

Acute Care Hospital Bed Need

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Background:

Section 19a-634 requires OHCA to establish and maintain a state-wide health care facilities and services plan.

The Plan may include:

- An assessment of the availability of acute hospital care
- An evaluation of unmet need and vulnerable populations
- A projection of future demand for health care services

In Addition,

Sec. 19a-638. (Formerly Sec. 19a-154). Certificate of need. When required and not required. Request for office determination. Policies, procedures and regulations. (a) A certificate of need issued by the office shall be required for:

- (1) The establishment of a new health care facility;
- (2) A transfer of ownership of a health care facility;
- (3) The establishment of a free-standing emergency department;
- (4) The termination of inpatient or outpatient services offered by a hospital, including, but not limited to, the termination by a short-term acute care general hospital or children's hospital of inpatient and outpatient mental health and substance abuse services;
- (5) The establishment of an outpatient surgical facility, as defined in section 19a-493b, or as established by a short-term acute care general hospital;
- (6) The termination of surgical services by an outpatient surgical facility, as defined in section 19a-493b, or a facility that provides outpatient surgical services as part of the outpatient surgery department of a short-term acute care general hospital, provided termination of outpatient surgical services due to (A) insufficient patient volume, or (B) the termination of any subspecialty surgical service, shall not require certificate of need approval;

(7) The termination of an emergency department by a short-term acute care general hospital;

(8) The establishment of cardiac services, including inpatient and outpatient cardiac catheterization, interventional cardiology and cardiovascular surgery;

(9) The acquisition of computed tomography scanners, magnetic resonance imaging scanners, positron emission tomography scanners or positron emission tomography-computed tomography scanners, by any person, physician, provider, short-term acute care general hospital or children's hospital, except as provided for in subdivision (23) of subsection (b) of this section;

(10) The acquisition of nonhospital based linear accelerators;

(11) An increase in the licensed bed capacity of a health care facility;

(12) The acquisition of equipment utilizing technology that has not previously been utilized in the state; and

(13) An increase of two or more operating rooms within any three-year period, commencing on and after October 1, 2010, by an outpatient surgical facility, as defined in section 19a-493b, or by a short-term acute care general hospital.

Past/Present Practice:

- Certificate of Need (CON) applications are evaluated on a case-by-case basis.
- No standardized guidelines for Acute Care Bed Need

Proposed:

- Develop an Acute Care Bed Need Model to serve as a guideline for CON applications seeking to increase licensed bed capacity, and also to:
 - help assess acute care service availability
 - determine unmet need
 - project future demand for acute care beds

Bed Need Models:

OHCA examined a variety of bed need models from various states – no perfect model

Many of the models utilize common elements and incorporate:

- Planning area
- Utilization of services
- Changes in Population
- Target Occupancy rates
- Age Groups

Three state bed need models were selected to illustrate differences in method:

- North Carolina
- Alabama
- South Carolina

Present Allocation of Acute Care Beds:

Statewide Totals*

Licensed: 9,358

Available: 8,360

Staffed: 6,848

*Connecticut Acute Care Hospitals, FY 2010

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

Planning Area:

Internal discussions did not lead to a definitive conclusion on the most appropriate planning area to use.

Many states outside of New England use county as their planning regions, however in Connecticut we generally focus on towns, not counties.

