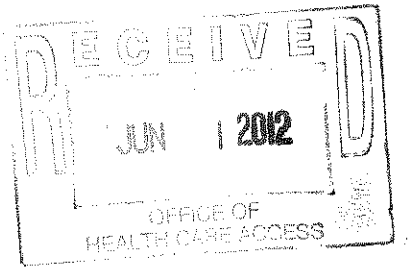
Thomas C. Richardson
Vice President of Strategic Planning
282 Washington Street
Hartford, CT 06106
860-545-9456
trichar@ccmckids.org

June 1, 2012
HAND DELIVERED



Lisa A. Davis
Deputy Commissioner
Office of Health Care Access
Department of Public Health
410 Capitol Avenue
Hartford, CT 06134

Re: Application for Certificate of Need
Pediatric Outpatient Surgery Center in Farmington

Dear Ms. Davis:

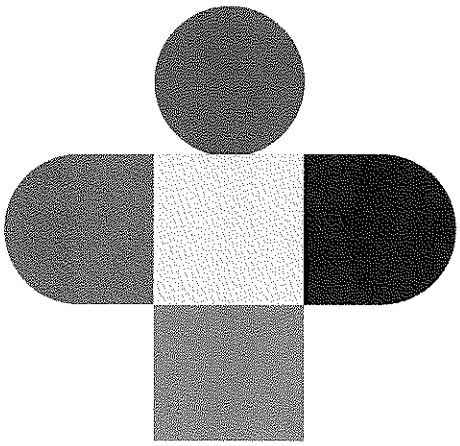
Enclosed for your consideration is Connecticut Children's application for a Certificate of Need to establish a Pediatric Outpatient Surgery Center in Farmington. We would be pleased to answer any questions you or the OHCA staff have and to provide any additional documentation you need.

The $500 filing fee is in the front pocket of the binder marked "Original" along with the CD containing the electronic files. The original Affidavit is inserted before page 3 in the binder. The four binders marked "Copy" mirror the original with the exception of those three items.

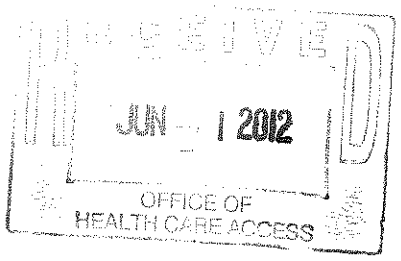
Thank you for your consideration of the application.

Sincerely,

Thomas C. Richardson



Connecticut Children's
MEDICAL CENTER



Certificate of Need Application

Pediatric Outpatient Surgery Center in Farmington

submitted 6/1/2012

Original Documents

Application Checklist

Instructions:

1. **Please check each box below, as appropriate; and**
2. **The completed checklist *must* be submitted as the first page of the CON application.**

☒ **Attached is the CON application filing fee in the form of a certified, cashier operating room business check made out to the "Treasurer State of Connecticut" in the amount of $500.**

For OHCA Use Only:

Docket No.: 12-31762-CON **Check No.:** 171469
OHCA Verified by: SC **Date:** 6/4/12

☒ **Attached is evidence demonstrating that public notice has been published in a suitable newspaper that relates to the location of the proposal, 3 days in a row, at least 20 days prior to the submission of the CON application to OHCA. (*OHCA requests that the Applicant fax a courtesy copy to OHCA (860) 428-7053, at the time of the publication)***

☒ **Attached is a paginated hard copy of the CON application including a completed affidavit, signed and notarized by the appropriate individuals.**

☒ **Attached are completed Financial Attachments I and II.**

☒ **Submission includes one (1) original and four (4) hard copies with each set placed in 3-ring binders.**

Note: **A CON application may be filed with OHCA electronically through email, if the total number of pages submitted is 50 pages operating room less. In this case, the CON Application must be emailed to ohca@ct.gov.**

Important: **For CON applications(less than 50 pages) filed electronically through email, the singed affidavit and the check in the amount of $500 must be delivered to OHCA in hardcopy.**

☒ **The following have been submitted on a CD**

1. **A scanned copy of each submission in its entirety, including all attachments in Adobe (.pdf) format.**
2. **An electronic copy of the documents in MS Word and MS Excel as appropriate.**

HARTFORD COURANT PROOF

Customer: CT CHILDRENS MEDICAL CENTER
Contact: THOMAS RICHARDSON Phone: 8605459339

Ad Number: **2488962**
Insert Dates: 03/01/2012 03/02/2012 03/03/2012

Price: 244.57
Section: CL Class: 2174; CONNECTICUT Size: 1 x 1.25
Printed By: KURCHELL Date: 02/28/2012

Signature of Approval:_____ Date:_____


NOTICE

2

AFFIDAVIT

Applicant: Connecticut Children's Medical Center

Project Title: Pediatric Outpatient Surgery Center in Farmington

I, Gerald Boisvert, Executive Vice President & CFO of Connecticut Children's Medical Center being duly sworn, depose and state that Connecticut Children's Medical Center's information submitted in this Certificate of Need Application is accurate and correct to the best of my knowledge.

Signature _____ Date 5/31/12

Subscribed and sworn to before me on 5/31/12

_____

Notary Public/Commissioner of Superior Court

My commission expires: 5/31/2015

KATHLEEN M. MCNAMARA
NOTARY PUBLIC
MY COMMISSION EXPIRES MAY 31, 2015

AFFIDAVIT

Applicant: Connecticut Children's Medical Center

Project Title: Pediatric Ambulatory Surgery Center in Farmington

I, Gerald Boisvert, Executive Vice President & CFO of Connecticut Children's Medical Center being duly sworn, depose and state that Connecticut Children's Medical Center's information submitted in this Certificate of Need Application is accurate and correct to the best of my knowledge.

Signature _____ Date 5/31/12

Subscribed and sworn to before me on 5/31/12

_____

Notary Public/Commissioner of Superior Court

My commission expires: 5/31/2015

KATHLEEN M. MCNAMARA
NOTARY PUBLIC
MY COMMISSION EXPIRES MAY 31, 2015

State of Connecticut
Office of Health Care Access
Certificate of Need Application

Instructions: Please complete all sections of the Certificate of Need ("CON") application. If any section operating room question is not relevant to your project, a response of "Not Applicable" may be deemed an acceptable answer. If there is more than one applicant, identify the name and all contact information for each applicant. OHCA will assign a Docket Number to the CON application once the application is received by OHCA.

Docket Number:	
Applicant:	Connecticut Children's Medical Center
Contact Person:	Thomas C. Richardson
Contact Person's Title:	Vice President of Strategic Planning
Contact Person's Address:	282 Washington Street Hartford, CT 06106
Contact Person's Phone Number:	860-545-9456
Contact Person's Fax Number:	860-545-8558
Contact Person's Email Address:	trichar@ccmckids.org
Project Town:	Farmington, CT
Project Name:	Pediatric Outpatient Surgery Center in Farmington
Statute Reference:	Section 19a-638, C.G.S.
Estimated Total Capital Expenditure:	$10,000,000

1. **Project Description: Outpatient Surgical Facility Operating Room Increase**

   a. **Please provide a narrative detailing the proposal.**

   Connecticut Children's Medical Center ("Connecticut Children's") seeks a Certificate of Need to authorize the construction and operation of an outpatient surgery facility with two operating rooms to be located in long term leased space in a building which is under construction at 505 Birds Eye Road in Farmington, CT.

   b. **Provide letters that have been received in support of the proposal.**

   N/A

   c. **Report the number of existing operating rooms, identifying the number that are equipped and utilized and the number that were built and shelled for future use.**

   There are eight equipped and utilized operating rooms within the Connecticut Children's main hospital in Hartford. Rooms 1-5 are used interchangeably for both inpatient and outpatient surgery and procedures, rooms 6-8 are used primarily for outpatient surgery and procedures. Connecticut Children's has no operating rooms built and shelled for future use.

   d. **Report the number of proposed operating rooms, identifying the number to be equipped and utilized and the number to be built and shelled for future use.**

   Connecticut Children's proposes to construct four outpatient surgical facility operating rooms, including two to be equipped and utilized and two to be built and shelled for future use.

2. **Clear Public Need**

   a. **Explain why there is a clear public need for the proposal. Provide evidence that demonstrates this need.**

   The proposed facility would address a clear public need for improved access to outpatient surgical care of pediatric patients. "Access" includes elements of expertise, timeliness, quality, outcomes, convenience and comfort. There is no comparable substitute for the pediatric-specific care Connecticut Children's provides to children in our region. As the only Children's Hospital, General licensed in the State of Connecticut our status as an expert in pediatric services is recognized in a number of ways. As a consequence of the general recognition that pediatric care is best delivered by pediatric specialists, the ageing and operating room retirement of surgeons at community hospitals who previously performed surgeries, and the inability of nursing staff at community hospitals to maintain pediatric competencies (due to the relative low volumes) the number of surgeries performed at Connecticut Children's has grown 48% over the last six years. Our market share of outpatient surgery patients aged 0 – 17 grew from 24% in 2006 to 31% in 2011, while 25 of 30 acute care hospitals who reported data to the Connecticut Hospital Association experienced a reduction in market share in that age range over the same period. We expect this trend to continue because the public, specifically referring providers and those making health care decisions for children, increasingly expresses their preference for care of children by pediatric experts and specialists.

   As Connecticut Children's surgical volume has grown it has put significant pressure on Operating Room availability and reduced our flexibility in responding to provider and patient needs.

A common metric to assess operating room availability is open operating room "unblocked" time, that is, the percent of weekday operating hours that the operating room are not allocated to particular surgeons operating room practices. Best practice in the industry suggests that 65-80% of operating room time be dedicated blocks, with the rest open operating room "first come-first served" (FCFS)[1]. Institutions with more emergent surgeries operating room that are focused on growth would have less time blocked. The FCFS time provides room for add-on cases, time for new operating room external surgeons, and flexibility in scheduling.

Ideally, the Connecticut Children's operating rooms would operate at 75% blocked time. Appendix B shows the current Connecticut Children's block schedule. The blocked times represent 99% of available time, far beyond the desired 75% blocked time. The only FCFS time is in Room 7, one of our smallest operating room and only suitable for simple cases; our large operating room are 100% blocked.

Continuing to perform our current volume of services within our existing operating room facilities would on its own represent a failure to meet public need, but that need extends even beyond our current volume. Pediatric surgeons employed by our affiliated Connecticut Children's Specialty Group do not have exclusive use of our operating room facilities. We are also pleased to support the needs of community-based surgeons and dental surgeons, who are also pediatric specialists, seeking to perform pediatric procedures at Connecticut Children's. They prefer to perform surgeries at Connecticut Children's because of the superior level of service our pediatric-trained operating room staff provides, the special equipment and resources only we have and our unique setting designed to meet the needs of pediatric patients. Regrettably, the limited capacity of our operating room has reduced our ability to provide these services to our providers and their patients. We and our providers share a concern that this lack of access results in a poorer patient and family experience, and could reduce the quality of surgical care available to children in our region.

The proposed facility will also be more convenient to a large number of our patients. We now serve children throughout Connecticut, with a growing percent of our patient population in the towns from West Hartford to Danbury along I-84, as well as towns in the Farmington Valley. A facility located off I-84 in Farmington will provide much more convenient access to our patients in those towns, and will free up capacity in our Hartford facility for our patients with complex conditions and for local patients.

b. **Provide the calculations used to determine the proposed number of operating rooms (relate this to the projected volumes, including information such as the estimated number of procedures per room), and include any documentation to support these estimates.**

Demand for this facility: Table A shows recent historical volume in Connecticut Children's current operating room facility in Hartford.

[1] See, for example: operating room Manager, Volume 25, No 7, July 2009; Evidence-based Competency for Management of the Operating Room, 2nd Edition (2008); Institute for Healthcare Improvement Seminar, Reengineering the Operating Room (2010).

Table A

Type of surgery	FY08	FY09	FY10	FY11	Annual trend	Projected trend	Estimated FY16 surgeries
Inpatient	2,097	2,141	2,293	2,036	-0.1%	0.2%	2058
Outpatient	6,712	7,666	7,613	8,062	5.3%	5.3%	10,442
Total	8,809	9,807	9,906	10,,098	4.1%	4.4%	12,500
% Outpatient	76%	78%	77%	80%			84%

We anticipate continued growth in demand for our surgical facilities. Consistent with industry trends, outpatient surgeries have been growing over 5% per year. Based on existing demand for our facilities, current waitlists among our subspecialty surgeons, and our hiring plans, we anticipate growth of about 5% annually over the next several years, resulting in total demand by FY16 for 12,500 surgeries in our operating room. We expect virtually all of this growth to be in outpatient procedures. Our plan to bring on additional surgeons is designed to support the demand for services as well as to expand the depth of our subspecialty expertise to ensure that children can get the care they need right here in Connecticut rather than having to leave the state for certain unique subspecialty services.

We reviewed our mix of procedures and for each procedure estimated the percent of them that could be safely performed at an outpatient facility. We conclude that 84% of outpatient cases could be moved to an outpatient surgery center. Based on the anticipated growth in volume discussed above, this results in approximately 8,775 surgeries available annually for an outpatient surgery center in 2016 (10442 x 84% = 8,771).

In the twelve months ending December 31, 2011, 1,444 patients from our primary service area and 696 patients from our secondary service area received outpatient surgery at Connecticut Children's. As this facility will offer easy highway access and free parking, we believe that almost all patients who travel to the Hartford area from the western operating room south central areas of the state will find the proposed facility more convenient. This includes the southern and western sections of Hartford County not already in the primary and secondary service areas, as well as patients from Fairfield, New Haven, Litchfield and Middlesex Counties. In the year ending December 31, 2011, Connecticut Children's performed 2,826 outpatient surgeries on patients from those four counties. In total, these patients plus patients from the primary and secondary service areas represent approximately 66% (4966) of our total outpatient surgeries (7,524). If we apply this 66% to the anticipated 8,771 outpatient surgeries that could be performed at the proposed outpatient surgical facility in 2016, we project potential demand to be 5,789 cases.

Capacity of proposed facility: The average case length for the procedures that might be moved to the proposed facility is 37 minutes, and our current average room turnaround time is 20 minutes, for an average total time per case of 57 minutes. We intend to operate this facility at the 80% occupancy including turnaround time. Therefore:

i. Average operating room minutes per year = 2 operating room x 8 hours per day x 60 minutes per hour x 5 days per week x 50 working-weeks per year (assuming 10 days of holidays) = 240,000 operating room minutes per year.
ii. Operation at 80% capacity = 240,000 operating room minutes per year x 80% = 192,000 operating room minutes available per year
iii. Average minutes per case = 37 operating minutes + 20 turnaround minutes = 57 minutes
iv. Expected case capacity of new facility = 192,000 working minutes / 57 minutes per case = 3368 cases.

The estimated potential demand for an outpatient facility (5,789 cases annually) far exceeds the capacity of 3,368 cases. As the subspecialty practices with block time in the proposed facility account for 85% of our outpatient procedures, we do not anticipate difficulty in filling the proposed facility.

Occupancy of current facility after proposed facility is in operation:

Based on the above, we have developed a block time schedule for the proposed facility, as shown in Appendix D. The specialties being moved to Farmington are those where we expect significant growth over the next several years. Moving these practices to Farmington will open up 6 new room-day blocks of the 20 available in operating room 1-5 (5 operating room x ~4 weeks/month), 30% of operating room time (Appendix C). Based on pent-up demand and surgeons already hired and being recruited, we estimate that almost all of this time will be assigned to new orthopedists, general surgeons, urologists, and perhaps other specialties over the first year of operation of the proposed facility. Much of operating room 8 will also be opened. It is a very small room, which may be used to meet the high demand for space for dental procedures and surgeries.

Assuming 3,368 cases from projected total volume of 12,500 will be performed at the proposed facility by FY2016, the initial lower occupancy of the current facility will increase as shown in the calculations below.

i. Capacity of Existing operating room Facilities: operating room minutes per year = 8 operating room x 8 hours per day x 60 minutes per hour x 5 days per week x 50 working-weeks per year (assuming 10 days of holidays) = 960,000 operating room minutes per year.

ii. Projected Occupancy Including Turnaround Time (cases remaining after outpatient cases leave average 87 minutes per case):
    a. Average minutes per case = 87 operating minutes + 20 turnaround minutes = 107 minutes
    b. FY16 Projected Volume = 9114 cases (12500 - 3386 cases) x 107 minutes per case = 975,198 minutes
    c. FY16 Projected occupancy including turnaround time = 975,198 minutes/960,000 = 102%

Based on our best estimates of demand for pediatric surgical services, we anticipate both the proposed new facility and the existing facility to be operating at full capacity, with excess demand by 2016. The proposed facility will contain two operating room shelled in for future use, to accommodate this demand as it evolves. We will also address capacity by operating at

higher than planned occupancy rates, seeking efficiencies in surgical times and by continuing to drive down turnaround times.

c. **Provide the following regarding the proposal's location:**

i. **The rationale for choosing the proposed service location;**

Patients and families consistently advise us that proximity and convenience are among the most important drivers of their decisions about where to seek non-emergent outpatient care. Accordingly, Connecticut Children's has improved access to its outpatient services by developing specialty care centers in Farmington, Glastonbury, Shelton, Fairfield, and Southport for patients and families in those towns and their surrounding areas. These services generate surgery volume. A pediatric only surgery center in Farmington will allow families from south and west of Hartford easier access with more convenient parking. Reducing the burden on the operating room facilities on our main campus in Hartford would improve access for urban families and families east of Hartford.

Our main building in Hartford is landlocked and we cannot expand the ground level footprint. Increasing our capacity vertically would require extensive retrofitting of the building superstructure to meet the current regulatory and code requirements. It is more cost-effective, less disruptive to current operations and more conducive to meeting patient and family needs for us to develop an outpatient surgery center outside of the hospital.

