Guam Memorial Hospital Authority

Strategic Plan (2018-2022)



850 Governor Carlos G. Camacho Road Tamuning, Guam 96911

The Board of Trustees for the Guam Memorial Hospital Authority is pleased to present the

STRATEGIC PLAN (2018-2022)

We are proud to present our plans for improving our organization and enhancing the delivery of quality health care on Guam. We commend the Medical Staff, the Executive Management Council and the Hospital staff for their commitment to providing excellent patient care. We offer our support and look forward to continued success.

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Section I: GMHA Environmental Assessment

The Guam Memorial Hospital Authority (GMHA) provides a wide array of acute care inpatient and outpatient services at its community-based Guam Memorial Hospital (GMH) facility located in Oka, Tamuning, Guam; and skilled nursing care for its residents at its Skilled Nursing Unit (SNU) located in Barrigada, Guam approximately six (6) miles Northeast of GMH. Its primary service market is the civilian population on Guam. The secondary markets are the residents of the neighboring Pacific Islands, tourists/visitors and active duty military personnel and their dependents. As the population changes, GMHA must prepare to accommodate changes in healthcare needs. GMHA's planning efforts focus mainly on Guam's civilian population, although utilization by regional neighbors is certainly taken into consideration.

COMMUNITY SERVED

Guam's resident population has grown steadily over the years and its growth rate is expected to continue to rise in the future. Table 1 tracks the population growth experience since 2010 and projected through 2022. However, the figures are not reflective of Guam's Civilian Military Buildup population growth projection of approximately 5,000 marines that are expected to be relocated to Guam sometime between 2018 to 2020. Aside from the near future anticipated population spikes that may result from the Civilian Military Buildup, Guam's resident population is projected to increase 6% by 2020. Projections of the resident population released by the Census Bureau are based on the 2010 Census and projected forward using historical trends in vital statistics, and intercensal change.

TABLE 1
Civilian Population
Projections

Guam: 2010 - 2022

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Population	159,358	159,600	159,914	160,378	161,001	161,785	162,742	163,875	165,177	166,658	168,322	170,002	171,699

Sources: Guam Bureau of Statistics and Plans (2010-2020)

Guam Memorial Hospital Authority Projection (2021-2022)

The ongoing growth in the Island's civilian population supports the need for continuous improvement of Guam's healthcare services. By examining the aging of the population, GMHA can project the types of services it may be expected to provide. Table 2 details Guam's civilian population by age from 2000 through 2010. Although the island's population is relatively young, the population projections indicate that the Community is aging.

TABLE 2
Civilian Population
by Age Groups
Guam: 2000-2010

Age Group	2010	2000	1990	1980
Under 5 years	14 290	16 795	15,097	12 002
Under 5 years	14,289	16,785	-	13,002
5-9	13,984	16,090	13,078	12,632
10-14	15,046	14,281	11,777	11,338
15-19	14,407	12,379	12,121	10,993
SubTotal	57,726	59,535	52,073	47,965
22.24	40.070	44.000	44.070	44.400
20-24	12,379	11,989	14,379	11,108
25-29	10,746	12,944	13,490	10,324
30-34	10,346	12,906	11,786	9,289
35-39	11,404	12,751	10,186	6,246
40-44	11,659	10,390	8,143	5,049
SubTotal	56,534	60,980	57,984	42,016
15 10	44.0=0	0.040		4 400
45-49	11,072	9,042	5,471	4,189
50-54	9,203	7,506	4,808	3,983
55-59	7,715	4,993	4,059	2,914
60-64	6,361	4,534	3,527	1,927
SubTotal	34,351	26,075	17,865	13,013
65-69	3,889	3,399	2,433	1,418
70-74	3,030	2,461	1,368	809
75+	3,828	2,355	1,429	-
SubTotal	10,747	8,215	5,230	2,227
oub i otal	10,141	3,210	5,200	_,
TOTAL:	159,358	154,805	133,152	105,221

Source: U.S. Census Bureau, 2010 Census Guam

The youngest segment of the population, **ages under 5 years**, shows a 15% decrease when comparing 2000 to 2010 census data. This may result in a decline for maternity services, as well as nursery and neonatal care over time. A population decrease of 13% for **ages 5 through 9 years** has similar implications. However, GMHA has experienced

an annual average of approximately 2,531 deliveries from FY2012 – FY2016. Therefore, we anticipate the provision of patient care services within the L&D, Nursery and Pediatrics Units to remain fairly steady for the foreseeable future.

Between 2000 and 2010, the populations of young and middle-aged adults, **ages 20 through 24 years** and **ages 40 through 44**, show increases of 3% and 12% respectively. However, the population for **ages 25 through 39** (both male and female) shows a significant 16% decrease when comparing ¹2000 to 2010 census data, which was probably due to the result of out-migration for employment, education and better opportunities for families with young children. Of those populations that are female, there was a 3% increase. This segment of the population represents the working-age population; and they also represent women of child-bearing age, which make up 29% of GMHA's FY2016 inpatient discharges.

In addition, GMHA is seeing more patients, from ages 45 through 64 years, with complications of chronic diseases of hypertension and diabetes (i.e. Myocardial Infarction, Cerebrovascular Accident or CVA, which is the medical term for Stroke). Comparing 2010 to 2000, this age group is showing a 32% population increase. Thus, it is no surprise that inpatient admissions are high for this age group, which is presenting at GMH with acute illnesses that require longer lengths of stay. This will mean longer patient days in the following Nursing Units: Intensive Care Unit/Critical Care Unit (ICU/CCU), Telemetry Unit, Progressive Care Unit (PCU), Medical Surgical Unit and Surgical Unit. The senior population, ages 65 years and above, is also reflecting a significant increase of 31%. As the population ages and the life expectancy increases, there will be a growing need for long-term care.

The growth in specific age groups suggests an increase in the utilization. **Seniors** will be requiring skilled nursing care at the Skilled Nursing Unit; **adults** will continue to use emergency room services as well as receiving treatment for complications of chronic diseases; and **children/young adults** will also require services in the Emergency Department (ED) in addition to the Pediatrics Unit.

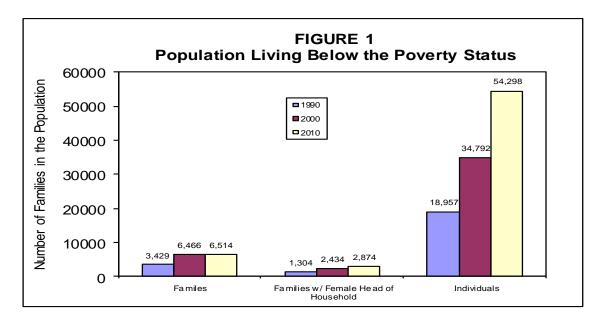
¹ Source: U.S. Census Bureau, 2000 and 2010 Census Guam

The changes in the Island's population affect the demand for hospital acute care and associated professional support services. This is evident when we compare inpatient acute care beds to the population. In the 1990s through 2003, GMHA's bed capacity was 192 acute care beds that provided 1.17 beds per 1,000 population. In FY2004, the number of beds reduced after converting the four-bed wards to semi private rooms. This brought the total bed capacity down to 158 acute care beds and the bed ratio to 1 per 1,000 population (using 2010 population projection of 159,358), unlike the U.S. national average, which is approx. 2.5 acute care beds per 1,000 population. Hawaii, in comparison, manages 2.6 beds per 1,000 population; the U.S. Pacific census division hospitals has 2.1 beds; Alaska 2.3 beds; and California manages 2.1 beds per 1,000 population.

GMHA's current acute care bed capacity, which is at 161, as well as outpatient services (e.g., ED, Urgent Care) has slightly increased to meet the current and future healthcare needs of Guam's growing population. Of course, in CY2015, the opening of the new private, for-profit hospital (namely, the Guam Regional Medical City) significantly enhanced Guam's acute care bed capacity and services as well. ²More specifically, GRMC manages a 132-bed acute care hospital (this does not include their NICU capacity of 10). A portion of their acute care services began operating in July of 2015 (40-bed acute care capacity) and their Emergency Room began operating in September of 2015. However, it is important to keep in mind that due to staffing and other issues, their acute care bed capacity fluctuated between 40 to 90 acute care beds during the timeframe from July of CY2015 through CY2016. Throughout CY2016, their average daily census was approximately 70 acute care patients per day, which equates to a 78% average occupancy rate after the average patients per day are divided by the total number of "available" acute care beds (in this case, 90 beds). It is also noteworthy that GRMC is currently working towards opening and operating its full 132-bed acute care capacity during CY2017.

² Source: Guam Regional Medical Center (GMRC)

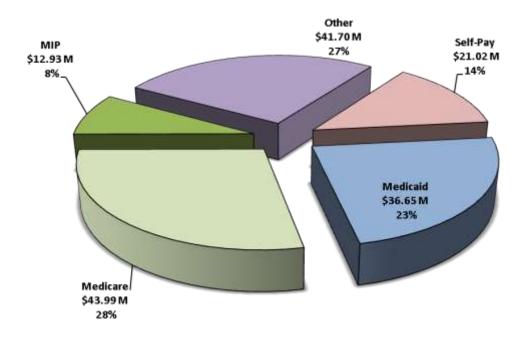
Figure 1 shows the population below the poverty level nearly doubling from 23,690 in 1990 to 43,692 in 2000, when approximately 28% of the population was living within the poverty status. The 2010 Census continued an upward trend, as that number increased to 63,686, which means that approximately 40% of the population is now living within the poverty status. Education attainment, employment opportunities, childcare and cost of living may all have contributed to the increased numbers of poor and uninsured people.



Source: Guam Bureau of Statistics and Plans and the 2010 Census.

Figure 2 illustrates an analysis of billings for FY2016 by payor. Forty-five percent (45%) of GMHA's patients either received medical assistance from the Department of Public Health and Social Services or were uninsured self-payers. Often the indigent or uninsured seek healthcare services when their condition has deteriorated to the point whereby hospitalization has become essential rather than routine or preventative.

