optimum utilization data. Therefore, SHPDA approved the certificate of need application for a CT from Molokai General Hospital.
- Gamma Knife for Hawaii: The gamma knife is used for specialized treatment of certain types of brain tumors. The current frequency of such brain tumors in Hawaii, and the surrounding Pacific Basin region, is below the utilization numbers needed for a gamma knife. However, given the fact that there was no other gamma knife in the Hawaii/Pacific Basin region and that the knife provides improved patient brain surgery outcomes, SHPDA approved the application for a gamma knife for St. Francis Hospital.

Chapter 3: Statewide and Regional Priorities

Statewide Health Coordinating Council (SHCC) Priorities

General Principles

1. Promote and support the long-term viability of the health care delivery system
2. Expand and retain the health care workforce to enable access to the appropriate level of care in a timely manner
3. Ensure that any proposed service will at least maintain overall access to quality health care at a reasonable cost
4. Strive for equitable access to health care services (i.e., remove financial barriers, increase availability of physicians)
5. Ensure all projects are appropriate for the regional and statewide continuum of care
6. Encourage and support health education, promotion, and prevention initiatives
7. Expand awareness of available human, financial, programmatic resources

Specific Health Areas of Concern

1. Ensure capacity and access to a continuum of long-term care services
2. Establish a statewide emergency and trauma system
3. Ensure capacity and access to primary care services
4. Increase and improve access to mental health programs, services, and education
5. Increase and improve access to substance abuse programs, services, and education

Subarea Health Planning Council (SAC) Priorities

HAWAII COUNTY/HAWAII SUBAREA PLANNING COUNCIL (HSAC)

In determining its priorities, HSAC notes that Hawaii, as compared to the rest of the State, has the:

- Highest growth rate of resident population due to in-migration
- Highest growth rate of older adults (60+) between 1980 and 2000
- Lowest life expectancy
- Highest coronary heart disease death rates
- Highest cerebrovascular disease death rates
- Highest cancer death rates
- Highest motor vehicle accident death rates

The following are the HSAC priorities:

1. PROVIDER (WORKFORCE) SHORTAGE: Increase the number of and retention of the health care workforce. This includes but is not limited to:
   - Primary care providers
   - Specialty care providers

- Dentists
- Long term care workers
- Nurses
- Allied health professionals

2. FACILITIES SHORTAGE: Increase the number of and improve the access to and the quality of health care facilities.

3. LONG-TERM CARE SHORTAGE: Expand the capacity of and improve the access to long term care facilities and home and community-based services.

4. PREVENTION**:** Address high risk health indicators through education, prevention, and treatment strategies.

KAUAI COUNTY/KAUAI SUBAREA HEALTH PLANNING COUNCIL

1. COMPREHENSIVE SYSTEM OF CARE
   - Strive for a Kauai system of comprehensive care , continuously improving and providing affordable health care services – prenatal to death
   - Promote island sustainability and local control of Kauai health services
   - Increase the supply of residential and in-home care options for seniors at all economic levels
   - Resolve the long term care waitlist problems at hospitals
   - Improve accessibility to medical services on island as soon as feasible (i.e., radiation treatment, interventional catheterization)
   - Support a responsibility that health service providers establish charity care/sliding-fee policies
   - Advocate for cultural relevancy and patient and family satisfaction with provider quality and user-friendly procedures/processes
   - Support efforts which: 1) sponsor students to pursue careers in health: nursing; physical therapy; home health; geriatrics, medicine, etc.; and 2) recruit and retain personnel in areas of health care experiencing shortages who will live on Kauai

2. EMERGENCY SERVICES
   - Minimize life-threatening time delays of emergency vehicles responding to 911 calls such as narrow lanes, no shoulder roads and grid-locked traffic on major state/county roads that obstruct emergency access and create a high-risk of triggering traffic accidents.
   - Establish an ambulance station in the Kalaheo district due to the planned increase of 6,000 residential units in the area.
   - Review the on-going stability and effectiveness of air/ground ambulance and emergency room services, due to Kauai's total dependency and vulnerability for time-sensitive Oahu medical services.

3. COMMUNITY AWARENESS, PREVENTION AND EARLY INTERVENTION
   - Increase community education and awareness of drug and alcohol abuse and chronic diseases (i.e., Type I diabetes) in schools and small business workplaces. Prevention and early intervention: Develop teen centers.