Located 10 miles from our main hospital and near the intersection of Interstate 84 and Route 4, the Farmington site allows us to provide more convenient care to the population of the service area, helps to correct our existing capacity issues and will complement our nearby outpatient services that include:

Center for Motion Analysis
Endocrinology
Gastroenterology
General Surgery Clinic
Hematology/Oncology
Occupational Therapy
Orthopedics
Physical Therapy
Speech Therapy
Sports Medicine
Pulmonary Medicine
Radiology
Urology

ii. **The service area towns and the basis for their selection:**

The primary service area consists of Farmington itself and the seven adjacent towns. The secondary service area consists of seven additional towns adjacent to the primary service area with sizeable populations and easy access to the proposed facility.

Primary Service Area	Secondary Service Area
Avon	Berlin
Bristol	Bloomfield
Burlington	Canton

Farmington
New Britain
Newington
Plainville
West Hartford
Rocky Hill
Simsbury
Southington
Wethersfield

iii. **The population to be served, including specific evidence such as incidence, prevalence, operating room other demographic data that demonstrates need;**

Table C

		2010 population ages 0-19[1]		
	Town	**Total**	**Male**	**Female**
Primary Service Area	Avon	5,034	2,590	2,444
	Bristol	14,195	7,356	6,839
	Burlington	2,699	1,434	1,265
	Farmington	5,999	3,151	2,848
	New Britain	20,239	10,339	9,900
	Newington	6,677	3,411	3,266
	Plainville	3,854	1,937	1,917
	West Hartford	16,406	8,260	8,146
	Total PSA	75,103	38,478	36,625
Secondary Service Area	Berlin	4,618	2,421	2,197
	Bloomfield	4,090	2,106	1,984
	Canton	2,652	1,333	1,319
	Rocky Hill	4,074	2,095	1,979
	Simsbury	6,910	3,595	3,315
	Southington	10,599	5,403	5,196
	Wethersfield	6,011	3,052	2,959
	Total SSA	38,954	20,005	18,949
	Total Service Area	**114,057**	**58,483**	**55,574**

[1] 2010 census

iv. **How and where the proposed patient population is currently being served;**

As described above, in 2011, Connecticut Children's performed 1,444 outpatient surgeries on patients from the primary service area, with 696 surgeries from the secondary service area.

87% of those procedures were performed by four sub-specialties: ENT (39%), Digestive Diseases (24%), Genitourinary (15%) and Musculoskeletal (9%). All procedures were performed at our main hospital in Hartford.

v. **All existing providers (name, address and associated information) of the proposed service in the towns listed above and in nearby towns in the format presented in Table 1 as follows:**

Table 1: Utilization and Capacity of the Applicants and Existing Providers

Provider Name Street Address Town, Zip Code	Number of Operating Rooms				Estimated Capacity for Proposal		Current Utilization [7]
	Avail-able [1]	Util-ized [2]	Not Utilized [3]	Equipped for Proposal [4]	Min [5]	Max [6]	
Connecticut Children's Medical Center, 282 Washington St., Hartford	8	8	0	2	800	2,100	10,098
Connecticut GI Endoscopy Center, 4 Northwestern Drive, Bloomfield 06002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
The Eye Surgery Center, 4 Northwestern Drive, Bloomfield 06002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Farmington Surgery Center (UConn), 263 Farmington Av, Farmington 06030	4	4	0	n/a	n/a	n/a	n/a
Hartford Hospital Eye Surgery Center, 505 Willard Av, Newington 06111	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Orthopedic Associates Surgery Center, 1111 Cromwell Av, Rocky Hill	3	3	0	n/a	n/a	n/a	n/a
West Hartford Surgery Center (Hartford Hosp), 65 Memorial Road, West Hartford	3	2	1	n/a	n/a	n/a	n/a

[1] Used, equipped, and shell space.
[2] Those used to perform surgeries.
[3] Those not used and those that are equipped operating room are only shell space.
[4] Those rooms uniquely equipped to perform the types of surgeries included in the proposal.
[5] Minimum number of surgeries to be performed in a single operating room for one year: Capacity for one room operating at 80% occupancy is 1,684 cases. Depending on the ramp up period after the facility is opened, the rooms may see as few at 800 cases the first year. However, we expect to quickly reach 80% occupancy.
[6] Maximum number of surgeries: Estimated maximum capacity is operation at 95% occupancy, operating room 2,000 cases [Capacity@80% x 95% / 80%]= [1684 x 95% / 80%].

[7] FY11: 10/1/10 – 9/30/11

vi. **The effect of the proposal on existing providers.**

The effect on existing providers will be negligible. The primary purpose of developing the new outpatient surgery center is to relocate services we expect to be requested to provide with operating room without the new facility. Most other providers provide services only, operating room mostly, to the adult population. We cater to the needs of children and therefore are trained and equipped to handle the specific needs of the pediatric population.

vii. **Explain why the proposal will not result in an unnecessary duplication of existing operating room approved health care services.**

As noted in Table 1, there are six other existing outpatient surgery facilities in the area. It is our understanding that these facilities are focused on the adult population and are not specifically equipped operating room trained to provide child-specific care. Our facility, the only one in the area staffed by physicians and nurses specializing in pediatrics, has reached capacity and is unable to accommodate the increasing demand for child-specific services. There will be no duplication of services because the primary purpose of developing the new outpatient surgery center is to relocate services we expect to be requested to provide with operating room without the new facility.

d. **Attach a copy of any articles, studies, operating room reports that support the need to establish the proposed service, along with a brief explanation regarding the relevance of the selected articles.**

See Appendix I: Operating Room Manager, Volume 25, No 7, July 2009

A common metric to assess operating room availability is open operating room "unblocked" time, that is, the percent of weekday operating hours that the operating room are not allocated to particular surgeons operating room practices. Best practice in the industry suggests that 65-80% of operating room time be dedicated blocks, with the rest open operating room "first come-first served" (FCFS). Institutions with more emergent surgeries operating room that are focused on growth would have less time blocked. The FCFS time provides room for add-on cases, time for new operating room external surgeons, and flexibility in scheduling.

3. Actual and Projected Volume

a. **Provide total volumes for the most recently completed full fiscal year by town**.

See Appendix A: Connecticut Children's Outpatient Surgery Volume by Town.

b. **Complete the following tables** for the past three fiscal years ("FY"), current fiscal year ("CFY"), and first three projected FYs of the proposal, for the outpatient surgical volume of each of the Applicants and physicians involved in the proposal. In Table 2a, report the units of service by service operating room procedure type, and in Table 2b, report the units of service by each existing and proposed operating room. Add lines as necessary.

Table 2a: Historical, Current, and Projected Outpatient Surgical Volume, by Procedure Type

	Actual Volume (Last 3 Completed FYs)			FYTD Volume*	Construction of facility	Projected Volume (First 3 Full Operational FYs)**		
	FY 09	FY 10	FY 11	FY 12	FY13	FY14	FY15	FY16
Outpatient procedures	7,666	7,613	8,062	3,929	8,100	9,200	10,000	10,450

Fiscal Year: October 1 through September 30
*October 2011 – March 2012

Table 2b: Historical, Current, and Projected Outpatient Surgical Volume, by Operating room

OR	Actual Volume (Last 3 Completed FYs)			FYTD Volume*	Construction of facility	Projected Volume (First 3 Full Operational FYs)**		
	FY 09	FY 10	FY 11	FY 12	FY13	FY14	FY15	FY16
Current operating room: Hartford								
1	740	730	740	360	750	670	690	705
2	520	500	530	260	530	480	495	505
3	880	860	865	420	865	785	805	825
4	1000	1000	1,020	500	1,030	925	950	975
5	1000	1000	1,140	555	1,150	1,040	1,060	1,090
6	1250	1250	1,410	684	1400	1,400	1,400	1,400
7	880	880	915	445	925	900	900	900
8	1400	1400	1,445	705	1450	600	700	750
Subtotal	**7,670**	**7,620**	**8,065**	**3,929**	**8,100**	**6,800**	**7,000**	**7,150**
Proposed operating room: Farmington								
A	0	0	0	0	0	1,200	1,500	1,650
B	0	0	0	0	0	1,200	1,500	1,650
Total	**7,670**	**7,620**	**8,065**	**3,929**	**8,100**	**9,200**	**10,000**	**10,450**

Fiscal Year: October 1 through September 30
* October 2011 – March 2012

c. Explain any increases and/or decreases in volume in the tables above.

The projected volumes shown above anticipate little growth through 2013, as our operating room are essentially at capacity. We expect that when the Farmington facility is first opened, volume will shift from the Hartford facility, and volume in both facilities will subsequently grow as explained in the response to question 2.a.

d. Provide a detailed description of all assumptions used in the derivation/calculation of the projected volumes.

Section 2b., above, describes the expected overall volume anticipated for the proposed and existing operating room. Room by room volume changes are described below:

Rooms 1-5: These are the largest operating room, able to accommodate the most complex surgeries. We anticipate the initial case volume to drop slightly during the transition period, as most of the surgeries to be moved to the proposed facility are now performed in these rooms.

Rooms 6 and 7: These are very small operating room, suitable for relatively simple outpatient surgeries. They will continue to be used for these functions. Some fraction of their current volume will now be performed in Farmington, but it will be largely replaced by outpatient surgeries moved from rooms 1 – 5.

Room 8: This operating room has been reserved exclusively for endoscopies. Some endoscopies may be performed in this suite after the proposed facility opens, but many will be performed in Farmington.

Farmington Rooms 1 and 2: The assumptions used in developing this volume are described above in sections 2b and c.

e. Provide a discussion on any shift of surgical procedures from existing operating rooms to the proposed operating rooms.

Growing practices with high outpatient volume will be given block time in the proposed facility as shown in Appendix D. The move to Farmington will accommodate patients living in towns surrounding Farmington and patients coming from the western and south central areas of the state.

f. For hospital Applicants, provide inpatient volume in the formats presented in Tables 2a and 2b and describe any impact the proposal will have on the inpatient surgery volumes of any of the Applicants.

Table 2c: Historical, Current, and Projected Inpatient Surgical Volume, by Procedure Type

	Actual Volume (Last 3 Completed FYs)			FYTD Volume*	Construction of facility	Projected Volume (First 3 Full Operational FYs)**		
	FY 09	FY 10	FY 11	FY 12	FY13	FY14	FY15	FY16
Inpatient procedures	2,141	2,293	2,036	1,068	2,040	2,050	2,050	2,058

Fiscal Year: October 1 through September 30
* October 2011 - March 2012

g. Using the following table, categorize the outpatient surgical procedures that have been performed by the Applicants during the past three fiscal years and report the total time required to perform the procedures in each category.

Table 3: Procedure Time

	FY09		FY10		FY11	
	Procedures	Total Time (minutes)	Procedures	Total Time (minutes)	Procedures	Total Time (minutes)
Outpatient procedures	7,666	471,957	7,623	469,310	8,062	496,337

Fiscal Year: October 1 through September 30

h. Using the total number of procedures performed and the total number of minutes as reported above, report the Applicants' historical operating room utilization for outpatient surgical procedures as presented in Table 4.

Table 4: Historical Operating Room Utilization —Outpatient Procedures

	FY09	FY10	FY11	FYTD FY12*
Total number of outpatient procedures performed	7,666	7,623	8,062	3,929
Annual increase in outpatient procedures performed	-	-0.6%	5.8%	NA
Number of operating rooms	8	8	8	8
Avg. annual number of outpatient procedures per room	958	953	1008	NA
Total number of outpatient procedure hours (including turnaround time)	10,477	10,418	11,018	NA
Number of hours available per year	16,000	16,000	16,000	NA
Percent of Total Hours Utilized for Outpatient Procedures	65%	65%	69%	NA

Fiscal Year: October 1 through September 30
*October 2011 – March 2012

i. Use the format presented in Table 5 to identify the number of outpatient procedures actually performed and projected to be performed by the proposal's physicians, by facility:

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Table 5: Proposed Number of Procedures by Facility

Facility Name	Specialty**	Procedure Type	Actual by Fiscal Year				Projected by Fiscal Year				
			FY09	FY10	FY11	FYTD FY12*	FY12	FY13	FY14	FY15	FY16
Connecticut Children's: Hartford	General surgery	Inpatient and outpatient	1,905	1,892	1,860	964	1,950	1,955	1,850	1,950	2,075
	Cardiovascular		40	34	42	14	30	30	35	40	40
	ENT		2,008	1,816	2,251	1,279	2585	2,595	2,435	2,600	2,700
	GI		1,421	1,705	1,681	827	1670	1,675	910	325	350
	Neurosurgery		263	271	272	135	273	275	280	280	280
	Orthopedics		879	817	899	391	790	795	885	950	975
	Sports		163	186	207	107	215	215	30	30	15
	Urology		896	967	886	418	845	850	575	535	525
	Other		2,236	2,225	2,003	862	1742	1750	1,850	2,340	2,248
	Total		9,811	9,913	10,101	4,997	10,100	10,140	8,850	9,050	9,208
Connecticut Children's: Farmington	ENT	Outpatient	NA						715	895	985
	GI								840	1,045	1,150
	General Surgery								200	250	275
	Sports								270	340	375
	Urology								325	405	445
	Other								50	65	70
	Total								2,400	3,000	3,300

Fiscal Year: October 1 through September 30
* October 2011 – March 2012

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4. Quality Measures

a. Submit a list of all key professional, administrative, clinical, and direct service personnel related to the proposal. Attach a copy of their Curriculum Vitae.

Fernando Ferrer, MD, Surgeon-in-Chief and Executive Vice President of Medical Affairs
Cheryl Hoey, RN, MBA, MS, Chief Nursing Officer and Vice President of Clinical Services
Jeffrey Thomson, MD, Chief (Orthopedics), Associate Director of Clinical Affairs (Surgery)
Craig Bonanni, MD, FAAP, Chief of Anesthesiology, Medical Director of Perioperative Services
Elizabeth Crouch, RN Director of Perioperative Services
Elizabeth Cannon, RN, Nurse Manager (PAT/Pre-Op/PACU)
Mary McLaughlin, RN, Nurse Manager (Operating Room)

See Appendix H – Curriculum Vitae

b. Explain how the proposal contributes to the quality of health care delivery in the region.

Healthcare for children is different from healthcare for adults, in conditions, treatment, equipment, communication issues, developmental stage, social and emotional needs, and the need to support the entire family. All of our doctors, nurses and staff specialize in working with children, and every aspect of what we do is designed specifically for children and their families.

At this time, there is an insufficient number of surgical facilities designed, staffed and equipped based on the particular needs of children. Expanding the existing surgical capacity devoted to children as proposed here will ensure that more children will receive surgery and other outpatient procedures in a facility best equipped to handle their needs. It will reduce the wait time for access to such facilities. It will also maintain operating room improve dental care for children by providing ongoing space for community dentists to care for children in a pediatric facility.
.

c. Identify the Standard of Practice Guidelines that will be utilized in relation to the proposal. Attach copies of relevant sections and briefly describe how the Applicant proposes to meet each of the guidelines.

Connecticut Children's operating room are operated in accordance with the guidelines established by the Joint Commission, CMS, American College of Surgeons, Association of Operating Room Nurses and other professional and regulatory agencies as appropriate. The new facility will be an extension of the high standards currently practiced by Connecticut Children's.

5. Organizational and Financial Information

a. Identify the Applicants' ownership type(s) (e.g. Corporation, PC, LLC, etc.).

Private Corporation

b. Provide copies of Articles of incorporation, Articles of Organization, operating room Partnership Agreements (all that are appropriate) **related to the proposal.**

Not applicable

c. Do the Applicants have non-profit status?

Yes.

d. Provide a copy of the State of Connecticut, Department of Public Health license(s) currently held by the Applicant and indicate any additional licensure categories being sought in relation to the proposal.

See Appendix E – DPH License

e. Provide copies of all signed written agreements operating room memorandum of understanding including all exhibits/attachment etc., between the Applicants **related to the proposal.**

Not applicable

f. Identify the current and proposed percentage of ownership.

Connecticut Children's Medical Center will have 100% ownership of the outpatient surgery center and will operate it in leased space custom built for our purpose.

g. Financial Statements

i. <u>If the Applicant is a Connecticut hospital:</u> Pursuant to Section 19a-644, C.G.S., each hospital licensed by the Department of Public Health is required to file with OHCA copies of the hospital's audited financial statements. If the hospital has filed its most recently completed fiscal year audited financial statements, the hospital may reference that filing for this proposal.

The hospital has filed its most recently completed fiscal year audited financial statements with OHCA with its FY 2011 Twelve Months Actual Filing.

h. Submit a final version of all capital expenditures/costs as follows:

Table 6: Proposed Capital Expenditures/Costs

Medical Equipment Purchase	$	2,000,000
Imaging Equipment Purchase		200,000
Non-Medical Equipment Purchase		1,300,000
Land/Building Purchase *		0
Construction/Renovation **		5,900,000
Other Non-Construction (Specify)		600,000
Total Capital Expenditure (TCE)	$	**10,000,000**
Medical Equipment Lease (Fair Market Value) ***	$	
Imaging Equipment Lease (Fair Market Value) ***		
Non-Medical Equipment Lease (Fair Market Value) ***		
Fair Market Value of Space ***		
Total Capital Cost (TCC)	$	
Total Project Cost (TCE + TCC)	**$**	**10,000,000**
Capitalized Financing Costs (Informational Purpose Only)		
Total Capital Expenditure with Cap. Fin. Costs	$	10,000,000

*If the proposal involves a land/building purchase, attach a real estate property appraisal including the amount; the useful life of the building; and a schedule of depreciation.

** If the proposal involves construction/renovations, attach a description of the proposed building work, including the gross square feet; existing and proposed floor plans; commencement date for the construction/ renovation; completion date of the construction/renovation; and commencement of operations date.