FIGURE 2 PAYOR MIX FISCAL YEAR 2016

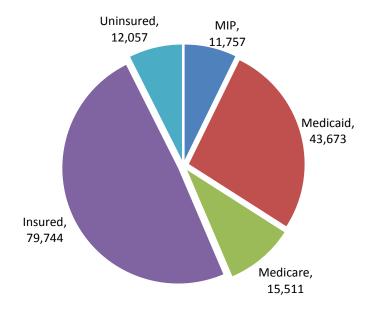


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Source: GMHA, Fiscal Services Division

In Figure 3 the Department of Public Health and Social Services (DPHSS) estimates **82,998** individuals on Guam are uninsured or underinsured. The cost of care for this population is borne by GMHA and private providers, at an expense of \$30 million per year (inpatient services only) and for GMHA, is an unfunded mandate by the Government of Guam to provide such services.

Figure 3
Insured vs. Uninsured/Underinsured Population
FY2016



Source: Department of Public Health and Social Services CMS/Office of Enterprise Data & Analytics May 2017

LEADING HEALTH ISSUES

When planning health care for a Community, it is also important to consider the patterns of illnesses within the Community. There are two (2) health indicators that GMHA includes in its environmental assessment: Guam's leading causes of death and GMHA's most common discharge diagnoses. Evaluating and understanding this information offers insight as to where GMHA will need to focus its efforts and plans for the future.

Leading Causes of Death

Guam's Office of Vital Statistics reports that **heart disease**, **malignant neoplasms and cerebrovascular disease** have consistently ranked as the top three (3) leading causes of death on Guam from FY2012 through FY2016 (refer to Table 3). Although the leading causes do not necessarily represent the most common reasons for hospitalization, the

statistics do reflect the Community's health status and therefore, should be taken into consideration when planning for GMHA's services.

Table 3
Top 10 Leading Causes of Death

	<u>2012</u>	<u>R</u>	<u>2013</u>	<u>R</u>	<u>2014</u>	<u>R</u>	<u>2015</u>	<u>R</u>	<u>2016</u>	<u>R</u>
Diseases of the Heart	235	1	286	1	297	1	277	1	360	1
Malignant Neoplasms	167	2	166	2	175	2	195	2	170	2
Influenza and pneumonia			39	5	29	7			55	3
Cerebrovascular Disease	82	3	71	3	71	3	71	3	47	4
Septicemia	32	6	50	4	43	5	36	6	47	5
Suicide	26	8	26	7	27	8	35	8	43	6
Nephritis, Nephrotic Syndrome			21	<i>10</i>	10	<i>10</i>			39	7
Disease of the Digestive System									35	8
Other Accidents	24	9	50		47	4	33	9	34	9
Chronic Lower Respiratory Diseases	55	4	27	6	21	9	55	4	29	10
Diabetes Mellitus	40	5	25	8	40	6	52	5		
Hypertensive Disease	27	7					36	7		
Certain conditions originating in the perinatal period	24	10					28	10		
Chronic Liver Disease			25	9						

Source: Department of Public Health and Social Services

Inpatient Types of Treatments

In addition to the leading causes of death, GMHA analyzes its inpatients by types of treatments in no particular order, as depicted in Table 4 for FY2012 through FY2016. For FY2016, aside from childbirth, heart disease, certain infectious and parasitic diseases, influenza and malignant neoplasms ranked highest.

TABLE 4
Inpatient Types of Treatment

	FY12	R	FY13	R	FY14	R	FY15	R	FY16	R
Other not specified	2,939	2	2,973	2	5,340	1	6,009	1	5,539	1
Pregnancy, childbirth and the puerperium	4,230	1	4,255	1	2,742	2	2,556	2	2,401	2
Other forms of heart disease	929	3	813	3	489	4	454	4	398	3
Certain infectious and parasitic diseases	829	4	721	4	412	5	754	3	320	4
Ischemic heart disease	594	5	548	6	394	6	375	6	276	5
Influenza and pneumonia	546	6	613	5	1046	3	347	7	267	6
Malignant neoplasm (Cancer)	518	7	507	7	297	7	386	5	203	7
Cerebrovascular disease	422	8	380	8	271	8	223	8	186	8
Diabetes mellitus	358	9	332	9	172	9	148	9	182	9
Other Chronic obstructive pulmonary										
disease	123		88		62		67	10	68	10
Asthma	161	10	157	10	75	10	43		44	
Epilepsy	21		19		12		31		28	
Drugs, medicaments/biological substances										
causing adverse effects in therapeutic use	9		15		17		18		20	
Mental and Behavior Disorders	99		99		21		16		20	
Transport accidents	9		6		14		5		15	
Congenital Malformations, deformations										
and chromosomal abnormalities	86		100		17		16		13	
Exposure to smoke, fire and submersion	0		3		1		2		1	
Falls	47		41		46		42		0	
Assault	7		9		23		28		0	
Intentional self-harm	9		8		17		16		0	

Source: GMHA Information Technology Department

In FY2016, GMHA's leading inpatient treatments are those that present to GMH with heart diseases admitted to the adult acute care units (674); certain infectious and parasitic diseases ranked 2^{nd} (320); with influenza and malignant neoplasms ranking 3^{rd} (267) and 4^{th} (203) respectively.

For those treatments related to childbirth, we believe that Sagua Managu (a private birthing center and the only other childbirth delivery system on Guam) and the recent opening of GRMC, has contributed to the decreases that resulted in lower admissions in the Obstetrics (OB) Ward from FY2012 to FY2016.

Inpatient Types of Treatments for Infants & Pediatrics

Included in GMHA's Inpatient Types of Treatments are those infants and pediatric patients served by its Maternal & Child Health Center (MCH Center), which is comprised of the Labor & Delivery (L&D), Nursery/Neonatal Intensive Care Unit (NICU), Obstetrics Ward (OB Ward) and Pediatrics/Pediatric Intensive Care Unit (PICU). More specifically, the patient population served consists of infants and young children from birth through adolescence and young adulthood up to the age of seventeen (17) inclusive of their families. Table 5 reflects the types of treatments that GMHA provided to this patient population from FY2012 - FY2016.

Although we are blessed to have such dedicated, experienced staff, it is GMHA's responsibility to provide them with progressive, state-of-the-art healthcare industry modalities and technologies that are vitally needed in order to meet our patients' complex healthcare conditions. For the past decade or so, it is known that Guam's infant mortality has been significantly higher than the national average of 6.1 per 1,000 live births. To address this disparity, Guam launched both public health and hospital-based efforts which both directly and indirectly resulted in decreased infant mortality numbers. In FY2014, Guam's infant mortality rate was 7.65 infant deaths per 1,000 live births. However, in the last two years, Guam's infant mortality rates are showing a very concerning trend reflected by the fact that by the end of FY2016, the rate rose to 12.49 infant deaths per 1,000 live births, an increase of 61% compared to the previously mentioned FY2014 number of 7.65 infant deaths per 1,000 live births.

In addition, the transfer numbers from outside healthcare facilities to our MCH Center has been fairly steady over the past decade; they have shown an increase in FY2016; and we anticipate that this trend will continue into the foreseeable future. Aligned with this trend, the PICU Census increased in the last six (6) months of FY2016. Therefore, it is no surprise that GMHA was recently recognized for being the only Guam acute care hospital with a PICU that successfully delivers the high quality U.S. Standard of Care not previously offered on Guam. For example, GMHA's PICU offers sophisticated and

advanced therapies, such as pediatric peritoneal hemodialysis and high-frequency oscillator ventilation for its critically ill pediatric patients.

TABLE 5
Infant/Pediatric Types of Treatments

	FY12	R	FY13	R	FY14	R	FY15	R	FY16	R
Other not specified	784	2	703	2	744	2	735	2	1,460	1
Pregnancy, childbirth, and the puerperium	2,642	1	2,716	1	2,664	1	2,647	1	840	2
Influenza and pneumonia	61	3	53	3	76	3	61	3	94	3
Certain infectious and parasitic diseases	18	5	6		16	5	15	4	48	4
Asthma	23	4	32	4	17	4	13	5	31	5
Congenital malformations, deformations,										
and chromosomal abnormalities	8		8		12		8		15	
Epilepsy	13		13	5	12		6		8	
Other forms of heart disease	6		3		4		7		6	
Diabetes mellitus	3		8		7		6		6	
Malignant neoplasm (Cancer)	1		5		4		3		5	
Drugs, medicaments/biological substances										
causing adverse effects in therapeutic use	0		2		6		3		3	
Cerebrovascular disease	1		0		0		1		2	
Mental and behavior disorders	3		1		0		0		1	
Falls	1		0		0		0		1	
Transport accidents	0		0		0		0		1	
Intentional self-harm	0		0		0		0		1	
Other chronic obstructive pulmonary										
disease	4		3		4		3		0	
Ischemic heart disease	0		0		0		1		0	
Exposure to smoke, fire and submersion	0		0		0		0		0	
Assault	0		0		0		0		0	

Source: GMHA Information Technology Department

GMHA's MCH Center has physicians and staff whom have been proudly and professionally serving the people of Guam for nearly half a century; and some of our subspecialists are offered only at GMH. This unique set of subspecialty services includes High-Risk Obstetrics/Gynecology (OB/GYN), Neonatology, Pediatric Intensive Care, Pediatric Cardiology, Pediatric Interventional Cardiology, and Pediatric Pulmonology. Not only serving the patients clinically, these highly educated and specialized GMHA medical staff, nursing staff and professional support staff (aka allied health professionals) are actively engaged in elevating the standard of health care in our

Community. The MCH subspecialists offer Continuing Medical Education (CME), Continuing Nursing Education (CNE) and Continuing Education (CE) programs for our clinicians within our Medical Services, Nursing Services and Professional Support Services Divisions, as well as offering them to external clinicians that choose to participate in our training and education programs. Many of them teach American Heart Association (AHA) Pediatrics Advanced Life Support (PALS) and Neonatal Advanced Life Support (NALS) Certification Courses offered by GMHA, which is the leading AHA Accredited Training Facility on Guam.

