

## Chapter 6: Hospital and Ambulatory Surgery Facility Tiering

Draft tables prepared for review by the Acute Care Services  
Committee

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# Hospital and Ambulatory Surgery Facility Tiers 2007 Data from the 2008 License Renewal Applications

Facility Name	Type	Tier	Average Resource Hours	Number of OP Cases	Average OP Case Time	Am't OP=	Room Utilization Rate 2007	Actual Room Utilization	Amfihal Room Capacity			
Northeast Medical Center	Hospital	2	9.2	6,505	145.0	1.5	23,941.5	4.0	17.0	21.0	46.72%	2392.0
Geason Memorial Hospital	Hospital	2	8.5	3,791	125.0	1.4	23,403.4	5.0	9.0	22.0	45.46%	2210.0
Durham Regional Hospital	Hospital	2	9.0	4,354	210.0	1.4	22,727.1	3.1	12.0	15.0	84.75%	2340.0
Medical Park Hospital	Hospital	2	9.4	1,183	167.0	1.3	20,143.2	0.6	13.0	13.0	66.22%	2444.0
Wayne Memorial Hospital	Hospital	2	8.0	3,455	130.0	1.3	19,785.5	1.0	10.0	2.0	65.04%	2340.0
Presbyterian Orthopaedic Hospital	Hospital	2	9.4	3,190	196.6	1.4	18,542.0	0.0	12.0	0.0	63.22%	2444.0
Duke Health Raleigh Hospital	Hospital	2	10.0	2,177	172.0	1.4	17,658.2	0.0	13.0	0.0	54.05%	2600.0
Craven Regional Medical Center	Hospital	2	8.9	4,635	120.0	1.5	16,464.0	3.0	9.0	8.0	39.09%	2574.0
High Point Regional Health System	Hospital	2	8.6	3,516	166.0	1.4	15,434.1	3.0	8.0	0.0	54.98%	2455.8
Nash General Hospital	Hospital	2	8.2	2,187	149.0	1.2	15,010.5	1.0	13.0	0.0	45.83%	2132.0
Margaret R. Pardee Memorial Hospital	Hospital	2	8.8	1,949	174.0	1.5	14,825.3	0.0	10.0	0.0	83.35%	2288.0
Alleghenya Regional Medical Center	Hospital	2	8.7	1,900	138.0	1.3	14,674.0	2.0	11.0	0.0	48.24%	2249.0
CMC - University	Hospital	2	9.5	1,051	180.2	1.4	13,876.7	1.0	9.0	4.0	42.35%	2496.0
Rowan Regional Medical Hospital	Hospital	2	10.5	2,455	174.4	1.4	13,778.6	2.0	8.0	3.0	45.30%	2740.0
Calawba Valley Medical Center	Hospital	2	8.9	2,043	140.0	1.5	12,997.0	1.0	12.0	0.0	42.75%	2374.0
WakeMed Cary Hospital	Hospital	2	9.3	1,917	129.0	1.3	11,500.1	2.0	9.0	0.0	45.03%	2418.0
Presbyterian Matthews Hospital	Hospital	2	8.0	997	144.0	1.2	11,519.0	2.0	8.0	0.0	49.23%	2080.0
Grace Hospital	Hospital	2	8.0	1,644	100.0	1.2	11,362.5	1.0	5.0	0.0	50.95%	2080.0
Southeastern Regional Medical Center	Hospital	2	9.0	2,216	148.0	1.1	11,195.2	1.0	9.0	0.0	47.84%	2340.0
CMC - Union	Hospital	2	10.1	1,505	142.0	1.4	10,888.5	0.0	7.0	0.0	68.35%	2623.4
Median			8.1	145.0	87.5							
Average							16866			13		
Number of Facilities: 20												
Max			11	5,505	210	1.5						
Min			8	997	129	1.2						