HONOLULU COUNTY

HONOLULU (HONSAC) PRIORITIES

1. Increase the availability of long-term care services and other supportive services.
    - Long-term care services include nursing homes, assisted living facilities, skilled nursing facilities, home and community-based services and hospice services.
    - Supportive services help maintain the quality of life and include housing, transportation, nutrition, and social support for independent living.

2. Support efforts to promote scientifically-based nutritional health knowledge within the community for the development of healthy living lifestyles for all.

3. Identify and address workforce shortages in the health care industry with particular emphasis on senior care services.

4. Control escalating costs in the senior care industry and other needed services. For example, reduce the need for institutionalized care.

WEST OAHU SAC PRIORITIES

1. IMPROVE AND INCREASE ACCESS
    - Acute care
    - Critical care
    - Specialty care
    - Emergency care options
    - Routine outpatient diagnostic services (i.e., blood pressure, urinalysis)
    - Geriatric services (home and community based) to keep older adults out of institutions
    - Nursing home beds
    - Mental health services
    - Substance abuse services
    - Services for uninsured and underinsured
    - Telemedicine

2. INCREASE COMMUNITY ENGAGEMENT
    - Raise dialog of health issues in the community (neighborhood boards, businesses, providers, schools)
    - Develop partnerships between various organizations in the community to support health care activities (University of Hawaii-West Oahu/Leeward, neighborhood boards, community associations, focal points) and increase utilization

3. IMPROVE EDUCATION AND INCREASE PREVENTIVE MEDICINE
    - Health education for chronic disease (i.e., hypertension, diabetes, asthma) to ensure cost savings
    - Community preventive health campaigns (obesity/chronic disease, screenings, nutrition)

- Establish preventive care programs at John A. Burns School of Medicine and other institutions that can be taken out into community (i.e., kidney screenings, diabetic screenings)

WINDWARD SAC PRIORITIES

1. IMPROVE BED AVAILABILITY: Improve the hospital bed availability through timely transfer of ready patients to appropriate levels of care.
   - Examples include the transfer of an acute care patient to a long term care facility or for specialized continued treatment.

2. HAVE ADEQUATE ACCESS: Have adequate access to and from the facilities of care or to medical information using emerging technologies.
   - Examples of emerging technologies include telemedicine, remote monitoring, online medical information or similar technology solutions.

3. EDUCATION AND PREVENTION: Through collaborative partnerships, improve health with easily accessible education and prevention.
   - Example of disease areas should include obesity, diabetes, cancer, dental and mental health.
   - Examples of easily accessible education include partnering to provide the end user with an easy navigation of the health care system. The end user includes the patient, advocates, facilities or physicians.

MAUI COUNTY/TRI-ISLE SAC

1. PREVENTIVE MEDICINE[1]
   - Establish health promotion and disease prevention as a primary focus while promoting personal responsibility for optimal health.
   - Expand resources (human, financial, and programmatic) for education, disease prevention, and complementary medicine[2] practices and integrating complementary medicine definitions in the HSFP.

2. HOME AND COMMUNITY-BASED SERVICES[3]
   - Address the immediate shortages of long term care beds and services
   - Increase home and community-based services and bed supply including nursing facilities, foster families, assisted living, and adult residential care homes
   - Promote the paradigm shift of long term care -- the notion that home and community-based services encompasses more than nursing facilities
   - Investigate public and private partnerships to ensure optimal, cost effective, and quality care
   - Streamline requirements and eliminate barriers for establishment of home and community-based services in the community
   - Provide for and educate an adequate supply of home and community-based services workers to meet demand
   - Optimize reimbursement through Medicare, Medicaid, and third party insurers
   - Expand/create programs to provide accessibility for low income individuals to home and community-based services

- Create a formula for distributing public funds toward alternative home and community-based services and conduct regular bi-annual evaluations

