STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

Raul Pino, M.D., M.P.H.
Commissioner

Dannel P. Malloy
Governor

Nancy Wyman
Lt. Governor

Office of Health Care Access

Certificate of Need
Final Decision

Applicant: **Hartford Hospital**
80 Seymour Street,
Hartford, CT 06106

Docket Number: **17-32164-CON**

Project Title: **Increase in Operating Rooms**

Project Description: Hartford Hospital seeks authorization to increase operating room capacity on its main campus, with the addition of two operating rooms.

Procedural History: The Applicant published notice of its intent to file a Certificate of Need ("CON") application in *The Hartford Courant* (Hartford) on February 28, March 1 and 2, 2017. On April 18, 2017, the Office of Health Care Access ("OHCA") received the CON application from the Applicant for the above-referenced project and deemed the application complete on August 14, 2017. OHCA received no responses from the public concerning the proposal and no hearing requests were received from the public per Connecticut General Statutes ("Conn. Gen. Stat.") § 19a-639a(e). Deputy Commissioner Addo considered the entire record in this matter.

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Findings of Fact and Conclusions of Law

1. Hartford Hospital ("Applicant" or "Hospital") is an 867-bed not-for-profit hospital located in Hartford, Connecticut. Ex. A, p. 12

2. As a member of the Hartford HealthCare ("HHC") system, Hartford Hospital provides primary, secondary and tertiary acute-care services to residents of Hartford and the surrounding communities. Ex. A, p. 13

3. The Hospital currently has approval (Docket 16-31851-MDF) for forty-two (42) operating rooms ("ORs") on its main campus. In accordance with national best practices, one OR has been dedicated for trauma purposes, effectively reducing operating room capacity to forty-one for non-emergent cases. Ex. A, pp. 13

4. A 2012 article[1] "Dedicated operating room for emergency surgery improves access and efficiency," concludes that dedicated trauma ORs help improve the overall quality of care by reducing cancellations, overruns[2] and wait-times in elective ORs. Ex. A, pp. 36-43

5. In 2013, HHC's adopted an Institute model ("IM") for the growth and development of key service lines, including: orthopedics, neurosciences, cancer, cardiovascular services, urology and behavioral health. Ex. C, p. 114

6. Following adoption of the IM, significant growth in complex surgical cases has occurred, allowing HHC to advance key service lines throughout the system. The IM is intended to help optimize the use of resources to promote innovation and multidisciplinary teamwork and reduces clinical practice variation. Ex. A, p. 14; Ex. C, p. 114

7. Adoption of the IM has also helped the Hospital recruit key clinical staff members (cardiac surgeon and neurosurgeon) to enhance the breadth and depth of specialty and sub-specialty services and to attract new patients. Ex. C, p. 114

[1] "Dedicated operating room for emergency surgery improves access and efficiency." Marilyn Heng, MD* and James G. Wright, MD, MPH*† from the *Division of Orthopaedic Surgery, Department of Surgery, University of Toronto, and the †Department of Surgery and Child Health Evaluative Sciences program, The Hospital for Sick Children, and the Departments of Public Health Sciences, and Health Policy, Management and Evaluations, University of Toronto, Toronto, Ont. Accepted for publication May 22, 2012.

[2] An overrun in an elective room referred to the time in minutes that the last case of the day continued beyond the scheduled block end time if an emergency case was added to the schedule for that OR.

8. In addition to surgical program expansion, the Hospital has experienced a large increase (+53%) in surgical transfers over the past several years (see table below).

TABLE 1
SURGICAL TRANSFERS TO HARTFORD HOSPITAL

Surgical Services	FY 2013	FY 2014	FY 2015	FY 2016	Annualized[1] FY 2017
CT Surgery	99	99	97	151	134
Hand	62	64	69	80	98
Neurosurgery	408	438	428	386	466
OMF	103	111	96	71	98
Ophthalmology	17	8	16	22	24
Orthopedics	112	110	127	130	148
Plastics	12	5	10	11	4
Surgery	185	259	388	455	420
Transplant	29	34	40	25	30
Trauma	386	464	586	835	652
Vascular	101	129	171	166	246
Total Surgical Services	**1,514**	**1,721**	**2,028**	**2,332**	**2,320**

[1] Annualized volume based on October 1, 2016 to March 30, 2017 historical data.