The World Health Organization (WHO) emphasizes training and education of the staff personnel in critical care as one of the key corner stones for decreasing that infant mortality rate. Therefore, GMHA's MCH Team is extremely dedicated and committed towards participating in life long training and education programs and sharing that gained knowledge, as well as partnering with the Guam community in all respects relative to their respective MCH disciplines. By doing so, our MCH Team strives to bring the U.S. Standard of Care to Guam, which the infants, children and their families have long awaited and richly deserve. As well, Guam's MCH Healthcare Providers (both public and private) and the Community at large shall need to continue to plan, coordinate, collaborate and implement preventative measures focused on addressing the multi-faceted risk factors previously mentioned within this Environmental Assessment.

Through this ongoing, steadfast and focused dedication and commitment, GMHA has been and continues to be an MCH Center that "provides quality patient care in a safe environment" for both "healthy" and "high risk" mothers, infants, children and their families. This experience has led to GMHA's excellent reputation for serving as Guam's MCH Transfer Center because, as previously mentioned, some of our subspecialties are offered only at GMH. Therefore, we stand continuously ready to accept infant and pediatric transfers from other healthcare facilities, whose patients require GMHA's higher level of specialized MCH Care to ALL that present at our hospital doors. In particular, when the infant and pediatric patients suffer life-threatening illnesses or

injuries, they are quite often transferred to GMH as quickly as possible. GMHA has the only full-time Pediatrics Intensive Care Unit (PICU) on the island with experienced PICU Nurses, Pediatricians, and a PICU Physician. GMHA's Anesthesiologists and Certified Registered Nurse Anesthetists (CRNAs) stand ready to assist within thirty (30) minutes to offer their expertise in emergency intubation, central line placement, and to attend any Surgery or OB/GYN Cases.

GMHA's Pediatric Cardiology Services are also the only such specialized services offered on Guam. Our Pediatric Cardiologists offer life-saving interventions, such as Interventional Cardiology Procedures and Comprehensive Echocardiograms, including Fetal Echo, an especially vital part of MCH pre-natal care that detects any heart abnormalities prior to birth. The services cover from neonates to young adults with congenital heart disease; and through its service partnership with the Children's Hospital of Los Angeles, GMHA has direct Cardiologist-to-Cardiologist communications when caring for our cardiac pediatric patients. As well, GMHA's Pediatrics and Orthopedic Surgeons are partnering with the Shriner's Children's Hospital, a non-profit world class orthopedic hospital. Through these partnerships, GMHA is provided specialized pediatric consults, which significantly enhances the quality of care provided to our pediatric patients.

Lastly, for all of the previously mentioned reasons, GMHA's MCH Center is considered a higher level of patient care and a trusted healthcare facility on the Island. Furthermore, it has become the hub for present and future physician and nursing training and education programs on Guam. For example, many pre-med and nursing students from the University of Guam (UOG), the Guam Community College (GCC) and the U.S. Mainland are joining GMHA's NICU, PICU and Pediatric Morning Rounds and are being mentored by our highly dedicated, knowledgeable and skillful physicians, nurses and professional support staff. GMHA therefore anticipates that this shall lead to even more excellent opportunities in the future for furthering the practice of specialized MCH Medicine, Nursing and Professional Support Care at GMH, all

focused on healthy outcomes for the patients and families that we so proudly and professionally serve.

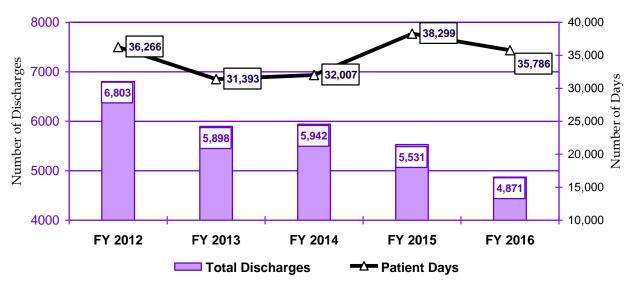
UTILIZATION

In addition to evaluating the inpatient types of treatment, GMHA must assess the volume of its hospital services. GMHA monitors the utilization of inpatient services, the number and type of Emergency Room and Urgent Care visits, the number and type of surgeries, and trends in the use of outpatient services. Data related to hospital utilization is a significant factor in GMHA's plans for services and programs.

Inpatient Care: Discharges and Patient Days

When evaluating inpatient statistics, GMHA considers patient days and discharges for each Nursing Unit. Figure 4 depicts acute care trends in patient days and discharges.

FIGURE 4
GMHA DISCHARGES AND PATIENT DAYS
ACUTE CARE UNITS
FY 2012 - FY 2016



Note: Excludes Labor Room and Nursery (RNUR, INUR, NICU)

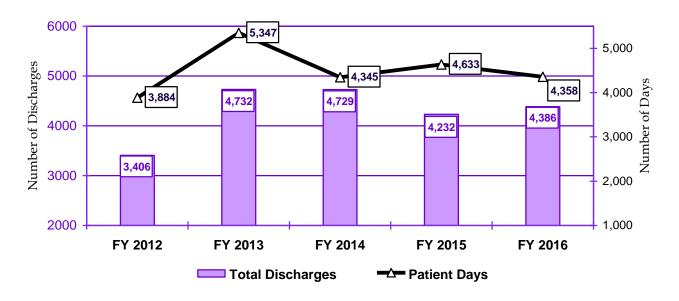
Source: GMHA Medical Records Department

The GMHA uses the number of discharges and patient days to measure inpatient utilization. From FY2012 through FY2016, the total number of discharges in the acute care units decreased by 40%. This reflects a 7.9% average annual decline. However, the total number of patient days slightly decreased by 1% from FY2012 through FY2016. This also represents an average decrease of .3% each year during the 5-year period.

Declining numbers of discharges and patient days suggest fewer admissions with shorter stays in the acute care units. Contributing factors may be alternate care services offered by GRMC and the private clinics. The opening of GRMC provides the community with the option for acute care services and more clinics available to deliver quality primary care to prevent acute illnesses requiring hospital stays. Other factors are the opening of the Department of Public Health and Social Services' satellite clinics to provide services to its clientele.

Figure 5 represents utilization within the Obstetric Unit. Since obstetric cases comprise nearly half of all GMHA's inpatient discharges at 47%, the utilization for the maternity ward is studied separately and apart from the other acute care units.

FIGURE 5
DISCHARGES AND PATIENT DAYS - OBSTETRICS
Guam Memorial Hospital:
FY 2012 - FY 2016



Source: GMHA Medical Records Department

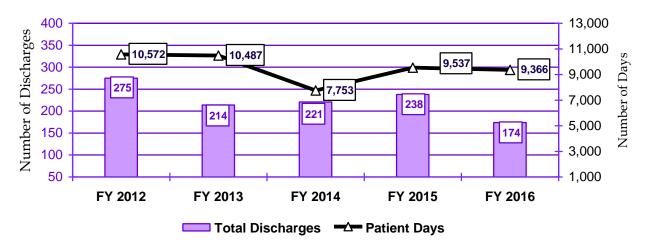
Obstetrics patient days range from a low 3,884 to 4,361 spread over the 5-year period. Overall, the Unit experienced an 11% increase in patient days and 22% increase in total discharges from FY2012 through FY2016.

The increase in patient days is reflective of longer stays for maternity patients. Obstetric patients who are low risk with prenatal care average a 2-day stay at GMH after delivery. However, we also experience a large number of high risk maternity patients that present with complications as a result of little to no prenatal care or underlying medical conditions, which average a 3-5 day stay.

Regarding the decrease in total discharges, we believe that Sagua Managu (a private birthing center) along with the option to receive services at the newly opened GRMC, has contributed to the decreases that resulted in lower admissions in the maternity ward from FY2012 to FY2016. However, it is noteworthy to point out that GMHA's Family Birth Center, which includes its L&D Unit, OB Ward and NICU/Nursery, remains the only such center of excellence prepared to provide quality, safe, specialized care to all of Guam's "high risk" mothers and infants. All other such centers (e.g., GRMC, Naval Hospital Guam, and Private Clinics/Centers) refer their "high risk" mothers to GMHA.

Figure 6 represents the Skilled Nursing Unit (SNU) and reflects that the average number of patient days dropped 12% from FY2012 through FY2016.

FIGURE 6
DISCHARGES AND PATIENT DAYS
SKILLED NURSING UNIT
FY 2012 - FY 2016



Source: GMHA Medical Records Department

The annual total discharges significantly decreased by 58% from FY2012 through FY2016. However, FY2012 appears to have been a deviation from the standard/average compared to the other years. The decrease rise in patient days as well, suggests that the length of stay also decreased during that period. Long-term medical conditions associated with strokes, diabetes, orthopedic injuries and other accidents are factors that contribute to the length of stays in the Skilled Nursing Unit.

Inpatient Care: Occupancy Rates

GMHA's occupancy rate measures utilization in relation to staffed bed capacity. As seen in Table 6, utilization of the acute care units show mid to high occupancy percentages in FY2016. More specifically, the <u>Telemetry Unit</u> maintained an extremely high occupancy rate of <u>112%</u>. Other units with high occupancy rates were <u>Progressive Care Unit (PCU) at 99%</u>, <u>ICU/CCU at 61%</u> and <u>Medical Surgical at 94%</u>. The other acute care units had occupancy rates as follows: Surgical at 84%, <u>Obstetrics at 60%</u>, <u>PICU at 33%</u> and <u>Pediatrics at 39%</u>. Telemetry's high occupancy rate signaled to GMHA that it needed to expand its ICU/CCU to meet the demand for these specialized acute care services.