# Hospital and Ambulatory Surgery Facility Tiers 2007 Data from the 2008 License Renewal Applications.

Facility Name	Type	Tier	Average Resource Utilization	Number of OP Cases	Average OP Case Time	CMI 2007	Room Utilization Rate 2007							
Iredell Memorial Hospital	Hospital	3	10	2,393	126	3.624	76	9,876.7	1	8	0	9	45.95%	2000
Harris Regional Hospital	Hospital	3	8	1,200	117	4.219	60	6,754.8	0	6	0	6	62.36%	2000
Lake Norman Regional Medical Center	Hospital	3	9	2,085	148	2.645	78	8,559.5	1	7	0	8	45.72%	2210
Cleveland Regional Medical Center	Hospital	3	9	2,319	98	3.515	77	8,298.6	1	6	0	7	50.66%	2392
Johnston Memorial Hospital	Hospital	3	10	2,320	119	3.704	54	7,952.8	1	4	1	6	56.64%	2496
Haywood Regional Medical Center	Hospital	3	9	1,493	154	2.792	78	7,504.2	0	7	0	7	45.81%	2327
Beaufort County Hospital	Hospital	3	8	958	170	2.481	115	7,412.3	1	5	0	6	59.79%	2340
Central Carolina Hospital	Hospital	3	8	939	144	2.716	111	7,283.6	1	5	0	6	51.66%	2080
Person Memorial Hospital	Hospital	3	8	888	210	1.922	150	7,143.0	1	3	0	4	76.31%	2000
Carteret General Hospital	Hospital	3	10	1,870	126	1.907	96	7,010.4	1	5	0	6	50.46%	2000
Halifax Regional Medical Center	Hospital	3	8	1,763	120	2.364	86	6,932.2	0	6	0	6	49.37%	2236
Randolph Hospital	Hospital	3	8	1,066	120	3.234	86	6,833.7	1	5	0	6	48.67%	2080
Columbus County Hospital	Hospital	3	10	1,573	180	3.146	48	6,765.9	1	4	0	5	57.74%	2000
Wilson Medical Center	Hospital	3	8	2,076	90	3.484	73	6,078.6	1	9	0	10	26.10%	2340
Presbyterian Huntarville	Hospital	3	8	646	107	3.940	73	6,480.7	1	4	0	5	55.39%	2000
Onslow Memorial Hospital	Hospital	3	10	1,644	145	1.320	111	6,418.0	1	5	0	6	45.89%	2000
Abemare Hospital	Hospital	3	9	1,831	103	4.333	44	6,336.4	2	7	0	9	30.06%	2040
Lenoir Memorial Hospital	Hospital	3	8	1,950	96	3.222	55	6,136.5	1	8	0	10	26.23%	2080
Cabwell Memorial Hospital	Hospital	3	8	773	135	2.752	90	6,067.3	1	4	3	8	31.34%	1850
Betsy Johnson Regional Hospital	Hospital	3	8	1,150	107	2.639	80	6,536.2	0	4	0	4	62.35%	2080
Sisany Memorial Hospital	Hospital	3	8	764	112	3.641	74	5,793.4	1	5	0	6	41.26%	2340
Morehead Memorial Hospital	Hospital	3	8	1,228	110	2.159	90	5,488.8	1	5	0	6	36.10%	2000
Highsmith-Rainey Memorial Hospital	LTAC	3	8	194	137	3.013	96	5,364.2	0	4	0	4	57.31%	1920
Brunswick Community Hospital	Hospital	3	9	776	169	2.042	68	5,210.0	1	3	0	4	56.99%	2210
Northern Hospital of Surry	Hospital	3	8	1,216	110	2.947	80	4,966.1	1	4	0	5	42.36%	2000
Wilkes Regional Medical Center	Hospital	3	8	745	50	2.450	102	4,833.2	1	4	0	6	42.19%	2000
Scotland Memorial Hospital	Hospital	3	8	1,139	120	2.576	60	4,883.6	1	6	0	6	34.67%	1950
Rutherford Hospital	Hospital	3	9	1,260	100	1.997	84	4,840.5	0	5	0	5	41.37%	2000
Franklin Regional Medical Center	Hospital	3	10	1,003	160	1.976	80	4,742.2	0	3	0	3	67.59%	2000
Anne Penn Hospital	Hospital	3	8	778	162	1.564	100	4,707.3	0	4	0	4	50.29%	2000
Park Ridge Hospital	Hospital	3	9	1,109	87	4.449	41	4,604.1	0	8	0	6	32.79%	2340
Davis Regional Medical Center	Hospital	3	9	804	102	2.140	88	4,434.1	1	5	0	6	31.58%	2340
Murphy Medical Center	Hospital	3	8	461	160	2.068	83	4,404.4	0	4	0	4	47.06%	2000
Valdese General Hospital	Hospital	3	8	412	180	1.821	100	4,271.0	0	4	0	4	45.63%	2000
Lexington Memorial Hospital	Hospital	3	8	935	107	2.314	66	4,212.8	0	4	0	4	45.01%	2000
Watauga Medical Center	Hospital	3	8	1,210	82	3.071	48	4,181.7	1	5	0	6	26.94%	2155
Transylvania Community Hospital	CAH	3	8	401	136	1.962	79	3,531.7	0	4	0	4	37.73%	2080
J. Arthur Doster Memorial Hospital	Hospital	3	8	261	180	1.598	100	3,489.8	0	2	0	2	74.57%	2080
Lincoln Medical Center	Hospital	3	8	763	95	1.762	76	3,466.4	0	4	0	4	37.26%	2080

