

EXECUTIVE SUMMARY

DeKalb Regional Health System (DRHS) is a three-hospital system located in DeKalb County, Georgia. One of those hospitals is DeKalb Medical at Downtown Decatur 76 licensed beds. All three hospitals, as part of a system, share the same mission which is to earn our patients' trust every day, through our uncompromising commitment to quality. The patient care is guided by our care values of integrity, respect, excellence, accountability, compassion and helping hands.

DeKalb Medical at Downtown Decatur Long Term Acute Care (LTAC) Facility is a community based not-for profit hospital and is one of three hospitals within the DeKalb Regional Health System. The LTAC Facility routinely discharges close to 300 patients each year. The medical staff consists of physicians, registered nurses, medical assistance, and numerous medical professionals who have privileges at the hospital. DeKalb Medical LTAC strives to provide outstanding services and outcomes for their patients and was recognized for their accomplishments in 2010 when it was the first hospital in Georgia to earn a Center of Excellence designation and Gold Seal disease-specific certification for wound care treatment from the Joint Commission. The DeKalb LTAC is also the only hospital to earn the Joint Commission's Gold Seal disease-specific certification for the treatment of patients on ventilators who are diagnosed with respiratory failure.

Purpose

While DeKalb Medical LTAC is part of the DeKalb Regional Health System, the location is a separate hospital and thus requires its own Community Health Needs Assessment (CHNA) as indicated by the Internal Revenue Service guidelines. The DeKalb Medical LTAC provides specialized treatment for patients requiring extended hospitalizations with an average stay length of at least 25 days. While still in the primary hospital setting, patients with severe complications or co-morbidities are recommended for LTAC services by their treatment team. Once a patient has been identified as a candidate for LTAC, a case manager representing the LTAC meets with the patient to discuss their services and provides an assessment to ensure the patient will benefit from the services provided at the LTAC. As a result of patients being referred to LTAC services instead of directly coming to the hospital, the DeKalb Medical at Downtown Decatur Community Health Needs Assessment is defining the community as individuals, and their families, who are referred and admitted to the hospital.

The resources of the DeKalb Medical LTAC include an operating room to perform procedures such as tracheotomies as well as a physical therapy room. With 300 discharges

every year, DeKalb Medical LTAC is one of the largest facilities of its kind in the Georgia market.

Within the walls of the DeKalb Medical LTAC facility, the management and staff provide a high level of community service to their patients as well as the patient's families. The staff provides numerous support groups and educational programs that directly relate to the needs of their community such as information on living healthy with diabetes, the importance of physical activity and a coping with illness programs for family members. Aside from focusing on the physical ailments that afflict the patients, DeKalb Medical LTAC has partnerships with surrounding religious organizations to provide spiritual support to the patients as well as the families. Finally, DeKalb Medical LTAC culminates their commitment to their patients and the community regardless of ability to pay by providing over \$200,000 in charity care each year.

Furthermore, the management of DeKalb Medical LTAC always ensures its commitment to quality through its governing structures as well as in the strategic and operating plans of the facility. The management routinely evaluates and monitors progress in service to the community by holding semiannual board meetings on the subject and asking patients to complete an exit survey when they are ultimately discharged from LTAC. The overarching goal of DeKalb Medical LTAC is to respond to identified health needs of their patient community especially for the most vulnerable and underserved individuals and their families. The LTAC strives to be a leader and to serve by example in the area of community patient care.

Methodology:

Background: The LTAC has been consistently involved with providing support services to the patients' families and relatives through the long period of recovery of their loved ones. Our support groups have been meeting regularly since 2010 to help the families of patients cope with the burden of illness in the family.

In 2010, the Congress enacted the Patient Protection and Affordable Care Act (The Affordable Care Act), which will lead to healthcare reforms that will improve the quality of care for all American citizens and residents. One such reform is the requirement of all not-for-profit hospitals to conduct a community health needs assessment once every three years. Continuing with its mission to provide the best care and support to its patients and their families, the LTC developed a process to identify and address key avenues that will improve the health and well being of the patient community at LTAC.

Approach: For the community needs assessment, internal data of all the patients that were referred to LTAC from January 2009 through June 2012 was used. Though the patients and their families are considered the service area for this assessment, the geographic referral area for the LTAC was also determined according to the county of residence of the patient and examined.

As part of the assessment the principal diagnoses of the patients from the last three years were examined. These figures were then used to assess the prevalence of associated diseases and co-morbidities in the patients served. The health indicators identified were mortality, leading causes of death, incidence of respiratory disease, chronic disease diagnoses of admitted patients, wound care, and infectious disease patients as these were the most common diagnoses of patients admitted to the DeKalb LTAC. These reports were obtained from the public data available on OASIS. OASIS stands for the Online Analytical Statistical Information System operated by the Georgia Department of Public Health. Further, the LTAC's inpatient data was analyzed to determine how many patients were admitted at the facility for those diagnoses in order to establish the breadth of our services and how well we are able to meet the demand. For ease of classification we used DRG codes to identify conditions that were associated with each category.

For demographic data, we used counties and census tracts instead of zip codes. Some zip codes extend beyond county lines and have the potential to confound the results of the needs assessment. Furthermore, in order to control for variation in population density, we stratified the maps to show census tracts, instead of county lines. This resulted in greater insight into possible local influencing factors.

Keeping with the definition of the community as DeKalb Medical LTAC patients, all reports were that of the population between 45-74 years of age. This further helped establish accuracy in the implementation program and customize the process to achieve the highest possible effectiveness.

As available, other sources of data were used to generate reports for this community needs assessment. The population demographics report was generated using Truven Health Analytics, 2012 population data. Physician and nurse staffing at the LTAC reports are based on previous years' hospital reports to the Georgia Department of Community Health. Another source of data was the University of Georgia.

Gaps in the Data: The most recent available data was used to determine the needs of the community. However, there may be errors and confounders in the needs assessment.

- Data has been compiled from different sources. The most recent data from Truven for facility inpatients are from the year 2011. Mortality reports are from 2007 through 2010. The report also indicates that data for the year 2009 is missing. Furthermore, the most recent numbers for leading causes of death are from the year 2009. The variation in the years for different health indicators makes comparisons difficult.
- All reports are at the county level. Any anomalies or special characteristics of the census tracts cannot be identified. However, maps are generated on a census tract level. Variations in at the census tract level are not definitive or conclusive.
- Diagnosis of patients at Admission may not be the final diagnosis of the patients at discharge.

