

HAWAI'I STATE HEALTH PLANNING AND DEVELOPMENT AGENCY

STANDARD APPLICATION - CERTIFICATE OF NEED PROGRAM

Application Number: _	≠11 - 23 o be assigned by Age	ency	Date of Rec	eipt:	
		APPLICANT	PROFILE		
Project Title:	Establishment c	of an Open Hea	rt Surgery Prog	gram	
Project Address:	640 `Ulukahiki S	Street, Kailua, F	lawai`i 96734		
Applicant Facility/Or	rganization:Cas	stle Medical Cer	nter		
Name of CEO or eq	uivalent: <u>Katl</u>	hryn A. Raethel		····	
Title:	Presiden	t/CEO			
Address:	640 'Ulukahiki Stı	reet, Kailua, Ha	wai`i 96734		
Phone Number:	(808) 263-5142	Fa	x Number:	(808) 263-5143	
Contact Person for t	this Application:	Kathryn A. F	Raethel		
Title:	President/CEO				· · · · · · · · · · · · · · · · · · ·
Address:	640 `Ulukahiki Si	treet, Kailua, Ha	awai`i 96734		
Phone Number:	(808) 263-5142	Fa	x Number:	(808) 263-5143	
contained herein. documentation inclu	that I reviewed the I declare that the uded is true and cor	e project desc rect to the best	I have knowled ribed and ead of my knowled Date	dge of the content and	and supporting
Certificate of Need Standard July 2009 1409481 V1	Application				Page 1 of 12

1.	TY	PE OR ORGANIZ. /ION: (Please check all applicable)
	No For Ind Co Par Lim Lim	polic vate X n-profit Y-profit Indicate
2.	PF	OJECT LOCATION INFORMATION:
	A.	Primary Service Area(s) of Project: (Please check all applicable)
		Statewide: O`ahu-wide: Honolulu: Windward O`ahu: West O`ahu: Maui County: Kaua`i County: Hawai`i County:
3.	DC	OCUMENTATION (Please attach the following to your application form):
	A.	Site Control documentation (e.g. lease/purchase agreement, DROA agreement, letter of intent)
		The designated area is located on the Castle Medical Center campus and is owned by Castle Medical Center
	В.	A listing of all other permits or approvals from other government bodies (federal, state, county) that will be required before this proposal can be implemented (such as building permit, land use permit, etc.)
		Building Permit from the City & County of Honolulu
	C.	Your governing body: list by names, titles and address/phone numbers
		See Attachment 1
	D.	If you have filed a Certification of Need Application this current calendar year, you may skip the four items listed below. All others, please provide the following: Articles of Incorporation: See Attachment 2

By-Laws: See Attachment 3
Partnership Agreements: Not applicable
Tax Key Number (project's location): 1-4-2-6-4

4. TYPE OF PROJECT. This section helps our reviewers understand what type of project you are proposing. Please place an "x" in the appropriate box.

.0.54	Used Medical Equipment (over \$400,000)	New/Upgraded Medical Equip. (over \$1 million)	Other Capital Project (over \$4 million)	Change in ownership	Change in service/ establish new service/facility	Change in Beds
Inpatient Facility		x			X	
Outpatient Facility						
Private Practice			vrience as			

5. TOTAL CAPITAL COST: _\$ 3,000,000_

6. **BED CHANGES.** Please complete this chart only if your project deals with a change in your bed count and/or licensed types. Again, this chart is intended to help our reviewers understand at a glance what your project would like to accomplish. Under the heading "Type of Bed," please use only the categories listed in the certificate of need rules.

Type of Bed	Current Bed Total	Proposed Beds for your Project	Total Combined Beds if your Project is Approved
Intensive Care Unit (ICU)	8	+ 4	12
Medical/Surgical	111	- 4	107
Obstetrics	12	No change	12
Behavioral Health Management	29	No change	29
TOTAL	160	0	160

7. CHANGE IN SERVICE. If you are proposing a change in service, then please briefly list what services will be added/modified. Be sure to include the establishment of a new service or the addition of a new location of an existing service. Please consult Certificate of Need Rules Section 11-186-5 for the categories of services. If you are unable to determine which category best describes your project, please consult with agency staff.

Establishment of an Open Heart Surgery Program at 640 `Ulukahiki Street,

Kailua, Hawai'i 96734. Reference HAR § 11-186-5(4)(E).

