



Office Of Health Care Access Certificate of Need Application

Final Decision

Applicant: John Dempsey Hospital

Docket Number: 02-538

Project Title: Patient Safety Information System – Application
Service Provider Model

Statutory Reference: Section 19a-639 of the Connecticut General Statutes

Filing Date: September 10, 2002

Hearing: Waived

Decision Date: October 3, 2002

Default Date: December 9, 2002

Staff Assigned: Harold M. Oberg
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Project Description: John Dempsey Hospital (“Hospital”) proposes to implement a Patient Safety Information System through a contractual agreement with an Application Service Provider, at a total capital expenditure of \$3,673,373.

Nature of Proceedings: On September 10, 2002, the Office of Health Care Access (“OHCA”) received a Certificate of Need (“CON”) application from John Dempsey Hospital seeking authorization to implement a Patient Safety Information System through a contractual agreement with an Application Service Provider, at a total capital expenditure of \$3,673,373. The Hospital is a health care facility or institution as defined by Section 19a-630 of the Connecticut General Statutes (“C.G.S.”).

The Hospital requested a waiver of hearing for the CON application pursuant to Section 19a-643-45 of OHCA's Regulations, and claimed that the CON application is non-substantive as defined in Section 19a-643-95(3) of OHCA's Regulations. On September 12, 2002, the Hospital was informed that the CON application was eligible for consideration of waiver of hearing, and a notice to the public was published in the *Hartford Courant*. OHCA received no comments from the public concerning the Hospital's request for a waiver of hearing during the public comment period, and therefore on October 1, 2002, OHCA granted the Hospital's request for a waiver of hearing.

OHCA's authority to review and approve, modify or deny this proposal is established by Section 19a-639, C.G.S. The provisions of this section as well as the principles and guidelines set forth in Section 19a-637, C.G.S., were fully considered by OHCA in its review.

Findings of Fact

Each finding of fact included in this Final Decision has been taken from the CON application and related CON filings or from external sources of information. A source reference is included with each finding of fact. All CON applicants must attest to the accuracy and correctness of the information submitted to OHCA as part of the CON application process.

Clear Public Need

Proposal's Contribution to the Quality of Health Care Delivery in the Region Proposal's Contribution to the Accessibility of Health Care Delivery in the Region

1. The University of Connecticut Health Center ("UCHC") is an academic health center located in Farmington that is composed of John Dempsey Hospital, the School of Medicine, the School of Dental Medicine, the UConn Medical Group, UConn Health Partners and University Dentists. *(August 28, 2002 www.uchc.edu/hc/info.html)*
2. John Dempsey Hospital ("Hospital" or "JDH") is an acute care hospital currently licensed for 204 acute care beds and 20 newborn nursery bassinets that is located at 263 Farmington Avenue in Farmington. It is the teaching hospital for the University of Connecticut Health Center. *(August 28, 2002 www.uchc.edu/hc/info.html)*
3. The UConn Medical Group ("UMG") is the multi-specialty group practice of the University Schools of Medicine and Dental Medicine. More than 200 physicians, dentists and other health care professionals within the group provide a complete range of programs in more than 50 specialties. *(August 28, 2002 <http://health.uchc.edu/welcomedesk>)*
4. Correctional Managed Health Care ("CMHC") is a subsidiary of UCHC that contracts directly with the Connecticut Department of Corrections to provide health care services to the Department of Corrections. *(August 5, 2002 CON Application, Exhibit I, Patient Safety Information System Agreement, Page 12)*