See Appendix F – Floor Plan
18,321 square feet
Start construction 2/1/2013
Complete construction 8/1/2013
Begin operations 9/1/2013

*** If the proposal involves a capital operating room operating equipment lease and/or purchase, attach a vendor quote operating room invoice; schedule of depreciation; useful life of the equipment; and anticipated residual value at the end of the lease operating room loan term.

i. List all funding operating room financing sources for the proposal and the dollar amount of each. Provide applicable details such as interest rate; term; monthly payment; pledges and funds received to date; letter of interest operating room approval from a lending institution.

Operations revenue and philanthropy

j. Provide a copy of the Applicant's charity care policy and sliding fee scale applicable to the proposal.

See Appendix G – Charity Care Policy

k. Demonstrate how this proposal will affect the financial strength of the state's health care system.

This proposal will not affect the financial strength of the state's health care system.

6. Patient Population Mix: Current and Projected

a. Provide the current and projected patient population mix (based on the number of patients, not based on revenue) with the CON proposal for the proposed program.

Table 7: Patient Population Mix

	FY2011	**Current** FY2012**	**Year 1 FY2013**	**Year 2 FY2014**	**Year 3 FY2015**	**Year 4 FY 2016**
Medicaid*	32%	36%	31%	30%	30%	30%
Total Government	**32%**	**36%**	**31%**	**30%**	**30%**	**30%**
Commercial Insurers*	67%	63%	68%	69%	69%	69%
Uninsured	1%	1%	1%	1%	1%	1%
Total Non-Government	**68%**	**64%**	**69%**	**70%**	**70%**	**70%**
Total Payer Mix	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

b. Provide the basis for/assumptions used to project the patient population mix.

We queried the CHIME database for FY2011 outpatient surgery discharges, filtered for Connecticut Children's and for the 15 towns in the primary and secondary service areas. We performed the same query for FY12 data through January, the most recent data available. Over the next few years, we expect the economy to improve slightly, resulting in the percentage of children on Medicaid in the proposed service area to decrease slightly. The higher level of Medicaid patients in FY12 to date is due to seasonality in outpatient surgeries, which we expect to level out by the end of the fiscal year. We do not have sufficient information to project future changes to payer mix after FY2014.

7. Financial Attachments I & II

a. Provide a summary of revenue, expense, and volume statistics, without the CON project, incremental to the CON project, and with the CON project. **Complete Financial Attachment I.** (Note that the actual results for the fiscal year reported in the first column must agree with the Applicant's audited financial statements.) The projections must include the first three full fiscal years of the project.

b. Provide a three year projection of incremental revenue, expense, and volume statistics attributable to the proposal by payer. **Complete Financial Attachment II.** The projections must include the first three full fiscal years of the project.

c. Provide the assumptions utilized in developing **both Financial Attachments I and II** (e.g., full-time equivalents, volume statistics, other expenses, revenue and expense % increases, project commencement of operation date, etc.).

- We are assuming a start date for the new Outpatient Surgery Center to be October 1, 2013.
- In the first three years of the project, we anticipate the need for a net additional 15.5 FTE's.
- In year one, we anticipate a net increase of 1,110 surgical cases. This is made up of an additional 10 inpatient cases at the hospital's main campus, a transfer of 1,300 outpatient cases from the main operating room to the Farmington Outpatient Surgery Center, and 1,100 incremental outpatient surgeries resulting in approximately 2,400 outpatient surgeries at the Farmington Outpatient Surgery Center. .
- In year two, we anticipate a net increase over 2012 of approximately 1,910 cases, made up of an additional 10 inpatient cases at the hospital's main campus, a decrease of 1,100 outpatient cases to be performed at the hospital's main campus, and an additional 3,000 cases at the Farmington Outpatient Surgery Center.
- In year three, we anticipate a net increase over 2012 of approximately 2,368 cases, made up of an additional 18 inpatient cases, a decrease of 950 outpatient cases to be performed at the hospital's main campus, and 3,300 cases to be performed at the Farmington Outpatient Surgery Center.

- Salary and wage increases are anticipated at 3% per year.
- Benefits expense is calculated at 29% of salaries and wages.
- Supply and drug expense is a variable expense and will increase at a rate consistent with volume increases. Inflation and other increases are calculated at 3% per year.
- Lease expense has been projected based on anticipated annual rental increases for the property.
- Depreciation expense is based on an initial investment of $10 million in medical equipment, non-medical equipment, construction and design costs.

d. Provide documentation operating room the basis to support the proposed rates for each of the FYs as reported in Financial Attachment II. Provide a copy of the rate schedule for the proposed service(s).

Fiscal Year	Rate	Notes
2012	$6,200	FY 2012 average gross charge for outpatient surgery
2013	$6,572	Assuming a 6% price increase
2014	$7,000	$6,966 assuming a 6% price increase, rounded to the nearest $100
2015	$7,400	$7,384 assuming a 6% price increase, rounded to the nearest $100
2016	$7,800	$7,827 assuming a 6% price increase, rounded to the nearest $100

e. Identify the entity that will be billing for the proposed service(s).

Connecticut Children's Medical Center will be billing for facility charges.

f. Provide the minimum number of units required to show an incremental gain from operations for each fiscal year.

FY 2014

Projected net revenue	$3,885, 588
Projected number of cases	1,110
Projected net revenue per case	$3,501
Projected total operating expenses	$2,555,611
Projected minimum number of units required to show an incremental gain	730

FY 2015

Projected net revenue	$6,933,067
Projected number of cases	1,910
Projected net revenue per case	$3,630
Projected total operating expenses	$3,368,721
Projected minimum number of units required to show an incremental gain	928

FY 2016

Projected net revenue	$8,918,942
Projected number of cases	2,368
Projected net revenue per case	$3,766
Projected total operating expenses	$3,608,643
Projected minimum number of units required to show an incremental gain	958

g. Explain any projected incremental losses from operations contained in the financial projections that result from the implementation and operation of the CON proposal.

We do not anticipate any incremental losses from operations that result from the implementation and operation of the CON proposal.

h. Describe how this proposal is cost effective.

Demand for outpatient surgical services from Connecticut Children's exceeds the capacity of our current facilities. This proposal is cost effective from two perspectives.

1. Connecticut Children's is very cost effective as consistently demonstrated by its being in the lowest cost quartile when benchmarked against other independent Children's Hospitals. In a recent analysis of 2011 financial results prepared by Goldman Sachs, Connecticut Children's had the 6th lowest cost per adjusted patient day out of 34 independent Children's Hospitals in the analysis. The five lower cost hospitals were located in areas of the country that have a lower cost of living.
2. Our main building in Hartford is landlocked and we cannot expand the ground level footprint. Increasing our capacity vertically would require extensive and prohibitively expensive retrofitting of the building superstructure to meet the current regulatory and code requirements. It is more cost-effective, less disruptive to current operations and more conducive to meeting patient and family needs for us to develop an outpatient surgery center outside of the hospital.

Appendix A
Connecticut Children's Outpatient Surgery Volume
by Town (CY11)

State	County	Town	Surgeries
CT	FAIRFIELD	BETHEL	14
		BRIDGEPORT	20
		BROOKFIELD	9
		DANBURY	41
		DARIEN	0
		EASTON	4
		FAIRFIELD	13
		GREENWICH	3
		MONROE	14
		NEW CANAAN	1
		NEW FAIRFIELD	6
		NEWTOWN	15
		NORWALK	9
		REDDING	2
		RIDGEFIELD	3
		SHELTON	11
		SHERMAN	5
		STAMFORD	12
		STRATFORD	14
		TRUMBULL	12
		WESTON	2
		WESTPORT	3
		WILTON	1
		Total	214

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Appendix A
Connecticut Children's Outpatient Surgery Volume
by Town (CY11)

State	County	Town	Surgeries
CT	HARTFORD	AVON	93
		BERLIN	81
		BLOOMFIELD	61
		BRISTOL	292
		BURLINGTON	41
		CANTON	59
		EAST GRANBY	25
		EAST HARTFORD	293
		EAST WINDSOR	36
		ENFIELD	160
		FARMINGTON	125
		GLASTONBURY	170
		GRANBY	61
		HARTFORD	836
		HARTLAND	11
		MANCHESTER	266
		MARLBOROUGH	46
		NEW BRITAIN	368
		NEWINGTON	118
		PLAINVILLE	80
		ROCKY HILL	72
		SIMSBURY	141
		SOUTH WINDSOR	110
		SOUTHINGTON	163
		SUFFIELD	53
		WEST HARTFORD	327
		WETHERSFIELD	119
		WINDSOR	137
		WINDSOR LOCKS	62
		Total	4,406

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Appendix A
Connecticut Children's Outpatient Surgery Volume
by Town (CY11)

State	County	Town	Surgeries
CT	LITCHFIELD	BARKHAMSTED	13
		BETHLEHEM	4
		BRIDGEWATER	2
		CANAAN (TOWNSHIP)	3
		COLEBROOK	2
		CORNWALL+WARREN	2
		GOSHEN	6
		HARWINTON	20
		KENT	4
		LITCHFIELD	13
		MORRIS	6
		NEW HARTFORD	40
		NEW MILFORD	24
		NORFOLK	7
		NORTH CANAAN	2
		PLYMOUTH	42
		ROXBURY	1
		SALISBURY	4
		SHARON	4
		THOMASTON	14
		TORRINGTON	118
		WASHINGTON	1
		WATERTOWN	41
		WINCHESTER	39
		WOODBURY	9
		Total	421

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Appendix A
Connecticut Children's Outpatient Surgery Volume
by Town (CY11)

State	County	Town	Surgeries
CT	MIDDLESEX	CHESTER	4
		CLINTON	3
		CROMWELL	56
		DEEP RIVER	7
		DURHAM	6
		EAST HADDAM	25
		EAST HAMPTON	63
		ESSEX	5
		HADDAM	19
		KILLINGWORTH	2
		MIDDLEFIELD	11
		MIDDLETOWN	146
		OLD SAYBROOK	9
		PORTLAND	34
		WESTBROOK	4
		Total	394

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Appendix A
Connecticut Children's Outpatient Surgery Volume
by Town (CY11)

State	County	Town	Surgeries
CT	NEW HAVEN	ANSONIA	5
		BEACON FALLS	6
		BETHANY	1
		BRANFORD	0
		CHESHIRE	26
		DERBY	3
		EAST HAVEN	3
		GUILFORD	7
		HAMDEN	5
		MADISON	1
		MERIDEN	199
		MIDDLEBURY	8
		MILFORD	7
		NAUGATUCK	42
		NEW HAVEN	9
		NORTH BRANFORD	2
		NORTH HAVEN	2
		ORANGE	1
		OXFORD	9
		PROSPECT	9
		SEYMOUR	5
		SOUTHBURY	28
		WALLINGFORD	33
		WATERBURY	255
		WEST HAVEN	7
		WOLCOTT	30
		WOODBRIDGE	0
		Total	703

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Appendix A
Connecticut Children's Outpatient Surgery Volume
by Town (CY11)

State	County	Town	Surgeries
CT	NEW LONDON	BOZRAH	2
		COLCHESTER	69
		EAST LYME	9
		FRANKLIN	3
		GRISWOLD+LISBON	44
		GROTON	36
		LEBANON	35
		LEDYARD	24
		LYME	0
		MONTVILLE	30
		NEW LONDON	35
		NORTH STONINGTON	6
		NORWICH	103
		OLD LYME	11
		PRESTON	18
		SALEM	9
		SPRAGUE	7
		STONINGTON	11
		VOLUNTOWN	6
		WATERFORD	21
		Total	479
	TOLLAND	ANDOVER	9
		BOLTON	25
		COLUMBIA	27
		COVENTRY	54
		ELLINGTON	83
		HEBRON	48
		MANSFIELD	43
		SOMERS	30
		STAFFORD+UNION	51
		TOLLAND	83
		VERNON	112
		WILLINGTON	12
		Total	577

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Appendix A
Connecticut Children's Outpatient Surgery Volume
by Town (CY11)

State	County	Town	Surgeries
CT	WINDHAM	ASHFORD	11
		BROOKLYN	13
		CANTERBURY	13
		CHAPLIN	8
		EASTFORD	5
		HAMPTON	10
		KILLINGLY	29
		PLAINFIELD	38
		POMFRET	8
		PUTNAM	32
		SCOTLAND	4
		STERLING	7
		THOMPSON	7
		WINDHAM	103
		WOODSTOCK	16
		Total	304
CT			7,498
MA			39
NY			13
RI			1
Other			9
Total			7,560

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Appendix B
Connecticut Children's operating room Block Time Schedule (FY12)

Day	Wk	Room1	Room 2	Room3	Room 4	Room 5	Room 6	Room 7	Room 8
Mon	1	Ortho	GU	CV	Gen Surg	Gen Surg	GU	Dental; ENT	GI
	2		Neurosurg					ENT, FCFS 11-1; ENT	
	3							ENT	
	4							FCFS	
	5								
Tues	1	Ortho	ENT	ENT	GU	ENT	GU	FCFS	GI
	2		Neurosurg					FCFS 7:30; ENT; DENTAL	
	3		ENT					Ophth; ENT	
	4		Neurosurg						
	5			Neurosurg					
Wed	1	Ortho	GU	Gen surg	GU	Gen Surg	ENT	ENT; Dental	GI
	2	ENT			Plastics; GU			ENT	
	3	Ortho			GU			ENT; Dental	
	4	ENT							
	5	Ortho							
Thur	1	Ortho	Sports Ortho	Gen surg	Gen Surg	ENT	Ophth; ENT	Dental	GI
	2		Neurosurg						
	3		Ortho				ENT; FCFS		
	4						Ophth; ENT		
	5								
Fri	1	GU	Craniofacial	Sports Med	Plastics	ENT	ENT; Gen Surg	Dental - 1 pm; GI 1-3:30	GI
	2		GU; Gen Surg				ENT		
	3		Craniofacial				ENT; Gen Surg	ENT	
	4		GU; Gen Surg				ENT	Dental - 1 pm; GI 1-3:30	
	5								

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Appendix C
Connecticut Children's Hartford operating room Block Time Schedule (if proposed facility is opened)

Day	Wk	Room1	Room 2	Room3	Room 4	Room 5	Room 6	Room 7	Room 8
Mon	1	Ortho	GU	CV	Gen Surg	Gen Surg	GU	Dental; ENT	GI
	2		Neurosurg					ENT, FCFS 11-1; ENT	
	3							ENT	
	4							FCFS	
	5								
Tues	1	Ortho	ENT	ENT	GU	ENT	GU	FCFS	GI
	2		Neurosurg					FCFS 7:30; ENT; DENTAL	
	3		ENT			ENT			
	4		Neurosurg					Ophth; ENT	
	5			Neurosurg					
Wed	1	Ortho	GU	Gen surg	GU	Gen Surg	ENT	ENT; Dental	GI
	2	ENT			Plastics				
	3	Ortho			GU			ENT	
	4	ENT							
	5	Ortho						ENT; Dental	
Thur	1	Ortho	Sports Ortho	Gen surg	Gen Surg	ENT	Ophth; ENT	Dental	GI
	2		Neurosurg						
	3						ENT; FCFS		
	4		Ortho				Ophth; ENT		
	5								
Fri	1	GU	Craniofacial	Sports Med	Plastics	ENT	ENT; Gen Surg	Dental - 1 pm; GI 1-3:30	GI
	2		GU; Gen Surg				ENT		
	3		Craniofacial				ENT; Gen Surg	ENT	
	4								
	5		GU; Gen Surg				ENT	Dental - 1 pm; GI 1-3:30	

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Appendix D
Connecticut Children's proposed Farmington operating room Block Time Schedule

<table>
<tr><th rowspan="2">day</th><th rowspan="2">week</th><th colspan="2">Room 1</th><th colspan="2">Room 2</th></tr>
<tr><th>am</th><th>pm</th><th>am</th><th>pm</th></tr>
<tr><td rowspan="4">Mon</td><td>1</td><td rowspan="4">Urology</td><td>Urology</td><td rowspan="4">GI</td><td rowspan="4">ENT</td></tr>
<tr><td>2</td><td>FCFS</td></tr>
<tr><td>3</td><td>Urology</td></tr>
<tr><td>4</td><td>FCFS</td></tr>
<tr><td rowspan="4">Tues</td><td>1</td><td colspan="2">Urology</td><td rowspan="4">GI</td><td rowspan="4">ENT</td></tr>
<tr><td>2</td><td colspan="2">Pedi Gen</td></tr>
<tr><td>3</td><td colspan="2">Urology</td></tr>
<tr><td>4</td><td colspan="2">Pedi Gen</td></tr>
<tr><td rowspan="4">Wed</td><td>1</td><td colspan="2">Pedi Gen</td><td rowspan="4">GI</td><td rowspan="4">ENT</td></tr>
<tr><td>2</td><td colspan="2">Urology</td></tr>
<tr><td>3</td><td colspan="2">Pedi Gen</td></tr>
<tr><td>4</td><td colspan="2">Urology</td></tr>
<tr><td rowspan="4">Thur</td><td>1</td><td colspan="2" rowspan="4">Sports Medicine</td><td rowspan="4">GI</td><td rowspan="4">ENT</td></tr>
<tr><td>2</td></tr>
<tr><td>3</td></tr>
<tr><td>4</td></tr>
<tr><td rowspan="4">Fri</td><td>1</td><td colspan="2" rowspan="4">Sports Medicine</td><td rowspan="4">GI</td><td rowspan="4">ENT</td></tr>
<tr><td>2</td></tr>
<tr><td>3</td></tr>
<tr><td>4</td></tr>
</table>

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Appendix E
Connecticut Children's Medical Center DPH License

STATE OF CONNECTICUT

Department of Public Health

License No. 2-CH

Children's Hospital

In accordance with the provisions of the General Statutes of Connecticut Section 19a-491:

Connecticut Children's Medical Center of Hartford, CT, d/b/a Connecticut Children's Medical Center is hereby licensed to maintain and operate a Children's Hospital.