TABLE 6
OCCUPANCY RATES IN ACUTE CARE UNITS

Guam Memorial Hospital FY 2016

Acute Care Units	Patient Days	Max Bed Capacity	Staffed Bed Capacity	Staffed Bed Occupancy Rate (Percent)
Surgical	10,171	33	33	84.44%
Medical Surgical	9,620	43	28	94.13%
Telemetry	8,180	20	20	112.05%
Progressive Care Unit(PCU)	2,168	6	6	99.00%
ICU/CCU	2,197	14	6	110.91%
Pediatrics	3,092	22	12	70.59%
PICU	358	3	1.5	65.39%
Obstetrics	4,358	20	20	59.70%
TOTAL		161	138	

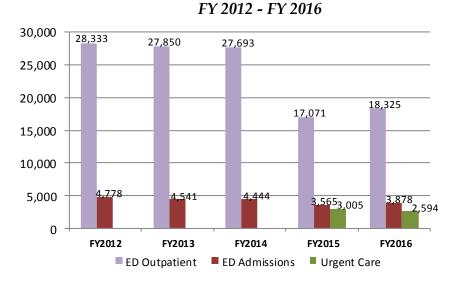
Source: Medical Records Department

Outpatient Services

There are several sources of outpatient services at GMHA: the Emergency Medicine Department, Urgent Care Clinic, Operating Room (OR), Radiology, Respiratory Care, Rehabilitative Services, Special Services, and Laboratory. For hospital planning purposes, outpatient visits and the number of procedures are evaluated in terms of service volume.

Figure 7, reflects that the number of **Emergency Department (ED)** outpatient and inpatient visits remained fairly steady during FY2012 through FY2014. However, GMHA's ED visits experienced significant decreases during FY2015 through FY2016 with the implementation of Urgent Care Services and the opening of GRMC in July of 2015 for acute care services and September of 2015 for Emergency Room Services.

FIGURE 7
EMERGENCY DEPARTMENT and URGENT CARE SERVICES
Guam Memorial Hospital:

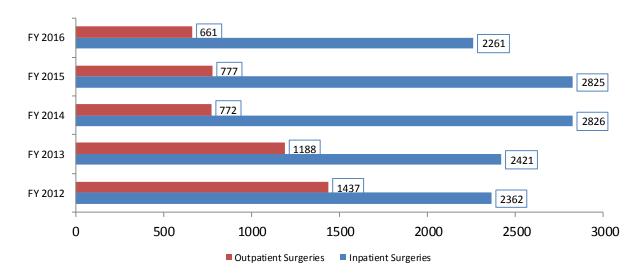


Source: GMHA Emergency Department and Urgent Care Clinic

What has also been helpful is that the Department of Public Health and Social Services' Northern Regional Health Center has extended its hours to provide services for MIP and Medicaid patients.

The Urgent Care Services provide services primarily on Sundays through Fridays from 12:00 pm to 10:00 pm, to treat injuries or illnesses requiring immediate care, but are not serious enough to require an ED visit and offers an alternative to waiting for hours in the hospital's Emergency Department, which would have otherwise inundated the ED for services that does not appear to be life-threatening.

FIGURE 8 SURGICAL SERVICES Guam Memorial Hospital FY 2012 - FY 2016



Source: GMHA Operating Room

Figure 8, reflects that the **Operating Room** (OR) outpatient surgeries showed a steady decline in the five (5) succeeding years through 2016. This declining trend in GMHA's outpatient surgeries may be attributed in part to services being provided at the Guam Surgicenter, a Medicare approved ambulatory surgery center and Hafa Adai Specialists; more outpatient surgeries being performed in physicians' offices, such as Island Surgical Center; the opening of the GRMC; and the use of off-island health care providers' array of surgery services.

GMHA's inpatient surgeries had upward spikes in FY2014 and FY2015 followed by a decline in FY2016 back to numbers more in line with those generated in FY12 and FY13. The initial rise in surgeries may be partly due to the number of patients requiring the increase in the provision of specialized procedures (e.g., GMHA's Heart Project). The following decline in FY2016 in GMHA's inpatient surgeries may be attributed to physician referrals for specialized care either to other Guam clinics (e.g., Surgicenter, etc.), the GRMC or off-island referrals.

The GMHA <u>Hemodialysis Unit</u> currently provides inpatient dialysis services only. Its former <u>Outpatient Unit</u> closed on September 30, 2011, as those services were able to be absorbed by the Private Sector Outpatient Dialysis Clinics (specifically, the chain of U.S. Renal Care Clinics). The Unit's reduction of shifts, accompanied by the availability of initially four (4) private centers providing outpatient dialysis services on Guam, led to the closure. There are still a total of four (4) U.S. Renal Care Clinics on Guam located in the following villages: Dededo, Tumon, Tamuning, and Sinajana. However, a 5th Clinic is projected to open in the near future.

The <u>Inpatient Unit</u>, located within the Medical Surgical Unit on the 3rd floor A-Wing, can accommodate a total of 9 (5 in the annex and 4 in room 322) for those acute patients who are admitted or those in the Emergency Medicine Department (EMD) waiting for a room. Additionally, if a patient is not stable and is unable to be moved to the unit, portable dialysis machines are available to address this situation. In FY2016, a total of <u>3,829 inpatient dialysis treatments</u> were administered by the <u>Hemodialysis Unit</u>.

Radiology statistics show a dramatic decrease in outpatient procedures of 57% from FY2012 through FY2014 followed by an increase of 14% from FY2015 to FY2016. Outpatient procedures were the highest in FY2012 at 2,602 procedures. The significant declines in radiology outpatients/procedures in FY2013 and FY2014 were due to the temporary lack of Interventional Radiology, MRI and Portable Ultrasound services, as well as, private clinics that were expanding their radiology programs such as the Guam Radiology Consultants imaging clinic. Discontinuation of Nuclear Medicine and Mammography procedures as well as less outpatient visits seen in the ED also contributed to the decrease in radiology outpatient procedures.

Respiratory Care's outpatient services decreased 12% from FY2012 to FY2013, however slightly increased in FY2014, but then significantly decreased 48% through FY2016. Outpatient services were the highest in FY2012 at 13,601 procedures. The following year the numbers dropped slightly to 11,929 in FY2013. Much of the decrease stems from the decline in the number of outpatients seen in the Emergency Department.

However, it is noteworthy to point out that GMHA's Respiratory Department was and continues to be the only provider performing Pulmonary Function Tests on Guam.

The <u>Special Services Department</u>, led by a group of Hospitalists and healthcare professionals (e.g., Registered Nurses, Technicians and Technologists, etc.), which provides diagnostic procedures such as Echocardiograms (Stress; Dobutamine); Electroencephalogram (EEG); Electrocardiogram (EKG); Cardiac Stress Test and Cardiac MIBI to both inpatients and outpatients. In addition to these numerous diagnostic tests, they also provide Adult Cardiology, Pediatric Interventional Cardiology, Pediatric Echo Cardiograms, and Orthopedic consultations. The department provides these services on a 24/7 operation to all inpatients. For FY2016, these different services were rendered to both inpatient and outpatients totaling <u>15,020</u> <u>patients</u>.

Additionally, the <u>Special Services Department</u> maintains a comprehensive, high quality cardiac program, namely the "Heart Project," which is the only one of its kind, to date, on Guam. A combined effort with the GMHA and a team of health professionals from the Valley Heart Associates from Modesto, California (Cardiologists; Cardiothoracic Surgeons; Cardiac Anesthesiologists; Per fusionists and Cardiac Surgery ICU and Cardiothoracic Operating Room Registered Nurses) conduct the Diagnostic Cardiac Catheterizations typically four (4) times per year and Open Heart Surgeries typically two (2) times per year to the people of Guam and neighboring islands.

During FY2012 through FY2014, these "Heart Program" specialists performed a total of **150 cardiac catheterization procedures** and **1,731 Cardiology consultations**. Additionally, since the Project's inception in 2005, a total of **86 open heart surgeries** were performed without any major complications. Unfortunately, due to funding issues, as well as the unavailability of a regularly scheduled Cardiologist, the Program ceased from 2014 through 2015.

However, in November of 2015, GMHA was able to bring on board two (2) Cardiologists who rotate with one another, providing consistency of services for cardiac

catheterization and cardiology consultations. As a direct result of the availability of these services, difficult situations are alleviated such as long distance travel; increased financial burden; lack of emotional support from family while off island; and potential death while each respective patient is waiting or planning for off island treatment. Unfortunately, open heart surgeries are not available at this time because it is a much more complicated process and additional funding is required.

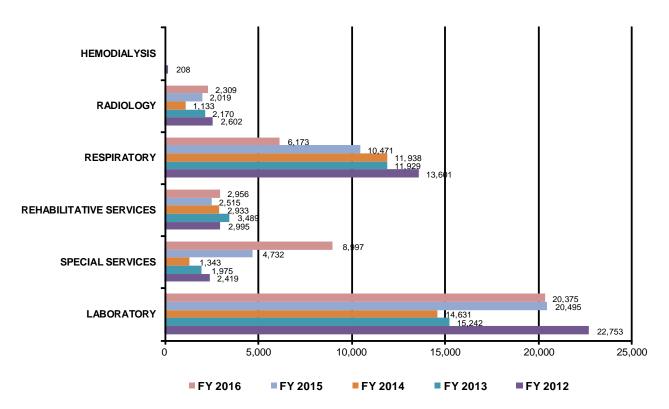
Rehabilitative Services experienced a slight increase of 17% in FY2013 but went through 14% declines in both FY2014 and FY2015. The decrease can be attributed to the loss of physical therapists, services being provided by GMRC and patients that sought services with Home Health Care Services. However, in FY2016 a total of 2,956 procedures were performed, which brought about an increase of 18%.

Laboratory Services saw a significant decrease in outpatient procedures from FY2012 to FY2014 of 36% followed by significant 40% increase in FY2015 back up to similar levels previously generated in FY2012. The Laboratory maintained that FY2015 level in FY2016. Some factors which may have impacted laboratory services include limiting pre-operative and pre-admissions for Labor patients' services and the increase of outpatient test services conducted by the Guam Cancer Center for patients that were previously being sent to GMHA for services either thru the ED or inpatient Laboratory Services. Furthermore, the discontinued drug screens for GMHA employees, as well as, other GovGuam agencies contributed to the decline in outpatient services.