COMMUNITY DEMOGRAPHICS FOR DEKALB MEDICAL LTAC

For the purposes of this report, the registered patients of the DeKalb Medical LTAC are defined as the community service area of the LTAC. For the 2010-2011 fiscal year, LTAC patients hailed from over thirty counties across the state of Georgia. Below is a list of the top seven counties represented by LTAC patients and where more than 90% of the patient population lives.

Source: Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

Table 1: Top LTAC Counties by Number of Patients, 2011			
County Name	Number of Patients	Total Days at Facility	Average Number of Days Spent at Facility Per Patient
DeKalb	168	5,156	30.69
Gwinnett	47	1,417	30.14
Fulton	20	936	46.8
Newton	17	607	35.71
Henry	13	333	25.61
Rockdale	13	418	32.15
Clayton	6	141	23.5

- More than half of the LTAC Patients live in DeKalb County, which is where the facility is located.

Figure 1: Map of Top LTAC Counties, 2011

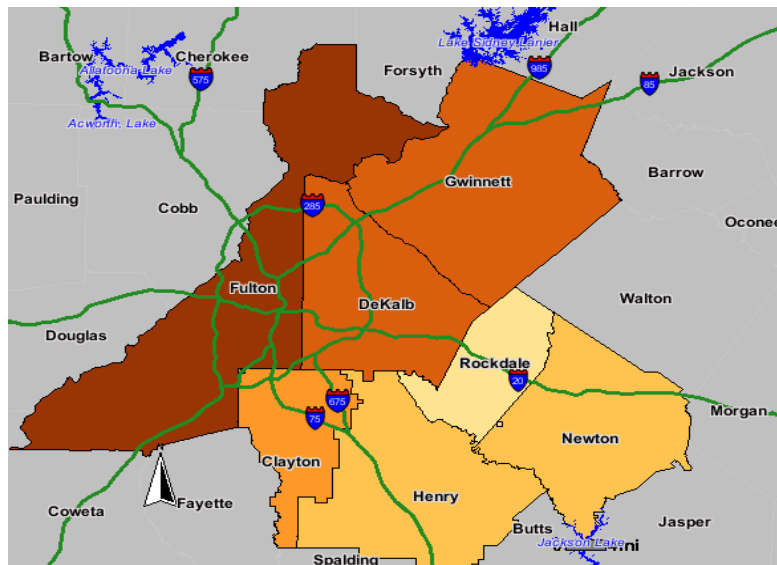


Figure 1: Courtesy of Georgia Department of Public Health, Online Analytical Statistical Information System

- The top LTAC counties include the city of Atlanta and the area southeast of the city.

REFERRING HOSPITALS TO LTAC

Since patients are referred to DeKalb Medical at Downtown Decatur the information below displays the top referring hospitals between calendar year 2009 to 2011.

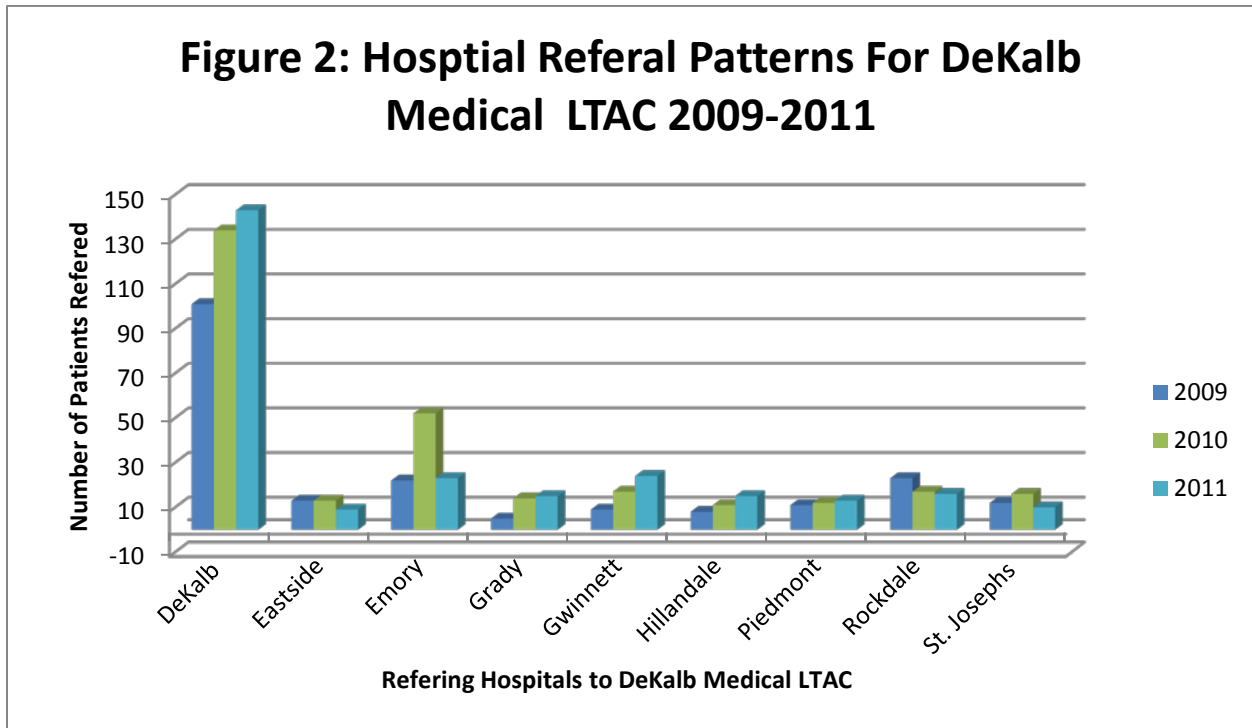


Figure 2: Courtesy of Internal Data, DeKalb Medical LTAC, 2009-2011

- **DeKalb Medical Center consistently refers the most patients to the Downtown Decatur campus.**
- **Both Gwinnett Medical Center and DeKalb Medical Center’s Hillandale campus have steadily increased the number of patients they are referring to Downtown Decatur.**