Connecticut Children's Medical Center is located at 282 Washington Street, Hartford, CT 06106

The maximum number of beds shall not exceed at any time:
115 Licensed Bed
72 Bassinet

This license expires **December 31, 2011** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, January 1, 2010.

License revised to reflect:
* Increased Bassinets by 40 and added (1) Satellite eff: 6/28/11

Satellites
Neo-Natal Intensive Care Unit, New Building, Hartford Hospital
CCMC/Waterbury Unit/Sacred Heart Bldg/St. Mary's Hospital, 56 Franklin Street, Waterbury CT
* Neo-Natal Intensive Care Unit, John Dempsey Hospital, 263 Farmington Avenue, Farmington, CT

Jewel Mullen, MD, MPH, MPA
Commissioner

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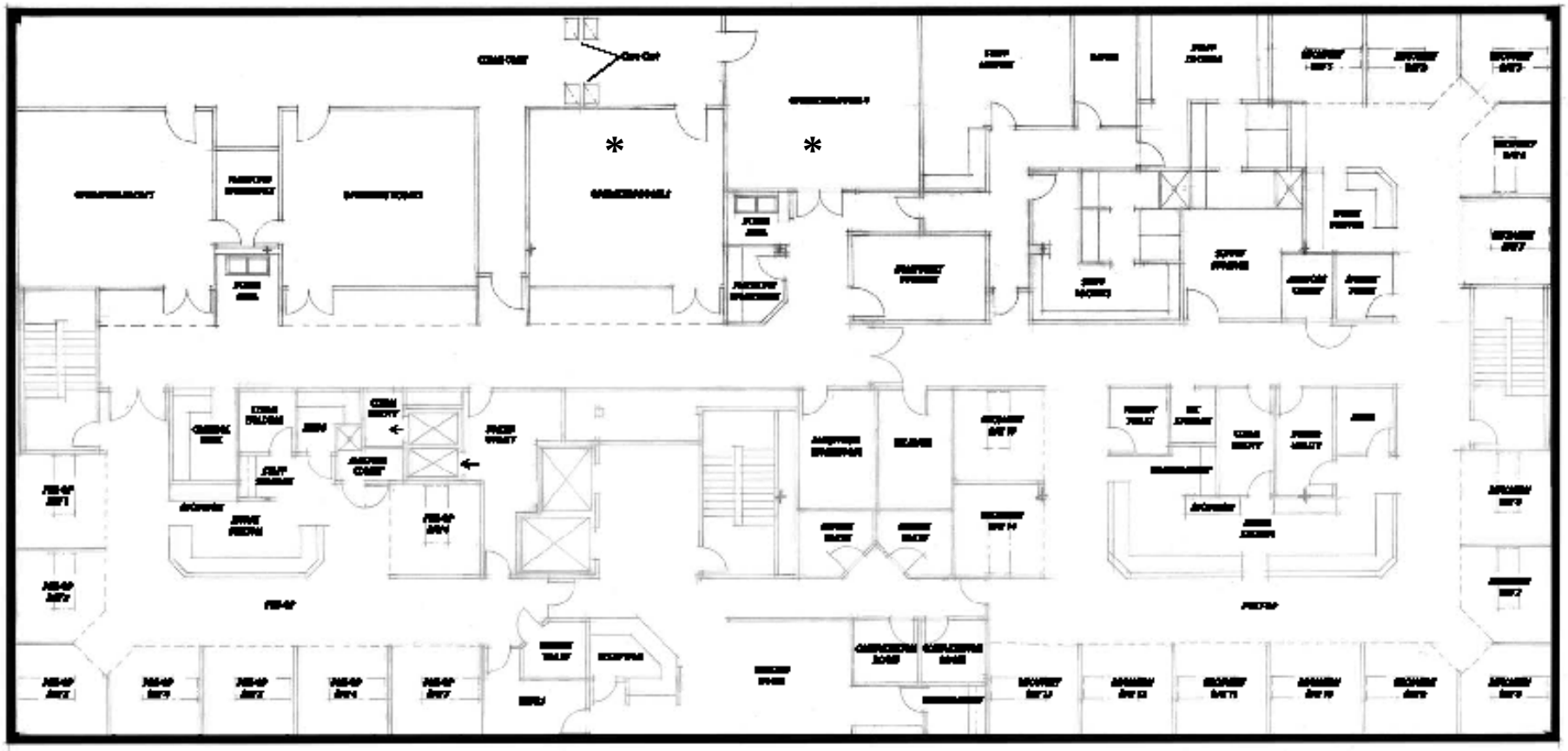
Appendix F
Floor Plan of Proposed Facility
(see separate pdf file for clearer picture)

18,321 square feet Start construction 2/1/2013 Complete construction 8/1/2013 Begin operations 9/1/2013 *****Shell only



FLOOR PLAN

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Appendix G
Connecticut Children's Medical Center Charity Care Policy

	Connecticut Children's Medical Center - Policy and Procedure Manual		
Connecticut Children's MEDICAL CENTER	Fiscal	Date Effective:	October 1, 2011
	Patient Financial Assistance	Date of Origin:	March 1, 2002
	Approved By: Finance Administration	Date Approved:	September 28, 2011

Purpose

The purpose of this policy is to establish the process for providing financial assistance for patients of Connecticut Children's Medical Center and/or Connecticut Children's Specialty Group (hereafter referred to as Connecticut Children's)

Policy

Connecticut Children's will provide care to patients presenting with emergency medical conditions (as defined by federal law, known as "EMTALA") without discrimination regardless of eligibility for financial assistance under this policy.

It is the policy of Connecticut Children's to provide financial assistance to all eligible patients, who are uninsured, underinsured, ineligible for a government program operating room otherwise unable to pay for health care services due to limited financial resources. Connecticut Children's Patient Financial Assistance (PFA) consists of Free Bed Funds and Charity Care. Charity Care will be applied when the Free Bed Funds have been exhausted and/or the application does not meet the requirements operating room restrictions of the Free Bed Funds.

Scope

This Policy applies to all Connecticut Children's services regardless of the location at which they are provided.

Definitions

Eligibility Criteria: The criteria set forth in this policy (and supported by procedure) to determine whether operating room not a patient meets the requirements for financial assistance.

Family Size: The total number of those family members living in the same household, who meet at least one of the following characteristics:

- Parent/Guardian (including step-parent regardless of guardianship status)
- Each child under the age of 19
- A family member between the ages of 18 and 25, who is enrolled as a full-time college operating room trade-school student

- An elderly (over the age of 65) operating room disabled (as defined by Medicaid operating room State welfare guidelines) family member, who is not collecting Social Security
- A family member who falls under plenary guardianship (patients over the age of 17 with a court decree appointing an adult as guardian, regardless of SSI/SSD status)

A patient's family size will be confirmed by proper identification (as defined in procedure) of all pertinent family members.

Federal Poverty Level Guidelines: The federal poverty level guidelines (hereafter, the FPLG) are established by the United States Department of Health and Human Services on an annual basis.

Family Income: A patient's family income will be assessed in accordance with the FPLG. His/Her family income cannot exceed 400% of the FPLG in order for the patient to be eligible for charity care. (Procedure will determine income calculations.)

Foreign Nationals: Under this policy, a foreign national shall be defined as an individual who is a citizen of any country other than the United States. A person who was born outside the jurisdiction of the United States, is a citizen of a foreign country, and has not become a naturalized U.S. citizen under U.S. law

Free Bed Funds: Represent the funds operating room assets donated to Connecticut Children's, Hartford Hospital, operating room John Dempsey Hospital (the pediatric services of which have been moved to Connecticut Children's) to benefit pediatric patients who meet the applicability restrictions as set forth by the donor. The Nominator is the entity operating room organization which has been authorized to submit and approve Free Bed Fund expenditures.

Uninsured: A patient, who has no level of insurance operating room third party coverage, including Medicare, Medicaid, Champus, operating room any other government operating room commercial insurance program, to assist in meeting his operating room her payment obligations for health care services.

Underinsured: Under this policy, an underinsured patient is a patient who has some level of insurance operating room third party coverage, yet has out-of-pocket health care-related expenditures of more than 10% of their family income. Underinsurance includes, but is not limited to, deductibles, coinsurance, co-payments, exhausted benefits, and lifetime benefit limits.

Procedure (Procedure operating room Guidelines operating room Protocol)

I Eligibility Criteria for Financial Assistance

In determining eligibility for financial assistance, Connecticut Children's

(a) Shall ask the patient/guarantor to complete an application as well as to supply other financial information (including necessary documentation) to substantiate a determination of financial eligibility. Connecticut Children's will also require the

patient/guarantor to complete a separate application if the patient/guarantor shows interest in establishing a payment plan.

(b) Shall determine the applicant's status with respect to residency.
   i. Connecticut residents can receive up to 6 months of financial assistance (both retrospectively and prospectively) from the date of application. Undocumented aliens can be deemed residents of Connecticut as long as they meet the criteria that defines residency. A resident represents someone who has lived in Connecticut for at least 30 days and has established an address in Connecticut. The patient/guarantor must prove residency as set forth in procedure.
   ii. U.S. citizens, who are not Connecticut residents, may qualify for specific episodes of care only.
   iii. Foreign Nationals will only be considered for financial assistance if their cases are considered urgent operating room emergent, and then only when all other forms of financing have been exhausted (including Medicaid and charitable donations). As with U.S. citizens who are non-Connecticut residents, they may qualify for specific episodes of care only.

(c) May rely on publicly available information and resources to determine the financial resources of the patient/guarantor.

(d) May pursue alternative sources of payment from public and/or private benefit programs.

(e) May review the prior payment history of the patient/guarantor, especially regarding, but not limited to, medical bills

(f) May consider the patient's inclusion in Women, Infants and Children programs; the patient's receipt of state-funded prescription programs, food stamps, subsidized school lunches, operating room subsidized housing; and/or the patient's participation in other public assistance as presumptive eligibility if and when the patient/guarantor provides insufficient information to determine eligibility through the means set forth in this policy.

II Basis for Calculating Patient Liability – Financial Assistance Guidelines

Eligibility criteria for financial assistance may include, but is not limited to, such factors as family size, liquid and non-liquid assets, employment status, amount and frequency of healthcare expenses, and other financial resources available to the patient. Connecticut Children's will apply any resulting discounts determined by the protocol noted below to applicable account balances.

Given the aforementioned eligibility criteria Connecticut Children's will determine eligibility for financial assistance in accordance with the following guidelines:

(a) Free Bed Funds

Free Bed Funds may be granted if the patient meets the eligibility restrictions of the fund. Screening of the PFA application for Free Bed Fund applicability will be performed either by a Financial Assistance Coordinator operating room by the Patient Financial Services Manager of Self Pay.

If the patient does not meet the eligibility criteria of any Free Bed Fund, the PFA shall be considered for Charity Care

(b) Charity Care:

Free care operating room a reduction to patient liability may be granted if the following criteria are met:

i. If family income is at operating room below 250% of the FPLG, the patient may qualify for a 100% discount of charges for health care services.

ii. If family income is between 250 and 400% of the FPLG, the patient may qualify for health care services to be provided at cost, through the discounting of billed charges by the hospital's most recently reported ratio of cost to charge to the State of Connecticut Office of Health Care Access.

iii. If the family income is greater than 400% of the FPLG, billed charges will be discounted in accordance with the requirements of IRS Section 501(r)(5); i.e., by using either the best, operating room an average of the three best, negotiated commercial rates, operating room the Medicare rate.

III Method for Applying for Financial Assistance

(a) Signage and summary brochures regarding how to apply and who to contact for financial assistance will be available in Connecticut Children's Emergency Department and Connecticut Children's patient registration check-in areas. All admission and registration personnel will serve as informational resources to patients regarding this policy. Information about Financial Assistance can also be found on Connecticut Children's Website and the Inpatient "Welcome Guide".

(b) Upon a request from a patient seeking financial assistance, a Financial Assistance Coordinator will provide the patient with the appropriate application along with a list of required documents. If the patient/guarantor does not provide the relevant information that is necessary to make a financial eligibility determination within thirty (30) calendar days of the financial counselor's written request, Connecticut Children's will then consider the patient's financial assistance application incomplete and, in turn, null and void. Depending on the outcome of the determination, the financial assistance coordinator will mail a letter of denial operating room approval to the patient within thirty (30) days receipt of a complete application. Given an unfavorable outcome, every applicant has the right to reapply.

(c) For Connecticut residents, approved applications can cover health care services up to 6 months retrospectively from the date of each application. Although, at the discretion of the Director of Patient Access, operating room designee, the retrospective period for an approved application can extend past 6 months. In respect to prospective coverage of an approved application for financial assistance, the coverage period will not exceed 6 months from the date of application. A patient may reapply at the end of the six-month period if he/she has either an outstanding balance corresponding to a more recent date of service falling outside the previous coverage period operating room an impending scheduled service falling outside the previous coverage period.

IV. Payment Plans

Connecticut Children's is committed to providing the available health care, along with convenient billing services, payment options and financial assistance.

Connecticut Children's Medical Center and Connecticut Children's Specialty Group are healthcare providers and as such, are not able to extend payments over a lengthy period of

time. Therefore, we request bills be paid in full within thirty days. If funds are not available to pay in full, the guarantor is responsible to obtain the necessary funds from a different source, such as obtaining a loan through their bank and/or credit union. We also accept MasterCard, Visa, American Express and Discover. In the event that the guarantor cannot obtain the necessary funding and/or are unable to use a credit card, payment arrangements would be made as a last resort under the following terms:

Monthly payments are to be established and paid each and every month.

Self-Pay Balance	Payment Plan
Under $100	Payment in full
$100 to $349	3-month payment plan: one-third of the balance to be paid each month
$350 to $1,199	6-month payment plan: one-sixth of the balance to be paid each month
$1,200 to $2,499	12-month payment plan: one-twelfth of the balance to be paid each month
$2,500 and above	Minimum $200 to be paid each month.

The above payment schedule is the only one available, any extenuating circumstances operating room any deviation from this plan must have the approval from the following:

Manager operating room Assistant Manager of Patient Accounts operating room Manager operating room Assistant Manager of Patient Access for accounts under $5,000

Director of Patient Financial Services operating room Director of Patient Access on accounts $5,000 - $10,000

CFO on accounts over $10,000

At the discretion of the Director, Patient Financial Services, operating room Director, Patient Access, an additional prompt pay discount may be granted on outstanding balances if payment in full is made.

We accept Visa, American Express, Discover, and MasterCard. For your convenience, credit card payments are accepted over the telephone at 860.696.6020 operating room (Toll Free) 888.690.2262 operating room in Connecticut Children’s at our cashier's window located at 2C.

V Non-payment Actions - Relationship to Billing/Collection Practices

(a) In the event a patient fails to qualify for financial assistance and, in turn, does not pay timely his/her financial liability operating room in the event a patient does

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qualify for financial assistance, yet does not pay timely any outstanding discounted patient liability pursuant to this policy, Connecticut Children's reserves the right to begin collection activity, including but not limited to, instituting legal action and reporting such matters to one operating room more credit reporting agencies.

(b) Connecticut Children's also reserves the right not to pursue such measures as those noted above for those patients making good faith efforts to resolve their respective outstanding liability.

VI Regulatory Compliance

Connecticut Children's will comply with all state and federal laws, rules and regulations applicable to the conduct described in this policy.

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Financial Attachment I

12. C (i). Please provide one year of actual results and three years of projections of **Total Facility** revenue, expense and volume without, incremental to and with the CON proposal in the following reporting format:

Total Facility:	**FY 2011**	**FY 2012**	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2013**	**FY 2013**
	Actual	**Projected**	**Projected**	**Projected**	**Projected**	**Projected**	**Projected**
Description	**Results**	**W/out CON**	**Increm**	**With CON**	**W/out CON**	**Increm**	**With CON**
NET PATIENT REVENUE							
Non-Government	$113,614,252	$140,440,285		$140,440,285	$158,524,937		$158,524,937
Medicare	$193,361	$85,784		$85,784	$86,562		$86,562
Medicaid & Other Medical Assistance	$87,275,065	$94,997,746		$94,997,746	$95,757,365		$95,757,365
Other Government	$1,364,828	$1,994,456		$1,994,456	$2,012,539		$2,012,539
Total Net Patient Patient Revenue	$202,447,506	$237,518,271	$0	$237,518,271	$256,381,403	$0	$256,381,403
Other Operating Revenue	$15,994,982	$19,827,418		$19,827,418	$15,718,243		$15,718,243
Revenue from Operations	$218,442,488	$257,345,689	$0	$257,345,689	$272,099,646	$0	$272,099,646
OPERATING EXPENSES							
Salaries and Fringe Benefits	$115,319,074	$125,060,293		$125,060,293	$133,675,687		$133,675,687
Professional / Contracted Services	$36,541,660	$56,040,107		$56,040,107	$58,660,894		$58,660,894
Supplies and Drugs	$14,697,511	$16,573,259		$16,573,259	$16,932,899		$16,932,899
Bad Debts	$1,461,264	$4,453,520		$4,453,520	$4,453,520		$4,453,520
Other Operating Expense	$27,597,095	$28,805,619		$28,805,619	$30,009,920		$30,009,920
Subtotal	$195,616,604	$230,932,798	$0	$230,932,798	$243,732,919	$0	$243,732,919
Depreciation/Amortization	$10,397,231	$12,004,526		$12,004,526	$13,113,244		$13,113,244
Interest Expense	$1,187,248	$1,168,450		$1,168,450	$1,168,450		$1,168,450
Lease Expense	$5,256,873	$8,411,885		$8,411,885	$8,411,885		$8,411,885
Total Operating Expense	$212,457,956	$252,517,659	$0	$252,517,659	$266,426,498	$0	$266,426,498
Gain/(Loss) from Operations	$5,984,533	$4,828,030	$0	$4,828,030	$5,673,148	$0	$5,673,148
Plus: Non-Operating Revenue	$7,000,191	$978,235		$978,235	$1,051,540		$1,051,540
Revenue Over/(Under) Expense	$12,984,724	$5,806,265	$0	$5,806,265	$6,724,688	$0	$6,724,688
FTEs	1229.2	1,315.0		1,315.0	1,359.7		1,359.7
*Volume Statistics:	10,068	10,140		10,140	10,140		10,140

Provide projected inpatient and/or outpatient statistics for any new services and provide actual and projected inpatient and/or outpatient statistics for any existing services which will change due to the proposal.