8. PROJECT COSTS AND SOURCES OF FUNDS (For Capital Items Only) A. List All Project Costs: AMOUNT: 1. Land Acquisition 2. Construction Contract \$1,525,000

4.	Movable Equipment	\$ 1,200,000

7. Other: _____

TOTAL PROJECT COST:

\$ 3,000,000

\$ 275,000

B. Source and Method of Estimation

Fixed Equipment

Describe how the cost estimates in Item "A" were made, including information and methods used:

The cost estimates were developed from estimates provided by equipment suppliers and

building professionals.

C.	Sour	AMOUNT:	
	1.	Cash	\$ 3,000,000
	2.	State Appropriations	
	3.	Other Grants	
	4.	Fund Drive	
	5.	Debt	
	6.	Other:	<u></u>

TOTAL SOURCE OF FUNDS: \$3,000,000

3.

- 9. IMPLEMENTATION SCHEDULE: Please present a projected time schedule for the completion of this project from start to finish. Include all of the following items that are applicable to your project:
 - a) Date of site control for the proposed project:

The site designated for the Open Heart Surgery Program is located on the campus of Castle Medical Center.

b) Dates by which other government approvals/permits will be applied for and received:

Building Permit from the City & County of Honolulu

Applied for:

February 2012

Received:

July 2012

- c) Dates by which financing is assured for the project: December 5, 2011
- d) Date construction will commence: July 2012
- e) Length of construction period: Three months
- f) Date of completion of the project: October 2012
- g) Date of commencement of operation: October 2012

Please remember that the Agency does monitor the implementation of Certificates approved. Non-implementation of a project as described in your application may result in a fine and/or withdrawal of the Certificate of Need.



- 10. EXECUTIVE SUMMARY: Please present a brief summary of your project. In addition, provide a description of how your project meets each of the Certificate of Need criteria listed below. If a new location is proposed, please attach an easy to read map that shows your project site.
 - a) Relationship to the State of Hawai'i Health Services and Facilities Plan
 - b) Need and Accessibility
 - c) Quality of Service/Care
 - d) Cost and Finances (include revenue/cost projections for the first and third year of operation)
 - e) Relationship to the Existing Health Care System
 - f) Availability of Resources

EXECUTIVE SUMMARY

Castle Medical Center ("Castle") seeks approval to develop an Open Heart Surgery Program ("Program") on its existing Kailua campus located at 640 `Ulukahiki Street, Kailua, Hawai`i. Implementation of the Program will require conversion of four of Castle's current Medical/Surgical beds to Intensive Care Unit beds, which will converted pursuant to the certificate of need exemption set forth in HRS § 323D-54(9).

Although Castle is the anchor hospital service provider for Windward O`ahu, currently, Castle does not have a cardiac surgery program. Windward O`ahu patients in need of open heart surgery are now transferred from Castle to one of the downtown Honolulu hospitals, which previously included Hawaii Medical Center-East ("HMC-East"). The announced closure of HMC-East will result in decreased access to cardiac surgery. As HMC-East closes, it is relocating its patients to other nearby hospitals and is not taking any new patients.

The Program is intended to alleviate gaps in cardiac surgery services that are expected to occur as a result of the closure of HMC-East. However, in addition to open heart surgery, the improved technical capabilities that will result from implementation of this proposal will enhance Castle's ability to provide a wider array of percutaneous coronary intervention ("PCI") procedures and vascular surgeries than can now be performed at the hospital. Accordingly, the Program will allow Castle to provide comprehensive cardiac surgery capability, with the exception of heart transplants, to residents of Windward Oʻahu and others displaced from HMC-East. In addition, the Program will provide support to Castle's existing Interventional Cardiac Catheterization Lab.

The Program specifically seeks to improve access to open heart surgery for the Windward O`ahu communities of Kailua, Waimanalo, Kane`ohe, Kahalu`u, Ka`a`awa, Hau`ula, Kahalu`u, and La`ie ("Targeted Service Area"). However, the closure of the HMC hospitals will seriously impact the accessibility of cardiac surgery throughout O`ahu, including Leeward O`ahu and the `Ewa plain. The relatively short drive times possible on the H-3 Interstate Freeway will make Castle an attractive option for displaced HMC patients living in Leeward O`ahu as well. Castle hopes to attract these patients to its campus by offering the full range of cardiac care services that the



Program, in conjunction with Castle's existing Interventional Cardiac Catheterization Lab, will allow it to offer.

a) Relationship to the State of Hawai'i Health Services and Facilities Plan.