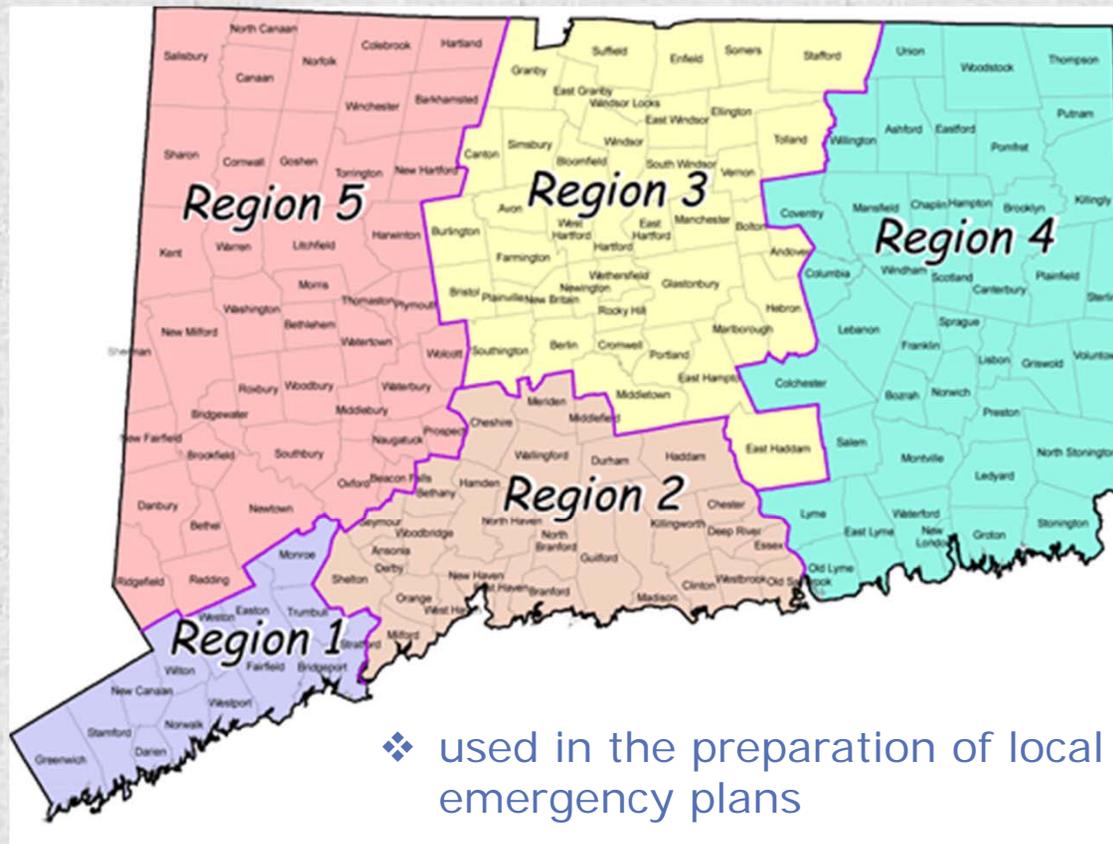
Planning Area - continued:

One proposed planning area alternative to county is the DEMHS (Dept. of Emergency Management & Homeland Security) regions.

So, for illustration purposes, we have used county and DEMHS regions.

DEMHS Regions:

(Dept. of Emergency Management & Homeland Security)



❖ used in the preparation of local emergency plans

Acute Care Beds per 1,000 population by county and DEMHS region:

County	County Population 2010 Est.	Licensed Beds per 1,000
Fairfield	907,033	2.4
Hartford	856,959	3.3
Litchfield	192,652	1.6
Middlesex	157,579	1.9
New Haven	819,772	3.3
New London	258,357	2.1
Tolland	134,193	1.6
Windham	115,296	2.3
Statewide	3,441,841	2.7

DEMHS	DEMHS Population 2010 Est.	Licensed Beds per 1,000
Region 1	672,391	2.7
Region 2	720,773	2.7
Region 3	1,036,480	3.2
Region 4	411,984	2.0
Region 5	600,216	2.4
Statewide	3,441,841	2.7

North Carolina Model:

- Pre-defined regions (county)
- Statewide 3 year utilization trend projected forward
- Target occupancy based on average daily census
 - ADC= 1-99 Target Occupancy 66.7%
 - ADC= 100-200 Target Occupancy 71.4%
 - ADC= >200 Target Occupancy 75.2%

Hospital	DEMHS Region	County	Licensed Beds ¹	2010 Bed Days ²	2015 Projected Bed Days ³	2015 Projected Avg. Daily Census (days/365)	2015 Beds Adjusted for Target Occupancy	Projected 2015 Deficit (+) or Surplus (-)	2015 Need Determination
Hospital A	1	Fairfield	425	104,936	104,204	285	380	-45	
Hospital B	1	Fairfield	206	52,678	52,310	143	201	-5	
Hospital C	1	Fairfield	366	70,058	69,569	191	267	-99	
Hospital D	1	Fairfield	520	123,691	122,828	337	447	-73	
Hospital E	1	Fairfield	330	76,488	75,954	208	277	-53	
Total	1		1,847	427,851	424,864	1,164	1,572	-275	0

¹Source: CT Department of Public Health Division of Office of Health Care Access Hospital Reporting System Report 400 - license beds include newborn bassinets.

