



Acute Care Hospital Bed Need

(continued)

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Occupancy Rates – How Determined?

South Carolina:

- A component of the bed need methodology since 1974
- Initially 85% applied to all hospitals, presumably based on the recommendation from the National Guidelines for Health Planning
- 1977 plan broke out hospitals by size – adjusted to preclude jeopardizing the smaller community hospitals that are unable to operate at high occupancy rates due to numerous factors. The occupancy rates were set at 8 to 9% above actual performance in order to provide opportunity for increased utilization at a more efficient level before consideration of bed increases.
 - 0-49 65%
 - 50-174 75%
 - 175-299 80%
 - 300+ 85%
- Rates modified several times in the past 30+ years
- Last changes came in 2003
 - Removed distinction between urban and rural hospitals and reduced 3 rates by 5% each at the request of the South Carolina Hospital Association.
 - Concern that 2-yr-old utilization data not capturing interim changes. (Pop estimates also changed and extended from 5 to 7 years)

South Carolina - continued:

- For 2009, Occupancy Rates are:

- 0-174 beds	Actual: 43.9%	Factor: 65%
- 175-349 beds	Actual: 57.4%	Factor: 70%
- 350+ beds	Actual: 64.8%	Factor: 75%

Alabama:

- Occupancy rates referenced in the Alabama State Health Plan were originally derived from a report issued (March 1980) by the Institute of Medicine, National Academy of Sciences, titled “Health Planning in the United States: Issues in Guideline Development”
- General Hospitals
 - 80% for all non-Federal, short-stay hospital beds
 - Adjustments for:
 - Seasonal population fluctuations
 - Rural Areas
- Obstetrical Services
 - 75% for each unit with more than 1,500 births per year
 - Developed from a variety of various occupancy rate figures in a number of source documents
- Pediatric Inpatient Services
 - Based on number of pediatric beds in facility
 - 20-39 beds 65%
 - 40-79 beds 70%
 - 80+ beds 75%
 - Variable rates reflect the need for smaller units to maintain the capacity to accommodate fluctuations in admissions and to set aside pediatric beds for particular ages and types of cases – scheduling problems less severe in larger units with greater capacity.

Acute Care Beds by Hospital (FY 2010)

Hospital Name	Town	County	Licensed Beds ¹	Available Beds	Bassinets ³	Staffed Beds
Backus (William W.) Hospital	Norwich	New London	233	223	20	202
Bridgeport Hospital	Bridgeport	Fairfield	425	397	24	290
Bristol Hospital	Bristol	Hartford	154	154	20	132
Charlotte Hungerford Hospital	Torrington	Litchfield	122	122	13	81
CT Children's Medical Center	Hartford	Hartford	147	147	0	142
Danbury Hospital	Danbury	Fairfield	371	365	26	278
Day Kimball Hospital	Putnam	Windham	122	122	18	72
Essent - Sharon Hospital	Sharon	Litchfield	94	94	16	47
Greenwich Hospital	Greenwich	Fairfield	206	206	22	206
Griffin Hospital	Derby	New Haven	180	180	20	94
Hartford Hospital	Hartford	Hartford	867	760	48	630
Hospital of Central Connecticut ²	New Britain	Hartford	446	356	20	341
John Dempsey Hospital	Farmington	Hartford	224	224	20	224
Johnson Memorial Hospital	Stafford	Tolland	101	95	6	72
Lawrence and Memorial Hospital	New London	New London	308	256	14	256
Manchester Memorial Hospital	Manchester	Hartford	283	283	34	140
Middlesex Memorial Hospital	Middletown	Middlesex	297	214	20	178
MidState Medical Center	Meriden	New Haven	156	156	12	142
Milford Hospital	Milford	New Haven	118	118	12	51
New Milford Hospital	New Milford	Litchfield	95	95	10	30
Norwalk Hospital	Norwalk	Fairfield	366	312	20	194
Rockville General Hospital	Vernon	Tolland	118	118	16	66
St. Francis Hospital	Hartford	Hartford	682	593	27	593
St. Mary's Hospital	Waterbury	New Haven	379	181	7	181
St. Raphael Hospital	New Haven	New Haven	533	489	26	364
St. Vincent's Medical Center	Bridgeport	Fairfield	520	423	27	423
Stamford Hospital	Stamford	Fairfield	330	322	25	269
Waterbury Hospital	Waterbury	New Haven	393	292	36	192
Windham Community Hospital	Willimantic	Windham	144	144	14	87
Yale-New Haven Hospital	New Haven	New Haven	944	919	40	871
Statewide			9,358	8,360	613	6,848