5. UCHC proposes to fund an amount not to exceed \$15 million over a seven year period to contract with an Application Service Provider (“ASP”) for access to a patient safety information system on a fee for use basis at an anticipated annual cost of \$1.3 million, and one-time costs including \$984,195 for hardware purchases, \$278,320 for licensing fees, and \$4,625,924 for vendor professional services required to customize the system to UCHC needs. The proposed patient safety information system will support all clinical programs of UCHC including those of John Dempsey Hospital, UConn Medical Group and Correctional Managed Health Care. *(June 6, 2002 Letter of Intent, Page 3 and September 10, 2002 Completeness Responses, Pages 7 and 8)*
6. UCHC will contract with Siemens Medical Solutions Health Services Corporation (“Siemens”), an ASP, to access the Siemens suite of clinical management information systems in order to implement and operate the proposed patient safety information system. This suite of systems includes physician order entry, results reporting, integrated pharmacy management, nursing documentation, medication administration checking, clinical pathways, protocol management, and a number of clinical tools for use in manipulating data. *(August 5, 2002 CON Application, Page 2 and Exhibit I, Page 1)*
7. The proposed patient safety information system with its computerized physician order entry and computerized patient records, can help eliminate many serious medication errors resulting from illegible handwriting on prescriptions, misplaced decimal points, and missed drug interactions and allergies. Physician order entry systems allow physicians to enter orders into a computer rather than on paper, and thus the orders are integrated with patient information including laboratory and prescription data and are automatically checked for potential errors. *(August 5, 2002 CON Application, Page 2)*
8. According to The Leapfrog Group, a consortium of large employers and health care purchasers, the benefits of a computerized physician order entry system include the following: *(August 5, 2002 CON Application, Pages 2 and 3)*
 - a. Prompts that warn against the possibility of drug interaction, allergy or overdose.
 - b. Accurate up-to-date information that helps physicians keep up with new drugs as they are introduced into the market.
 - c. Drug-specific information that eliminates confusion from drug names that sound alike.
 - d. Improved communication between physicians and pharmacies.
 - e. Reduced health care costs resulting from improved efficiency.
9. In November 2000, UCHC formed the Clinical Information Technology Planning Committee. This committee was charged with reviewing options and making a recommendation to senior management for the implementation of a Physician Order Entry System, Results Reporting System and Electronic Medical Record. As a result of the meetings, the state procurement process was undertaken and Siemens was selected as the vendor. *(August 23, 2002 Completeness Responses, Pages 3 and 4)*

10. Siemens offered UCHC two options to implement the patient safety information system, a remote computing option and an in-house computing option. *(August 5, 2002 CON Application, Page 2 and August 23, 2002 Completeness Responses, Page 2)*
- a. Remote Computing Option – Employs monthly service fees spread out over the seven-year life of the contract.
 - b. In-House Computing Option – Requires the acquisition of an IBM mainframe computer and the hiring of technical staff to support the IBM mainframe environment. The Hospital estimates that the costs associated with the acquisition and maintenance of the mainframe would exceed one million dollars per year.
11. A comparison of UCHC’s projected capital expenditures and operating expenses associated with acquiring the patient safety information system through an in-house computing option versus implementing the patient safety information system through the selected remote computing option involving the proposed contractual agreement between UCHC and Siemens is as follows: *(September 10, 2002 Completeness Responses, Page 5)*

UCHC’s Projected Capital Expenditures and Operating Expense Comparison

University of Connecticut Health Center	In-House Computing Option	Remote Computing Option	Cost Difference
Capital Expenditures:			
Hardware Costs	\$ 1,860,313	\$ 984,195	\$ 876,118
Siemens License Fees	2,493,808	278,320	2,215,488
Mainframe Hardware Lease Costs	8,753,388	0	8,753,388
Professional Services Costs	5,341,446	4,625,924	715,522
Total Capital Expenditures	\$18,448,955	\$ 5,888,439	\$ 12,560,516
Operating Expenses:			
Software Support (Maintenance) Fees	\$ 5,622,423	\$ 0	\$ 5,622,423
Processing Support (Usage Fees)	0	8,373,127	(8,373,127)
Environmentals	210,000	0	210,000
Wide Area Network (WAN) Support Fees	71,400	727,832	(656,432)
Total Operating Expenses	\$ 5,903,823	\$ 9,100,959	\$ (3,197,136)
Total Cash Outlay	\$24,352,778	\$14,989,398	\$ 9,363,380

12. A comparison of the Hospital’s projected capital expenditures and operating expenses associated with acquiring the patient safety information system through an in-house computing option versus implementing the patient safety information system through the selected remote computing option involving the contractual agreement between UCHC and Siemens is as follows: *(September 10, 2002 Completeness Responses, Page 6)*