FIGURE 9

OUTPATIENT PROCEDURES

Guam Memorial Hospital Authority: FY 2012 - FY 2016



Source: GMHA, Hemodialysis, Radiology, Respiratory, Rehabilitative, Special Services, and Laboratory Services

AVAILABILITY OF RESOURCES

In addition to examining the use of hospital services, GMHA must consider the resources available for delivery of services when outlining its plans for the future. The Hospital reviews the number of specialties and certifications of physicians, nurses and professional support, as well as hospital employees.

Physician Resources

Table 7, indicates that as of June 2, 2017, there were 141 members of GMHA's medical staff. The members represent broad spectrums of clinical specialties; and notably

absent are Neurosurgeons, Oral/Maxillofacial Surgeons, Plastic Surgeons and Pulmonary Disease/Critical Care Specialists.

Of the total medical staff membership, the Hospital employs fifty (50) physicians including pathologists, anesthesiologists and EMD physicians. Board certification has been achieved by 74% of all physicians.

The growing percentage of board certified physicians attests to the quality of care provided by GMHA. These certifications suggest that the Community will receive quality and continuity in the delivery of medical care over the next several years.

Despite, the medical staff's size and diversity, there are still critical physician shortages within the Community that need to be filled, such as, orthopedics and neuro-surgery, cardiac surgery, urology and oncology. Although GMHA has previously not been responsible for recruiting physicians for the Island, there is an active effort among the administration and the medical staff to recruit qualified physicians who can address the medical needs of the Community.

GMHA is very proud of the following highly dedicated and professional staff and/or departments that comprise the Medical Services Division:

Medical Services Division

Associate/Assistant Medical Directors

Medical Staff (employed/contracted)

Medical Staff Office

Utilization Review

Risk Management

Employee Health

Infection Control

TABLE 7 GMHA Medical Staff

By Specialty and Board Certification June 2, 2017

CLINICAL SPECIALITY	BOARD CERTIFIED	OTHER	% OF BOARD CERTIFIED
Anesthesiology	3	1	75%
Cardiology	3	0	100%
Certified RN Anesthesia	5	0	100%
Certified RN Midwife	5	0	100%
Emergency Medicine	9	2	82%
Endocrinology	3	0	100%
Family Medicine/Practice	7	1	88%
General Surgery	9	5	64%
Hand Surgery	1	1	50%
Hematology/Oncology	1	0	100%
Infectious Diseases	1	1	50%
Internal Medicine	7	11	63%
Nephrology	5	0	100%
Neurosurgery	0	1	0%
Obstetrics & Gynecology	10	3	77%
Oral/Maxillofacial Surgery	0	1	0%
Orthopedics	2	1	66%
Otolaryngology	1	0	100%
Pathology	2	0	100%
Pediatric Cardiology	1	0	100%
Pediatric Intensive Care	1	0	100%
Pediatric Pulmonology	1	0	100%
Pediatrics	12	5	42%
Physician Assistants	3	0	100%
Plastic Surgery	0	1	0%
Podiatry	4	0	100%
Pulmonary Disease/Critical Care	0	1	0%
Radiology	6	1	86%
Urology	2	1	67%
TOTAL	104	37	

Source: Guam Memorial Hospital Authority, Medical Staff Department

Nursing Resources

In line with our Nursing Code of Ethics, as well standards and guidelines promulgated by *The Joint Commission (TJC)* and the *Centers for Medicare and Medicaid Services (CMS)*, the nurses at GMHA provide patient and family centered care and therefore put Patients and Families First. The core of patient and family centered care is to guarantee opportunity for information sharing, collaboration, quality care, patient safety, and empathy for the fundamental human needs during hospitalization.

It is our Responsibility to value corporate and individual integrity, do the right thing and ensure fiscal accountability. All GMHA Nurses are held to standards that are in accordance with the American Nurse Association (ANA)/Guam Nurses Association (GNA) Code of Ethics and Guam's Nurse Practice Act, as implemented and enforced by the Guam Board of Nurse Examiners (GBNE). The ANA/GNA code of Ethics provides a professional guide to nurses of all disciplines and degrees nationally. The Code of Ethics encompasses values that all nurses should practice with good intent, confidentiality, and to continue to seek new knowledge to improve one's self and practice (ANA Code of Ethics, 2008, p.xi).

The GMHA Nurses, as front line caregivers, must practice using innovation and innovative ideas and be adaptable to change; develop and implement patient care plans, policies, and procedures that are based upon evidence-based best practices and that meet or exceed gold standards set by GMHA's accrediting organizations (e.g., *TJC*, *CMS*); and although nurses are not required to obtain nursing certifications, Table 8 on the following page depicts the committed GMHA nurses that achieve greatness by voluntarily seeking higher education and obtaining specialized certifications in their respective areas of expertise.

Dignity and Respect are core guiding values that are vital to our ability to meet GMHA's mission. All GMHA employees are expected to conduct their interactions with others with the highest levels of dignity and respect. The organization values courteous and kind manners, a culture that embraces differences, compassion, empathy, collaborative culture, and accepting the ideas and opinions of others.

Relative to Nursing Standards of Care, Nursing is recognized as one of the most respected professions. The GMHA Nurses are held to a Standard of Excellence. The nurses strive to exceed personal bests and expectations while furthering diversity. Above all, the GMHA Nurse practices with benevolence and an ethically sound Standard of Practice.

There is a growing need for nurses and the changing reality of nursing is hitting the home front fast and furious. Specific to GMHA's Nursing Division, some of the most challenging, underlying causes of our nursing shortage include, but are not limited to the following:

- Hospital acuity;
- Lack of a Recruitment and Retention Incentives Program; and
- Declining enrollments and baby boom effects or when one generation grows, the other shrinks;

Nation-wide, Hospitals' patient acuity has been rapidly rising due to the declining average length of stay and to new technology that allows rapid assessment, treatment and discharge. Hospitals are increasingly becoming large intensive care units, with cardiac monitoring, respiratory assistance and intense treatment as a growing part of the average patient's plan of care. Thus, skilled and specialized nurses are in great demand.

The following Table 8 provides a snap-shot, as of June 2017, of education and certification in nursing specialty, which demonstrates a commitment to advancing the knowledge and skillsets of this area of staffing resources within the GMHA. However, Table 8 does not reveal the full extent of GMHA's Nursing Shortage. Though GMHA needs more nurses hospital-wide, our greatest challenges present in our Specialty Care Units (e.g., ICU/CCU, PICU, Emergency Department and Telemetry Unit). For example, due to GMHA's long-term shortage in our ICU/CCU (with a max capacity of 14 Beds), we have only been able to staff about 8 ICU/CCU Beds on average. This has a negative cascading effect on other units, such as the Emergency Department and the

Telemetry Unit, which then have to staff ICU/CCU level care until staffed beds become available in the CCU/ICU.

TABLE 8
GMHA Nursing Certification & Education
June 2017

American Heart Association	TOTAL
Pediatric Advanced Life Support (PALS)	66
Basic Life Support (BLS)	421
Advanced Cardiac Life Support (ACLS)	222
Neonatal Resuscitative Program (NRP)	110
National Nursing Certifications	
Certified Acute/Critical Care Nursing (CCRN)	4
Certified Dialysis Nurse (CDN)	1
Certified Emergency Room Nurse (CEN)	19
Certified Correctional Health Provider (CCHP)	2
Certified Pediatric Nurse (CPN)	6
Progressive Care Certified Nurse (PCCN)	3
Registered Nurse Certified in Maternal Newborn Nursing (RNC-MNN)	1
Registered Nurse Certified in Maternal Child (RNC)	35
Certified Medical Surgical Nursing (RN-BC)	6
Registered Nurse Certified in Cardiovascular (RN-BC)	5
Certified MDS Registered Nurse (MDS)	3
Certified Nurse Operating Room (CNOR)	7
Certified in Other Areas	
Nursing Administration	3
Operating Room	7
Hemodialysis	1
Intensive Care Unit (ICU)	4
Emergency Department (ED)	16
Medical Surgical Ward	6
Telemetry	7
Surgical Ward	3
Pediatrics	6
Labor & Delivery (L&D)	21
Obstetrics (OB) Ward	5
Neonatal Intensive Care Unit (NICU)	11
Skilled Nursing Unit (SNU)	2
Advanced Degrees	
Masters in Nursing (MN)	2
Masters of Science in Nursing Administration (MSN/ADM)	1
Masters of Science in Education (MSN/ED)	2
Masters of Science in Nursing (MSN)	5

Source: Guam Memorial Hospital Authority, Nursing Department

Professional Support Resources

Patients, residents and their families also have access to a broad array of healthcare services provided by our allied health professionals that comprise our Professional Support Services Division. These diverse allied health professionals possess educational certifications and educational backgrounds from the following fields: Radiology, Laboratory, Respiratory, Pharmacy, Dietetic Services, Special Services, Rehabilitative Services, Social Services, and Education Department. Working together as a close knit division responding to medical referrals, they provide these services to better our patients' and residents' health and well-being. Table 9 reflects that wide array of certifications and educational backgrounds of GMHA's Professional Support Staff that are truly proud and professional in their service to the Guam community.