Ex. C, pp. 115-117

9. As a result of the expansion of surgical programs, new physician recruitment, the increased complexity of surgical procedures being performed and a growing number of patient transfers, the Hospital seeks approval to add two (2) ORs for a total of forty-four (44). Ex. A, p. 12; Ex. E, pp. 122-125

10. The two new ORs will be located at the Bone and Joint Institute on the main campus and will be used, in part, to accommodate joint replacement, podiatric and spine surgery and other inpatient cases that can be moved from the main hospital OR suites to help streamline scheduling. Ex. E, p. 122

11. From FY 2015 to FY2017, combined surgical case minutes at the Heart & Vascular, Ayer, Neurosciences and Bone & Joint Institutes increased by approximately 7%.

TABLE 2
HEART & VASCULAR/AYER NEUROSCIENCES/BONE & JOINT INSTITUTE SURGICAL VOLUME

	FY 2014		FY 2015		FY 2016		FY 2017 Annualized*	
Institute	**Cases**	**Minutes**	**Cases**	**Minutes**	**Cases**	**Minutes**	**Cases**	**Minutes**
Heart & Vascular	2,749	664,315	2,419[1]	585,035	2,413	613,489	2,530	636,462
Ayer Neurosciences	473	126,521	506	138,473	538	135,932	1,244	295,214
Bone & Joint	5,841	935,372	5,633[2]	908,384	5,585[2]	930,031	5,042[2]	810,678
Total	**9,063**	**1,726,208**	**8,558**	**1,631,892**	**8,536**	**1,679,452**	**8,816**	**1,742,354**

*Based on 6 months of actual data (Oct - March 2017)

[1] The decline in surgical cases was due primarily to a change in reporting – thoracic cases were embedded within peripheral vascular in FY 2014, but beginning in FY 2015 were reported separately and not as part of the Heart and Vascular Institute.

[2] Surgical cases declined in FY 2015 largely due to the loss of a podiatrist and an orthopedic surgeon. Similarly, in FY 2016 an orthopedic spine specialist relocated out-of-state.

Ex. C, p. 120; Ex. E, p. 123

12. The Applicant anticipates that surgical minutes will increase at the Heart & Vascular, Ayer, Neurosciences and Bone & Joint Institutes as a result of recent recruitment efforts (i.e., 11 new physicians/other medical staff and the introduction of several complex procedures which require longer surgical case times. The Institutes are currently in the process of expanding their programs to serve a growing market[3] as follows:
    - addition of two cardiac surgeons in FY 2017 to increase specialty and subspecialty programs, including a robotic program and Trans Aortic Valve Replacement;
    - expansion of Neuroscience services to include Deep Brain Stimulation, a highly complex service which requires multiple surgeries per patient; and
    - addition of a new orthopedic surgeon in September 2017 to support increased demand for orthopedic-related services at the Bone & Joint Institute.

    Ex. E, pp. 123-124

13. The Hospital projects that surgical minutes at the three Institutes will increase by 11% in FY 2018, 3% in FY 2019 and 3% in FY 2020.[4]

TABLE 3
HEART & VASCULAR/AYER NEUROSCIENCES/BONE & JOINT INSTITUTE SURGICAL VOLUME

	FY 2018		FY 2019		FY 2020	
Institute	**Cases**	**Minutes**	**Cases**	**Minutes**	**Cases**	**Minutes**
Heart & Vascular	2,643	693,213	2,727	712,670	2,839	741,486
Ayer Neurosciences	1,464	369,249	1,476	371,964	1,490	375,132
Bone & Joint	5,140	874,786	5,381	919,728	5,523	945,738
Total	**9,247**	**1,937,248**	**9,584**	**2,004,362**	**9,852**	**2,062,356**

Ex. C, p. 120

14. In addition, total surgical case hours at the Hospital have increased by 6% (FY 2014 to FY 2017). OR capacity at the Hospital is expected to reach 79% in FY 2017 and without the proposal, is expected to exceed 80% in FY 2018 (see Table 5).

[3] The Advisory Board, a global research, technology and consulting firm, predicts a 12% increase in neurosurgery in the Hartford Hospital market.
[4] Increased volume of 11% is primarily attributable to the new physician recruitment and ramp-up of their practices, while the continued 3% growth will result from program development, transfers etc.