JDH's Projected Capital Expenditures and Operating Expense Comparison

John Dempsey Hospital	In-House Computing Option	Remote Computing Option	Cost Difference
Capital Expenditures:			
Hardware Costs	\$ 1,106,838	\$ 725,848	\$ 380,990
Siemens License Fees	1,620,975	171,971	1,449,004
Mainframe Hardware Lease Costs	5,689,702	0	5,689,702
Professional Services Costs	3,471,940	2,775,554	696,386
Total Capital Expenditures	\$11,889,455	\$ 3,673,373	\$ 8,216,082
Operating Expenses:			
Software Support (Maintenance) Fees	\$ 3,654,575	\$ 0	\$ 3,654,575
Processing Support (Usage) Fees	0	5,442,532	(5,442,532)
Environmentals	136,500	0	136,500
Wide Area Network Support Fees	46,410	473,091	(426,681)
Total Operating Expenses	\$ 3,837,485	\$5,915,623	\$ (2,078,138)
Total Cash Outlay	\$15,726,940	\$9,588,996	\$ 6,137,944

13. The proposed contractual agreement with Siemens contains the following provisions: *(August 5, 2002 CON Application, Pages 9 and 10 and August 23, 2002 Completeness Responses, Pages 8, 9 and 10)*
- a. The proposed patient safety information system will be implemented via a multi-phased, multi-year approach. In all four implementation phases, Siemens will provide project management and technology resources to implement the software and interface connection with the John Dempsey Hospital and the UHC systems and environment.
 - b. Siemens will provide periodic updates and releases at no additional license fee that will include programming changes in response to generally applicable state-mandated changes and federal-mandated regulatory changes, including programming changes made in response to the Health Insurance Portability and Accountability Act ("HIPAA").
 - c. For the selected remote computing option, Siemens will be responsible for all space and environmental requirements. In the event of a power failure, backup systems are designed to provide uninterrupted power to operate the Siemens Information Service Center's equipment.
 - d. In the event of a computer crash, UHC's environment would be brought up on another Siemens central processing unit.
 - e. In the event of a loss of a telephone line, Siemens Network Operations Center would re-route all communications traffic to a redundant network connection.
14. Siemens is working with the federal government and with its customers to be ready for HIPAA as soon as possible. Based on current schedules, Siemens expects to be ready in time to enable its customers to upgrade their Siemens products and to incorporate the enhanced functions/capabilities necessary to meet HIPAA requirements into their operations. *(August 5, 2002 CON Application, Page 9)*

15. The estimated timetable involving the four phases of implementation for the proposed patient safety information system is as follows: *(August 5, 2002 CON Application, Pages 10 and 11 and August 23, 2002 Completeness Responses, Page 8)*

Estimated Timetable for the Four Phases

Phase	Commencement Date	Completion Date
Phase I	October 2002	August 2003
Phase II	November 2003	July 2004
Phase III	September 2004	May 2005
Phase IV	January 2005	June 2005

16. Prior to the expiration of the contract with Siemens, UCHC will decide to continue using the Siemens system or to replace the Siemens system. If UCHC decides to continue with Siemens as the patient safety information system vendor, the entire contract would be renegotiated. All fees, terms and conditions would be open to negotiation. If UCHC decides to replace Siemens as the vendor for the patient safety information system, UCHC would select a replacement system. *(August 23, 2002 Completeness Responses, Page 6)*

Financial Feasibility and Cost Effectiveness of the Proposal and its Impact on the Applicant's Rates and Financial Condition
Impact of the Proposal on the Interests of Consumers of Health Care Services and Payers for Such Services

17. The proposed total capital expenditures and operating expenses included in the proposed contractual agreement with Siemens for the implementation and operation of the patient safety information system by UCHC, JDH, UMG and CMHC are as follows: *(September 10, 2002 Completeness Responses, Pages 7 and 8)*

Univ. of Conn. Health Center	JDH	UMG	CMHC	Total
Capital Expenditures:				
Hardware Costs	\$ 725,848	\$ 165,781	\$ 92,566	\$ 984,195
Siemens License Fees	171,971	51,705	54,644	278,320
Professional Services Costs	2,775,554	1,156,481	693,889	4,625,924
Total Capital Expenditures	\$ 3,673,373	\$ 1,373,967	\$ 841,099	\$ 5,888,439
Operating Expenses:				
Processing Support (Usage) Fees	\$ 5,442,532	\$ 2,093,282	\$ 837,313	\$ 8,373,127
Wide Area Network (WAN) Fees	473,091	181,958	72,783	727,832
Total Operating Expenses	\$ 5,915,623	\$ 2,275,240	\$ 910,096	\$ 9,100,959
Total Cash Outlay	\$ 9,588,996	\$ 3,649,207	\$1,751,195	\$14,989,398