The State of Hawai`i Health Services and Facilities Plan ("HSFP") states that prior to the establishment of a new open heart surgery unit/service, the minimum annual utilization for each provider in the service area should be 350 adult or 130 pediatric open heart operations per year, and the utilization of the new service should be projected to meet the minimum utilization rate of at least 200 adult or 100 pediatric open heart operations by the third year of operation.

SHPDA has stated that utilization thresholds merely guide the initial determination of need for the service area and applications are neither approved nor disapproved solely on the basis of whether the utilization thresholds are met. The HSFP states that utilization thresholds may be modified to allow for suboptimum utilization if a proposal's benefits clearly outweigh the costs to the community of duplicating or under-using services, facilities or technologies. The HSFP further states that benefits may include improved access for the service area combined with significant improvements in quality of care. Thresholds may also be modified to incorporate current and best clinical practices.

Data from Hawai'i Health Information Corporation ("HHIC") shows that for the 12-month period ending in May, 2011, current providers performed the following numbers of open heart procedures.

Provider	Number of Cardiac Surgeries Performed	
HMC-East	159	
Kuakini Medical Center	123	
Queen's Medical Center	491	
Straub Clinic & Hospital	275	

Data in this table is for DRGs 160, 161, 162, 163, 165 and 166. Data for Tripler Army Medical Center and Kaiser Permanent Moanalua Medical Center has been omitted because those facilities do not provide services to the general public.

Data compiled by the HHIC shows that, in 2010, 75 open heart surgical procedures involving coronary artery bypass grafting ("CABG") and heart valve replacements were performed on patients from the Windward Oʻahu communities. This number excludes cardiac surgeries performed at Tripler Army Medical Center ("TAMC") and Kaiser Permanente Moanalua Medical Center ("Kaiser"); and therefore represents the actual volume of patients available to Castle. HHIC reported that, during the same year, 357 cardiac surgeries were performed on patients from the Leeward Oʻahu communities. This number also excludes cardiac surgeries performed at TAMC and Kaiser. Of the 357 cardiac surgeries performed on patients from Leeward Oʻahu, 97 were performed at HMC-East, representing 60% of all cardiac surgeries performed at the hospital and demonstrating the hospital's key role in providing care to Leeward Oʻahu residents.

During the first , Jar, Castle anticipates 50% of W. dward O`ahu residents needing cardiac surgery and 50% of Leeward O`ahu patients who previously sought care at HMC-East will utilize the Program. During the second year, Castle anticipates that 75% of Windward O`ahu residents needing cardiac surgery and 80% of displaced HMC-East patients from Leeward O`ahu will utilize the Program. By the third year of operation, Castle anticipates 10% growth in the number of patients from Windward O`ahu and 15% growth in the number of HMC-East's displaced Leeward D`ahu patients who sought services outside of HMC-East or non-open heart vascular surgeries that Castle anticipates will be performed as a result of the additional capabilities generated by the Program. The table below shows the anticipated open heart surgery volume for the first three years of the Program's operation.

	Year 1	Year 2	Year 3
Windward Oahu Patients	37	56	62
Leeward Oahu Patients	48	78	90
TOTAL	85	134	152

Although this proposal falls somewhat short of the threshold case volume established by the HSFP, the shortfall is insubstantial in light of the fact that this proposal meets the criteria for suboptimal utilization. The Windward area of O`ahu is a significant population center; and is likely to experience continued growth in population. The Program will be the only open heart surgery program on the Windward side of O`ahu. Under ideal conditions, the drive from Windward O`ahu to downtown Honolulu takes about 25 minutes. However, the drive time can be considerably longer due to congested traffic conditions. The availability of the H-3 Freeway also makes it likely that Leeward Oahu residents will be able to drive to Castle more quickly than to downtown Oahu hospitals.

Individuals experiencing an acute myocardial infarction ("AMI") require immediate emergency medical attention which may include emergency cardiac surgery. When every second and minute are crucial to survival, transportation from Windward or Leeward Oʻahu to downtown Honolulu for an emergency open heart surgery could involve a significantly longer drive time due to congested traffic conditions than would transportation to Castle and therefore raise a greater risk of death for patients suffering from AMIs. By making emergency care available more quickly, this Program will improve the quality of care available to residents of the Targeted Service Area as well as the Leeward side of Oʻahu.

The Program will also facilitate the implementation of current and evidenced-based best clinical practices, which are in compliance with standards established by The Joint Commission, the Centers for Medicare and Medicaid Services, Hawai`i Medical Service Association and John Hopkins University, to ensure that patients receive the highest quality of care and achieve the best clinical outcomes possible.