TABLE 4
HARTFORD HOSPITAL TOTAL SURGICAL VOLUME – ALL CASES

All Surgical Cases FY2014-FY2017					Without the Proposal			With the Proposal		
	FY 2014	FY 2015	FY 2016	FY2017[1]	FY 2018	FY 2019	FY 2020	FY 2018	FY 2019	FY 2020
Total # surg.cases performed	24,111	24,072	24,612	24,580	25,522	25,930	26,280	25,522	25,930	26,280
Annual increase in surg. cases	1,463	-39	540	-32	942	408	350	942	408	350
Number of operating rooms	38	38	38	42[2]	42	42	42	44	44	44
Avg. annual # surg. cases/room	635	633	648	585[3]	622	632	641	594	603	611
Total # of surgical case hours	68,660	67,589	72,033	73,018	75,881	77,124	78,256	75,881	77,124	78,256

[1] FY 2017 annualized from 6 months of historical data (October 1, 2016 - March 31, 2017)
[2] Utilization of 42 rooms became effective on 2/6/2017
[3] Calculation does not account for additional OR partial year and likely underestimates average surgical cases per room.

TABLE 5
HARTFORD HOSPITAL TOTAL SURGICAL VOLUME – BLOCK CASES

Block Cases[5] FY2014-FY2017					Without the Proposal			With the Proposal		
	FY 2014	FY 2015	FY 2016	FY 2017[1]	FY 2018	FY 2019	FY 2020	FY 2018	FY 2019	FY 2020
Total # surg. cases performed	21,594	21,684	22,151	22,122	22,970	23,337	23,652	22,970	23,337	23,652
Annual increase in surg. cases[2]	1,186	90	467	-29	848	367	315	848	367	315
Number of operating rooms	38	38	38	42[2]	42	42	42	44	44	44
Avg. annual # surg. cases/room	568	571	583	526[3]	560	569	577	534	543	550
Total # of surg. case hours	62,011	61,390	64,829	65,716	72,051	73,237	74,313	72,051	73,237	74,313
# of hours available per year	80,847	79,576	80,086	82,966	89,408	89,760	90,112	93,472	93,840	94,208
% of Total Hours Utilized	77%	77%	81%	79%	81%	82%	82%	77%	78%	79%

[1] FY 2017 annualized from 6 months of historical data (October 1, 2016 - March 31, 2017)
[2] Utilization of 42 rooms became effective on 2/6/2017
[3] Calculation does not account for additional OR partial year and likely underestimates average surgical cases per room.

Ex. C, p. 121

15. The Hospital engaged HKS Knox, a national health care strategy and design consulting firm, to research industry standards related to operating room utilization. HKS Knox concluded their examination and recommends "using an OR utilization rate of 75% or less to provide for flexibility of use of operating rooms." Ex. E, pp. 124-127

16. Most industry sources indicate that acceptable utilization for an OR should be in the range of 75-80%.[6] [7] Utilization rates above 80% may limit a hospital's ability and/or flexibility to accommodate patient/physician schedules and the growing number of emergency transfer cases requiring surgery. Ex. A, p. 14

[5] Block cases represent surgical cases performed during the time reserved (blocked time) for a service, physician group or individual surgeon. The Hospital's block time is Monday through Friday 7:00 AM – 5:30 PM.
[6] *Operating Room Utilization and Perioperative Process flow*, Frank Milewski, Premier Inc., p 4.
[7] According to guidelines published in the DPH, OHCA *Statewide Health Care Facilities and Services Plan, October 2012*, the optimum utilization for an operating room in an outpatient surgical facility is 80%.

17. Without additional ORs, the Hospital will be required to schedule more procedures after-hours and on weekends, which is not cost effective (i.e., requiring overtime and on-call pay for clinical staff). Ex. A, p. 19

18. The Hospital serves a wide distribution of towns[8] throughout the state. The new ORs will be utilized by the same patient population currently served by the Hospital. Ex. A, pp. 17, 27; CT DPH, Office of Health Care Access, Acute Care Hospital Discharge Database

19. Approximately 12% of Hartford Hospital's total surgical volume payer mix is comprised of Medicaid patients, with no anticipated changes expected through FY 2020.