TABLE 9
GMHA Professional Support Certification & Education
June 2017

American Heart Association	
Basic Life Support (BLS)	90
Advanced Cardiac Life Support (ACLS)	14
Pediatric Advanced Life Support (PALS)	16
Advanced Cardiac Life Support Instructor (ACLS-I)	1
Neonatal Resuscitation Program (NRP)	12
Certifications or Specialties	
Certified Hand Therapists	2
Certified Stroke Rehabilitation Specialists	2
Certified Wound Specialists	3
Certified Vestibular Rehabilitation Specialists	1
Certified Lymphedema Specialists	1
Cardiac Rehabilitation Specialists	1
Dysphagia	3
Registered Respiratory Therapist (RRT)	14
Registered Respiratory Therapist/ Neonatal Pediatric Specialty (RRT/NPS)	9
CPFT (Certified Pulmonary Function Therapist)	1
Certified Respiratory Therapist (CRT)	4
Certificate in Radiologic Technology	2
Certificate - U.S. Army Academy of Health Science-Radiologic Specialist	1
Certificate - Naval School of Health Science	2
American Society of Clinical Pathology (ASCP)	10
Association of Nutrition & Foodservice Professionals (ANFP)	2
Licenses	
Guam License, L-Bachelor of Social Work	4
Guam License, L-Master of Social Work	2
Licensed Professional Counselor (LPC)	1
Guam Board Of Allied Health Licensure	18
Guam Licensed Practical Nurse (LPN)	1
Board of Pharmacy Specialties (BPS) - Pharmacotherapy	2
Correctional Health Professional	1

Education	
Associate's in Occupational Therapy Assistant/Licensed	1
B.S. Occupational Therapy	3
B.S. Physical Therapy	5
B.A. Recreational Therapy	1
Bachelor of Social Work (BSW)	6
A.S. in Respiratory Care	9
B.A. Anthropology	1
B.S. Business Marketing	2
B.S. Health Care Management	1
B.S. Nursing (Philippine Graduate)	2
B.S. Respiratory	1
Associate of Occupational Science	1
Associate of Diagnostic Medical Sonography	1
Associate of Radiologic Technology	2
Bachelor of Health Science	1
Bachelor of Radiologic Technology	6
Bachelor of Science in Nursing	2
College - Diploma (Food Technology)	1
College - Certificate (undeclared)	1
Associate's in Culinary Art	1
Bachelor of Consumer & Family Science	2
Bachelor of Health Science	1
Bachelor of Nutrition & Dietetics	3
Bachelor of Business Administration	1
Bachelor of Foods & Nutrition	3
Bachelor of Foods Science & Nutrition	1
Bachelor of Foods Science & Human Nutrition	1
Bachelor of Hotel & Restaurant Management	1
Bachelor of Agriculture Education	1
Bachelor of Agriculture	1
Bachelor of Elementary Education	1
Bachelor of Holistic Nutrition w/Culinary	1
College - Diploma (Medical Assistant)	1
College - Certificate (undeclared)	1
Bachelor of Medical Lab Science	1
Bachelor of Medical Technology	21
Bachelor of Health Science	2
Bachelor of Biology	2
Bachelor of Medical Technology & Pharmacy	1
Bachelor of Nursing	2
Bachelor of Microbiology	1
Bachelor of Forensic Science	1
College - Certificate (Nurse Assistant)	1
Bachelor of Pharmacy	4
Bachelor of Chemistry	1
Bachelor of Physical Therapy	1
Bachelor of Medical Technology	1
Bachelor of Psychology	1
Advanced Degrees	
Master of Social Work (MSW)	1
Master of Social Work (MSW) & Master of Public Administration (MPA)	1
M.S. Occupational Therapy	3
M.S. Speech - Language Pathology	2
M.A. Exercise Physiology	1
Doctorate in Organization & Management Specialization	1
Doctorate in Physical Therapy	4
Master of Nutrition & Dietetics	1
Master of Pharmacy	1
PHD in Pharmacy	12

Source: GMHA, Professional Support Depts. & Human Resources Dept.

Fiscal Services & Operations/Administration

On the non-clinical side of the House, the invaluable managers and staff that comprise the Fiscal Services and Operations/Administration Divisions keep the heart of GMHA's facilities pumping in order for the organization to be able to deliver its full array of safe, quality acute care inpatient and outpatient services. The departments that comprise those divisions are listed below:

<u>Fiscal Services Division</u> <u>Operations/Administration Division</u>

Chief Financial Officer Hospital Administrator/CEO

Assistant CFO Compliance Office

Medical Records Planning Department

Accounting Facilities Maintenance

Patient Registration Materials Management

Patient Affairs Information Technology

Payroll Services Environmental Services

Human Resources

Safety & Security

Guest Relations

Communications

EEO Officer

Overall Staff Composition

Understanding that a successful acute care hospital and skilled nursing unit require management of patient and resident care along with the staffing of professionals who perform these services, GMHA is also concerned with the ratio of health care providers in relation to the staffing level of the entire organization. Therefore, GMHA continues to monitor the staffing patterns of full time, clinical and non-clinical employees, in an effort to meet GMHA's staffing requirements in order to meet its mission "to provide quality patient care in a safe environment," which extends to both the Guam Memorial Hospital and GMHA's Skilled Nursing Unit.

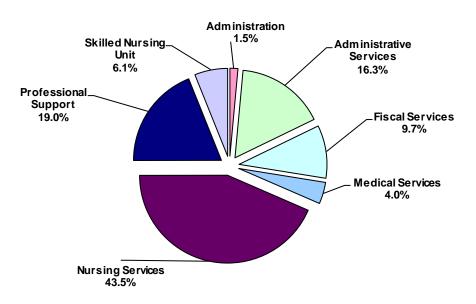
Figure 10 depicts the staffing levels for full-time employees (FTEs) by division and in relation to the GMHA's total budget. A greater percent of full-time employees are distributed among Nursing Services (43.5%) and Professional Support Services (19%). These divisions make up 62.5% of GMHA's total budget and are directly related to patient care services.

FIGURE 10

FULL TIME EMPLOYEES

Guam Memorial Hospital and Skilled Nursing Unit:

FY 2016



Source: Guam Memorial Hospital Authority Human Resources Department

Some ongoing challenges that GMHA faces are how to successfully recruit and retain qualified professionals. With respect to recruitment and retention, one set of key strategies is to improve recruitment efforts and expand staff development programs; expand services and capabilities to attract and support specialists and subspecialists; and provide additional avenues for healthcare professionals to work, educate, learn and/or provide services.

Section II:

Strategic Goals, Objectives & Strategies for Success

Five (5) strategic goals were determined to be most important in fulfilling GMHA's mission and vision as outlined in Section III. Those strategic goals are as follows:

1. Achieve Financial Stability

GMHA's historical financial results, cash flow and cost-saving measures have not been adequate to fund the ongoing operations and needed technological and capital improvement requirements. The costs of providing patient care are consistently greater than the ability of the federal or local governments to pay/reimburse for those patients who have insurance through government programs (e.g., Medicare, Medicaid and Medically Indigent Program) and those self-insured or uninsured patients who cannot afford to pay for hospital or medical care on Guam.

None-the-less, GMHA is mandated by law to provide care to all persons, regardless of their ability to pay; and the gap between the cost of providing care to the members of the Guam community and the government's abilities or willingness to pay for acute care, urgent care, long term care, and skilled nursing services constrains GMHA's capacity and performance.

This is a problem that continues to drain GMHA of cash, making it difficult, if not impossible, for the organization to fulfill its mission; and it is a problem that is not likely to be resolved soon. However, it is imperative that GMHA continue to forge ahead with multiple strategies/initiatives (outlined in Section IV) to achieve the financial stability that is so crucial for GMHA to fulfill its mission and vision.

2. Leadership Team Development

The GMHA Board of Trustees, Management Team and Staff are held accountable for their leadership, management, services and systems. To ensure staff responsibility and accountability, GMHA is working on improving its internal systems to ensure greater accountability and improved internal communications. It is developing and implementing new training programs for staff and management to enhance their skill sets specific to the provision and implementation of their respective services and systems.

3. Establish and Sustain Safety & Quality Culture

GMHA is committed to the Hippocratic Oath, "First, do no harm." The staff and management recognize that this commitment is not limited to ensuring just the physical

safety of patients. It also applies to the security and privacy of the families of patients and their visitors. In order to be able to meet this value, GMHA will establish a culture of Safety and Quality inclusive of all patients, families, employees, visitors, volunteers, contractors, etc.

4. Training and Education Assessment & Implementation

In order to provide excellent and safe services in its acute care and skilled nursing environments, GMHA is committed to providing its dedicated staff with the training and education programs that they will need to meet all pertinent standards, guidelines, rules, regulations, policies, procedures, etc.

5. Capital Improvement Planning & Implementation

In order to meet the needs of a rapidly growing population, as well as local/federal mandates and compliance requirements, GMHA must continue to assess and meet its needs in the areas of Facilities, Capital Improvement Projects (CIPs) and Information Technology (IT). This assessment shall include immediate, intermediate and long term planning to include various forms of hospital modernization to better serve the Guam community.

<u>Section III</u>: Mission, Values, Vision and Strengths, Weaknesses, Opportunities and Threats (SWOT)

Mission

To provide quality patient care in a safe environment.

Values

GMHA serves by the following core values, abbreviated as *ACES* + *Q*:

- i. <u>A</u>ccountability;
- ii. <u>C</u>ost Efficiency;
- iii. Excellence in Service;
- iv. <u>S</u>afety; plus
- v. **Q**uality.

A. Accountability

The GMHA Board of Trustees, Management Team and Staff are held accountable for their leadership, management, services and systems. Since achieving accountability at all levels requires strong internal and external communications, GMHA will improve its internal systems to meet those communications requirements. For example, the planned upgrade to integrated financial systems will allow executive and departmental leaders to develop and monitor metrics by which processes, outcomes and staff will be measured, reported, evaluated, etc. GMHA shall also develop and implement new training programs for staff and management to enhance their skill sets specific to the provision and implementation of their respective services and systems.

B. Cost Efficiency

The staff and management of GMHA are dedicated to delivering its services in the most cost efficient manner possible. Fiscal accountability and responsibility must operate on all levels including GMHA's

- i. ability to generate new revenue and maximize reimbursement;
- ii. ability to submit claims and collect for all services rendered to patients;
- iii. development of fiscal, cost and other reports for managing operations and services;
- iv. use of benchmarks from other hospitals having a similar patient mix;
- v. development of department budget reports to which managers will be held accountable; and
- vi. development of new services (e.g., medical programs) that meet the needs of the Community and which maximize the use of GMHA's campus.