18. The Hospital's proposed total capital expenditure of \$3,673,373 for the CON proposal will be funded entirely by an equity contribution from operating funds. *(August 5, 2002 CON Application, Page 7)*

19. The Hospital projects the following total reduction in incremental operating costs of \$1,987,526 resulting from the implementation and operation of the patient safety information system over the seven-year life of the proposed contractual agreement between UCHC and Siemens: *(September 10, 2002 Completeness Responses, Page 4)*

JDH's Projected Reduction in Incremental Operating Costs			
John Dempsey Hospital	Hospital-Related Incremental Costs	Cost Reductions and Revenue Enhancements	Total Hospital Incremental Costs
FY 2003	\$ 1,876,142	\$ (599,750)	\$ 1,276,392
FY 2004	1,915,443	(1,575,500)	339,943
FY 2005	1,915,443	(1,838,000)	77,443
FY 2006	990,259	(1,838,000)	(847,741)
FY 2007	990,259	(1,838,000)	(847,741)
FY 2008	845,089	(1,838,000)	(992,911)
FY 2009	845,089	(1,838,000)	(992,911)
Total CON Project	\$ 9,377,724	\$(11,365,250)	\$(1,987,526)

20. The Hospital's projected cost reductions and revenue enhancements totaling \$11,365,250 over the seven-year life of the proposed contractual agreement result from lost charge recovery, clinical programs redesign, improved physician documentation, a reduction in the cost of maintaining medical records, a reduction in adverse drug events, a reduction in radiology billing staff, a reduction in current software annual maintenance expense, a charge entry staff reduction and the reduced length of stay of Hospital inpatients. *(August 23, 2002 Completeness Responses, Pages 6 and 7)*
21. The Hospital's projected payer mix during the first three years of implementation and operation of the proposed patient safety information system is as follows: *(August 5, 2002 CON Application, Page 8)*

Hospital's Projected Payer Mix			
Payer Source	Year 1	Year 2	Year 3
Medicare	41.6%	41.6%	41.6%
Medicaid	12.2%	12.2%	12.2%
TriCare	0.4%	0.4%	0.4%
Commercial Insurers	42.3%	42.3%	42.3%
Self-Pay	0.3%	0.3%	0.3%
Workers Compensation	1.2%	1.2%	1.2%
Uncompensated Care	2.0%	2.0%	2.0%
Total Payer Mix	100.0%	100.0%	100.0%

Consideration of Other Section 19a-637, C.G.S. Principles and Guidelines

The following findings are made pursuant to the principles and guidelines set forth in Section 19a-637, C.G.S.:

22. There is no State Health Plan in existence at this time. *(August 5, 2002 CON Application, Page 2)*
23. The Hospital has adduced evidence that the proposal is consistent with the Hospital's long-range plan. *(August 5, 2002 CON Application, Page 2)*
24. There are no distinguishing or unique characteristics of the Hospital's patient/physician mix with regard to the proposal. *(August 5, 2002 CON Application, Page 5)*
25. The Hospital's teaching or research responsibilities will receive substantial benefits from the proposal through the demonstration of "best practices" for a given medical condition or set of medical circumstances to staff, the identification of pharmacological subtleties in drug interactions, and through the opening of a vast new resource for mining clinical research data. *(August 5, 2002 CON Application, Page 5)*
26. The Hospital has implemented various activities to improve productivity and contain costs including energy conservation, group purchasing, the application of technology and other activities involving mercury removal. *(August 5, 2002 CON Application, Page 4)*
27. The Hospital has sufficient technical, financial and managerial competence and expertise to provide efficient and adequate service to the public. *(August 5, 2002 CON Application, Exhibit D, Pages 33-42 and August 23, 2002 Completeness Responses, Exhibit 1, Pages 15-21)*

Rationale

John Dempsey Hospital ("Hospital") proposes to implement a patient safety information system through a contractual agreement with an Application Service Provider, at a total capital expenditure of \$3,673,373. The proposed patient safety information system will support all clinical programs of the University of Connecticut Health Center ("UHC") including those of UHC's subsidiaries, John Dempsey Hospital, UConn Medical Group and Correctional Managed Health Care.