TABLE 6
HARTFORD HOSPITAL's TOTAL SURGICAL VOLUME PAYER MIX

Payer	FY 2016		Projected							
			FY 2017		FY 2018		FY 2019		FY 2020	
	Surg. Cases	%	Surg. Cases	%	Surg. Cases	%	Surg. Cases	%	Surg. Cases	%
Medicare*	0	35.0%	8,604	35.0%	8,933	35.0%	9,076	35.0%	9,198	35.0%
Medicaid*	2,855	11.6%	2,852	11.6%	2,961	11.6%	3,008	11.6%	3,048	11.6%
CHAMPUS										
Other Govt.	197	0.8%	196	0.8%	204	0.8%	207	0.8%	210	0.8%
Total Government	**11,666**	**47.4%**	**11,650**	**47.4%**	**12,097**	**47.4%**	**12,291**	**47.4%**	**12,457**	**47.4%**
Commercial Insurers	12,380	50.3%	12,364	50.3%	12,838	50.3%	13,043	50.3%	13,219	50.3%
Uninsured	566	2.3%	566	2.3%	587	2.3%	596	2.3%	604	2.3%
Self Pay										
Workers Compensation	0	0%	0	0%	0	0%	0	0%	0	0%
Total Non-Government	**12,946**	**52.6%**	**12,930**	**52.6%**	**13,425**	**52.6%**	**13,639**	**52.6%**	**13,823**	**52.6%**
Total Payer Mix	**24,612**	**100%**	**24,580**	**100%**	**25,522**	**100%**	**25,930**	**100%**	**26,280**	**100%**

*Includes managed care activity.
Ex. A, p. 31

[8]Towns served by the Hospital in FY 2016 included: Hartford, East Hartford, West Hartford, Manchester, Wethersfield, Glastonbury, Newington, New Britain, Windsor, Meriden, Enfield, Middletown, Rocky Hill, Torrington, Bloomfield, Bristol, Vernon, South Windsor, Southington, Windham, Norwich, Wallingford, Coventry, Colchester, Windsor Locks, Avon, Berlin, Farmington, Simsbury, Griswold, Cromwell, Ellington, East Hampton, Lebanon, Portland Plainville, Tolland, Waterbury, Winchester, Suffield, Canton, Columbia, Granby, Marlborough, Burlington, Brooklyn, Stafford, Bolton, Montville, Cheshire, Mansfield, East Windsor, Hebron and Berlin.

20. , Incremental gains are projected through FY 2020, as a result of the proposal.

TABLE 7
HARTFORD HOSPITAL PROJECTED INCREMENTAL REVENUES AND EXPENSES

	FY 2018	FY 2019	FY 2020
Revenue from Operations	$24,168,595	$11,633,020	$10,532,557
Total Operating Expenses	$5,397,676	$3,393,336	$3,047,592
Gain/Loss from Operations	$18,770,919	$8,239,684	$7,484,965

Ex. A, p. 28

21. There will be no changes to the Hospital's price structure or to the charity care policy as a result of this proposal. Ex. A, p. 20

22. OHCA is currently in the process of establishing its policies and standards as regulations. Therefore, OHCA has not made any findings as to this proposal's relationship to any regulations not yet adopted by OHCA. (Conn. Gen. Stat. § 19a-639(a)(1))

23. This CON application is consistent with the Statewide Health Care Facilities and Service Plan. (Conn. Gen. Stat. § 19a-639(a)(2)) (Ex. A, pp. 14, 19)

24. The Applicant has established that there is a clear public need for the proposal. (Conn. Gen. Stat. § 19a-639(a)(3)) (Ex. C, p. 121)

25. The Applicant has demonstrated that the proposal is financially feasible. (Conn. Gen. Stat. § 19a-639(a)(4)) (Ex. A, p. 28)

26. The Applicant has satisfactorily demonstrated that the proposal will maintain cost effectiveness, while improving the quality and accessibility of health care delivery in the region. (Conn. Gen. Stat.§ 19a-639(a)(5)) (Ex. A, pp. 36-43; Ex, C, p. 14; Ex. E, pp. 123-124)

27. The Applicant has shown that there would be no change in the provision of health care services to the relevant populations and payer mix, including access to services by Medicaid recipients. (Conn. Gen. Stat. § 19a-639(a)(6)) (Ex. A, p. 19)