3. PRIMARY, ACUTE, AND EMERGENCY SERVICES
   - Improve access to mental health services for all citizens from cradle to grave
   - Improve timely access to dental services for uninsured/underinsured populations
   - Recruit and educate an optimal supply of health care workers to meet demand
   - Create innovative incentive programs to retain all health care workers
   - Provide community-based emergency and health care services to underserved communities, such as:
     - Establishing an aero-medical network of services that responds to all areas
     - Providing telemedicine throughout the county
     - Providing 24-7 pharmacy services throughout the county
   - Provide adequate number of acute care beds throughout the county
   - Expand and integrate complementary medicine
   - Optimize reimbursement through Medicare, Medicaid, and third party insurers
   - Support Tort Reform efforts (public policy and legislation that addresses the cost of medical malpractice premiums)
   - Promote high quality, modern, and complementary medicine obstetric practices[4]
   - Modernize facilities via construction, reconstruction and/or replacement
   - Create innovative solutions for making Hawaii health care systems responsive to community needs by recognizing efficient and inefficient facilities and services and exploring capital partnerships, joint ventures, consolidations, and other financial arrangements
   - Investigate public and private partnerships to ensure optimal, cost effective, and quality care
   - Offer State and County tax credits for consumers and providers of needed services
   - Establish a medical residency program in Maui County

4. RURAL AREAS (HANA, LANAI, AND MOLOKAI)
   - Develop and implement culturally appropriate comprehensive health care plans (e.g., elderly care program) for rural areas with input from and collaboration with existing service providers and community stakeholders
   - Modernize facilities and equipment
   - Increase access to primary care and specialty services (i.e., hemodialysis unit in Hana)
   - Provide incentives for attracting and retaining primary and specialty care providers

5. ENVIRONMENTAL MEDICINE[5]
   - Assure air and water quality standards are monitored and met
   - Continue to monitor genetically modified organisms (GMO) impact studies[6]

6. DISASTER PREPAREDNESS
   - Develop a comprehensive Maui County Disaster Plan that interfaces and collaborates with Federal and State programs
   - Provide adequate supply of disaster preparedness workers to meet demands
   - Increase awareness of personal responsibility in disaster preparedness through public awareness and education programs/activities

ENDNOTES

[1] Preventive medicine: The branch of medical science concerned with the prevention of disease and the promotion and preservation of physical and mental health through the study of the etiology and epidemiology of disease processes.

[2] Complementary medicine: A group of diagnostic and therapeutic disciplines that are used together with conventional medicine. Comprised and not limited to:

a. Biologically based practices use substances found in nature, such as herbs, special diets, or vitamins (in doses outside those used in conventional medicine).
b. Energy medicine involves the use of energy fields, such as magnetic fields or biofields (energy fields that some believe surround and penetrate the human body).
c. Manipulative and body-based practices are based on manipulation or movement of one or more body parts.
d. Mind-body medicine uses a variety of techniques designed to enhance the mind's ability to affect bodily function and symptoms.

[3] Home and community-based services (HCBS): Services that are provided to people in their homes by various types of providers. HCBS may include services such as case management, minor home modifications, home delivered meals, chores, personal care, assisted transportation, and personal emergency response systems.

[4] The Steps to a Mother Friendly Hospital are detailed in: http://www.motherfriendly.org/MFCI/steps.html (introduced in 1996). The Steps to a Baby Friendly Hospital are detailed in: http://www.babyfriendlyusa.org/eng/10steps.html (introduced in 1991).

[5] Environmental medicine: A multidisciplinary field involving medicine, environmental science, chemistry and other related areas. The scope of this field involves studying the interactions between the environment and human health, impact of environmental factors on the cause of diseases including chemical, physical and biological agents.

[6] Genetically modified organism (GMO): A GMO is an organism whose genome has been altered by the techniques of genetic engineering so that its DNA contain one or more genes not normally found there. A high percentage of food crops, such as corn and soybeans, are genetically modified.

Appendix

TABLE 1

Acute Care and Long-term Care Bed Rates

	Hawaii	Rank	U.S.
Rate of Beds per 1,000 for 2006	2.3	n/a	2.7
Rate of Nursing Facility Bed per 1,000 65+, 2005	23	48	47
Nursing facility occupancy rate (%), 2005	94	2	85

Note: Beds includes nonfederal, short-term general and other special hospitals.
Sources: American Hospital Association Hospital Statistics 2008
AARP Public Policy Institute, "Across the States, Profiles of Long-term Care and Independent Living Hawaii 2006"