AGE GROUPS OF INDIVIDUALS ADMITTED TO LTAC

The following table shows the age distribution of patients admitted to the LTAC:

Table 2: LTAC Population by Age Group, 2011			
Age Group	Patients	Total Days	Average Number of Days Per Age Group
18-24	2	81	40.5
25-34	7	212	30.29
35-44	23	648	28.17
45-54	42	1,501	35.74
55-64	88	2,803	31.85
65-74	82	2,251	27.45
75-84	53	2,087	39.38
85+	19	703	37

Source: Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

- **The age group 55-64 has the largest amount of patients admitted to the DeKalb Medical LTAC.**
- **The age group 18-24 has the longest average stay at the DeKalb Medical LTAC with 40.5 average days.**

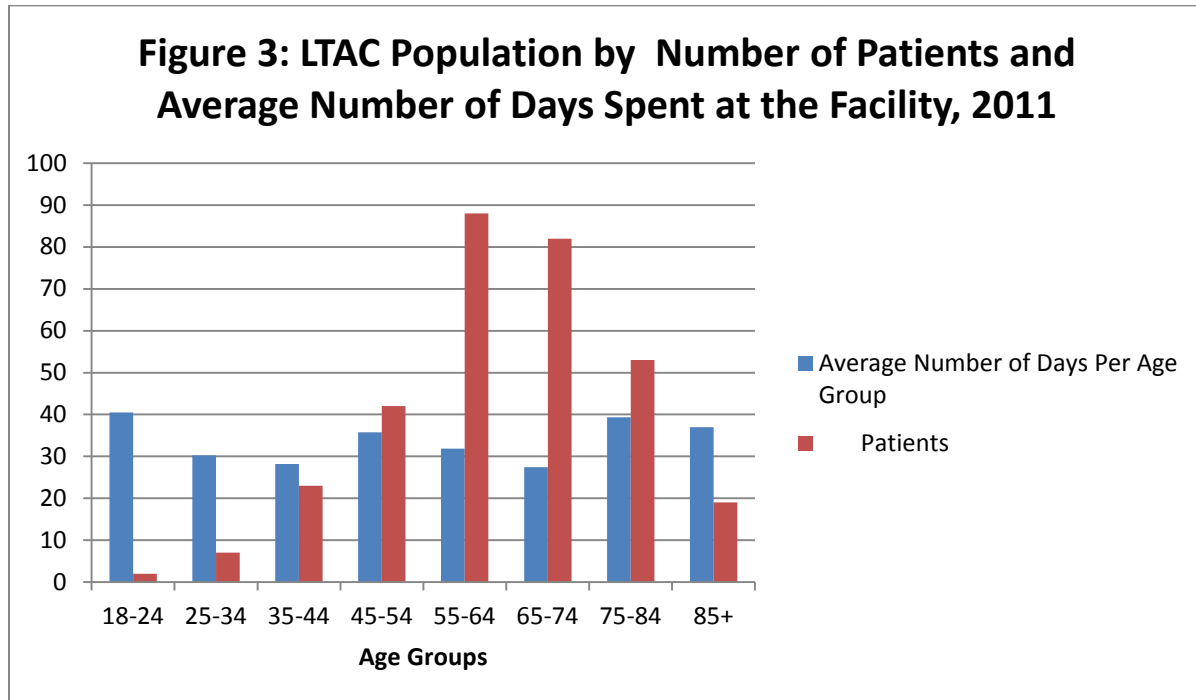


Figure 3: Courtesy of Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

GENDER BREAKDOWN OF LTAC PATIENTS

The following table shows the population of gender:

Sex Code	Table 3: LTAC Patients	Population by Total Days	Gender, 2011 Average Number of Days Per Sex Code
Female	159	4,861	30.57
Male	157	5,425	34.55

Source: Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

- There is a nearly 1:1 ratio for the male to female patients admitted to the DeKalb Medical LTAC.
- Males did have a higher number of average days spent at the facility.

The following figure shows the DeKalb Medical LTAC population by sex and age group:

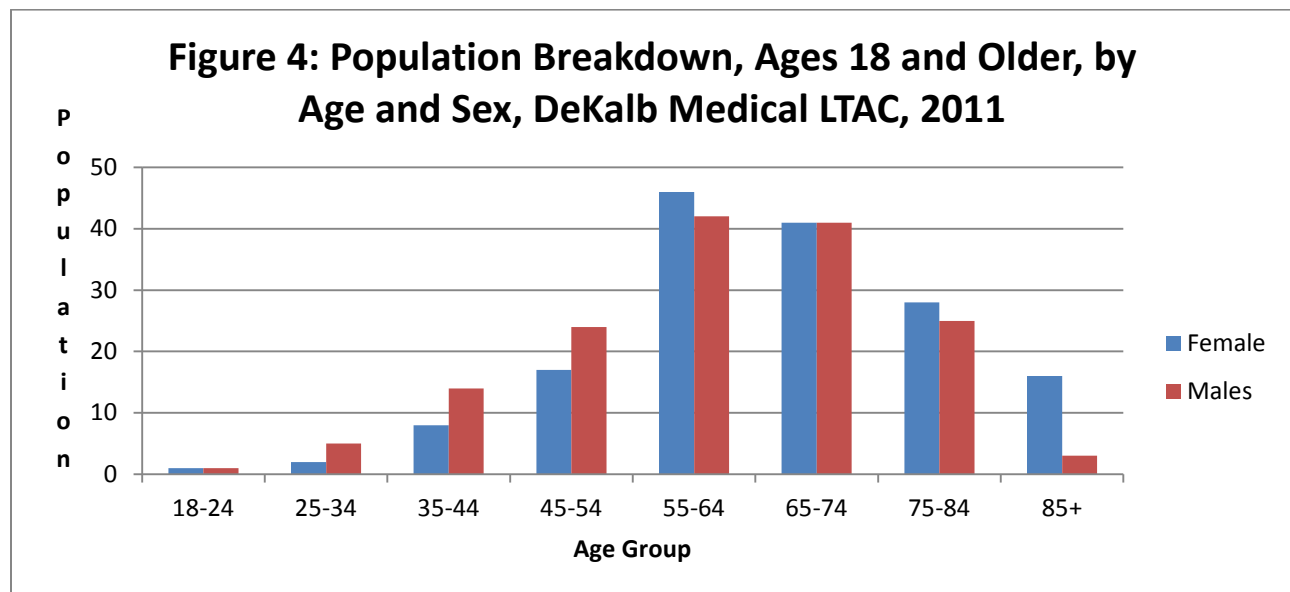


Figure 4: Courtesy of Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

- The Age Group 55-64 made up the most dramatic percentage of patients admitted to DeKalb Medicals LTAC
- As age increases, the patient population becomes predominantly female.