In addition, individuals diagnosed with coronary artery disease with multivessel involvement are recommended to receive open heart surgery for a CABG and a heart valve replacement if the patient has a concomitant valvular disease. Michael H. Crawford, MD, ed., *Chronic Ischemic Heart Disease*, Current Diagnosis and Treatment Cardiology, 25, 34-37 (3d. ed. 2009). Postponement of the recommended surgery can lead to acute cardiac incidents with resulting tissue ischemia, multi-organ system involvement, myocardial infarction and ultimately death. Making cardiac surgery services easily accessible to these patients is essential to ensuring that they receive this needed care. Georgios I. Tagarakis, et al., *Why Are Heart Operations Postponed?*, Journal of Cardiothoracic Surgery 6:106 (2011).

This Program will advance the Statewide Health Coordinating Council ("SHCC") priority of ensuring maintenance of overall access to quality health care at a reasonable cost by ensuring that residents of the Targeted Service Area and Leeward O`ahu have access to open heart surgical treatment that is near or more readily accessible than treatment now available from downtown Honolulu providers. By improving access to cardiac surgical treatments, this Program will encourage patients to seek, rather than postpone, cardiac surgical treatment, and thereby lower health care costs associated with treating conditions resulting from delayed treatment and improve each patient's quality of life.

In addition, Cardiovascular disease ("CVD"), which includes coronary heart disease and stroke, is the leading cause of mortality in Hawai`i. The Hawai`i State Department of Health ("DOH") has reported that in 2005 alone, the total hospital discharges for coronary heart disease was 6,101, with 2,940 discharges for AMI. The average age of death for patients with significant CVD is between 60 – 85 years of age. When CVD is left untreated or treatment is postponed, cardiovascular disease may result in repeat hospitalizations, necessitate costly nursing home care, or result in premature mortality. By improving access to cardiac surgical treatment, the Program will encourage patients to seek, rather than postpone, cardiac surgical treatment and thereby contribute to the overall lowering of health care costs in Hawai`i.

b) Need and Accessibility

Castle's proposed Program is timely and necessary in light of HMC's announced closure, which has resulted in the termination of HMC-East's open heart surgery program. Physicians who have practiced at HMC, have urged Castle to open the Program and provide needed care for displaced HMC-East patients who reside in Windward as well as Leeward O'ahu. HMC-East's closure has compromised Hawaii's healthcare system, especially its ability to provide cardiac care. According to the report published in the Star-Advertiser on October 28, 2011, most of Oahu's medical centers are currently full to capacity. Kristen Consillio, State Prepares in Case HMC Hospitals Close, Honolulu Star Advertiser, Oct. 28, 2011, at B-1. Castle's Program will fill in the gaps in services created by the closure of HMC-East and prevent the compromise of Hawaii's cardiac care services.

In 2011, the American Heart Association ("AHA") reported that, based on 2007 mortality rates, more than 2,200 individuals die of CVD every day in the United States.

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See AHA Statistical Update, Heart Disease and Stroke Statistics, e19 (2011). Of those deaths, one in six was caused by coronary heart disease. The AHA reported that, annually, approximately 785,000 Americans will suffer a myocardial infarction and approximately 470,000 will have a recurrent myocardial infarction.

In 2007, the DOH reported that heart disease is the leading cause of death in Hawai'i. See DOH, The Burden of Cardiovascular Disease in Hawaii, 8 (2007). In 2005 alone, 3,157 people in Hawai'i died from CVD with coronary heart disease as the primary cause for over 70% of those deaths. The risk of death from CVD increases with age. Accordingly, the need for cardiac care surgery services can be expected to increase as the state's population ages.

In addition, a significant risk factor for CVD is diabetes mellitus ("DM"). Insulin resistance coupled with obesity is associated with extensive CVD. See Clyde W. Yancy, Heart Disease in Varied Populations, Braunwald's Heart Disease – A Textbook of Cardiovascular Medicine, 21, 21 (9th ed. 2012). The increasing incidence of DM and obesity in Hawai'i among both seniors and the younger population suggests that the incidence of CVD is also likely to increase. DM, as a sequela to obesity, is a deadly risk factor for CVD. The Centers for Disease Control and Prevention ("CDC") has reported that from 1999 to 2009, the total number of adults in Hawai'i diagnosed with DM nearly doubled from 48,000 to 80,000. Six thousand new cases of DM were reported in Hawai'i every year from 2006 to 2009. The increasing prevalence of DM as a significant risk factor for CVD will likely cause Oahu's demand for cardiac surgical treatments to rise for the foreseeable future. The Program will provide the open heart surgery capacity needed to meet this projected growing demand.