# Hospital and Ambulatory Surgery Facility Tiers 2007 Data from the 2008 License Renewal Applications

Facility Name	Type	Tier	Average Resource Hours	Number of OP Cases	Average of Case Time	Room Utilization Rate 2007
Thomasville Medical Center	Hospital	3	618	85	3,451.0	24.69%
Roanoke-Croston Hospital	Hospital	3	803	76	3,140.4	22.37%
Granville Medical Center	Hospital	3	548	100	2,780.1	36.74%
Allegany Medical Center	Hospital	3	382	142	2,702.7	23.10%
Heritage Hospital	Hospital	3	668	108	2,627.7	18.72%
Sandhills Regional Medical	Hospital	3	718	120	2,537.0	36.14%
King Mountain Hospital	Hospital	3	318	165	2,373.0	50.71%
The McDowell Hospital	Hospital	3	390	180	2,152.5	23.00%
Martin General Hospital	Hospital	3	333	94	2,121.6	46.35%
FirstHealth Richmond	Hospital	3	458	90	2,018.3	21.67%
Chowan Hospital	CAH	3	7	90	1,839.0	33.89%
Duplin General Hospital	Hospital	3	458	90	1,826.2	26.01%
Ashe Memorial Hospital	Hospital	3	727	85	1,398.5	23.50%
Berrie Memorial Hospital	CAH	3	242	180	1,392.5	26.78%
Anson Community Hospital	Hospital	3	18	128	819.9	17.52%
Stokes-Reynolds Memorial Hospital	CAH	3	101	110	776.0	8.31%
The Outer Banks Hospital	Hospital	3	6	120	784.7	10.75%
Bladen County Hospital	CAH	3	367	47	571.7	12.22%
Flores Memorial Hospital	CAH	3	315	60	504.6	10.85%
Allegheny Memorial Hospital	CAH	3	2	120	500.5	10.66%
Washington County Hospital	CAH	3	33	231	497.4	11.98%
Pender Memorial Hospital	CAH	3	12	89	483.2	10.54%
FirstHealth Montgomery	CAH	3	63	119	476.7	10.25%
Chatham Hospital	CAH	3	101	85	211.0	4.51%
North Carolina Specialty Hospital	Hospital	3	31	120	143.0	1.53%
Sampson Regional Medical Center	Hospital	3	988	3	82.6	0.44%
Davie County Hospital	CAH	3	840	3	60.5	1.29%
Pungo District Hospital	CAH	3	10	46	48.6	1.06%
St. Luke's Hospital	Hospital	3	5	21	0	0.00%
Swain County Hospital	CAH	3	341	0	0	0.00%
Blue Ridge Regional Hospital	Hospital	3	0	10	5.0	0.21%
Median			370	150	1,946.4	27.73%
Average			8.8	119.9	77.3	
Number of Facilities: 70						
Max			18	2,381	210	4,469
Min			4	0	0	10