RACE BREAK DOWN OF PATIENTS ADMITTED TO LTAC

Table 4: LTAC Population by Race			
Race	Patients	Total Days	Average Number of Days Per Race
Caucasian	133	4,251	31.96
African American	179	5,908	33.01
Other	4	127	31.75

Source: Truven Health Analytics, Market Expert, Financial Year 2010-2011

- **African Americans accounted for 57% of DeKalb Medicals LTAC population**
- **Caucasians accounted for 42% of DeKalb Medicals LTAC population**

INSURANCE COVERAGE OF PATIENTS ADMITTED TO THE LTAC

Table 5: Type of Insurance Coverage for LTAC Population, DeKalb Medical LTAC, 2011

Insurance Provider	Total Population Covered by Provider	Total Days per Provider	Average Number of Days Per Patient Per Provider
Medicare	226	7,459	33.00
Managed Care	48	1343	27.98
Commercial Insurance	31	1025	33.065
Medicaid	5	242	48.4
Miscellaneous/Other	4	93	23.25

Source: Truven Health Analytics, Market Expert, Financial Year 2010-2011

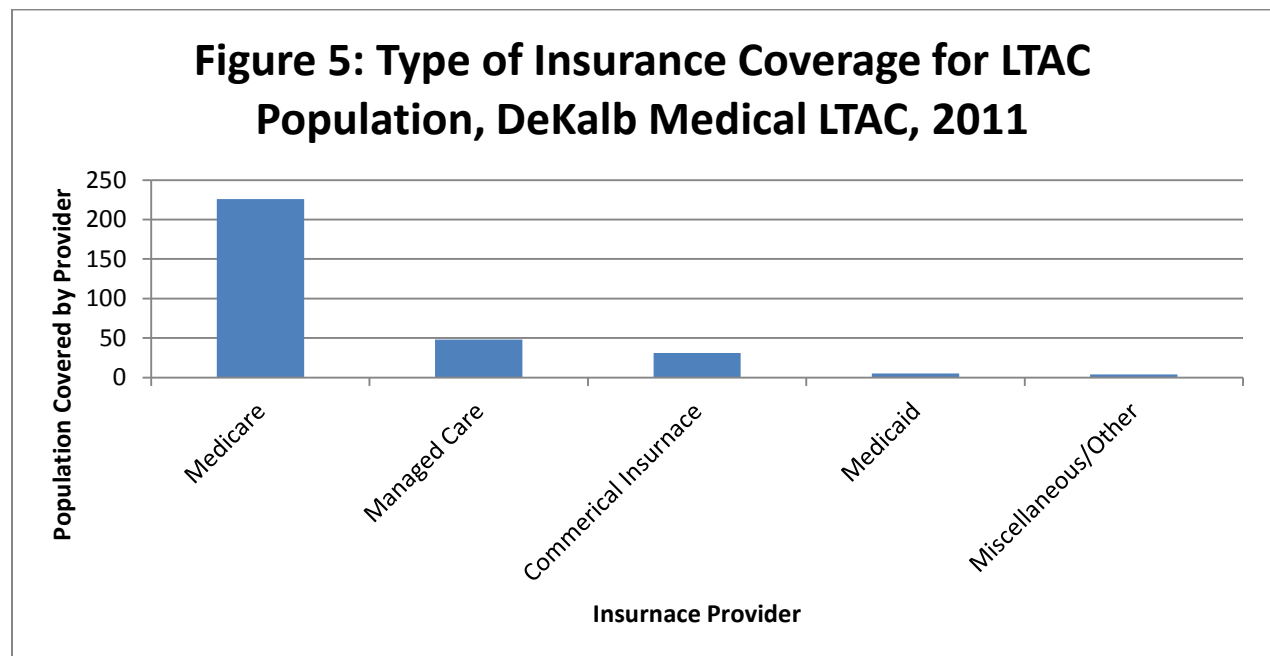


Figure 5: Courtesy of Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

- **Approximately 72 percent of the patients admitted to the DeKalb Medical LTAC were Medicare patients.**

POPULATION MORTALITY RATE:

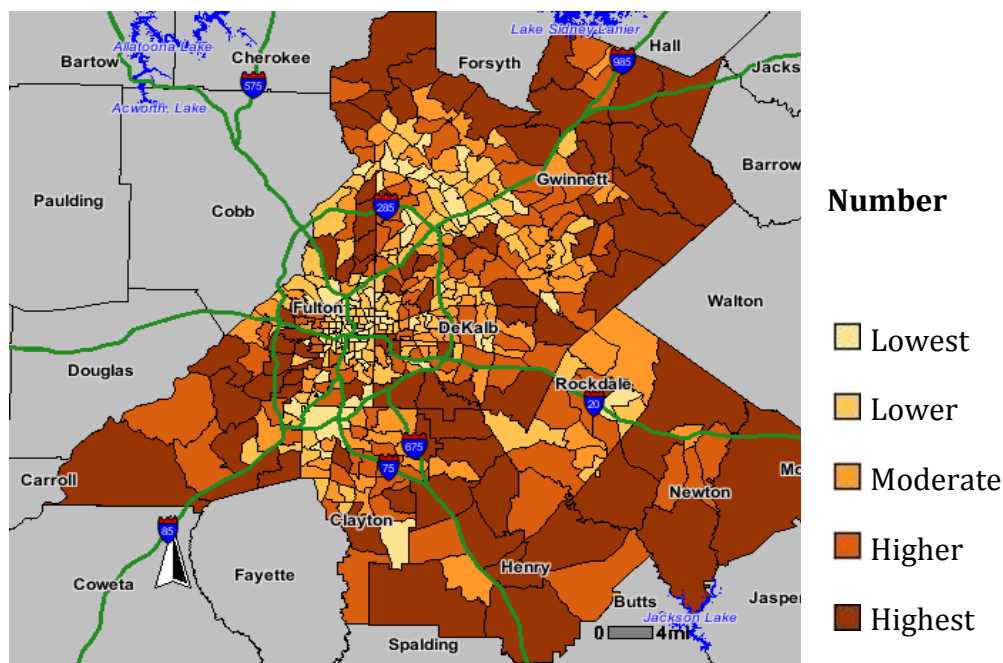
The table below depicts the mortality rates of the population between 45-74 years for the top seven counties in DeKalb LTAC's service area. Please note that the data for the year 2009 is not available