UHC will contract with Siemens Medical Solutions Health Services Corporation ("Siemens"), an Application Service Provider, to access the Siemens suite of clinical management information systems in order to implement and operate the proposed safety information system. This suite of systems includes physician order entry, results reporting, integrated pharmacy management, nursing documentation, medication administration checking, clinical pathways, protocol management, and a number of clinical tools for use in manipulating data. The proposed patient safety information system has been shown to be clinically effective in improving clinical practice and clinical disease management, improving the documentation efforts of physicians and other health care providers, and streamlining processes to improve workflow.

The proposed contract with Siemens is based upon a contractual agreement with an Application Service Provider ("ASP"), which offers an alternative to customer ownership, management of applications and supporting infrastructure. The ASP will

combine software, hardware and networking technologies and will deliver business applications as a service reducing the total cost of technology ownership by providing access to the ASP's applications through a monthly service fee and by placing the burden of hardware and software technical support on the ASP. The ASP model involves a remote computing option, which will enable UCHC to avoid millions of dollars in up-front capital expenditures as well as substantial local operating costs, in favor of monthly service fees spread over the seven-year life of the proposed contractual agreement between UCHC and Siemens.

The Siemens patient safety information system also has an in-house computing option that runs on a very expensive IBM mainframe computer. UCHC and the Hospital currently do not have an IBM mainframe computer in-house and the technical staff necessary to support an IBM mainframe computer environment. Therefore, the cost advantage goes to the remote computing option mainly because of the high cost of buying/leasing the IBM mainframe computer, since the cost of acquiring and supporting the IBM mainframe computer would be more than one million dollars per year.

Siemens will provide periodic updates and releases at no additional license fee that will include programming changes in response to generally applicable state-mandated changes and federal-mandated regulatory changes, including programming changes made in response to the Health Insurance Portability and Accountability Act ("HIPAA"). Siemens is working with the federal government and with its customers to be ready for HIPAA as soon as possible. Based on current schedules, Siemens expects to be ready in time to enable its customers to upgrade their Siemens products and to incorporate the enhanced functions/capabilities necessary to meet HIPAA requirements into their operations. Therefore, OHCA finds that the Hospital's CON proposal will very likely result in a significant improvement in the quality of the delivery of the Hospital's patient care services.

The CON proposal's total capital expenditure of \$3,673,373 will be funded entirely by operating funds. The Hospital projects decreasing annual losses from operations of \$(1,276,392), \$(339,943) and \$(77,443) during the first three years of implementation and operation of the patient safety information system. However, the Hospital also projects significant cost reductions and revenue enhancements totaling \$(11,365,250) over the seven-year life of the proposed contract with Siemens, offsetting increased operating costs during the same seven-year period of \$9,377,724 for a total net reduction in incremental operating costs of \$(1,987,526). Therefore, OHCA finds that the CON proposal will not only improve the quality of the delivery of the Hospital's patient care services but that the CON proposal is both financially feasible and cost effective.

Based upon the foregoing Findings and Rationale, the Certificate of Need application of John Dempsey Hospital to implement a patient safety information system through a contractual agreement with an Application Service Provider, at a total capital expenditure of \$3,673,373, is hereby GRANTED.

Order

John Dempsey Hospital (“Hospital”) is hereby authorized to implement a Patient Safety Information System through a contractual agreement with an Application Service Provider, at a total capital expenditure of \$3,673,373, subject to the following conditions:

1. This authorization shall expire on June 30, 2006. Should the Hospital’s patient safety information system project not be fully implemented by that date, the Hospital must seek further approval from OHCA to complete the project beyond that date.
2. The Hospital shall not exceed the approved capital expenditure of \$3,673,373. In the event that the Hospital learns of potential cost increases or expects that final project costs will exceed those approved, the Hospital shall file with OHCA a request for approval of the revised project budget.

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

By Order of the
Office of Health Care Access

October 3, 20002
Date

Signed by:
Mary M. Heffernan
Commissioner

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