# Hospital and Ambulatory Surgery Facility Tiers

## 2007 Data from the 2008 License Renewal Applications

Facility Name	Type	Tier	Average Resource Hours	Number of OP Cases	Average Of Case Time	Room Utilization Rate 2007	Annual Room Capacity
Surgicenter Services of Pitt	ASC	4	0	10,371	64	58.82%	2015
Heathsouth Surgical Center of Greensboro	ASC	4	10	10,848	44	28.33%	2476
James E. Davis Ambulatory Surgical Center	ASC	4	8	6,232	83	48.05%	2080
Hamthorne Surgical Center	ASC	4	8	6,748	70	84.11%	2132
Wilmington Surgery	ASC	4	8	8,819	54	48.46%	2050
Fayetteville Ambulatory Surgery Center	ASC	4	7	10,818	65	45.52%	1820
Charlotte Surgery Center	ASC	4	8	9,858	77	77.24%	2340
Hilgh Point Surgery Center	ASC	4	8	6,140	69	43.73%	2000
Heathsouth Greensboro Specialty Surgery Center	ASC	4	8	1,718	68	27.74%	2080
Orthopaedic Surgery Center of Asheville	ASC	4	8	2,328	105	58.03%	2080
Heathsouth Blue Ridge Surgery Center	ASC	4	8	5,286	47	28.55%	2080
Surgicare of Jacksonville	ASC	4	8	2,834	41	20.85%	2080
CSC - Randolph	ASC	4	8	5,288	35	16.47%	2080
Caromont Specialty Surgery	ASC	4	8	4,190	36	17.91%	1960
SDSC at Presbyterian	ASC	4	8	888	73	5.98%	2168
Heathsouth Surgery Center of Southern Pines	ASC	4	10	9,884	20	46.93%	2080
The Surgical Center at Lake Norman	ASC	4	7	2,254	56	44.95%	1820
General Surgery Center	ASC	4	8	4,307	32	49.75%	2080
Plastic Surgery Center of North Carolina	ASC	4	8	447	127	13.48%	2080
Innovel Surgical Center	ASC	4	10	1,840	44	14.57%	2600
Friedmont Surgical Center	ASC	4	8	937	90	30.03%	2060

# Hospital and Ambulatory Surgery Facility Tiers 2007 Data from the 2008 License Renewal Applications

Facility Name	Type	Tier	Average Resource Hours	Number of IP Cases	Average IP Case Time	Number of OP Cases	Average OP Case Time	CMI 2005	Room Utilization Rate 2007	Annual Room Capacity
Surgical Eye Center	ASC	4	6	0	0	3,827	18	1,148.1	12.27%	2080
Surgery Center of Morganton	ASC	4	6	0	0	2,064	40	1,376.0	28.40%	2080
Southpark Surgery Center	ASC	4	9	0	0	8,428	51	7,166.2	50.97%	2210
Cleveland Ambulatory	ASC	4	6	0	0	1,784	36	1,116.6	11.95%	2000
Chapel Hill Surgery Center	ASC	4	6	0	0	808	110	1,061.0	22.66%	1850
Eye Surgery and Laser Clinic	ASC	4	12	0	0	2,454	45	1,840.5	39.33%	3120
Asheville Eye Surgery Center	ASC	4	8	0	0	3,311	34	1,837.3	60.69%	2340
Eye Surgery Center of Shelby	ASC	4	8	0	0	1,078	40	1,118.7	23.90%	2080
RAMS Surgery Center	ASC	4	8	0	0	1,111	30	905.5	19.35%	2080
Raleigh Plastic Surgery Center	ASC	4	8	0	0	367	90	585.3	25.45%	2080
Iredell Head, Neck and Ear Ambulatory Surgical Center	ASC	4	11	0	0	594	60	594.0	25.36%	2360
Healthsouth Surgicenter of Organization*	ASC	4	6	0	0	882	45	681.5	7.07%	1580
Raleigh Women's Health Organization*	ASC	4	4	0	0	2,833	20	944.3	20.16%	1040
Wilkes Regional Medical Center ASC	ASC	4	8	0	0	514	60	514.0	21.97%	2080
Southern Eye Associates	ASC	4	8	0	0	518	90	778.9	16.13%	2080
Carolina Birth Center	ASC	4	8	0	0	386	30	183.0	8.25%	2080
Graystone Eye Surgery Center	ASC	4	11	0	0	2,483	10	413.8	17.69%	2720
OK HealthSouth Surg. Cent.)	ASC	4	2	0	0	413	45	309.8	13.24%	520
Wilson OB-GYN	ASC	4	7	0	0	987	40	165.2	3.55%	1820
Femcare	ASC	4	8.0	0	0	0	48.0	0	0	0
Median										
Average										
Number of Facilities: 40						19,848	127			
Max						360	10			
Min										