Although the Program is intended primarily to meet the needs of displaced HMC patients from Windward, and to some extent Leeward O`ahu, Castle will make its services available to all O`ahu residents, including low-income individuals, racial and ethnic minorities, women, individuals with disabilities, other underserved groups, and the elderly.

Castle is the largest provider of emergency medical services for Windward O`ahu and has a separate entrance for patients arriving via ambulance. Castle provides ample free, handicapped accessible parking on the same level as the hospital's main entrance.

c) Quality of Service/Care

The proposed Program will operate in the tradition of Castle's mission to provide the highest quality of care. Castle is nationally recognized for the excellence of healthcare it provides. This has translated to high patient satisfaction that has exceeded Hawaii's average for inpatient satisfaction. The certified and experienced staff will work alongside Castle's board certified cardiologists and cardiothoracic surgeons to ensure that Castle provides high quality open heart surgical care. In addition, these physicians will be available on-call as a further benefit to patients needing open heart surgical treatment. Castle will comply with state and federal regulations for the delivery of care, maintenance of service equipment, and maintenance of the clinical environment. Castle is accredited by The Joint Commission, licensed by the State of Hawai'i Department of Health, and Medicare certified. Castle

has demonstrated on-going commitment to the treatment of ligart disease through the establishment of only Interventional Cardiac Catheterization Lab on the Windward side of O'ahu. The Program will be operated in accordance with the same high standards.

A copy of Castle's written Quality Plan for 2011 is attached as Exhibit C-1.

d) Cost and Finances

As documented on page 4 of 12 of the Application form, the project is estimated to cost \$3,000,000, which will be paid by Adventist Health from cash reserves. The site is already owned by Castle Medical Center.

The new programs' revenue and cost projections for the first and third years of operations are summarized in the table below.

	Projected 1st Full Year Operations	Projected 3rd Full Year Operations
Total Operating Revenue	6,418,856	10,820,178
Operating Expenses		
Salaries and wages	1,576,765	1,689,070
Drugs and medical supplies/equipment	1,925,657	3,246,263
Other Expenses	1,074,841	1,336,340
Depreciation	366,527	366,527
Interest	0	0
Total Expenses	4,943,790	6,638,200
Net Income (Loss) from Operations	1,475,066	4,181,978

e) Relationship to the Existing Health Care System

This program is needed to replace services that were provided by HMC-East. Castle is the current anchor healthcare facility for the Windward communities. The proposed Program will enhance Castle's existing cardiac catheterization services by providing patients, from Windward and Leeward O`ahu, improved access to cardiac surgical treatment. This proposal will allow Castle to provide a full spectrum of cardiac surgical treatments to patients who might otherwise have to travel to downtown Honolulu for care. The resulting delay and inconvenience caused by the need to travel to downtown Honolulu, at best, may lead to the postponement of open heart surgery, which can contribute to increased health care costs, and, in an emergency situation, may also diminish a patient's likelihood of survival. The proposed Program will expedite treatment and recovery by allowing Windward and Leeward O`ahu patients a more effective alternative to seeking treatment downtown.

The Program will strengthen Oahu's health care system by maintaining access to open heart surgery services that would otherwise be lost with the closure of HMC-East. Because the patients that the Program is intended to serve are those that have been displaced by the announced closure of HMC-East, it will have minimal, if any, impact on the other downtown hospitals that now provide cardiac surgery services.

f) Availability of Resources

The proposed Program will include additional staff for the Operating Room ("O,R"), Intensive Care Unit ("ICU") and Telemetry unit. The OR will add the following staff members: 2 FTE registered nurses (RNs), 1 FTE surgical technician, 1 FTE scrub technician and 1 FTE anesthesia technician. The ICU will add 4.5 FTE RNs. The telemetry unit will add 4.5 FTE RNs. Castle is confident that qualified personnel can be acquired through inquiries and interviews with persons in the community with requisite training and experience. Castle will seek to provide employment opportunities to individuals who were formerly employed by the open heart surgery program at HMC-East.

There are minimal financial obstacles to the Program. The construction contract, fixed equipment and movable equipment will be paid for through cash reserves. Castle already owns the site where the Program will be located.