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Total Facility:	FY 2014 Projected	FY 2014 Projected	FY 2014 Projected	FY 2015 Projected	FY 2015 Projected	FY 2015 Projected
Description	W/out CON	Incremental	With CON	W/out CON	Incrementa	With CON
NET PATIENT REVENUE						
Non-Government	$174,248,004	$2,411,688	$176,659,692	$187,868,288	$4,395,967	$192,264,255
Medicare	$87,366	$0	$87,366	$88,192	$0	$88,192
Medicaid & Other Medical Assistance	$96,545,331	$1,431,000	$97,976,331	$97,355,806	$2,463,000	$99,818,806
Other Government	$2,031,235	$42,900	$2,074,135	$2,050,423	$74,100	$2,124,523
Total Net Patient Patient Revenue	$272,911,936	$3,885,588	$276,797,524	$287,362,709	$6,933,067	$294,295,776
Other Operating Revenue	$18,718,243		$18,718,243	$18,618,243		$18,618,243
Revenue from Operations	$291,630,179	$3,885,588	$295,515,767	$305,980,952	$6,933,067	$312,914,019
OPERATING EXPENSES						
Salaries and Fringe Benefits	$140,200,764	1,211,464.80	$141,412,229	$149,204,530	$1,253,866	$150,458,396
Professional / Contracted Services	$60,624,894		$60,624,894	$62,501,966		$62,501,966
Supplies and Drugs	$17,300,342	$369,175	$17,669,517	$17,675,760	$673,362	$18,349,122
Bad Debts	$4,453,520	$63,407	$4,516,927	$4,453,520	$107,448	$4,560,968
Other Operating Expense	$30,412,416		$30,412,416	$32,052,276		$32,052,276
Subtotal	$252,991,937	$1,644,047	$254,635,984	$265,888,051	$2,034,676	$267,922,727
Depreciation/Amortization	$14,221,962	$412,500	$14,634,462	$15,315,430	$825,000	$16,140,430
Interest Expense	$1,168,450		$1,168,450	$1,168,450		$1,168,450
Lease Expense	$11,111,885	$499,064	$11,610,950	$11,111,885	$509,045	$11,620,931
Total Operating Expense	$279,494,235	$2,555,611	$282,049,846	$293,483,817	$3,368,721	$296,852,538
Gain/(Loss) from Operations	$12,135,944	$1,329,977	$13,465,922	$12,497,135	$3,564,346	$16,061,481
Plus: Non-Operating Revenue	$1,051,540		$1,051,540	$1,051,540		$1,051,540
Revenue Over/(Under) Expense	$13,187,484	$1,329,977	$14,517,462	$13,548,675	$3,564,346	$17,113,021
FTEs	1,386.6	15.50	1,402.1	1,425.0	15.50	1,440.5
*Volume Statistics:	10,140	1,110	11,250	10,140	1,910	12,050

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Total Facility:	FY 2016 Projected	FY 2016 Projected	FY 2016 Projected
Description	W/out CON	Incrementa	With CON
NET PATIENT REVENUE			
Non-Government	$200,943,934	$5,771,342	$206,715,276
Medicare	$89,031	$0	$89,031
Medicaid & Other Medical Assistance	$98,180,863	$3,054,000	$101,234,863
Other Government	$2,069,937	$93,600	$2,163,537
Total Net Patient Patient Revenue	$301,283,765	$8,918,942	$310,202,707
Other Operating Revenue	$15,718,243		$15,718,243
Revenue from Operations	$317,002,008	$8,918,942	$325,920,950
OPERATING EXPENSES			
Salaries and Fringe Benefits	$155,825,828	$1,297,751	$157,123,579
Professional / Contracted Services	$64,877,163		$64,877,163
Supplies and Drugs	$18,059,324	$834,828	$18,894,151
Bad Debts	$4,453,520	$131,838	$4,585,358
Other Operating Expense	$33,387,436		$33,387,436
Subtotal	$276,603,270	$2,264,417	$278,867,687
Depreciation/Amortization	$16,408,898	$825,000	$17,233,898
Interest Expense	$1,168,450		$1,168,450
Lease Expense	$11,111,885	$519,226	$11,631,112
Total Operating Expense	$305,292,504	$3,608,643	$308,901,148
Gain/(Loss) from Operations	$11,709,504	$5,310,299	$17,019,803
Plus: Non-Operating Revenue	$1,051,540		$1,051,540
Revenue Over/(Under) Expense	$12,761,044	$5,310,299	$18,071,343
FTEs	1,440.9	15.50	1,456.4
*Volume Statistics:	10,140	2,368	12,508

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Financial Attachment II

12.C(ii). Please provide **three** years of projections of incremental revenue, expense and volume statistics **attributable to the proposal** in the following reporting format:

Type of Service Description	Outpatient surgery									
Type of Unit Description:	Amb Surg									
# of Months in Operation	12									
FY 2014	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FY Projected Incremental		Rate	Units	Gross	Allowances/	Charity	Bad	Net	Operating	Gain/(Loss)
Total Incremental Expenses:	**$2,555,611**			Revenue	Deductions	Care	Debt	Revenue	Expenses	from Operations
				Col. 2 * Col. 3				Col.4 - Col.5	Col. 1 Total *	Col. 8 - Col. 9
Total Facility by								-Col.6 - Col.7	Col. 4 / Col. 4 Total	
Payer Category:										
Medicare		$7,000	0	$0				$0	$0	$0
Medicaid		$7,000	477	$3,339,000	$1,908,000			$1,431,000	$1,098,222	$332,778
CHAMPUS/TriCare		$7,000	11	$77,000	$34,100			$42,900	$25,326	$17,574
Total Governmental			488	$3,416,000	$1,942,100	$0	$0	$1,473,900	$1,123,548	$350,352
Commericial Insurers		$7,000	611	$4,277,000	$1,879,436			$2,397,564	$1,406,737	$990,827
Uninsured		$7,000	11	$77,000	$47,476	$15,400		$14,124	$25,326	($11,202)
Total NonGovernment		$7,000	622	$4,354,000	$1,926,912	$15,400	$0	$2,411,688	$1,432,063	$979,625
Total All Payers		$7,000	1,110	$7,770,000	$3,869,012	$15,400	$0	$3,885,588	$2,555,611	$1,329,977
Type of Service Description	Outpatient surgery									
Type of Unit Description:	Amb Surg									
# of Months in Operation	12									
FY 2015	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FY Projected Incremental		Rate	Units	Gross	Allowances/	Charity	Bad	Net	Operating	Gain/(Loss)
Total Incremental Expenses:	**$3,368,721**			Revenue	Deductions	Care	Debt	Revenue	Expenses	from Operations
				Col. 2 * Col. 3				Col.4 - Col.5	Col. 1 Total *	Col. 8 - Col. 9
Total Facility by								-Col.6 - Col.7	Col. 4 / Col. 4 Total	
Payer Category:										
Medicare		$7,400		$0				$0	$0	$0
Medicaid		$7,400	821	$6,075,400	$3,612,400			$2,463,000	$1,448,021	$1,014,979
CHAMPUS/TriCare		$7,400	19	$140,600	$66,500			$74,100	$33,511	$40,589
Total Governmental			840	$6,216,000	$3,678,900	$0	$0	$2,537,100	$1,481,532	$1,055,568
Commericial Insurers		$7,400	1,051	$7,777,400	$3,405,829			$4,371,571	$1,853,678	$2,517,893
Uninsured		$7,400	19	$140,600	$89,604	$26,600		$24,396	$33,511	($9,115)
Total NonGovernment		$7,400	1,070	$7,918,000	$3,495,433	$26,600	$0	$4,395,967	$1,887,189	$2,508,778
Total All Payers		$7,400	1,910	$14,134,000	$7,174,333	$26,600	$0	$6,933,067	$3,368,721	$3,564,346
Type of Service Description	Outpatient surgery									
Type of Unit Description:	Amb Surg									
# of Months in Operation	12									
FY 2016	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
FY Projected Incremental		Rate	Units	Gross	Allowances/	Charity	Bad	Net	Operating	Gain/(Loss)
Total Incremental Expenses:	**$3,608,643**			Revenue	Deductions	Care	Debt	Revenue	Expenses	from Operations
				Col. 2 * Col. 3				Col.4 - Col.5	Col. 1 Total *	Col. 8 - Col. 9
Total Facility by								-Col.6 - Col.7	Col. 4 / Col. 4 Total	
Payer Category:										
Medicare		$7,800		$0				$0	$0	$0
Medicaid		$7,800	1,018	$7,940,400	$4,886,400			$3,054,000	$1,551,351	$1,502,649
CHAMPUS/TriCare		$7,800	24	$187,200	$93,600			$93,600	$36,574	$57,026
Total Governmental			1,042	$8,127,600	$4,980,000	$0	$0	$3,147,600	$1,587,925	$1,559,675
Commericial Insurers		$7,800	1,302	$10,155,600	$4,415,074			$5,740,526	$1,984,144	$3,756,382
Uninsured		$7,800	24	$187,200	$122,784	$33,600		$30,816	$36,574	($5,758)
Total NonGovernment		$7,800	1,326	$10,342,800	$4,537,858	$33,600	$0	$5,771,342	$2,020,718	$3,750,624
Total All Payers		$7,800	2,368	$18,470,400	$9,517,858	$33,600	$0	$8,918,942	$3,608,643	$5,310,299

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Appendix H
Curricula Vitae

Fernando A. Ferrer, M.D.

Curriculum Vitae

Current Positions

Executive Vice-President, Medical Affairs, Connecticut Children's Medical Center 2011 - present

Surgeon-in-Chief, Connecticut Children's Medical Center 2006 - present

C0-Chairman, Connecticut Children's Medical Center - Faculty Practice Plan, Suite 5-B 2006-2011

Director, Division of Pediatric Urology, Suite 2-E 2004-present

Connecticut Children's Medical Center
282 Washington Street
Hartford, CT 06106
(860) 545-9658

Vice Chairman, Department of Surgery 2006-present

Associate Professor of Surgery (Urology), Pediatric Oncology
University of Connecticut School of Medicine
Farmington, CT 06032

Board Director

Board Member, Child Health and Development Institute, Farmington, CT 2006-2009

Board of Christian Service, Asylum Hill Congregational Church 2009- present

Previous Positions

2001-2004 Pediatric Urologist
Assistant Professor Surgery and Pediatrics
Connecticut Children's Medical Center
University of Connecticut School of Medicine
282 Washington Street
Hartford, CT 06106

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2000-2001 Instructor of Urology 2000-2001
Pediatric Urology Fellow, Division Pediatric Urology
James Buchanan Brady Urological Institute
The Johns Hopkins Hospital
600 N. Wolfe St.
Baltimore, MD 21287-2101

Personal Information

Residence:
47 Sycamore Road
West Hartford, CT 06117
860-523-1121

Born: Passaic, New Jersey, USA
Citizenship: USA
Languages: English, Spanish
Marital Status: Married, 3 children

Education

1985 Seton Hall University, South Orange NJ, BA
1989 Georgetown University School of Medicine, Washington DC, MD
1991 Portsmouth Naval Regional Medical Center, Portsmouth VA, PGY I
1992 Naval Diving and Undersea Medical Institute, Panama City, FL
1999 University of Connecticut, Surgery/Urologic Surgery Residency, Farmington, CT
2001 The Johns Hopkins Hospital: Research/Pediatric Fellow, Baltimore, MD

Military Service/Qualifications/Awards

January 1991-May 1994: Honorable Discharge
Diving Medical Officer/ Navy Diver, Lt. CMDR, United States Navy
Naval Achievement Medal, National Defense Medal (Desert Storm)
South West Asia Service Medal (Desert Storm)
Sea Service Award, Meritorious Unit Commendation, Battle Efficiency Award.

Licenses

- State of Connecticut, current
- State of Maryland, 1991-2002
- State of Virginia, 1990-1994

Certifications

- Board Certification: American Urologic Association
- Fellow of the American Academy Pediatrics: Pediatric Urology
- Fellow of the American College of Surgeons

Memberships

- The Johns Hopkins Medical & Surgical Association
- American Colleges of Surgeons
- American Urologic Association
- American Academy of Pediatrics
- American Association Pediatric Urologists
- Society of University Urologists
- Society of Pediatric Urology
- Society of Fetal Urology
- Wee Willies Association
- American Medical Association
- Childrens Oncology Group (COG)
- American College of Physician Executives
- Hartford County Medical Society
- New England Surgical Society

National Committee Activities

- NIH/NIDDK Special Emphasis Study Section Panel ZDK1 GRB-6, 2005 - present
- Renal Tumors Committee, Children's Oncology Group, 2004-present
- Urinary Tract long-term follow-up task force, Children's Oncology Group, 2004-2009
- Fertility & Reproduction long term task force, Children's Oncology Group, 2006-2009
- Oncology Committee, AAP Section of Urology, 2003-present
- Surgical Discipline Committee, Childrens Oncology Group, 2002-present
- Soft Tissue Sarcoma Committee, Childrens Oncology Group, 2007-present

Local Committee Activities

- Board of Directors, CCMC, Faculty Practice Plan,
- American College of Surgeons, CT chapter membership Committee
- Chair, Surgical Excutive Committee, CT Children's Medical Center
- Residency Education Committee, University of Connecticut, Surgery
- Operating Room Committee, CT Children's Medical Center,
- Medical Staff Executive Committee, CT Children's Medical Center
- Peer Review Committee, CT Childrens Medical Ceneter
- Budget Remediation Commitee, CT Children's Medical Center,
- American Academy of Pediatrics, CT Chapter Representative,
- Volunteer physician, Hole-in-the-Wall Gang Camp, Ashford, CT, 2002-2004

Grant Funding

HSETC Grant: #P94-L-OAOOOO-100:A, *Effect of Chemotherapy on the Compensatory Renal Growth in the Uninephrectomized Piglet Model.*
$16,000.00, 1993-1994. Associate Investigator. ***Completed***

Hartford Hospital New Investigator Award. Grant # 011-53-010-095. *Angiogenesis and Neovascularity in Prostate Cancer.* $10,000.00, 1996-1999. Co-Principal Investigator. ***Completed***

Connecticut Children's Medical Center Surgical Endowment Fund. *Pathogenesis of Neuroblastoma,* $77,000/year. 1999-2001. Co- Investigator. ***Completed***

Connecticut Children's Medical Center Surgical Endowment Fund. *Role of Sphingolipids in Pediatric Solid Tumors,* $75,000/year renewable. Principal Investigator. ***Active***

NIH/NIDDK , Sphingolipid Signaling In Wilm's Tumor Cells, 1k08DK070468A. Mentored Investigator, Funded 2005-2011 $750,000 ***Completed***

Seraph Foundation Investigator Grant, Principle Investigator, 2007-2011, $300,000 ***Active***

Meredith Blume Renal Cancer Fund, Co-Principal Investigator, 2010,
$10,000 ***Active***

NIH/NCI, Sphingosine-1-Phosphate Pathway Based Therapy for Neuroblastoma, 1R01CA168903-01, Principle Investigator, Oct, 2011 ***Submitted***

Honors and Research Awards

First place: Portsmouth Regional Naval Medical Center
Resident Research Award, 1995.
First Paper: Pyrtek Prize, Resident Research Award, Hartford Hospital/University of Connecticut, 1996.
First Paper: Max K. Willscher Resident Prize Essay Contest, New England Section AUA prize essay, 1996.
Recipient: The Pfizer Scholar in Urology Award, 1996.
Third Place: The Howard S. Levine, Clinical Research Award, University Of Connecticut, 1998.
Second Place: Max K. Willscher Resident Prize Essay Contest, New England Section AUA prize essay, 1998.
Third Place: Clinical Research Essay Prize, American Academy of Pediatrics, Section Pediatric Urology, 1998.
Finalist: Clinical Research Essay Prize, Society Pediatric Urology, American Urologic Association, Atlanta, GA. 2000.
Second Place: Basic Research Essay Prize, Mid-Atlantic Section AUA, 2000.
Hands Humanitarian Award, Hands Across the Americas Inc., Baltimore, MD 2001.
Governers Citation, The State of Maryland, 2001
Faculty Award for Excellence in Teaching, The University of Connecticut Pediatric Residency Program, 2003
Service Excellence Award, Connecticut Children's Medical Center, 2005

Second Place: Basic Research Essay Prize, American Academy of Pediatrics, Section Pediatric Urology, Atlanta, 2006
First Place: Resident Case Presentation, Society of Fetal Urology, San Francisco, 2007
First Place: Resident Case Presentation, Society of Fetal Urology, Boston 2011
Americas Top Doctors 2007, 2008, 2009, 2010,2011

Current IRBs/Protocols

Connecticut Children's Medical Center. *IRB # 04-084: Evaluation of Edg Receptors and Sphingolipid Signaling Pathways in Pediatric Solid Tumors.* Principal Investigator.
Connecticut Children's Medical Center. *IRB # 01-152: Evaluation of Edg Receptors and Sphingolipid Signaling Pathways in Pediatric Solid Tumors/Obtained from Archival Paraffin Samples.* Principal Investigator.
Connecticut Children's Medical Center. *IRB # 06-029: Hypospadias Repair: Risk Factors.* Principal Investigator.