TABLE 2

Hawaii Health Insurance Coverage 2006

	Hawaii	Rank	U.S.
% of population covered by health insurance	91.2	2	84.2
% of population covered by private health insurance	74.7	11	67.9
% of population covered by employment-based health insurance	68.1	6	59.7
% of population covered by direct purchase health insurance	8	35	9.1
% of population covered by government health insurance	30.2	13	27
% of population covered by military health care	9.6	3	3.6
% of population covered in Medicare	14.5	32	14.3
% of population covered in Medicaid	15.6	19	14.8
% of children covered by health insurance	93.7	6	88.3
% of children covered by private health insurance	70	20	64.6
% of children covered by employment-based health insurance	66.9	14	59.7
% of children covered by direct purchase health insurance	4.1	35	5.3
% of children covered by government health insurance	35.8	8	29.8
% of children covered by military health care	13.5	2	2.8
% of children covered by Medicaid	22.4	38	27.1

Source: Health Care State Rankings 2008

TABLE 3

Health Care Workforce Rates and Rankings

Workforce	Hawaii	Rank	U.S.*
Health Care Practitioners and Technicians in 2006	1,893	45	2,207
Physicians in 2006	360	7	304
Percent of Female Physicians in 2006	27.4	21	27.7

Percent of physicians under 35 years old in 2006	11.7	37	15.3
Percent of physicians 65 years and older in 2006	20.6	11	19.2
Rate of physicians in patient care 2006	284	7	239
Rate of physicians in primary care 2006	125	7	99
Rate of physicians in general/family practice in 2006	33	24	30
Percent of physicians who are specialists in 2006	74.5	11	73.2
Rate of nonfederal physicians in medical specialties in 2006	113	8	96
Rate of physicians in internal medicine in 2006	62	8	52
Rate of physicians in pediatrics in 2006	139	6	98
Rate of physicians in surgical specialties in 2006	63	8	53
Rate of physicians in general surgery in 2006	14	10	12
Rate of physicians in obstetrics and gynecology in 2006	38	3	27
Rate of physicians in ophthalmology in 2006	8	4	6
Rate of physicians in orthopedic surgery in 2006	9	13	8
Rate of physicians in plastic surgery in 2006	2	11	2
Rate of physicians in other specialties in 2006	92	7	73
Rate of physicians in anesthesiology in 2006	13	18	14
Rate of physicians in psychiatry in 2006	21	7	14
Percent of International Medical School Graduates in 2006	15.4	33	25.3
Rate of osteopathic physicians in 2007	14	21	18
Rate of podiatrists in 2006	n/a	n/a	3
Rate of chiropractic doctors in 2006	38	9	29
Rate of optometrists in 2006	9	24	8
Rate of dentists in 2005	82	2	60
Rate of physician assistants in clinical practice in 2007	13	44	22
Rate of registered nurses in 2006	752	37	809
Rate of licensed practical nurses/vocational nurses in 2006	157	41	241
Rate of physical therapists in 2006	44	41	52
Rate of pharmacists in 2006	95	6	80
Rate of emergency medical technicians and paramedics in 2006	41	43	66
Rate of health care support (aides and assistants) in 2006	1,039	39	1,166
Access			
Percent of population lacking access to primary care 2007	3.6	48	11.1
Percent of population lacking access to mental health care 2007	7.6	40	17.8
Percent of population lacking access to dental care in 2007	6.5	35	9.6

**National Rate per 100,000 population*
Note: The rate for health care practitioners and technicians does not include the self-employed, veterinarians, and veterinarian technicians. The rate of physicians in obstetrics and gynecology is per 100,000 female population. Also, access rates and ranks are based on data from the U.S. Dept. of Health and Human Services, Div. of Shortage Designation
Source: Health Care State Rankings 2008

TABLE 4
Resident population by county: 1990-2007

	State Total	City and County Honolulu	Hawaii County	Kauai County	Maui County
1-Jul-90	1,113,491	838,534	121,572	51,676	101,709
1-Jul-07	1,283,388	905,601	173,057	62,828	141,902
% change	15.3	8	42.3	21.6	39.5

Notes: Maui County includes Kalawao County (Kalaupapa Settlement)
Source: U.S. Bureau of the Census, Federal-State Cooperative Program for Population Estimates, "Time Series of Hawaii Entercensal Population"
Estimates by County: April 1, 1990 to April 1, 2000 (CO-EST2001-12-15)
The State of Hawaii Data Book 2007