Source: CT Department of Public Health Division of Office of Health Care Access Hospital Reporting System Report 400 (FY10)

¹ CT Department of Public Health license data and includes newborn bassinets.

² Established on October 1, 2007 from the merger of New Britain General Hospital and Bradley Memorial Hospital.

³ Bassinets included in available beds

***Note: If we decided to remove bassinets, we would also need to remove newborn bed days from totals**

Process for Calculation of Beds Needed - Hospital Categories of Service

For the Medical-Surgical/Pediatrics category of service:

- 40 Medical-Surgical/Pediatrics planning areas have been designated by the Health Facilities Planning Board as illustrated on the preceding page and the pages which follow.
- Occupancy target rates:

Modernization:

Medical-Surgical

1-25 beds	60%
26-99 beds	75%
100-199 beds	85%
200+ beds	90%

Additional Beds:

Medical-Surgical

1-99 beds	80%
100-199 beds	85%
200+ beds	90%

Pediatrics

1-30 beds	65%
31+ beds	75%

Pediatrics

1-99 MS beds	80%
100-199 MS beds	85%
200+ MS beds	90%

- Bed need for Medical-Surgical/Pediatrics is calculated by first calculating a three-year average utilization of Medical-Surgical/Pediatrics services in the area for three age groups: 0-14 years, 15-64 years, and 65+ years. These age group average utilizations are divided by the planning area base year population estimate for each age group to produce age group utilization rates. The age group utilization rates are multiplied by the projected planning area populations for each age group ten (10) years from the base year to calculate projected patient days for each age group. These are added to produce a projected total Medical-Surgical utilization.

Next, a migration adjustment factor is calculated for the planning area. This is done by subtracting the number of patients from outside the planning area receiving services at area hospitals (in-migration) from the number of area residents receiving services at hospitals outside the planning area (out-migration). The difference between these figures is multiplied by the State average for length of stay for Medical-Surgical/Pediatrics patients to calculate migration patient days. This is multiplied by an adjustment factor of 0.50. If out-migration exceeds in-migration, the adjusted migration days are added to the projected patient days for the area. If in-migration exceeds out-migration, the adjusted days are deducted from the projected patient days for the planning area.

The migration-adjusted projected patient days for the planning area are divided by 365 (days in projection year) to find the projected Average Daily Census for Medical-Surgical /Pediatrics services for the planning area. The Average Daily Census is divided by the target occupancy rate for additional beds (determined by the number of Medical-Surgical/Pediatrics beds in the planning area, illustrated above) to calculate the projected number of medical-Surgical/pediatrics beds needed in the planning area.

For the Obstetrics/Gynecology category of service:

- The planning areas are the same as those designated for Medical-Surgical/Pediatrics category of service.
- Occupancy target rates:

1-10 Obstetrics beds in area	60%
11-25 Obstetrics beds in area	75%
26 or more Obstetrics beds in area	78%

Hospital Planning Area: A-01									
Hospital	City					Beds	2005 Admissions	2005 Patient Days	
	Medical-Surgical/Pediatrics Planning Area Totals					3,323	103,814	581,324	
Three-Year Utilization	2003	2004	2005	TOTAL	AVERAGE	2005 Population Estimate	Use Rates	2015 Population Projection	Projected Days
0-14 Years Old	42,057	36,506	52,889	131,452	43,817	173,480	0.2526	173,750	43,886
15-64 Years Old	260,190	252,485	245,326	758,001	252,667	773,050	0.3268	844,710	276,089
65-up Years Old	283,931	282,007	283,109	849,047	283,016	98,380	2.8768	96,490	277,579
Out-Migration	In-Migration	Net Migration	Average Length of Stay	Migration Days	Adjustment Factor	Migration Adjustment	Total Projected Days	Adjusted Days	
25,174	48,127	-22,953	4.757	-109,187	0.50	-54,594	597,553	542,959	
Adjusted Days	Days in Year 2015	Adjusted Average Daily Census	Occupancy Target*	Adjusted Beds Needed	Existing Beds	Excess Beds			
542,959	365	1.488	0.90	1,653	3,323	1,670			