Table 6: Deaths & Death Rate, All Causes, Race: All Races, Ages: 45-74, 2011								
	2008		2009		2010		SELECTED YEARS TOTAL	
	DEATHS	<u>DEATH RATE</u>	DEATHS	<u>DEATH RATE</u>	DEATHS	<u>DEATH RATE</u>	DEATHS	<u>DEATH RATE</u>
<u>Clayton</u>	703	1047.20	N/A	N/A	736	1040.30	2,082	1024.50
<u>DeKalb</u>	1,657	851	N/A	N/A	1,733	844.6	5,015	849.9
<u>Fulton</u>	2,277	894.9	N/A	N/A	2,293	840.8	6,911	893.5
<u>Gwinnett</u>	1,310	611	N/A	N/A	1,419	606.7	3,880	593.6
<u>Henry</u>	486	863	N/A	N/A	490	782.5	1,428	829.1
<u>Newton</u>	266	950.3	N/A	N/A	335	1,107.70	890	1,048.60
<u>Rockdale</u>	219	805.4	N/A	N/A	232	801.8	690	835.9
County Summary	6918	821.4	N/A	N/A	7,238	800.4	20,896	816.2

**Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2008-2010.*

Below is the map for number deaths in each census tract for the top seven counties in the LTAC service area counties during the years 2007 through 2010. Please note that the data for the year 2009 is not available.

Figure 6: Number of Deaths in LTAC service counties 2007-2010



**Source: Georgia Department of Public Health, Online Analytical Statistical Information System, 2007-2010*

LEADING CAUSES OF DEATH:

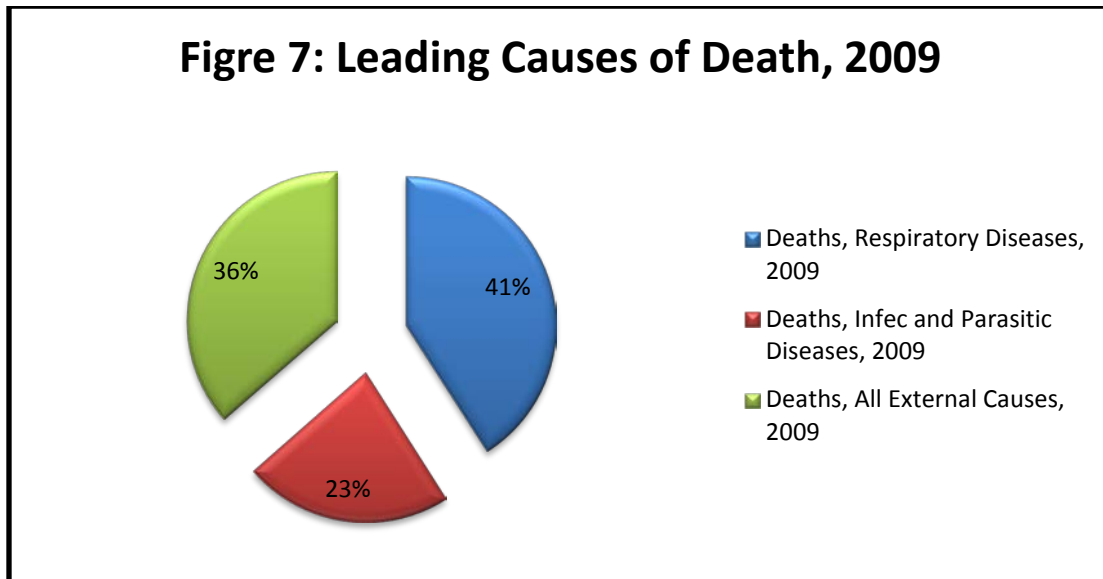
The table below shows the leading causes of death for the entire population of the LTAC's service counties.

Table 7: Leading Causes of Death for Entire Population of LTAC Service Counties, 2009

County	Total, 2009	Respiratory Diseases, 2009	Infections and Parasitic Diseases, 2009	All External Causes, 2009
Clayton	1,377	125	71	119
DeKalb	4,012	339	198	283
Fulton	5,972	439	338	436
Gwinnett	3,225	291	104	241
Henry	1,125	117	45	98
Newton	669	71	23	60
Rockdale	557	66	21	52
	16,937	1,448	800	1,289

**Source: Georgia Statistics System, University of Georgia, 2009*

The pie chart below breaks down the percentage of the leading causes of death among the principle diagnoses of LTAC patients.



- **The leading cause of death was respiratory diseases.**
- **Fulton County had the highest number of deaths for each of the leading causes.**
- **Deaths due to major cardiovascular diseases accounted for 41% of all deaths followed by deaths due to external causes, at 36%.**
- **Infections and parasites accounted for the smallest percentage of deaths.**

LEADING CAUSES OF ADMITTANCE TO DEKALB MEDICAL LTAC

The Leading Causes of admittance are the six main reasons people are admitted to DeKalb Medical LTAC

The following figure shows trending information for 2008-2011:

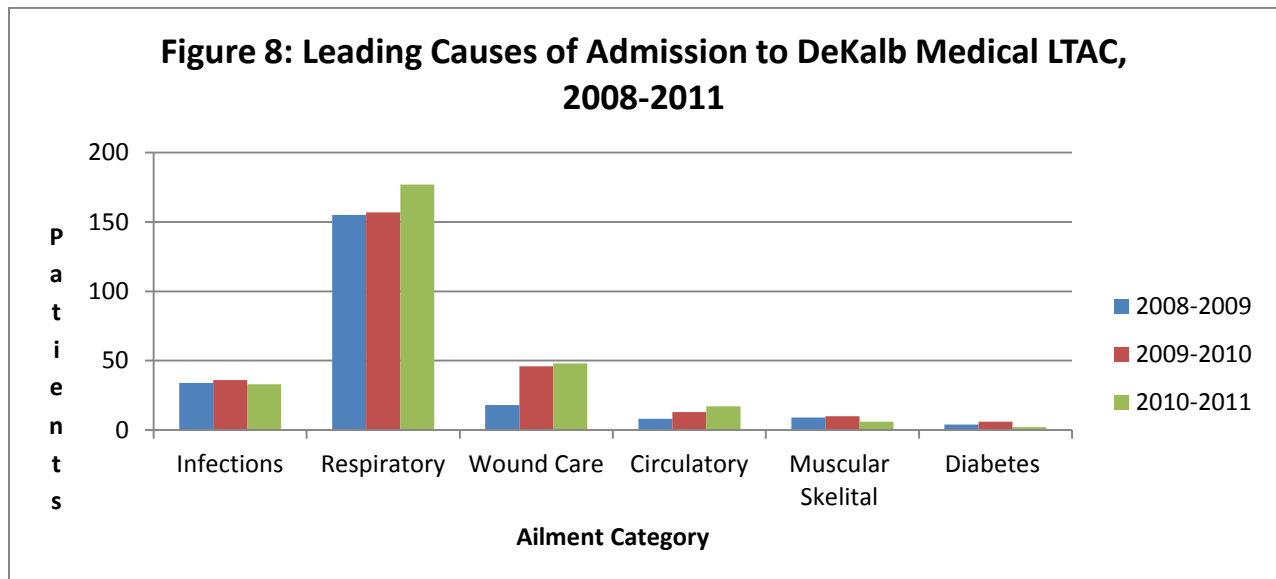


Figure 8: Courtesy of Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

- The leading cause of hospitalization for patients at DeKalb Medical LTAC is respiratory disease
- The DeKalb Medical LTAC has seen an increase in respiratory, wound care and circulatory diseases over the past three years with the largest increase in wound care.

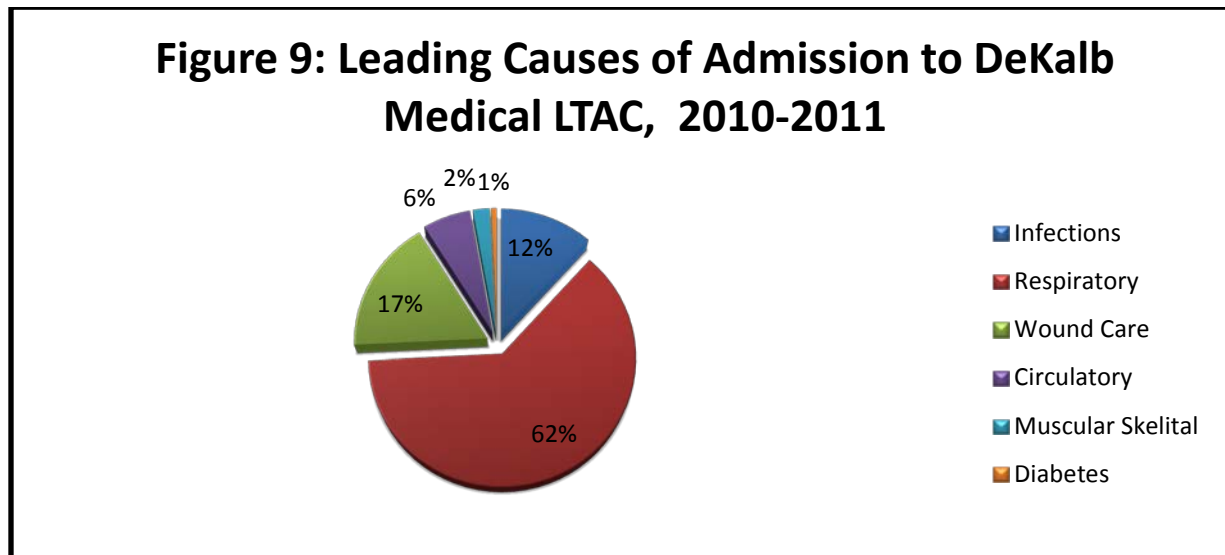


Figure 9: Courtesy of Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

- **The diagnosis of respiratory disease was more than three times greater than the next leading cause of hospitalization (wound care) for patients at DeKalb Medical LTAC**

LEADING DIAGNOSES AT DEKALB MEDICAL LTAC

The tables and graphs in the following section analyze the top four diagnostic groups. These are chronic diseases, pulmonary care, wound care, and infections. This section further tries to ascertain the most common diagnoses within each group and the patient's average length of stay for each of those diagnoses. Each table or graph is followed by a brief description of the diagnostic group and trends and observations for that group.

CHRONIC DISEASES BY DRG

Table 8: Chronic Disease DRG's for DeKalb Medical LTAC, 2010-2011				
CODE	DRG	FACILITY IN	TOTAL DAYS	AVG LOS
MSDRG- 190	Chronic obstructive pulmonary disease w MCC	2	31	15.5
MSDRG- 558	Tendonitis, myositis & bursitis w MCC	2	75	37.5
MSDRG- 191	Chronic obstructive pulmonary disease w CC	1	20	20
MSDRG- 639	Diabetes w CC	1	37	37
MSDRG- 637	Diabetes w MCC	1	52	52
MSDRG-683	Renal failure w CC	1	2	2
MSDRG- 682	Renal failure w MCC	1	18	18
TOTAL		10	3898	182

Source: Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

- **The maximum length of stay was for patients with diabetes related complications totaling 89 days for the year.**

PULMONARY CARE BY DRG

Table 9: Pulmonary Care DRG's for DeKalb Medical LTAC, 2010-2011				
DRG CODE	DRG	FACILITY INPATIENT	AVG DAYS	AVG LOS
MSDRG-189	Pulmonary edema & respiratory failure	55	1,402	25.49
MSDRG- 207	Respiratory system diagnosis w ventilator support 96+ hours	53	1,765	33.3
MSDRG-166	Other resp system O.R. procedures w MCC	31	1,458	47.03
MSDRG-208	Respiratory system diagnosis w ventilator support <96 hours	22	665	30.23
MSDRG-004	Trach w MV 96+ hrs or PDX exc face, mouth & neck w/o maj O.R.	7	392	56
MSDRG-003	ECMO or trach w MV 96+ hrs or PDX exc face, mouth & neck w maj O.R.	5	359	71.8
MSDRG- 195	Simple pneumonia & pleurisy w MCC	1	30	30
TOTALS		174	6071	293.85

Source: Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

Pulmonary edema is fluid accumulation in the lungs. The fluid collects in the air sacs of the lungs, making it difficult for the patient to breathe. It may even lead to respiratory failure.