S1p signaling in Wilm's Tumor, Animal Study. Approved University Of Connecticut CLAC, Nov. 17, 2005-2008

Journal Publications

1. Brittain HG and **Ferrer FA**. *Solution Phase Chemistry of Lanthanide Complexes.* **Inorganica Chemica ACTA,** 1985 109:147.

2. **Ferrer FA**, McKenna PH. *Partial Nephrectomy in a Metachronous Multilocular Cyst of the Kidney (Cystic Nephroma).* **J Urol.** 1994 May;151(5):1358-60.

3. **Ferrer FA**, McKenna PH, Donnal JF. *Noninvasive Angiography in Preoperative Evaluation of Complicated Pediatric Renal Masses Using Phase Contrast Magnetic Resonance Angiography.* **Urology**. 1994 Aug;44(2):254-9.

4. **Ferrer FA**, McKenna PH. *Cavernous Hemangioma of the Scrotum: A Rare Benign Genital Tumor of Childhood.* **J Urol.** 1995 Apr;153(4):1262-4.

5. **Ferrer FA**, McKenna PH, Donnal JF. *Noninvasive Angiography in Preoperative Evaluation of Complicated Pediatric Renal Masses Using Phase Contrast Magnetic Resonance Angiography.* **J Urol.** (Urologic Survey) 1995 153:1347.

6. MacGillivray DM, Shichman SJ, **Ferrer FA**, Malcoff CD. *A Comparison of Open Vs. Laparoscopic Adrenalectomy.* **Surg Endosc**., 1996 Oct;10(10):987-90.

7. **Ferrer FA**, MacGillivray DC, Malchoff CD, Albala DM, Shichman SJ. *Bilateral Laparoscopic Adrenalectomy for Adrenocorticotropic Dependent Cushing's Syndrome.* **J Urol.** 1997 Jan;157(1):16-8.

8. **Ferrer FA**, McKenna PH, Bauer MB, Miller SF. *Accuracy of Renal Ultrasound Measurements in Predicting Actual Renal Size.* **J Urol.** 1997 Jun;157(6):2278-81.

9. **Ferrer FA**, Miller LJ, Andrawis RI, Kurtzman SH, Albertsen PC, Laudone VP, Kreutzer DL. *Vascular Endothelial Growth Factor (VEGF) Expression in Human Prostate Cancer: In Situ and In Vitro Expression of VEGF by Human Prostate Cancer Cells.* **J Urol.** 1997 Jun;157(6):2329-33.

10. See editorial commentary *Re: VEGF and Prostate Cancer: This Month in Investigative Urology,* **J Urol.** 1997 157:2040.

11. **Ferrer FA**, McKenna PH, Bauer MB, Miller SF, Torkilson J. *The Effect of Wilms' Tumor Chemotherapy on Contralateral Renal Growth after Nephrectomy*. **J Urol.** 1997 Sep;158(3 Pt 2):1086-9.

12. **Ferrer FA**, and McKenna PH. *Late Development of Antenatal Bladder Neck Obstruction and Treatment of the Premature infant*. **Society of Fetal Urology Newsletter**. 8/1997.

13. **Ferrer FA**, Miller LJ, Andrawis RI, Kurtzman SH, Albertsen PC, Laudone VP, Kreutzer DL. *Angiogenesis and Prostate Cancer: In Vivo and In Vitro Expression of Angiogenesis Factors by Prostate Cancer Cells.* **Urology**. 1998 Jan;51(1):161-7.

14. **Ferrer FA**, McKenna PH, Hochman HI, Herndon CD. *Results of a Vesicoureteral Reflux Practice Pattern Survey Among American Academy of Pediatrics, Section on Pediatric Urology Members*. **J Urol.** 1998 Sep;160(3 Pt 2):1031-7.

15. Kolon TF, **Ferrer FA**, McKenna PH. *Clinical and Molecular Analysis of XX Sex Reversed Patients*. **J Urol.** 1998 Sep;160(3 Pt 2):1169-72; discussion 1178.

16. McKenna PH, Herndon CD, Connery S, **Ferrer FA.** *Pelvic Floor Muscle Retraining for Pediatric Voiding Dysfunction Using Interactive Computer Games.* **J Urol.** 1999 Sep;162(3 Pt 2):1056-62; discussion 1062-3.

17. **Ferrer FA,** Miller LJ, Lindquist R, Kowalcyzk P, Laudone, VP, Albertsen PC, Kreutzer DL. *Expression of Vascular Endothelial Growth Factor Receptors in Human Prostate Cancer.* **Urology**. 1999 Sep;54(3):567-72.

18. **Ferrer FA**, Herndon CD, McKenna PH. *Citrobacter Diversus Urosepsis and Cerebral Abscess in a Child with Antenatal Hydronephrosis*. **Urology.** 1999 Dec;54(6):1097.

19. Herndon CD, **Ferrer FA** and McKenna PH. *A Complex Urologic Problem Demonstrates How Far Pediatric Urology has Progressed*. **Conn Med**. 1999 Dec;63(12):707-11.

20. **Ferrer FA** and McKenna PH. *Cryptorchidism; Update on Diagnosis and Management.* **Contemporary Pediatrics.** 17:106, 2000.

21. Dodson JL, **Ferrer FA**, Jackman SV, Blakemore KJ, Docimo SG. *Cloacal Outlet Obstruction with an Ectopic Ureter*. **Urology**. 2000 May 1;55(5):775.

22. **Ferrer FA,** Cadeddu JA , Schulam P, Mathews R, Docimo SG. *Orchiopexy Using 2 mm Laparoscopic Instruments: Two Techniques for Delivering the Testis into the Scrotum.* **J Urol.** 2000 Jul;164(1):160-1.

23. Dyer BW, **Ferrer FA**, Klinedinst DK and Rodriguez R. *A Noncommercial Dual Luciferase Assay System for Reporter Gene Analysis*. **Anal Biochem**. 2000 Jun 15;282(1):158-61.

24. Herndon CD, **Ferrer FA**, Freedman A, McKenna PH. *Consensus on the Prenatal Management of Antenatally Detected Urologic Abnormalities*. **J Urol.** 2000 Sep;164(3 Pt 2):1052-6.

25. **Ferrer FA**, Pantshenko AG, MillerLJ, Anderson K, Grunnet M, McKenna PH and Kruetzer D. *Angiogenesis and Neuroblastoms: Interleukin-8 and Interleukin-8 Receptor Expression in Human Neuroblastoma.* **J Urol.** 2000 Sep;164(3 Pt 2):1016-20.

26. Karth J, **Ferrer F A,** Perlman E, Hanrahan C, Simons JW, Gearhart JP and Rodriguez R. *Co-expression of Hypoxia-inducible Factor 1-alpha and Vascular Endothelial Growth Factor in Wilms' Tumor,* **J Pediatr Surg**. 2000 Dec;35(12):1749-53.

27. **Ferrer FA**. *Editorial re: Increased Transforming Growth Factor Beta 1 Excretion in Children with Posterior Urethral Valves*, **Urology**. 2000 56:314.

28. Herndon CD, **Ferrer FA** and McKenna PH. *Survey Results on Medical and Surgical Followup of Patients Vesicoureteral Reflux from AAP, Section on Urology Members*, **J Urol.** 2001 Feb;165(2):559-63.

29. **Ferrer FA**, Rodriguez R. *Prostate cancer gene therapy***. Hematol Oncol Clin North Am.** 2001 Jun;15(3):497-508.

30. **Ferrer FA** and Rodriguez RA. *Overview of Gene Therapy for Urologic Malignancy,* **AUA Update Series**. 2001 Lesson 27, Vol. XX.

31. **Ferrer FA,** Tadros YE, Gearhart JP. *Modified Young-Dees-Leadbetter Bladder Neck Reconstruction: New Concepts About Old Ideas*. **Urology**. 2001 Nov;58(5):791-6.

32. Van der Poel HG, McCadden J, Verhaegh GW, Kruszewski M, **Ferrer, FA,** Schalken JA, Carducci M, Rodriguez R. *A novel method for the determination of basal gene expression of tissue-specific promoters: an analysis of prostate-specific promoters.* **Cancer Gene Ther.** 2001 Dec;8(12):927-35.

33. Palese MA, **Ferrer FA**, Perlman E and Gearhart JP. Metanephric Stromal Tumor: A Rare Benign Pediatric Renal Mass**. Urology**. 2001 Sep;58(3):462.

34. **Ferrer FA,** Rodriguez R. *Gene Therapy for Urologic Cancer.* **Curr Urol Rep.** 2002 Feb;3(1):75-81.

35. Li Y, McCadden J, **Ferrer FA,** Kruszewski M, Carducci M, Simons J, Rodriguez R. *Prostate-specific expression of the diphtheria toxin A chain (DT-A): studies of inducibility and specificity of expression of prostate-specific antigen promoter-driven DT-A adenoviral-mediated gene transfer.* **Cancer Res**. 2002 May 1;62(9):2576-82.

36. Dodson JL, **Ferrer FA**, Hanna G, Blakemore KJ, Docimo SG. *Poor Predictability of Prenatal Ultrasonography for a Nonfunctional Kidney.* **Urology.** 2002 Oct;60(4):697.

37. Surer I, **Ferrer FA**, Baker LA, Gearhart JP. *Continent Urinary Diversion and the Exstrophy-Epispadias Complex.* **J Urol**. 2003 Mar;169:1102-05.

38. Parsons JK, **Ferrer FA,** Docimo SG. *The low scrotal approach to the ectopic operating room ascended testicle: prevalence of a patent processus vaginalis.* **J Urol**. 2003 May;169(5):1832-3; discussion 1833.

39. **Ferrer FA.** *Letter*: *Does bladder preservation as a surgical principle lead to retaining bladder function in bladder/prostate rhabdomyosarcoma? Results from Intergroup Rhabdomyosarcoma Study IV*. **J Urol.** 2004 Nov;172(5 Pt 1):2084.

40. **Ferrer, FA .**and McKay, K. Editorial Re: *Reliability of voiding cystourethrography to detect urethral obstruction in boys*, **Urology.** 2004, May: 63:971

41. Mammen, A., **Ferrer, FA**. Nocturnal Enuresis: Medical Management. **Urol Clin N Am.** 31, 491-498, 2004

42. Hsieh K, O'Loughlin MT, **Ferrer FA**. *Bladder Exstrophy and phenotypic Gender Determination on fetal Magnetic Resonance Imaging.* **Urology.** 2005 May;65(5):998-9

43. Berger, A and **Ferrer F.** *Pediatric Renal Cell Carcinoma*, **Dialogues in Pediatric Urology**, June, 2005

44. Lepley D, Paik JH, Hla T, **Ferrer F**. *The G protein-coupled receptor S1P2 regulates Rho/Rho kinase pathway to inhibit tumor cell migration*. **Cancer Res**. 2005 May 1;65(9):3788-95.

45. **Ferrer FA**, Isakoff M, Koyle M. *Rhabdomyosarcoma, Past-Present-Furture*, **J. Urol**. 2006, 176: 1283-91

46. **Ferrer FA**, Editorial on *"Renal Expression of Epidermal Growth Factor and Transforming Growth Factor in Children with Congenital Hydronephrosis*" **Urology**, 2006, Apr;67:821-2

47. Driscoll, K., Isakoff, M. and **Ferrer, F**. *Update on Pediatric Genitourinary Oncology*, **Current Opinion in Urology,** 2007, Jul;17:281-286

48. Ferrer FA, **Editorial**: J. Urol. Oct. 2007

49. Ritchey, M., F**errer, F.A**., Shearer, P. and Spundt, S., *Late Effects on the Urinary Bladder in Patients Treated for Cancer in Childhood, A COG report*. **Pediatric, Blood and Cancer**. Accepted in Press. Maunscript #PBC-08-0199.R2

50. Berger, A., Kim, C. Hagstrom, N., and **Ferrer, FA**., *Successful Preoperative Treatment of Pediatric Bladder Inflammatory Myofibroblastic Tumor (IMT) with Anti-inflammatory Therapy*. **Urology,** 2007, Aug; 70:372

51. Marrietti, S., Driscoll, K., Spencer, J., Copel, J., Kim, C., and **Ferrer, FA.,** *Cloacal Exstrophy in Two Separate of Monoamniotic, Monochorionic Twins*. **Dialogous in Pediatrics Urology**, March, 2008

52. Sanchez, T., Pappalardo, A., Li, MH., Hla, T., **Ferrer, FA**. *Targeting Sphingosine-1-Phosphate Receptors as Anti-Tumor and Anti-Angiogenic Therapy in Renal Cell Carcinoma*. **J. Urol**. 2008, May; 179(4):40.

53. Kim C, Campbell B, **Ferrer FA,** *Robotic Sigmoid Vaginoplasty: A Novel Technique*. **Urology**, 2008,

Oct; 72(4): 847-849.

54. Sweeny H, Rzepski B, Hochman H, Kim C., Lerer, T. and **Ferrer, FA**., *Identifying Characteristics of Children Requiring Sedation for Urodynamics.* **Urol Nurs**., 2008, Aug; 28(4): 269-72.

55. Sweeny H, Marai S, Kim C, and **Ferrer, FA**., *Creating a Sedation Service for Pediatric Urodynamics*. **Urol Nurs**., 2008, Aug; 28(4): 273-8.

56. Li, MH., Sanchez,T., Pappalardo. A., Lynch, KR., Hla, T., and **Ferrer, FA**., *Induction of Anti-Proliferative Connective Tissue Growth Factor Expression in Wilms Tumor Cells by Sphingosine 1-Phosphate receptor 2*. **Mol. Cancer Res**., 2008 Oct.; 6(10):1649-55.

57. Li, MH., Sanchez,T., Pappalardo. A., Lynch, KR., Hla, T., and **Ferrer, FA**., *Sphingosine-1-Phosphate/ Sphingosine-1-Phosphate Receptor 2 Signaling Induces COX-2 Expression in Wilms Tumor*. **J. Urol**., 2008, Jan 20

58. Li, MH., Sanchez, T., Yamase, H., Hla, T., Oo, ML., Pappalardo, A., Lynch, KR., Lin, CY., and **Ferrer, FA.**, *S1P/S1P$_1$ Signaling Stimulates Cell Migration and Invasion in Wilms Tumor.* **Cancer Letters**. April, 2009.

59. Li, MH., Yamase, H., Hla, T., and **Ferrer, FA**., *Characterization of a WiT49 Cell Line Derived Orthotopic Model of Wilms Tumor*. **Ped. Blood & Cancer**; Feb. 2010.

60. Rodeberg, D., Anderson, J., Arndt, C., **Ferrer, FA**., et al, *Comparison of outcomes based on treatment algorithms for rhabdomyosarcoma (RMS) of the bladder/prostate (BP): combined results from the Children's Oncology Group (COG), German Cooperative Soft Tissue Sarcoma Study (CWS), Italian Cooperative Group (ICG), and International Society of Pediatric Oncology (SIOP) Malignant Mesenchymal Tumors (MMT) Committee*. Int J Cancer. 2011 Mar 1;128(5):1232-9.

61. Ehrlich PF, **Ferrer FA**, Ritchey ML, Anderson JR, Green DM, Grundy PE, Dome JS, Kalapurakal JA, Perlman EJ, Shamberger RC. *Hepatic Metastasis at Diagnosis in Patients With Wilms Tumor is not an Independent Adverse Prognostic Factor for Stage IV Wilms Tumor: A Report From the Children's Oncology Group/National Wilms Tumor Study Group.*Ann Surg. 2009 Aug 27.

62. Makari JH, Ramachandra P and **Ferrer FA** Jr. *Pediatric urologic oncology: Organ-sparing surgery for kidney and testis*. Urol Clin North Am. 2010 May; 37(2): 287-298.

63. **Ferrer, F.A**. Editorial RE: *Can we spare removing the adrenal gland at radical nephrectomy in children with Wilms tumor*. J. Urol. 2010 Oct;184: 1642-43

64. Chalmers, D. and **Ferrer, F.A.** *Continent Urinary Diversion in the Exstrophy Epispadias Complex*. Seminars In Pediatric Surgery, 2011 May; 20(2):102-8.

65. Li, MH., Hla, T., and **Ferrer, FA.,** *Sphingolipid Modulation of Angiogenic Factor Expression in Neuroblastoma*. **Cancer Prev. Res.** May, 2011

66. Scarpato, K., Makari, J., Agaronov, M., Balarezo, F., Parikh,N., Finck, C. and **Ferrer, F.A**., *A Case of Primary Renal Synovial Sarcoma in a 13 year old Male,* **J. Ped. Surg**. 2011 Sep;46(9):1849-51

67. Scarpato, K.R., Kim, C., Makari, J.H., Silva, C. and **Ferrer, F.A.** *Long Term Bladder Dysfunction as a Result of In Utero Outlet Obstruction in Females.* **Urology**, *in press*

68. Shamshirsaz A, Leftwich H, Ravangard S, Sadowski A, Prabulos A, Campbell W, Makari JH, **Ferrer FA**, Herbst KW, Egan J. "*Fetal Hydronephrosis as a Predictor of Neonatal Urologic Outcomes.* Journal of Ultrasound in Medicine [In Press]

Book Chapters

Ferrer FA. *Bladder Exstrophy*. In: Mulhall JP, editor. ***Contemporary Diagnosis of Urologic Emergencies.*** Philadelphia PA: SMM Healthcare Handbooks, 2000.

Ferrer FA, Simons J W, Rodriguez R. *Human Gene Therapy for Urological Oncology.* In: Chung Leland WK, Issacs WB, Simons JW, editors. ***Prostate Cancer Biology, Genetic, and the New Therapeutics.*** Humana Press; Dec., 2000.