C. Excellence in Service

GMHA is focused on delivering excellent services to the Guam community. Excellence in the provision of services will be measured and reported by

- i. patient and staff satisfaction surveys;
- ii. measuring performance improvement activities and outcomes against national benchmarks; and
- iii. achieving "excellent" results from certification and accreditation agencies.

D. Safety

GMHA is committed to the Hippocratic Oath, "First, do no harm." The staff and management recognize that this commitment is not limited to ensuring just the physical safety of patients. It also applies to the security and privacy of the families of patients and their visitors to the best of the hospital's capability.

E. Quality

GMHA continually strives to meet the highest quality standards that it must comply with specific to hospitals and skilled nursing facilities. In line with this quality focus, GMHA has achieved and now continues to maintain certification by the Centers for Medicare and Medicaid Services (CMS). In addition, though GMHA recently lost its hospital accreditation by *The Joint Commission* (TJC) on July 16, 2018, our GMHA A-TEAM continues to plan, review, complete and implement various multi-disciplinary A-Team Self Assessments and Action Plans to guide any future GMHA efforts to regain TJC Accreditation. This is because GMHA strongly believes that maintaining *CMS* certification and regaining and sustaining *TJC* accreditation are extremely important towards assuring the community of GMHA's commitment to quality patient care and safety. In demonstrating this commitment, GMHA actively maintains a continuum of care that supports patients and their families becoming more involved and informed regarding their own health care decisions. GMHA also recruits board-certified or board eligible physicians and other licensed providers to ensure that services meet the local and regional needs of the Guam community.

In maintaining and striving to meet and sustain these nationally recognized guidelines and standards respectively, GMHA is also a benefactor of the many opportunities for staff and management to review and improve governance, internal communications, quality standards and management systems. From these opportunities, GMHA and its staff sustain their commitment to a code of conduct based upon Trust, Respect, Integrity, and Professional Standards.

In addition, the process has reinforced the commitment to evaluation systems that increase management effectiveness and confidence that resources are effectively utilized. Finally, *CMS* certification and striving to meet and sustain *TJC* accreditation has reinforced a GMHA culture reflective of commitment to continuous improvement ... a commitment to provide verifiable assurance to the Community that the Guam Memorial Hospital Authority maintains the highest standards of patient care and safety comparable to any other accredited institution in the United States.

Vision

Based on the core values of the organization, the BOT Subcommittee on Governance, Bylaws and Strategic Planning developed the following vision statement that guides all efforts and actions moving forward: To achieve a culture and environment of safety and quality patient care meeting national standards and addressing the needs of the Community in a fiscally responsible, autonomous hospital.

Strengths, Weaknesses, Opportunities, and Threats

The GMHA Management Team is continually analyzing the organization's internal strengths and weaknesses as well as the external opportunities and threats facing the organization (e.g., Cost Cutting Taskforce, Performance Improvement Committee, Environment of Care Committee, BOT Facilities/CIP/IT Subcommittee, etc.). The assessment of internal strengths and weaknesses identified major challenges and achievements from the perspective of those who work at GMHA. Identification of external opportunities and threats, projected changes in the economy and the community as predicted by government planners and private sector sources were reviewed and incorporated into the Strategic Plan.

Key GMHA "Strengths:"

- i. dedication and leadership of its Board of Trustees, its management team, and staff both clinical and non-clinical, as well as the strong support provided by the GMH Volunteers' Association;
- ii. constant focus on improving services and facilities GMHA's certification by the *Centers for Medicare and Medicaid Services* (CMS) validates the excellence and quality in its medical services; and
- iii. support from the Legislature and the Governor's Office for initiatives to improve GMHA's financial stability.

Key GMHA "Weaknesses:"

- i. critical infrastructure is well beyond its useful life and currently posing a significant life safety risk to the organization to include our need to expedite the removal and replacement of our Hospital Electrical Distribution Panel (manufactured in 1974), demolish and replace our dilapidated Z-Wing, develop a new Parking Structure to remedy a severe parking shortage, and other capital improvement requirements;
- ii. existing Electronic Health Record (EHR) Technology (namely, Optimum) continuously performs sub-optimally, as it is not an efficient IT System capable of managing and processing large amounts of patient information and other key data sets; and this sub-optimal system performance in turn negatively impacts the performance of our staff and other hospital-wide systems/modules (e.g., Billing, Collections, Procurement, Performance

- Improvement, Human Resources, monitoring & documentation for clinical compliance, etc.);
- iii. modern clinical care technologies are absent in the following medical specialties: Cardiac Care, Stroke Care, Interventional Radiology and Surgical Care;
- iv. significant staff shortages in specialized medical, nursing and professional support areas;
- v. financial instability and untimely vendor payments causing continuous shortages in medical supplies and inability to replace obsolete medical equipment/systems; and
- vi. the recent loss of GMHA hospital accreditation by TJC on July 16, 2018.

At the same time, the continuing increase in population, as well as our economy, adversely impacted by cuts in federal programs, has generated an increase in the number of individuals who do not have access to health insurance, choose not to be covered by health insurance, or do not qualify for the Medicare, Medically Indigent Program (MIP) or the Medical Assistance Program (MAP) because they are unable to meet the respective program eligibility requirements. These individuals frequently do not consider medical treatment as a priority. This contributes to acute medical conditions which generate high medical expenses when the patients seek care at the Hospital in its Emergency Department or when hospitalized as an inpatient. These individuals usually cannot pay for the care they have received from GMHA.

The cash flow deficiencies caused by uncompensated care and underpayments has limited GMHA's ability to provide needed resources, updating its facilities, acquiring new technologies, and adequately compensating its staff. The operating shortfalls have also prevented GMHA from expanding its human and capital resources and have contributed to a negative public image and ongoing maintenance of a significantly deficient, organization-wide IT System.

GMHA does have several opportunities to improve the situation. The organization benefits from the strong support offered by the GMH Volunteers Association (GMHVA). The Community recognizes the need to explore private and public partnerships to accelerate the development of acute care facilities on Guam. GMHA intends to capitalize on these partnership opportunities and good will to generate more resources, better planning, and the support required to engage in any future hospital-wide efforts to regain and sustain accreditation by *The Joint Commission (TJC)* and maintain conditions of participation certification by the *Centers for Medicare and Medicaid Services (CMS)*. Additionally, the Government of Guam must identify a dedicated funding source that will address the underfunded and unfunded critical infrastructure, key resources, and services provided by GMHA.

Section IV: Strategic Goals

Goal 1: Achieve Financial Stability

In order to achieve financial stability, GMHA must address seven (7) distinct issues:

- i. generating and maximizing revenues;
- ii. continuing effort to obtain underpayment reimbursement of Medicare services through Annual Adjustment and Permanent Rebasing requests with the Centers of Medicare and Medicaid Services;
- iii. updating of fee schedules and collection of charges for services provided;
- iv. assisting uninsured patients in obtaining coverage through Medicaid or Medically Indigent;
- v. working with the Government of Guam to identify dedicated funding sources for its operational shortfalls and capital improvement requirements;
- vi. changing the "care model" from primarily "inpatient hospital-based" to "outpatient hospital-based;" and
- vii. Providing resources and ongoing training to Fiscal Services (accounting, patient affairs, patient registration, and medical records) to keep up with constantly changing rules and regulations with the health industry

GMH generates its own revenues from charges for services provided during a patient's encounter at the Guam Memorial Hospital. Collection of that revenue creates cash flow for GMHA. However, due to its payer mix, GMHA incurs substantial underpayment and uncompensated care which has negatively contributed to GMHA's perennial operating shortfall. The following are provided as examples:

- i. Based on the FY2017 Audit, 55% of GMHA's patients are under Medicare, Medicaid, and Medically Indigent (commonly referred to as the "3 Ms"), which have generated under-compensation that has ranged over \$40 million for many years negatively impacting GMHA's finances;
- ii. Self-pay and uninsured patients account for 13% of uncompensated care from this group, which averaged \$15 million for the past six (6) years, and GMHA does not have the legal or governmental means to actively pursue payment, unlike its counterparts, the utility agencies;
- iii. While GMHA utilizes collection agencies, the cash collected represents only a portion of the total charges due; and
- iv. Even if a patient does not have the ability to pay, services are provided regardless.

<u>Objective 1</u>: To improve cash flow by addressing the seven (7) issues noted above and improving organization-wide services and systems delivered and managed by properly led and staffed departments.

Strategies:

- 1.1 Ensure that patients and residents receive proper levels of care by the appropriately trained and licensed staff; ensure that all appropriate charges are documented in a timely and professional manner at the "point of care;" and improve IT/MIS Systems (Electronic Health Records, Revenue Cycle Management, General Financials, Materials Inventory Management, Clinical iMed, eMAR, CPOE and Pharmacy-RX, e-billing, physician professional fees inputted into billing module within 72 hours of patient discharge, etc.) to allow for this timely and professional documentation to occur.
- 1.2 Tighten, improve, and enhance management, accountability, monitoring and reporting throughout the Fiscal Services Division. Restructuring of the Fiscal Division to include an Internal Audit Unit and Charge Master Unit to improve accountability, maximization of revenues and collection.
- 1.3 Review and assess processes, define accountability, responsibility, and establish mechanisms for maximizing billing of and collections of services. Examples are reviewing and improving business practices to enhance collections and cash flow (garnishments, coding, billing to clients for denials, billing to insurance providers, billing to other GovGuam agencies such as DOC, GFD, GPD for GMHA services) and reviewing and implementing OPA Audit Findings and Recommendations timely.
- 1.4 In addition to actively pursuing TEFRA rebasing and Annual Adjustments, explore and propose alternate funding mechanisms and products (especially for self-pays and comparable insurance programs); work with the Government of Guam and Insurers to modify the Prompt Payment Act from 45 to 30 days; and collaborate with other GovGuam agencies to change MIP reimbursement to reflect the actual cost of services provided.
- 1.5 Materials Management: (1) Assess, revise and adopt a new set of procurement rules, regulations and processes that will result in lower costs while maintaining quality; and (2) Review and improve utilization of hospital resources throughout the organization (at all levels) to include: oversight/management of the procurement process; proper processing of departmental requests for supplies/equipment; maintenance of product

standardization when appropriate; and maintenance of accountability/security of supplies and equipment.