Respiratory failure is a condition in which not enough oxygen passes from the lungs to the blood. It can also occur when the lungs can't properly remove carbon dioxide from the blood.

Patients with respiratory failure and distress sometimes require the help of specialized medical care including tracheostomy tubes and mechanical ventilation to facilitate the flow of sufficient oxygen to lungs. DeKalb LTAC provides an interdisciplinary approach to caring for these, and all other patients ensuring that they receive the quality care necessary for their diagnosis and recovery.

The graph below plots the number of patients with each diagnosis and their average length of stay and the LTAC.

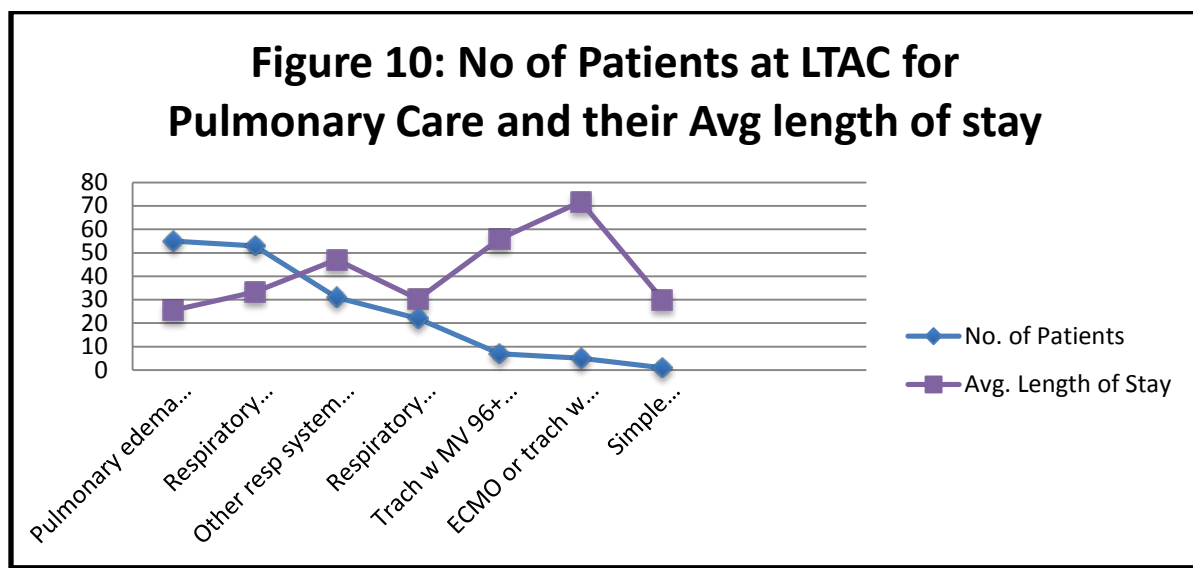


Figure 10: Courtesy of Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

WOUND CARE

The table below shows the number of patients admitted to LTAC for wound care by their DRG. A wound was defined as a break in the continuity of the skin.

Table 10: Wound Care DRG's For DeKalb Medical LTAC, 2010-2011				
Code	DRG	Facility Inpatient	Total Days	AVG LOS
MSDRG-573	Skin graft for skin ulcer or cellulitis w MCC	12	489	40.8
MSDRG-463	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w MCC	9	368	40.9
MSDRG-574	Skin graft for skin ulcer or cellulitis w CC	5	222	44.4
MSDRG-622	Skin grafts & wound debrid for endoc, nutrit & metab dis w MCC	4	103	25.8
MSDRG-592	Skin ulcers w MCC	4	72	18
MSDRG-593	Skin ulcers w CC	3	117	39
MSDRG-623	Skin grafts & wound debrid for endoc, nutrit & metab dis w CC	3	65	21.7
MSDRG-464	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w CC	2	79	39.5
MSDRG-945	Rehabilitation w CC/MCC	1	7	7
MSDRG-577	Skin graft exc for skin ulcer or cellulitis w CC	1	42	42
	Total	44	1564	156.4

Source: Truven Health Analytics, FY 2010-11.

As the aging population grows, one of the most obvious effects is the growing number of people with chronic health care problems including skin deterioration and the need for wound care.

Wound care is defined as care of wounds that are resistant to healing or have complicated medical conditions. Wound care provided by DeKalb LTAC is limited to chronic wounds. Pressure ulcers, or decubitus ulcers are examples of chronic wounds. There is an estimated 3% to 5% incidence rate of chronic wounds in hospitalized patients. The incidence increases to 25% to 85% in patients with spinal cord injuries. Approximately 5% of Americans hospitalized every year will develop pressure sores (Source: *Wound Rep Reg* 4994;2:965-70).

The graph below plots the number of patients with each diagnosis and their average length of stay and the LTAC.