* If less than 100 beds in Planning Area, Occupancy Target is 80%; if the Planning Area has 100-199 beds, the Occupancy Target is 85%; 200 or more beds, 90%.

Illinois Methodology In-migration/Out-migration

Definitions:

Out-migration: planning area residents receiving services at hospitals outside the planning area

In-migration: patients from outside the planning area receiving services within the planning area hospitals

- If out-migration exceeds in-migration, the adjusted migration days are added to the projected patient days for the planning area
- If in-migration exceeds out-migration, the adjusted migration days are deducted to the projected patient days for the planning area

Illinois Methodology - DEMHS Region 1

DEMHS Region	Facility	Age Groups	2008-10 Avg. Bed Days	DEMHS 1 2010 Pop	Use rate	DEMHS 1 Estimated 2015 Pop	Proj Bed Days 2015	Licensed Beds
1	Hospital A	0-14	12,404	141,932	0.09	142,976	12,495	
1	Hospital A	15 - 64	47,514	442,442	0.11	449,308	48,251	
1	Hospital A	65+	45,937	88,017	0.52	96,432	50,329	
Total								425
1	Hospital B	0-14	8,048	141,932	0.06	142,976	8,108	
1	Hospital B	15 - 64	18,390	442,442	0.04	449,308	18,675	
1	Hospital B	65+	25,071	88,017	0.28	96,432	27,468	
Total								206
1	Hospital C	0-14	6,677	141,932	0.05	142,976	6,726	
1	Hospital C	15 - 64	29,986	442,442	0.07	449,308	30,451	
1	Hospital C	65+	36,379	88,017	0.41	96,432	39,857	
Total								366
1	Hospital D	0-14	5,468	141,932	0.04	142,976	5,509	
1	Hospital D	15 - 64	56,561	442,442	0.13	449,308	57,439	
1	Hospital D	65+	55,580	88,017	0.63	96,432	60,894	
Total								520
1	Hospital E	0-14	9,943	141,932	0.07	142,976	10,016	
1	Hospital E	15 - 64	33,492	442,442	0.08	449,308	34,011	
1	Hospital E	65+	31,755	88,017	0.36	96,432	34,791	
Total								330
Total								1,847

**Illinois Methodology - DEMHS Region 1
(continued)**

DEMHS Region	Facility	2008-10 Avg. Bed Days		DEMHS 1 2010 Pop	Use rate	DEMHS 1 Estimated 2015 Pop	Proj Bed Days 2015	Licensed Beds
		0-14	15 - 64					
		0-14	42,541	141,932	0.30	142,976	42,854	
		15 - 64	185,942	442,442	0.42	449,308	188,828	
		65+	194,722	88,017	2.21	96,432	213,339	
1	All	Total	423,205	672,391		688,716	445,020	1,847
Out-Migration*	In-Migration	Net Migration	Avg. LOS	Migration Days	Adjustment Factor	Migration Adjustment	Total Projected Days	Adjusted Days
8,867	16,150	-7,283	4.83	-35,205	0.5	-17,602	445,020	427,418
Adjusted Days	Days in Year 2015	Adjusted Avg. Daily Census	Occupancy Target**		Adjusted Beds Needed	Existing Beds	Bed Surplus (-) or Deficit (+)	
427,418	365	1,171	0.75		1,561	1,847	-286	

*Includes discharges from NY state hospitals and CT hospitals that reside outside of the DEMHS 1 region

**Adjusted occupancy target closer to other comparative model rates (Illinois would use .90 in this example)

.....and an appropriate migration factor for the medical-surgical and pediatric category of service which shall be no less than 50%



Thank You!