- 1.6 All Departments (Contract Management): Maintain, monitor, evaluate and replace hospital resources and services needed in the provision of excellent GMHA services in the most cost effective manner. This shall also include reviewing Hospitalist contracts and ensuring that all such staff with hours in excess of 2,080 per year are justified and properly processed for approval.
- 1.7 Conduct staffing assessment/analysis focusing on utilization of staffing resources and staffing levels (e.g., staffing types, numbers, distribution, utilization, and effectiveness). This can include departmental staff time and motion studies and development of department-specific benchmarks.
- 1.8 Explore and leverage strategic alliance opportunities (new hospital, integration of other islands).
- 1.9 Explore revenue and service enhancements/modifications (e.g., Wound Care, Out-patient Services, etc.).
- 1.10 Continue reviewing all GMHA revenue producing departments and evaluate and implement ways to maximize revenues and minimize losses. This shall include respective departments conducting cost benefit analyses of low volume services to determine viability of such services relative to the best interests of GMHA and the Guam community.

Goal 2: Leadership Team Development

<u>Objective 2</u>: To develop a Leadership Team capable of properly leading, managing and holding accountable the staff that comprise GMHA's divisions/departments.

Strategies:

- 2.1 Assess existing leadership capabilities and identify gaps, define GMHA leadership, membership and knowledge deficits (i.e. address leadership and accountability deficiencies at all levels).
- 2.2 Identify and fill key vacancies for new leadership team with clear accountability and performance expectations.

- 2.3 Assess, define and communicate clear accountability expectations at all levels of leadership through training and development programs; ongoing monitoring, evaluation and improvement opportunities (e.g., Medical Committees, Executive Management Council, Performance Improvement Committee, Environment of Care Committee, Divisional and Departmental Meetings & Activities, etc.).
- 2.4 Provide training and education programs specific to leadership (Six Sigma, Lean, TJC, HR disruptive behavior, etc.).
- 2.5 Establish accountability measures, monitoring and expectations for leadership relative to addressing all top priorities (ACES + Q).

Goal 3: Establish & Sustain Safety and Quality Culture

Objective 3: To effectively establish & sustain GMHA's safety and quality culture.

Strategies:

- 3.1 Assess and identify existing issues and areas that negatively impact our Safety and Quality Culture (i.e. disruptive behaviors, staff morale, vacancies, etc.); and plan to address and improve each area that negatively impacts our Safety and Quality Culture (especially for Medical Staff, eliminate disruptive and self-serving behaviors, recognize/reward those that are exemplary).
- 3.2 Improve recruitment, compensation, and retention of key critical vacancies (e.g., request GovGuam remove barriers, such as all GMHA requests needing to go to BBMR for pre-approval).
 - 3.2.1 GMHA's <u>Medical Services Division</u> recruitment efforts shall be aligned with this Strategic Plan to include creative recruitment, compensation and retention programs and activities in order to effectively address key physician shortfalls (e.g., Outpatient Services, Neurosurgeons, Oral/Maxillofacial Surgeons, Plastic Surgeons and Pulmonary Disease/Critical Care Specialists, etc.).
 - Creative Recruitment may include, but not be limited to:
 - Local as well as the National Practitioner Data Base (NPDB);
 - Online Recruitment;

- Healthcare Industry-Focused and General Job Fairs;
- University of Guam (UOG) Graduates;
- o Guam Community College (GCC) Graduates;
- o Contingent Recruiters as well as Retained Recruiters;
- o Improving hiring flexibility in highly central systems;
- Maintaining a pre-screened applicant pool;
- o Realistic Job Previews;
- Word of Mouth;
- Targeted Recruitment;
- o Interns; and
- Other creative recruitment strategies.
- 3.2.2 GMHA's <u>Nursing Services Division</u> recruitment efforts shall be aligned with this Strategic Plan to include creative recruitment, compensation and retention programs and activities in order to effectively fill key nursing resource shortfalls in the Specialty Care Areas (e.g., ICU/CCU, Telemetry, ED).
 - The Recruitment Plan will center on identifying the real recruitment needs of the Nursing Division and tying it to the overall Strategic Plan. The Nursing Division needs range and vary from the immediate to medium and long term needs.
 - Recruitment of nursing professionals involves utilization of several methods to accomplish the goal to include, but not limited to:
 - Local Advertisements;
 - National Advertisements;
 - Travel Companies;
 - Collaborating with Guam's local Colleges (e.g., GCC) and Universities (e.g., UOG);
 - Healthcare Industry-Focused and General Job Fairs;
 - Foreign Recruitment; and
 - Other Government Agencies to include the Department of Labor and the Professional and International Programs.
- 3.2.3 GMHA's <u>Professional Support Services</u> Nursing Services Division recruitment efforts shall be aligned with this Strategic Plan to include creative recruitment, compensation and retention programs and activities in order to effectively address key human resource shortfalls in various Professional Support Departments.

- 3.2.4 GMHA's <u>Fiscal Services Division</u> recruitment efforts shall be aligned with this Strategic Plan to include creative recruitment, compensation and retention programs and activities in order to effectively address key human resource shortfalls in various Fiscal Services Departments.
- 3.2.5 GMHA's <u>Operations/Administration Services Division</u> recruitment efforts shall be aligned with this Strategic Plan to include creative recruitment, compensation and retention programs and activities in order to effectively address key human resource shortfalls in various Operations/Administration Services Departments.
- 3.3 Continue to implement <u>ACES+Q</u> as GMHA's core values, as we value <u>Accountability</u>, <u>Cost Efficiency</u>, <u>Excellence in Service</u>, <u>Safety</u>, plus <u>Quality</u>.
- 3.4 Assess and refine current dashboards and quality indicators; and develop and implement accountability measures relative to governance, leadership and management effectiveness, and patient outcomes.
- 3.5 Engage in ongoing hospital-wide efforts to maintain conditions of participation certification by the *Centers for Medicare and Medicaid Services (CMS);* and engage in any future hospital-wide efforts to regain and sustain accreditation by *The Joint Commission* and compliance with all applicable standards and expectations (e.g., convert to CMS "Deemed Status"), as directed and guided by GMHA's Executive Leadership Team.
- 3.6 Develop mechanisms to improve communications throughout the organization starting with the Medical Staff and Executive Management/Leadership and then up and down the organizational chain to include all employees, patients, families, visitors, volunteers, contractors, etc.
- 3.7 Engage Medical Staff as champions and leaders in all initiatives.
- 3.8 Assess all unsafe practices and make necessary improvements.
- 3.9 Develop staff and physician recognition/incentive programs to reward cost savings and safety recommendations and initiatives.
- 3.10 Develop program(s) to involve the Guam community in GMHA initiatives (i.e., physicians, groups, media, etc.).

Goal 4: Training & Education

Assessment, Development and Implementation

Objective 4: To effectively assess, develop and implement GMHA's Training & Education Plan.

Strategies:

- 4.1 In alignment with Goal 2, Leadership Team Development (Strategy 2.1 on page 48), (1) <u>assess</u> existing Board of Trustees, Management and Staff Leadership Capabilities and identify Gaps; and (2) based upon that assessment, <u>identify or detail</u> opportunities for improving GMHA's BOT, Management and Staff Leadership and Management knowledge Gaps (i.e. address leadership and accountability deficiencies at all levels).
- 4.2 Develop and provide ongoing educational programs for quality and safety (i.e., disruptive behaviors, accountability, JC Accreditation, etc.).
- 4.3 Review and improve communication mechanisms throughout the organization.
- 4.4 Identify trainer(s) and establish a formal training program/schedule to provide leadership, management and quality/safety improvement training to Governance, Leadership, and Management (e.g., "Lean and Six Sigma" effectiveness principles, tools and techniques). In so doing, GMHA may benefit from partnering with local and international institutions of higher learning (e.g., UOG and their Professional and International Program).
- 4.5 Provide billing and coding training (to include the Medical Staff).

Goal 5: Capital Improvement Planning & Implementation

<u>Objective 5</u>: To effectively develop and implement GMHA's Capital Improvement Plan to include modernization of its Facilities and replacement of obsolete Capital Infrastructure, which includes, but is not limited to, Clinical and Non-Clinical Space Design & Construction/Renovation Projects, Utility Systems, Medical Equipment and Information Technology (IT).

Strategies:

- 5.1 Coordinate and complete all currently funded Capital Improvement Projects (CIPs) with oversight leadership provided by the GMHA BOT Facilities/CIP/IT Subcommittee; and seek out new funding sources to fund future priority capital facilities (e.g., plant and buildings) and equipment upgrades, projects, initiatives, etc.
- 5.2 Review, assess and implement immediate, intermediate and long term modernization needs relative to and in alignment with GMHA's existing plans (e.g., Hospital Expansion Feasibility Study, Business Development Plan, Strategic Plan, etc.), <u>facilities</u> and <u>properties</u> (both GMH and Skilled Nursing Facility) to include such projects as the Z-Wing Demolition & Replacement that is so critically needed in order to fully implement hospital-based outpatient services model to include both Clinical and Non-Clinical Services such as Medical, Nursing, Professional Support, Fiscal Services and Operations Divisions; Parking Structure Development; and Electrical Distribution & Generation; etc.).
- 5.3 Develop or refine GMHA's Master Plan for a new or expanded Guam Memorial Hospital, as it is critical that GMHA have a roadmap for building its future facility.
- 5.4 Review, assess and implement needed Information Technology upgrades (to include integrated hardware and software systems between both internal and external partners) to enhance services and staff productivity wherever possible.

The End.