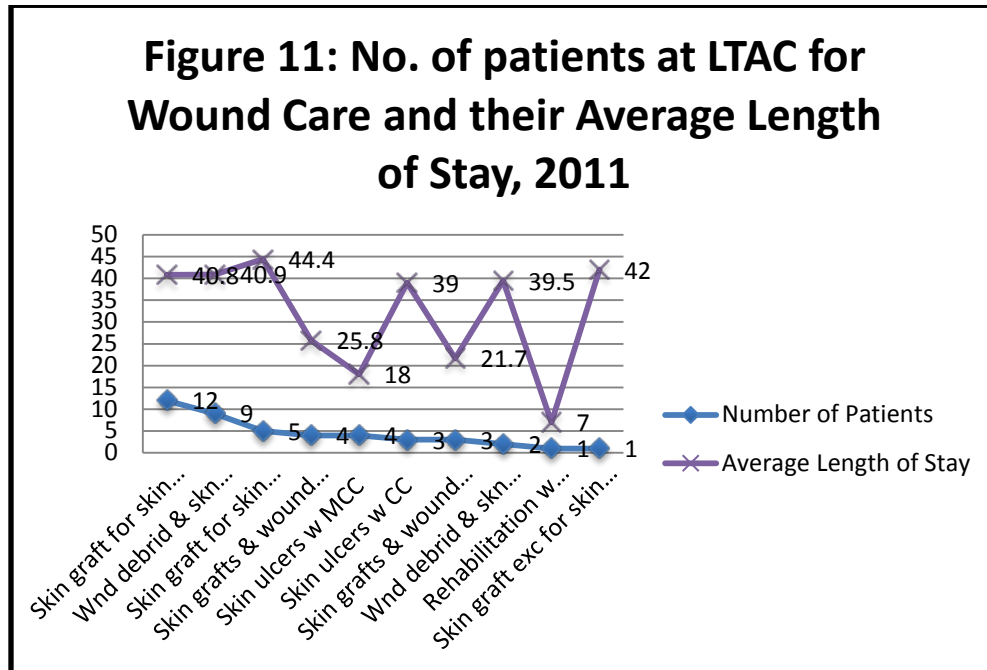


Figure 11: Courtesy of Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

- **Skin Graft for Skin Ulcer or Cellulitis is the most common wound care diagnosis with 12 patients for the FY 2010-11 and their average length of stay was 40.8 days.**
- **Cellulitis is a condition involving skin and soft tissue infections that are resistant to drugs commonly used for infections.**

INFECTIONS

Table 11: Infections DRG's for DeKalb Medical LTAC, 2010-2011				
Code	DRG	Facility Inpatient	Total Days	AVG LOS
MSDRG-862	Postoperative & post-traumatic infections w MCC	11	382	34.7
MSDRG-602	Cellulitis w MCC	6	156	26
MSDRG-288	Acute & subacute endocarditis w MCC	4	94	23.5
MSDRG-863	Postoperative & post-traumatic infections w/o MCC	2	17	8.5
MSDRG-689	Kidney & urinary tract infections w MCC	2	57	28.5
MSDRG-857	Postoperative or post-traumatic infections w O.R. proc w CC	2	89	44.5
MSDRG-371	Major gastrointestinal disorders & peritoneal infections w MCC	1	10	10
MSDRG-177	Respiratory infections & inflammations w MCC	1	32	32
MSDRG-094	Bacterial & tuberculosis infections of nervous system w MCC		35	35
	Total	36	1011	101.1

Source: Truven Health Analytics, FY 2010-11

Post operative and/or post traumatic infections are caused by bacterial presence after a surgery, or as a result of a traumatic injury. Treatment involves the administration of various antibiotics depending on the severity and the site of infection.

The graph below shows the number of patients admitted in the LTAC for treatment of infections and their average length of stay.

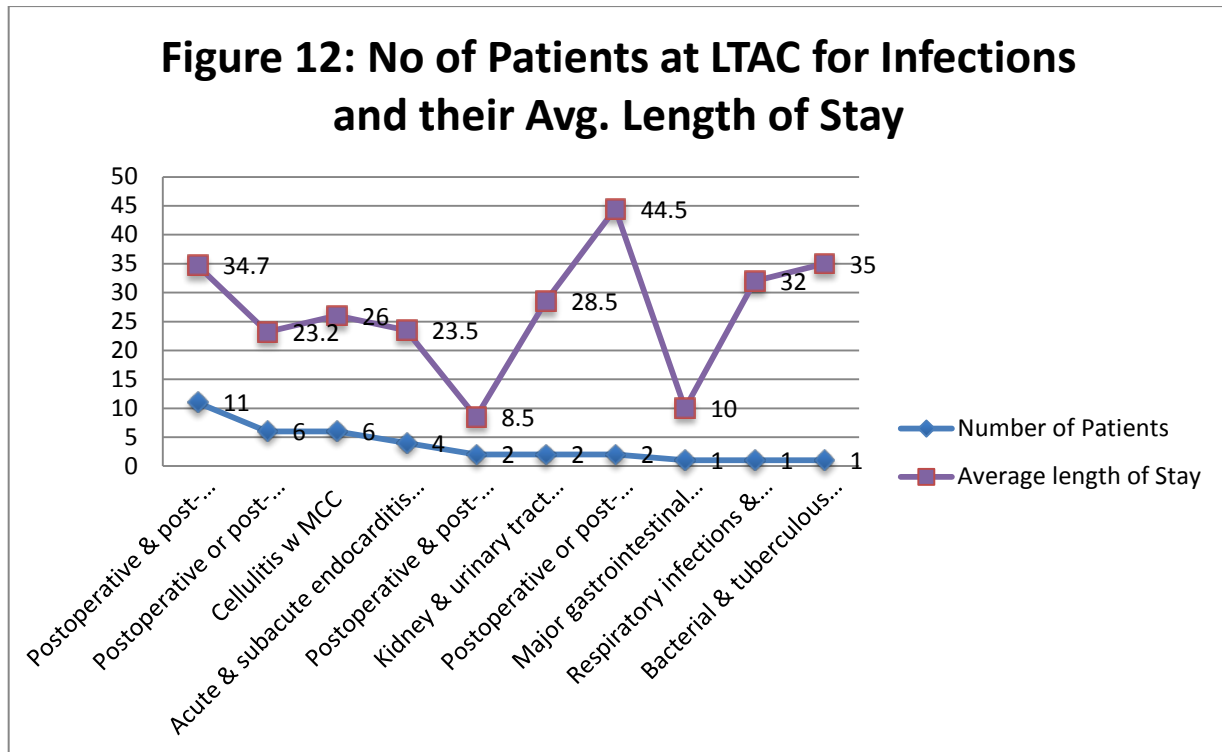


Figure 12: Courtesy of Truven Health Analytics, Market Expert Program, Financial Year 2010-2011

- **Post operative and or post traumatic infections were most common and had the highest length of stay for the FY 2010-11.**
- **The second most common diagnosis was cellulitis. Cellulitis is a serious infection of the skin or underlying tissues. Treatment includes the use of specific antibiotics with constant monitoring of the condition.**
- **The third most common diagnosis was endocarditis, which is an infection of the inner lining of the heart. The aggressive use of antibiotics is again the focus of the treatment while managing and monitoring other symptoms.**

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