Ferrer FA, Rodriguez R. *Prostate Cancer Gene Therapy*. ***Hematol Oncol Clin North Am;*** 2001 Jun;15(3):497-508**.**

McKenna PH, **Ferrer FA**. *Prenatal and Postnatal Urologic Emergencies*. Belman AB, King LR, Kramer SA, editors. ***Clinical Pediatric Urology, 4th Edition.*** Martin Dunitz Ltd. 2002; 169.

Ferrer FA, Simons JW, Rodriguez R. *Gene Therapy for Urologic Malignancies.* In: ***Prostate Cancer in the 21st Century.*** (in process)

Ferrer FA, Gearhart JP. Puri P, editor. *Bladder Exstrophy:Considerations and Management of the Newborn Patient.* ***Newborn Surgery 2nd Edition.*** London: Arnold, 2003; 619-27.

Gearhart JP, **Ferrer FA.** *Bladder Exstrophy for the General Urologist: New Discoveries and Modern Management* Gearhart JP, editor . ***Pediatric Urology.*** NJ: Humana Press, 2003; 127-149.

Ferrer FA. Gearhart JP, editor. *Chapter 13: Pediatric Genitourinary Oncology.* ***Pediatric Urology.*** NJ: Humana Press, 2003; 281-319.

Mammen, A, **Ferrer FA**. Canning DA, Kolon TF, editors. *Nocturnal Enuresis: Medical Management.* ***Urologic Clinics of North America, 31.*** PA : Elsevier Science (USA), 2004 ; 491-498.

Kolon TF, Hsieh K, **Ferrer FA**. Bajpai M, editor. *The Molecular Basis of Intersexuality.* ***Progress in Paediatric Urology.*** (in press).

Ferrer FA, Ritchey M. *Pediatric Bladder Tumors*. Lerner SP, Schoenberg MP, Sternberg C, editors. *Chapter 71: .* ***Bladder Cancer.*** United Kingdom: Taylor and Francis, 2006.

Ferrer FA, McKenna PH. *Perinatal Urological Consultation.* Docimo SG, Canning DA, Khoury AE, editors. ***Clinical Pediatric Urology, 5th Edition.*** UK: Informa, 2007.

Ferrer FA, Ritchey M. *Wilms Tumor*. Docimo SG, Canning DA, Khoury AE, editors. ***Clinical Pediatric Urology, 5th Edition.*** UK: Informa, 2007.

Ferrer FA, *Oncologic Aspects of Pediatric Urologic Tumors*, Gearhart J, Rink R, Mouriquand, P. editors. ***Pediatric Urology 2nd Edition.*** (In Press)

Ercole, B., Isakoff, M and **Ferrer FA.** *Rhabdomyosarcoma.* Koyle, M. Editor ***'Pediatric Urology: Surgical Complications and Management'*** Oxford:Wiley-Blackwell, 2007.

Ferrer FA, *Editorial Comments Re: Neuroblastoma Surgery*, Baskin, L. Editor **Hinmans Atlas of Pediatric Urologic Surgery 2nd Edition.** Elsevier.

Ferrer FA, *Editorial Comments Re: Radical Orchiectomy*, Baskin, L. Editor **Hinmans Atlas of Pediatric Urologic Surgery 2nd Edition.** Elsevier.

Marietti, S., Isakoff, M. and **Ferrer, FA**., *Renal Tumors in Children*, Rabinowitz, R., Holbert, W., Mevorach, R., Editors. **Pediatric Urology for the Primary Care Physician.** Humana press Inc**. (**In Press)

Ferrer FA., *Pediatric Oncology*, Leslie, SW., Editor. **Urology Board Review: Third Edition**. McGraw Hill Medical. (In Press)

Ramachandra, P and **Ferrer, FA**, *Treatment of Wilm's Tumor*, Dahm, P and Dmochowski, R Editors. **Evidence-Based Urology.** Wiley-Blackwell:BMJ Books, 2010.

Editorial Activities

Reviewer, Urology (Elsevier)
Reviewer, Journal of Urology (Lippincott)
Reviewer, British Journal of Urology International (Blackwell)
Reviewer, Genes, Chromosomes and Cancer (Wiley)
Moderator, Society Pediatric Urology Online Forums, *Evaluation*, *Diagnosis and Reconstructive Surgery - Kidney/Bladder*,
Reviewer, Experimental Cell Research (Elsevier)
Reviewer, Journal of Endourology (Elseveir)
Reviewer, Journal of Postgraduate Medicine
Reviewer, Cancer (AACR)
Reviewer, Pediatrics
Reviewer, Pediatric, Blood and Cancer

Selected Invited Lectures & Visiting Professor

Ferdinand Valentine Essay Contest, Judge, New York Section, American Urologic Association, New York, NY, 03/99.

Prostate Cancer Gene Therapy: an Overview, Horton Hospital, Middletown, NY, 03/00.

Urinary Tract Infections a Developmental Perspective, University of Maryland, Baltimore, MD, 04/00.

Lower GenitourinaryTract Reconstruction and Bladder Function in Pelvic Rhabdomyosarcoma, Children's Oncology Group, Sarcoma Committee meeting, Chicago, IL, 09/02.

Continent Diversion in Bladder Exstrophy, Panelist & Lecturer, 2nd International Symposium on Exstrophy and Epispadias, Baltimore, MD, 10/02.

Detrusor Composition and Physiology in Exstrophy, 2nd International Symposium on Exstrophy and Epispadias, Baltimore, MD, 10/02.

Renal Cell Carcinoma in Children, Section of Pediatric Surgery, National Conference & Exhibition of the American Academy of Pediatrics, New Orleans, LA, 11/03.

Renal Tumors, Section of Pediatric Urology, National Conference & Exhibition of the American Academy of Pediatrics, San Francisco, CA, 11/04

Bladder Tumors in Children, Hasbro Childrens Hospital/Brown University 5/05

Evaluation of Bladder Function in Children Treated for Cancer, Childrens Oncology Group, Surgical Education Seminar, Dallas, TX, 10/05

Pediatric Testicular Cancer, Section Pediatric Surgery, National Conference & Exhibition of the American Academy of Pediatrics, Atlanta, 2006

Bladder Prostate Rhabdomyosarcoma, Society for Pediatric Urology, American Urologic Association, Atlanta, 2006

Controversy Surrounding Bladder Function after Bladder/Prostate RMS, Memorial Sloan Kettering Cancer Center, NY, Nov. 2006

Sphingosine-1-phosphate Signaling in Pediatric Solid Tumors, FASEB meeting, Tucson, AZ, 2007

Disorders of Sexual Development: An Overview, American Academy of Child Psychiatry and Psychology National Meeting, Boston, MA, 2007

Urology Visiting Professor, University of Southern Illinois, May 2008

Bladder sparing treatment for RMS to what end, at waht cost ? Society for Pediatric Urology, American Urologic Association, Chicago, Il 2009

Exstrophy Treatment, Augmentation and Continent Diversion, 3rd International Exstrophy Symposium, Baltimore, MD, 2009

Visiting Professor, Mexcian Society of Pediatric Surgery, Tuxtla Gutierrez, Mexico 2010

Moderator/Organizer: Genito-Urinary Oncology Panel, Society Pediatric Urology Section, American Urologic Association Meeting, Washington, DC, 2011

How Competitors Collaborate, National Association of Childrens Hospitals and Related Organizations, Seattle, 2011

Selected Published Abstracts and Presentations

Regional

Noninvasive Angiography in Preoperative Evaluation of Complicated Pediatric Renal Masses Using Phase Contrast Magnetic Resonance Angiography. ***Kimbrough Urologic Seminar, San Diego, October***, 1993. **P**

Partial Nephrectomy in a Metachronous Multilocular Cyst of the Kidney (Cystic Nephroma). ***Kimbrough Urologic Seminar, San Diego, October***, 1993. **P**

Noninvasive Angiography in Preoperative Evaluation of Complicated Pediatric Renal Masses Using Phase Contrast Magnetic Resonance Angiography. ***Mid-Atlantic Section of the American Urologic Association, Philadelphia, September***, 1994. **P**

Accuracy of Ultrasound Measurements in the Growing Piglet Kidney. ***Kimbrough Urologic Seminar, Charleston, October***, 1994.

Angiogenesis and Prostate Cancer: In-vivo and In-vitro Expression of Angiogenesis Factors by Prostate Cancer Cells, ***New England Section of American Urologic Association, Lake George, September*** , 1996. **P**

Accuracy of Renal Ultrasound Length Measurements, ***New England Section of American Urologic Association, Lake George, September***, 1996. **P**

Effect of Chemotherapy on Compensatory Renal Growth, ***New England Section of American Urologic Association, Lake George, September*** , 1996. **P**

Fresh Microscopic Epididymal Sperm Aspiration (MESA) in Conjunction with ICSI in Patients with Obstructive Azoospermia, ***New England Section of American Urologic Association, Lake George, September*** , 1996.

Accuracy of Ultrasound Measurements of Renal Size. ***Kimbrough Urologic Seminar, Scottsdale, December***, 1996.

Cytokine Induced Inhibition of Angiogenic Factor (bfgf) Expression in Human Prostate Cancer. ***New England Section of American Urologic Association, Boston, September ,*** 1997. **P**

Results of a Vesicoureteral Reflux Practice Pattern Survey Among Members of the American Academy of Pediatrics. ***Mid-Atlantic Section of the American Urologic Association, Hot Springs, September*** 1997. **P**

Survey Results Concerning Medical and Surgical Follow-up of Vesicoureteral Reflux Patients among American Academy of Pediatrics, Section of Urology Members. ***New England Section of American Urologic Association , WatervilleValley***, 1998. **P**

Pelvic Floor Muscle Retraining for Pediatric Voiding Dysfunction using Interactive Computer Games. ***New England Section of American Urologic Association , WatervilleValley***, 1998.

Clinical Significance of Intraoperative Spillage of Seminal Fluid During Radical Retropubic Prostatectomy. ***New England Section of American Urologic Association , WatervilleValley,*** 1998. **P**

Comparative Analysis of the activity of Prostate Specific Promoter and Enhancer Sequences in prostate cancer cells. ***Mid-Atlantic Section of the American Urologic Association, Puerto Rico, October,*** 2000.

The Use of Hyperbaric Oxygen for Preservation of a Hypospadias Repair Compromised by Tissue Ischemia. ***Connecticut Chapter of the American College of Surgeons, Meriden, November,*** 2005.

Sphingosine-1-phosphate Upregulates Vascular Endothelial Growth Factor Expression in Human Neuroblastoma Cells Via S1P2/ROCk/eRk Pathway. ***The New England Surgical Society, Boston, 2008***

Incidence of repeat dextranomer/hyaluronic acid copolymer injection among pediatric health information system hospitals. ***New England Section of the American Urological Association and Mid-Atlantic Section of the American Urological Association 2011 Joint Meeting***, **Lake Buena Vista, Florida**, 2011

Comparing minimally invasive surgery for vesicoureteral reflux: dextranomer hyaluronic acid copolymer injection versus robotically-assisted laparoscopic ureteral reimplantation. **New England Section of the American Urological Association and Mid-Atlantic Section of the American Urological Association 2011 Joint Meeting, Podium Presentation, Lake Buena Vista, Florida**, 2011.

National/ International

Noninvasive Angiography in Preoperative Evaluation of Complicated Pediatric Renal Masses Using Phase Contrast Magnetic Resonance Angiography. ***American Academy of Pediatrics, Dallas, October*** , 1994. **P**

Bilateral Laparoscopic Adrenalectomy: A Minimally Invasive Treatment for Non-Localized Ectopic Producing -ACTH Tumors. ***American Urologic Association, Las Vegas, April*** , 1995. **P**

Laparoscopic Adrenalectomy: A Multi-Institutional Review**.** ***American Urologic Association, Las Vegas, April*** , 1995. **P**

A Comparison of Open Versus Laparoscopic Adrenalectomy. ***Society of American Gastrointestinal Endoscopic Surgeons, Philadelphia, March*** , 1996.

Vascular Endothelial growth Factor Expression in Human Prostate Cancer. International ***Symposium on Biology of Prostate Growth, NIDDK/NIH Washington D.C., March*** , 1996 **P**

Cytokine Regulation of Angiogenesis Factors in Human Prostate Cancer. ***American Urologic Association, Orlando, May*** , 1996. **P**

Is Renal Ultrasonography Accurate in the Detection of Compensatory Growth. ***American Urologic Association, Orlando, May*** , 1996. **P**

Laparoscopic Versus Open Adrenalectomy a Single Center Comparison. ***American Urologic Association, Orlando, May*** , 1996. **P**

Does Chemotherapy Affect Compensatory Renal Hypertrophy after Nephrectomy in the Growing Piglet Model? ***American Academy of Pediatrics, Boston, October*** , 1996. **P**

Angiogenesis Factors in Human Prostate Cancer: Exvivo and Invitro Expression of VEGF and Il-8 in Human Prostate Cancer. ***American Urologic Association, New Orleans, April*** , 1997. **P**

Results of a Vesicoureteral Reflux Practice Pattern Survey Among Members of the American Academy of Pediatrics. ***American Academy of Pediatrics, New Orleans, October, 1997***. **P**

Clinical and Molecular Analysis of XX Sex Reversed Patients With SRY Negativity. ***American Academy of Pediatrics, New Orleans, October***, *1997.*

Survey Results Concerning Medical and Surgical Follow-up of Vesicoureteral Reflux Patients among American Academy of Pediatrics, Section of Urology Members. ***American Academy of Pediatrics, San Francisco, October, 1998***. **P**

Pelvic Floor Muscle Retraining for Pediatric Voiding Dysfunction using Interactive Computer Games. ***American Academy of Pediatrics, San Francisco, October, 1998***.

Expression of Human Vascular Endothelial Growth Factor Receptors in Human Prostate Cancer. ***American Urologic Association, Dallas, May 1999***. **P**

Consensus on the Approach to Antenately Detected Urologic Abnormalities. ***American Academy of Pediatrics, Washington D.C. October***, *1999.*

Interleukin-8 (IL-8) and IL-8 Receptor Expression in Human Neuroblastoma. ***American Academy of Pediatrics, Washington D.C. October, 1999***. **P**

Enhanced Expression of Prostate Specific Promoter Constructs by Addition of Prostate Specific Enhancers. ***Amercican Society of Gene Therapy, Denver***, CO, 2000

Development of Diphtheria Toxin Based Adenoviral Vectors for Treatment of Prostate Cancer. ***American Association of Cancer Research, San Francisco, CA***. 2000. P

Co-Expression of Hypoxia Inducible Factor-1a and Vascular Endothelial Growth Factor in Human Wilms' Tumor. ***Amercian Urological Association National Meeting, Atlanta, GA***. 2000. P

Experience Using Micro-Laparoscopic Instrument and a Radial Dilation Technique for Neocanal Formation During Orchidopexy. Society of Pediatric Urology, ***Amercian Urological Association National Meeting, Atlanta, GA***. 2000. **P**

Laparoscopic Orchidopexy Using Micro-laparoscopic Instruments and a Radial Dilation Technique for Neocanal Formation. ***European Society for Pediatric Urology, Tours, France***. 2000.

Can Adenoviral Vectors be used to Effect Gene Transfer for Pediatric Urogenital Tissue Engineering? ***American Urologic Association***, 2001Familial Multicystic Dysplastic Kidneys, ***Society for Fetal Urology, 29th Biannual Meeting***, *Boston, MA***,** 2002

Diagnosing Dysfunctional Elimination Syndrome (DES): A Correlation of Clinical Assesment, Validated Questionnaire and Urolow/EMG Patterns, ***American Urologic Association National Meeting***. *San Francisco, CA* 2004

Survey of Pediatric Urologist Management of Ureteroceles, ***Society of Fetal Urology***, Atlanta, 2006

Sphingolipid Regulation of Pediatric Renal Tumor Progression, ***American Academy of Pediatrics***, Atlanta, 2006

Induction of anti-proliferative Connective Tissue Growth Factor expression by Sphingosine-1-phosphaye in WiT49 cells, ***FASEB***, Tucson, AZ 2007

Role of S1P in regulation of CTGF in Wilm's Tumor, **6th International Meeting on the Biology of Renal Tumors**, Chamonix, France 2008

Bioactive lipid signaling in renal tumors, **7th International Meeting on the Biology of Childhood Renal Tumors,** Banff, Canada - March 1-3, 2010

Sphingosine kinase -2 deficient mice exhibit diminished renal inflammation in response to unilateral ureteral obstruction, **American Academy of Pediatrics**, Boston, 2011

Postnatal diagnosis, treatment and follow-up of antenatal hydronephrosis: a health care challenge. **21st World Congress in Ultrasound in Obstetrics and Gynecology**, Los Angeles, CA 21 September 2011.

The impact of fetal renal pelvic diameter on postnatal outcome. **21st World Congress in Ultrasound in Obstetrics and Gynecology,** Los Angeles, CA 21 September 2011.

Completed Courses and Special Education

Urologic Laparoscopic Surgery, Eastern Virginia Medical School and Uniform Services University of Health Sciences, 1994

Clinical Issues in Tumor Microcirculation, Angiogenesis and Metastasis: Biological Significance and Clinical Revelance. Harvard Medical School 1996

Mouse Models of Human Cancer, Keystone Symposium, CO, 2004

Physician In Management, American College of Physician Excecutives, Boston, MA, 2005

Animal Care and CLAC training, University of Connecticut Health Center, November 21, 2o05

JEFFREY D. THOMSON, M.D.