²Source: CT Department of Public Health Division of Office of Health Care Access Acute Care Discharge Database

³Based on three year statewide historical average (-0.14% for FY07-10) growth (attrition) compounded forward

Alabama Model:

Based on:

- Pre-defined region (county)
- Service categories
- Weighted average daily census based on bed days (more weight given to the most recent year)
- Population changes in the region
- Target occupancy based on 8 service categories and size of hospital for Medical/Surgery and Pediatric

Alabama Model:

DEMHS Region	Facility	Services	2008 patient days	2009 patient days	2010 patient days	Weighted ADC	DEMHS Region Pop chg 2010 to 2015*	Projected ADC	Target Occupancy	Beds Needed	Licensed Beds	Excess (-) or Deficit (+)
1	Hospital A	Newborn	10,478	10,396	8,977	26.6	1.02	27.2	0.75	36		
		Maternity	8,886	8,235	7,584	22.0	1.02	22.5	0.75	30		
		Psychiatric	9,355	9,524	10,148	26.9	1.02	27.5	0.75	37		
		Rehabilitation	4,542	4,590	4,812	12.9	1.02	13.2	0.75	18		
		Pediatric	2,745	3,069	2,770	7.9	1.02	8.0	0.65	12		
		Medical/Surgical	72,268	68,541	70,645	192.4	1.02	197.0	0.80	246		
Total										379	425	-46
1	Hospital B	Newborn	7,618	7,235	7,378	20.2	1.02	20.7	0.75	28		
		Maternity	6,774	6,868	7,245	19.3	1.02	19.8	0.75	26		
		Psychiatric	212	172	344	0.7	1.02	0.7	0.75	1		
		Rehabilitation	0	0	0	0.0	1.02	0.0	0.75	0		
		Pediatric	742	614	550	1.7	1.02	1.7	0.65	3		
		Medical/Surgical	36,260	35,354	37,161	99.7	1.02	102.2	0.80	128		
Total										185	206	-21
1	Hospital C	Newborn	5,533	5,691	5,292	15.0	1.02	15.3	0.75	20		
		Maternity	5,226	5,499	4,938	14.2	1.02	14.5	0.75	19		
		Psychiatric	3,613	3,296	3,041	8.8	1.02	9.0	0.75	12		
		Rehabilitation	6,872	6,838	7,085	19.1	1.02	19.6	0.75	26		
		Pediatric	1,773	1,807	1,525	4.5	1.02	4.7	0.65	7		
		Medical/Surgical	54,961	47,957	48,177	134.9	1.02	138.2	0.80	173		
Total										258	366	-108
1	Hospital D	Newborn	3,448	3,421	3,779	9.9	1.02	10.1	0.75	13		
		Maternity	3,712	3,521	3,586	9.8	1.02	10.1	0.75	13		
		Psychiatric	5,648	25,319	26,282	61.7	1.02	63.2	0.75	84		
		Rehabilitation	2,833	2,376	2,338	6.7	1.02	6.8	0.75	9		
		Pediatric	60	63	23	0.1	1.02	0.1	0.65	0		
		Medical/Surgical	89,409	89,328	87,683	242.5	1.02	248.4	0.80	311		
Total										431	520	-89
1	Hospital E	Newborn	8,952	9,083	8,376	23.9	1.02	24.4	0.75	33		
		Maternity	8,373	8,942	8,202	23.2	1.02	23.8	0.75	32		
		Psychiatric	5,506	5,538	5,186	14.7	1.02	15.0	0.75	20		
		Rehabilitation	164	2,090	4,506	8.2	1.02	8.4	0.75	11		
		Pediatric	1,656	1,519	1,430	4.1	1.02	4.2	0.65	6		
		Medical/Surgical	50,664	46,595	48,788	132.5	1.02	135.7	0.80	170		
Total										272	330	-58
REGION										1,525	1,847	-322

South Carolina Model:

Based on:

- Pre-defined region (county)
- Age Groups
- Use Rates
- Population changes in the region
- Target occupancy based on # of beds
 - 0-174 bed hospitals, 65%
 - 175-349 bed hospital, 70%
 - 350+ bed hospitals, 75%

South Carolina Model:

DEMHS Region	Facility	Age Groups	2010 Bed Days	DEMHS 1 2010 Pop	Use rate	DEMHS 1 Estimated 2015 Pop	Proj Bed Days 2015	Proj ADC 2015	Occupancy Rate	Proj. Bed Need 2015	Licensed Beds	Bed Surplus (-) or Defecit (+)
1	Hospital A	0-14	11,378	141,932	0.08	142,976	11,462	31	0.75	42		
1	Hospital A	15 - 44	21,143	254,646	0.08	256,432	21,291	58	0.75	78		
1	Hospital A	45 - 64	25,527	187,795	0.14	192,876	26,218	72	0.75	96		
1	Hospital A	65+	46,888	88,017	0.53	96,432	51,371	141	0.75	188		
Total										403	425	-22
1	Hospital B	0-14	7,928	141,932	0.06	142,976	7,986	22	0.7	31		
1	Hospital B	15 - 44	10,736	254,646	0.04	256,432	10,811	30	0.7	42		
1	Hospital B	45 - 64	8,191	187,795	0.04	192,876	8,413	23	0.7	33		
1	Hospital B	65+	25,823	88,017	0.29	96,432	28,292	78	0.7	111		
Total										217	206	11
1	Hospital C	0-14	6,398	141,932	0.05	142,976	6,445	18	0.75	24		
1	Hospital C	15 - 44	12,509	254,646	0.05	256,432	12,597	35	0.75	46		
1	Hospital C	45 - 64	15,518	187,795	0.08	192,876	15,938	44	0.75	58		
1	Hospital C	65+	35,633	88,017	0.40	96,432	39,040	107	0.75	143		
Total										270	366	-96
1	Hospital D	0-14	6,476	141,932	0.05	142,976	6,524	18	0.75	24		
1	Hospital D	15 - 44	26,615	254,646	0.10	256,432	26,802	73	0.75	98		
1	Hospital D	45 - 64	35,687	187,795	0.19	192,876	36,653	100	0.75	134		
1	Hospital D	65+	54,913	88,017	0.62	96,432	60,163	165	0.75	220		
Total										475	520	-45
1	Hospital E	0-14	9,466	141,932	0.07	142,976	9,536	26	0.7	37		
1	Hospital E	15 - 44	18,053	254,646	0.07	256,432	18,180	50	0.7	71		
1	Hospital E	45 - 64	16,647	187,795	0.09	192,876	17,097	47	0.7	67		
1	Hospital E	65+	32,322	88,017	0.37	96,432	35,412	97	0.7	139		
Total										314	330	-16
REGION										1,680	1,847	-167

Connecticut Acute Care Bed Need Summary of 2015 Projections *(For Discussion Purposes Only)*

DEMHS	Licensed Beds	Alabama Method		North Carolina Method		South Carolina Method	
		Beds Needed	Surplus (-) or Deficit (+)	Beds Needed	Surplus (-) or Deficit (+)	Beds Needed	Surplus (-) or Deficit (+)
Region 1	1,847	1,525	-322	1,572	-275	1,680	-167
Region 2	1,931	1,792	-139	1,849	-82	1,983	52
Region 3	3,319	2,559	-760	2,631	-688	2,826	-493
Region 4	807	574	-233	622	-185	696	-111
Region 5	1,454	948	-506	972	-482	1,072	-382
Statewide*	9,358	7,398	-1,960	7,646	-1,712	8,257	-1,101

County	Licensed Beds	Beds Needed	Surplus (-) or Deficit (+)	Beds Needed	Surplus (-) or Deficit (+)	Beds Needed	Surplus (-) or Deficit (+)
Fairfield	2,218	1,863	-355	1,916	-302	2,078	-140
Hartford	2,803	2,233	-570	2,288	-515	2,431	-372
Litchfield	311	183	-128	200	-111	233	-78
Middlesex	297	199	-98	213	-84	239	-58
New Haven	2,703	2,220	-483	2,277	-426	2,425	-278
New London	541	425	-116	459	-82	504	-37
Tolland	219	125	-94	130	-89	153	-66
Windham	266	148	-118	162	-104	190	-76
Statewide*	9,358	7,396	-1,962	7,646	-1,712	8,253	-1,105

*Surplus/Deficit totals differ due to rounding of population estimates

Proposed Exceptions:

Additional factors may need to be considered when evaluating bed need

Models are static in nature and don't always capture changes that occur rapidly

May want to allow an increase in licensed beds if, for example:

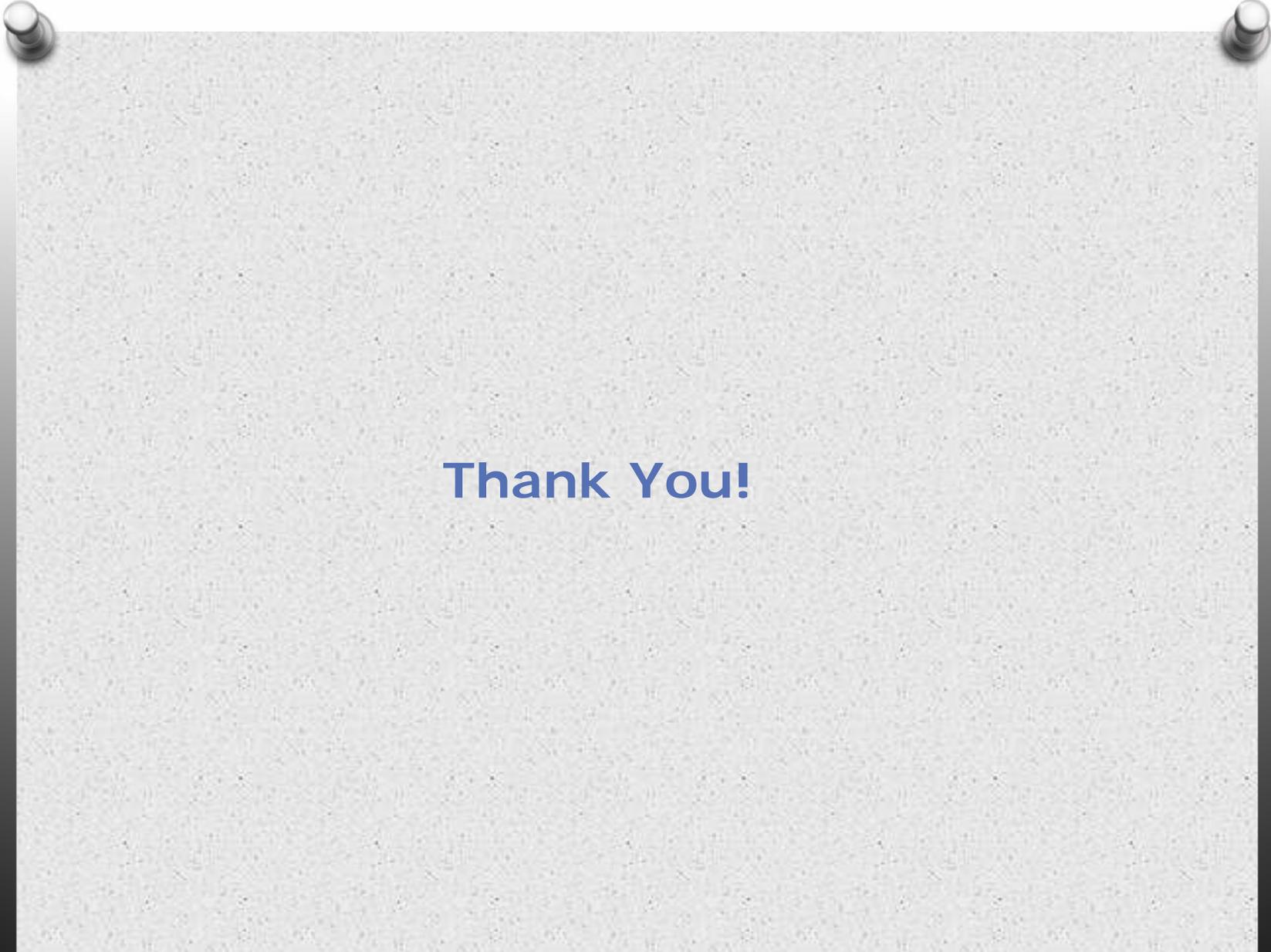
- area of hospital experiencing census levels at or above ? % of bed capacity over a defined time period
- other unique circumstances that would merit additional consideration

Moving Forward:

Issues in need of further discussion:

- Bed need model
- Planning area
- Age groups
- Target occupancy rate
- Exceptions

DPH-OHCA staff are looking forward to working collaboratively with the advisory body to determine the most effective and appropriate bed need model for Connecticut's health care system.



Thank You!