28. The Applicant has satisfactorily identified the population to be affected by this proposal. (Conn. Gen. Stat. § 19a-639(a)(7)) (Ex. A, pp. 17, 27)

    The Applicant's historical provision of treatment in the service area supports this proposal. (Conn. Gen. Stat. § 19a-639(a)(8)) (Ex. C, p. 121)

29. The Applicant has satisfactorily demonstrated that the proposal would not result in an unnecessary duplication of existing services in the area. (Conn. Gen. Stat. § 19a-639(a)(9)) (Ex. A, pp. 12-14)

30. The Applicant has demonstrated that there will be no reduction in access to services by Medicaid recipients or indigent persons. (Conn. Gen. Stat. § 19a-639(a)(10)) (Ex. A, p. 19)

31. The Applicant has demonstrated that the proposal will not negatively impact the diversity of health care providers and patient choice in the region. (Conn. Gen. Stat. § 19a-639(a)(11)) (Ex. A, pp. 12-14)

32. The Applicant has satisfactorily demonstrated that the proposal will not result in any consolidation that would affect health care costs or access to care. (Conn. Gen. Stat. § 19a-639(a)(12)) (Ex. A, pp. 12-14)

Discussion

CON applications are decided on a case by case basis and do not lend themselves to general applicability due to the uniqueness of the facts in each case. In rendering its decision, OHCA considers the factors set forth in § 19a-639(a) of the Statutes. The Applicants bear the burden of proof in this matter by a preponderance of the evidence. *Jones v. Connecticut Medical Examining Board, 309 Conn. 727 (2013).*

Hartford Hospital is an 867-bed not-for-profit hospital located in Hartford, Connecticut. The Hospital is a member of the HHC system and provides primary, secondary and tertiary acute-care services to residents of Hartford and the surrounding communities. The Hospital currently has approval for forty-two ORs on its main campus. In accordance with national best practices, one OR has been dedicated for trauma purposes, effectively reducing operating room capacity to forty-one for non-emergent cases. *FF1-FF3*

In 2013, HHC's adopted an Institute Model ("IM") for the programmatic growth and development of key service lines, including: orthopedics, neurosciences, cancer, cardiovascular services, urology and behavioral health. Adoption of the IM has helped to expand programs and attract new physicians, specifically at the Heart & Vascular, Ayer Neuroscience and Bone & Joint Institutes. New subspecialty programs and services will include a cardiac robotic program, "TAVR" (Trans Aortic Valve Replacement) and Deep Brain Stimulation. *FF5-FF7; FF12*

As a result of the expansion of surgical programs, physician recruitment, the increased complexity of surgical procedures and a growing number of patient transfers, the Hospital anticipates that total surgical case hours will increase by 11% in FY 2018. This increase in surgical volume will result in OR capacity exceeding 80%. At this level, the Hospital will have limited ability and/or flexibility to accommodate patient/physician schedules and the growing number of emergency transfer cases requiring surgery. *FF8-FF9; FF13-FF14*

The proposal is financially feasible and is projected to generate incremental gains of $18.8 M in FY 2018, $8.2 M in FY 2019, and $7.5 M in FY 2020. Patients will not incur any additional costs as a result of this proposal and there will be no changes to the Hospital's patient population, charity care policy or to the existing payer mix, including Medicaid. Without the proposal, the Hospital would be required to schedule more procedures after-hours and on weekends, which would most likely add to the cost of care (e.g., overtime and on-call pay for clinical staff). *FF17-FF21*

The addition of two ORs will better allow the Hospital to accommodate the surgical volume more efficiently, prevent delays in access to surgical care and be more cost effective than expanding OR hours beyond the established block time schedule. The Hospital will improve its ability to accommodate patients/physicians and the growing number of emergency transfer cases. As a result, adding two new ORs at the Hospital's main campus is consistent with the Statewide Health Care Facilities and Services Plan.

Order

Based upon the foregoing Findings and Discussion, the Certificate of Need application requesting authorization to increase operating room capacity on its main campus, with the addition of two operating rooms, is hereby APPROVED.

All of the foregoing constitutes the final order of the Office of Health Care Access in this matter.

By Order of the
Department of Public Health
Office of Health Care Access

10/11/2017
Date

Yvonne T. Addo, MBA
Deputy Commissioner