TABLE 5
Physicians Providing Patient Care in 2006

Physician Workforce Providing Patient Care Rates per 100,000 Population	Hawaii	Honolulu	Kauai	Maui	State	National
Total Patient Care	174.7	296.1	192.1	186.8	262.8	231.98
General Practice	9.9	4.7	4.8	5.7	5.5	2.9
Family Medicine	29.2	20.2	38.1	24.1	22.7	25.4
Anesthesiology	8.8	13.2	9.5	8.5	11.9	13.04
Child Psychiatry	3.5	5.6	1.6	1.4	4.7	2.2
Diagnostic Radiology	5.8	8.6	7.9	7.8	8.1	7.7
Emergency Medicine	8.2	12.3	15.9	10.6	11.7	9.4
Neurology	1.2	4.2	1.6	2.8	3.5	4.3
Nuclear Medicine	1.2	0.8	0	0	0.7	0.4
Occupational Medicine	0.6	1.4	0	2.1	1.3	0.59
Psychiatry	11.1	19.9	9.5	6.4	16.7	12.02
Pathology, Anatomic/Clinical	2.9	5.9	3.2	2.8	5.1	5.3
Physical Medicine/Rehabilitation	3.5	2.96	1.6	2.1	2.9	2.3
General Preventive Medicine	0.6	1.8	1.6	0.7	1.5	0.5
Radiology	1.2	3.4	3.2	4.95	3.3	2.7
Radiology Oncology	0.6	1.4	0	2.1	1.3	1.41
General Surgery	8.8	13.95	9.5	5.7	12.1	11.7
Neurological Surgery	0	1.97	0	0.71	1.5	1.7
Obstetrics-Gynecology	22.3	36	19	18.6	31.5	23.6
Ophthalmology	2.9	9	6.3	3.5	7.5	5.7
Orthopedic Surgery	4	10.6	6.3	7.8	9.2	7.7
Otolaryngology	0	3.6	3.2	2.8	3.03	3.2
Plastic Surgery	1.8	2.4	0	3.5	2.3	2.3

Colon/Rectal Surgery	0	0.33	0	0	0.23	0.43
Thoracic Surgery	0.6	1.9	0	0.7	1.5	1.5
Urology	1.8	3.3	1.6	2.8	2.96	3.3
Allergy and Immunology	0.6	1.5	0	0	1.2	1.2
Cardiovascular Disease	2.9	5.3	4.8	4.95	4.9	6.8
Dermatology	2.33	3.7	1.6	4.2	3.5	3.4
Gastroenterology	2.3	3.7	0	2.1	3.2	3.8
Internal Medicine, General	24	52.8	25.4	31.1	45.2	34.6
Pediatrics, General	14	26.3	19	16.98	23.3	17.6
Pulmonary Disease	1.8	2.96	1.6	0.7	2.5	2.99

Notes: Patient Care includes office-based and hospital-based practice.
Source: Area Resource File (ARF) 2007. US Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions.
Note: ARF contains American Medical Association Physician Data.

TABLE 6
2006 Physician Demographic/Rates

	Hawaii	Honolulu	Kauai	Maui	State	U.S.
Physicians, Non-Fed and Fed, Total Active	186.3	352.8	222.2	205.2	307.97	267.3
Physicians, Non-Fed, Total Active	182.8	326.5	214.3	201.7	288.1	259.96
Physicians, Non-Fed, Total Patient Care	174.7	296.1	192.1	186.8	262.8	231.98
Physicians <35	5.8	52.9	14.3	10.6	40.1	46.2
Physicians, 65-74	30.95	40.56	38.1	23.4	37.3	30.1
Physicians, 75+	23.4	38.5	25.4	27.6	34.6	27.1

TABLE 7
2006 Physician Count and Percentage Inactive 65+

	Hawaii	Honolulu	Kauai	Maui	State	U.S.
Physician Count, 65-74	53	369	24	33	479	90207
Percentage Inactive 65-74	36%	22%	20%	30%	24%	25%
Physician Count, 75+	40	350	16	39	445	81129
Percentage Inactive 75+	45%	43%	47%	46%	43%	43%

TABLE 8
2006 Percentage of Active and Inactive Female Physicians

	Hawaii	Honolulu	Kauai	Maui	State	U.S.
Percentage of Active Female Physicians	29%	28%	24%	25%	28%	28%
Percentage of Inactive Female Physicians	13%	7%	10%	4%	8%	6%

Notes: Patient Care includes office-based and hospital-based practice.
Inactive includes retired, semi-retired, working part-time, temporarily not in practice, or not active for other reasons and indicated they worked 20 hours or less per week.
Source: Area Resource File (ARF) 2007. US Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions.
Note: ARF contains American Medical Association Physician Data.

Chart 1. Typical Standard Application Review Flowchart