# Hospital and Ambulatory Surgery Facility Tiers 2007 Data from the 2008 License Renewal Applications

Facility Name	Type	Tier	Average Resource Hours	Number of IP Cases	Number of OP Cases	Average OP Case Time	Shared	Room Utilization Rate 2007	Actual Room Utilization	Annual Room C					
Outliers															
Five Regional Medical Center	Hospital		200	3611	191	85	2	22,907.5	2	15	4	21	46.62%	2.10%	62000
Maria Parham Hospital	Hospital		24	803	81	67	1	3,623.4	0	5	0	5	30.97%	11.81%	8245
Hugh Chatham Memorial Hospital	Hospital		30	1085	0	0	1	0	0	5	0	5	0.00%	0.00%	7800
Charles A. Cannon Memorial Hospital	Hospital		686	186	63	64	1	572.2	0	2	0	2	12.23%	0.16%	178100
FirstHealth Moore Regional Hospital	Hospital		90	9815	131	77	2	16,882.5	2	10	4	16	50.38%	5.04%	23400
Surgey Center of Pinal, ASC	ASC		34	0	4,425	60	0	4,425.0	0	0	0	0	31.07%	6.34%	8840
Highlands-Cashiers Hospital	CAH		8	21	250	45	0	263.8	0	2	0	2	5.64%	6.34%	2000
Carolina Center for Specialty Surgery (x Edgewill)	ASC		7	0	0	0	0	0	0	0	0	2	0.00%	0.00%	1880
Gateway Ambulatory Surgery Center (new 2006)	ASC		0	0	0	1	0	113.8	0	0	4	4	1.22%	1.22%	2348
No cases 2007															
Blowing Rock Hospital	CAH		0	0	0	0	0	0	0	2	0	2	0	0	0



# Hospital Tiers

## Enhancement to the Operating Room Methodology

### Updated with 2007 Data from the 2008 License Renewal Applications

The current methodology assumes an average of 9 hours of OR time available each day and an average of 3 hours for inpatient surgery and 1.5 hours for outpatient surgery. These are broad assumptions and it is recognized that the true average OR availability and average case times are higher in facilities performing the most complex cases, and lower in many facilities performing less complex surgery. These average times could be refined using the following method:

1. Develop a measure of "Total Surgical Hours" for each facility using actual cases and average case times as reported on the license renewal application:

$$\text{Total Surgical Hours} = (\text{IP cases} \times \text{IP case time}) + (\text{OP cases} \times \text{OP case time})$$

2. Rank facilities from highest Total Surgical Hours to lowest.
3. Group facilities into four tiers. *NOTE: For the example presented below, the tiers were established with the following "breakpoints:"*

*Tier 1: Total Surgical Hours  $\geq$  30,000*

*Tier 2: Total Surgical Hours = 10,000 through 29,999*

*Tier 3: Total Surgical Hours < 10,000*

*Tier 4: Ambulatory Surgical Facilities*

4. Calculate the "Median Resource Hours per Day," "Median Inpatient Case Time" and "Median Outpatient Case Time" for each tier group and use this in the OR methodology in place of the 9 hours, 3 hours and 1.5 hours respectively.

#### Example of Provider Tiers - Analysis of Key Variables from Reported Data (Data from 2007 Lic. Renewal Apps.)

Tiers	Description	Number of Facilities in Tier	Average Medicare CMI <sup>1</sup>	Average Total Number ORs	Average Total Surgical Hours	Median Resource Hours per Day	Median Inpatient Case Time (Minutes)	Median Outpatient Case Time (Minutes)
Tier 1	Large Regional Referral Centers	14	1.75	34	60,902	10.0	170.5	110
Tier 2	Other Regional Referral Centers/ High volume Community Hospitals	20	1.37	13	15,990	9.1	149.0	87.5
Tier 3	Other Community Hospitals	70	1.15	5	3,880	8.0	119.0	77.3
Tier 4	Ambulatory Surgical Facilities	40	n/a	4	3,182	8.0	n/a	46

<sup>1</sup> Case Mix Index (CMI) reflects Medicare case mix index only  
Not updated from original provided in 2007