PRESENT STATUS	Director of Orthopaedic Surgery Department of Pediatric Orthopaedic Surgery (2000 – Present) Associate Director of Clinical Affairs for the Department of Surgical Subspecialties (2007 – Present) Connecticut Children's Medical Center 282 Washington Street Hartford, CT 06106 860-545-8643 Fax 860-545-8650
DATE OF BIRTH	September 20, 1956 Oakland, California
PERSONAL	Married, 2 children
EDUCATIONAL BACKGROUND:	
Undergraduate School	Catholic University of America Washington, D.C. BA, Biochemistry September 1974-June 1978
Medical School	Georgetown University School of Medicine Washington, D.C. September 1979-June 1983
INTERNSHIP	Walter Reed Army Medical Center Washington, D.C. July 1983-June 1984
ORTHOPAEDIC RESIDENCY	Walter Reed Army Medical Center Washington, D.C. July 1984-June 1988
ORTHOPAEDIC FELLOWSHIP	University of Miami School of Medicine Department of Orthopaedic Surgery & Rehabilitation Anthony Ballard, M.D. Miami Children's Hospital Harry Shuffelbarger, M.D. August 1988-August 1989

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MILITARY SERVICE	June 1983-July 1994 Honorable Discharge, July 1994 Military Rank, Major
	June 1991-June 1994 Tripler Army Medical Center Orthopaedic Surgery Service Chief, Pediatric Orthopaedic Section
	December 1990-May 1991 403rd Combat Support Hospital Deployed to Saudi Arabia in Support of Operation Desert Shield/Storm
	August 1989 -December 1990 Tripler Army Medical Center Orthopaedic Surgery Service
MILITARY AWARDS:	Meritorious Service Medal Army Commendation Medal with Oak Leaf Cluster Southwest Asia Service Medal Liberation of Kuwait Medal National Defense Service Ribbon Army Service Ribbon Overseas Service Ribbon
MEDICAL AWARDS	2003 Connecticut Magazine “Top Doc”
	2009 America’s Top Orthopaedic Surgeons by Castle & Carlinger
	2009 Who’s Who of American Physicians
	2009 Harry Gossling Teaching Award University of Connecticut
	2010 US News & World Report Top 30 Orthopaedic Program Connecticut Children’s Medical Center
	2011 Connecticut Magazine’s “Top Doc”
ACADEMIC APPOINTMENTS	Teaching Fellow of Surgery Uniformed Services Univ. of the Health Sciences Department of Surgery 1987-1988
	Instructor in Surgery

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Uniformed Services University of Health Sciences
Department of Surgery
1989-1994

Assistant Professor
Department of Orthopaedic Surgery
(Connecticut Children's Medical Center)
University of Connecticut School of Medicine
1994-1999

Associate Professor
University of Connecticut School of Medicine
2000 - Present

Adjunct Lecturer for Spring Term of the 2001-02/ 2002-2003, 2003-2004 academic year
Trinity College, Hartford, Connecticut

REVIEWER
Present

The Journal of Bone and Joint Surgery 2003-

Spine 2010
The Journal of Musculoskeletal Medicine
POSNA Abstract Reviewer 2006-2007

PROFESSIONAL SOCIETIES
Surgeons

Fellow, American Academy of Orthopaedic

Pediatric Orthopaedic Society of North America
Scoliosis Research Society
Connecticut State Medical Society
Hartford County Medical Association
American Orthopaedic Association

BOARD CERTIFICATION

Diplomate-American Board of Orthopaedic Surgery 1991
Recertification 2001

STATE LICENSURE

Hawaii
Connecticut

COMMITTEE MEMBERSHIP

Spina Bifida Association of America
Professional Advisory Board
2007 – Present

Hartford Country Medical Association
Board of Directors
2007 – 2010

American Academy of Orthopaedic Surgeons
Pediatric Evaluation Subcommittee
2005-2009

Scoliosis Research Society
Patient Based Outcomes Committee
2000-2005 *(Chairman – 2003-2005)*
Non-Operative Management Committee
2007 - Present

University of Hartford
Advisory Board
Physical Therapy Department

Pediatric Orthopaedic Society of North America
Trauma & Prevention Committee
2000-2004 (Chairman: 2003-2004)
Publications Committee
2010 - Present
Bylaws Committee
2010 - Present

Connecticut Children's Specialty Group
Finance Committee
1996 – Present
Board of Directors
2003-2005, 2009 - Present

Connecticut Children's Medical Center
Continuing Professional Education
1997 – 2000
QA/QI
1998-2002
Research Committee
1997-2000
Physician Newsletter Committee
1998-2002
Operating Room Committee
2003-Present

RESEARCH GRANTS:

1. The Development of a Natural History Database for Children with Spina Bifida.
   Principal Investigator: Jeffrey D. Thomson, M.D., Funding Source: Connecticut Children's Medical Center
   3 year grant 1999-2002.

2. Spina Bifida National Patient Registry.
   Principal Investigator: Jeffrey D. Thomson, M.D., Funding Source: Center for Disease Control

3 Year Grant - 2008-2011.

PUBLICATIONS (Referenced journals)

1. Thomson JD, Callaghan JJ, Savory CG, Stanton RP, Pierce RN: Prior Deposition of Autologous Blood in Elective Orthopaedic Surgery. J. Bone and J. Surg., 69-A: 320-324, 1987

2. Jelinek JS, Kransdorf MJ, Utz JA, Berrey BH, Thomson JD, Heekin RD, Radowich MS: Imaging of Pigmented Villonodular Synovitis with Emphasis of MRI. AJR 152: 337-342, 1989.

3. Doty JR, Thomson JD, Simonds G, Rengachary SS, Gunby EN: Occult Intrasacral Meningocele: Clinical and Radiographic Diagnosis. Neurosurgery, 24(4): 616-625, 1989.

4. Thomson JD, Talbert CJ, Jackson JP: Late Breakage of Orthopaedic Staple Causing Peroneal Nerve Palsy. Am. J. Sports Medicine, 18(1): 109-111, 1990.

5. Fugate D., Thomson JD, Christensen KP: An Irreducible Fracture Dislocation of Lesser Toe: A Case Report. Foot and Ankle, 11(5): 317-318, April 1991.

6. Shuffelbarger H, Grimm J, Vinh Bui, Thomson JD: Anterior and Posterior Spinal Fusion: Staged Versus Same-Day Surgery. Spine, 16(6): 930-993, 1991.

7. Stricker SJ, Thomson JD, Kelly RA: Coronal-Plane Transcondylar Fracture of the Humerus in a Child. Clin. Orthop., 294: 308-311, 1993.

8. Thomson JD, Lisecki E: Injuries and Deaths from Collecting War Souvenirs in Operation Desert Storm. Military Medicine, 158: 8-13, 1993.

9. Thomson JD, Stricker S., Williams M: Fractures of Distal Femoral Epiphyseal Plate. Journal of Pediatric Orthopaedics, 15: 474-478, 1995.

10. Benson E., Thomson J., Smith B., Banta J.: Outcome and Morbidity in a Consecutive Series of Patients Undergoing Spinal Fusion for Neuromuscular Scoliosis. Spine, 23:2308-2317, 1998.

11. Thomson JD., Ounpuu S., Davis RB., DeLuca PA: The Effects of Ankle Foot Orthosis on the Ankle and Knee in Persons with Myelomeningocele: An Evaluation Using Three Dimensional Gait Analysis. Journal of Pediatric Orthopaedics, 19:27-33, 1999.

12. Santangelo J., Thomson JD: Childhood Leukemia Presenting with Back Pain and Vertebral Compression Fractures. The American Journal of Orthopaedics, 28:257-260, 1999.

13. Nagarkatti DG, Banta JV, Thomson JD: Charcot Arthropathy In Spina Bifida. Journal of Pediatric Orthopaedics, 20:82-87, 2000.

14. Pierz K, Banta JV, Thomson JD, Gahm N, Hartford J: The Effect of Tethered Cord Release on Scoliosis Curve Progression. Journal of Pediatric Orthopaedics, 20:362-365, 2000

15. Ounpuu S, Thomson JD, Davis RB, DeLuca PA: An Examination of the Knee Function During Gait in in Persons with Myelomeningocele. Journal of Pediatric Orthopaedics, 20:629-635, 2000.

16. Wiley J, Thomson JD, Mitchell T, Smith, BG, Banta, JV: The Effectiveness of the Boston Brace for the Treatment of Large Curves in Adolescent Idiopathic Scoliosis. Spine, 25:2326-2332, 2000

17. Thomson JD, Banta JV: Scoliosis in Cerebral Palsy: An Overview and Recent Results. Journal of Pediatric Orthopaedics, Part B. 10:6-9, 2001.

18. Mazzocca AD, Thomson JD: A Comparison of the Posterior Approach vs. Dorsal Approach-Congenital Vertical Talus. Journal of Pediatric Orthopaedics, 21:212-217, 2001.

19. Trivedi JM, Thomson JD: The Results of Charleston Bracing in Skeletally Immature Patients with Idiopathic Scoliosis. Journal of Pediatric Orthopaedics, 21:277-280, 2001.

20. Bagchi K, Mohaideen A, Thomson JD, Foley LC: Hardware Complications in Scoliosis Surgery. Pediatric Radiology, 32:465-475, 2002

21. Trivedi JM, Thomson JD, Slakey J, Banta JV, Jones PW: Clinical and Radiographic Predictive Variables in Scoliosis in Patients with Myelomeningocele. J. Bone J. Surg., 84-A:1389-1394, 2002.

22. Koenig KM, Thomson JD, Anderson KL, Carney BT. Does Skeletal Maturity Predict Sequential Contralateral Involvement After Fixation of Slipped Capital Femoral Epiphysis? Journal of Pediatric Orthopaedics, 27(7):796-800, 2007.

23. Smith BG, Miriam V, Thomson JD: Low Body Mass Index: A Risk Factor for Superior Mesenteric Artery Syndrome in Adolescents Undergoing Spinal Fusion for Scoliosis. Journal of Spine Disorders. 22(2):144-8, 2009.

24. Thomson JD, Segal LS: Orthopedic Management of Spina Bifida. Developmental Disabilities Research Reviews 16:96-103 - 2010.

25. Lee MC, Stone NE, Ritting AW, Silverstein EA, Pierz KA, Johnson DA, Naujoks R, Smith BG, Thomson JD**:** Mini-C-arm Fluoroscopy for Emergency-Department Reduction of Pediatric Forearm Fractures. Journal of Bone and Joint Surgery, American Volume. 93(15):1442-7. 2011 Aug.

PUBLICATIONS (Books):

1. Doty JR & Thomson JD: "Biomechanics of the Sacrum", in The Sacrum, Doty & Rengachary eds., Raven Press. 1993.

2. Thomson JD: "Fractures of the Clavicle and Proximal Humerus", in Essentials of Musculoskeletal Care, Walter Greene ed., AAOS 2000.

3. Thomson JD: "Hip Disorders In Childhood", John V. Banta ed., MacKeith Press 2003.

4. Thomson JD: Contributor to Orthopaedic Pocket Procedures-General Orthopaedics. Cortland Lewis ed, McGraw-Hill. 2003

5. Thomson JD: "Myelomeningocele," in Pediatric OKU, AAOS 2006.

6. Thomson JD: "Myelomeningocele," in Pediatric Orthopaedics and Sports Medicine. John Sarwark and Cynthia LaBella eds. American Academy of Pediatrics 2010.

PUBLICATIONS (Invited Publications)

1. Callaghan JJ, Thomson JD, Savory CG, Leaken MH: Autologous Blood Transfusion. Complications in Orthopaedics, 4(1):8-11, 1989.

2. Thomson JD, Renshaw TS: Analysis of Lumbar Lordosis in Posterior Spine Fusions for Idiopathic Scoliosis. Journal of Spinal Disorders, 2(2): 1989.

3. Kesling K, Thomson JD, & Felmly WT: Posterior Approaches to Anterior Column Deformity, Part I. Techniques in Orthopaedics, 10: 24-30, 1995.

4. Kesling K, Thomson JD, & Felmly WT: Posterior Approaches to Anterior Column Deformity Part II. Techniques in Orthopaedics. 10: 31-35, 1995.

5. Kesling K, Felmly WT & Thomson JD. The Vascularized Pedicle Rib in Spinal Surgery. Techniques in Orthopaedics. 10: 43-48, 1995.

6. Smith BG, Thomson JD: Update in Pediatric Hip Disorders. Current Opinion in Orthopaedic Surgery 11:449-453, 2000.

7. Thomson JD, Editor: Symposium; Congenital Vertical Talus. Indian Journal of Foot Surgery. December 2002.

8. Lee MC, Thomson JD: Evaluation of Idiopathic Scoliosis. American Academy of Orthopaedic Surgeons Web site: *Orthopaedic Knowledge Online* 2009;7(3): http://www5.aaos.org/oko/description.cfm?topic=PED024. Accessed March 30, 2009.

NATIONAL PRESENTATIONS/ABSTRACTS

1. Thomson JD, Savory CG, Callaghan JJ, Stanton RP, Pierce RN: Autologous Blood Transfusion in Orthopaedic Transactions, Vol. 10, Fall 1986.

2. Thomson JD, Renshaw TS: Analysis of Lumbar Lordosis in Posterior Spine Fusions for Idiopathic Scoliosis. Orthopaedic Transactions, Vol. 10, Fall 1986.

3. Thomson JD, Berrey BH, Heekin D, Geiselle A: Soft Tissue Sarcomas of the Extremities. Orthopaedic Transactions, 14(1), Spring 1990.

4. Thomson JD, Stricker S, Williams M, Ballard A: Distal Femoral Physeal Fractures in Children. Orthopaedic Transactions, 14(1), Spring 1990.

5. Shufflebarger H, Thomson JD: Complications of C.D. in Idiopathic Scoliosis. Orthopaedic Transactions 16(1), Spring 1992.

6. Thomson JD, Lisecke E, Percival H: Injuries and Deaths from Collecting War Souvenirs in Operation Desert Storm. Society of Military Orthopaedic Surgeons, El Paso, Texas, November, 1991.

7. Green MR, Thomson JD: Open Versus Arthroscopic Bankart Suturing Techniques in Anterior Shoulder Instability: A Comparison of Peri and Post Operative Morbidity. Orthopaedic Transactions, 16(2), Spring, 1992.

8. Moore RK, Christensen KP, Thomson JD: Small Unit Portable Fluoroscopy in Orthopaedic Extremity Procedures Society of Military Orthopaedic Surgeons, El Paso, Texas, November, 1991.

9. Thomson JD: Femoral Nerve Palsy, Mal-Reductions and the Pavlik Harness. The Shrine Surgeons Meeting, Greenville, South Carolina, September, 1992.

10. Moore RK, Bottini A., Priest J, Thomson JD, Ono CM: The Use of Macintosh Personal Computer Network in the Department of Surgery and Orthopaedic Surgery Service at Teaching Hospital. Presented at the Annual Meeting for the Society of Military Orthopaedic Surgeons, Bethesda, Maryland, Dec. 1993.

11. Thomson JD, Stricker, Williams M.: Distal Femoral Physeal Fractures in Children. Pediatric Orthopaedic Society of North America, Miami, Florida, May 1995.

12. Banta JV, Smith BG, Gahm N, Hartford JM, Thomson JD: Tethered Cord Syndrome and Scoliosis: Results of Tethered Cord Release on Curve Progression Five Year Follow-Up. North American Spine Society, Nov. 1995

13. Caputo A., Romness MJ., DeLuca PA., Thomson JD.: Infantile Femora Vara: A Significant Component of Progressive Infantile Genu Vara. AAOS, February 1996.

14. McKeon B., Thomson JD., Banta JV.: Long Term Follow-Up of Luque Spinal Instrumentation and Fusion for Neuromuscular Scoliosis, AAOS Feb. 1996, POSNA May 1996, and SRS Sept. 1996.

15. Bruce C., Thomson JD., Banta JV.: The Fate of the Unfused Proximal Thoracic Curve after Selective Fusion and Instrumentation of Adolescent Idiopathic Scoliosis. POSNA May 1996, SRS Sept. 1996, and AAOS Feb. 1997.

16. Mitchell T., Smith B., and Thomson, J.: Effectiveness of The Boston Brace in Treatment of Large Curves in Adolescent Idiopathic Scoliosis. SRS Sept. 1996, AAOS Feb. 1997.

17. Benson E., Thomson J., Smith B., Banta J.,: Outcome and Morbidity in a Consecutive Series of Patients Undergoing Spinal Fusion for Neuromuscular Scoliosis. SRS Sept. 1996.

18. Slakey J., Banta, JV., Thomson, JD.: The Natural History of Scoliosis in Myelomeningocele. SRS Sept. 1996.

19. Thomson, JD., Ounpuu, S., Davis, R., DeLuca, PA.: Classification of Knee Kinematics and Kinetics in Persons with Myelomeningocele. AACPDM Meeting, Portland, Oregon, Sept. 1997.

20. Banta, JV, Slakey J, Thomson JD.: The Natural History of Scoliosis in Myelomeningocele. International Symposium on Spina Bifida, Kobe Japan 1997.

21. Thomson, JD.: Differences Between Myelo vs. Normal Gait. Spina Bifida Study Group, St. Louis, MO, January 1998.

22. Thomson, JD.: Natural History of Untreated Hip Dysplasia/Dislocation (Nonambulatory & Ambulatory Are Pain & Stiffness Disabling? Spina Bifida Study Group, St. Louis, MO, January 1998.

23. Thomson JD.: Nurses Update-Scoliosis and Myelomeningocele. SBAA Meeting, Washington, DC, June 1998.

24. Thomson, JD., Ounpuu, S. MSC., DeLuca, PA.: A Comparison of Barefoot and AFO Walking in Persons with Myelomeningocele: An Evaluation Using 3-D Gait Analysis. AACPDM Meeting, San Antonio, Texas, September 1998.

25. Ounpuu, S. MSC., Thomson, JD., Davis, R. Ph.D., DeLuca, PA.: Understanding Gait in Persons with Myelomeningocele: An Evaluation of the Upper Body and Pelvic Motion. AACPDM Meeting, San Antonio, Texas, September 1998.

26. Thomson JD, Ounpuu S, Davis RB, DeLuca PA: Three Dimensional Gait Analysis of Ankle-Foot Orthosis Function in Myelomeningocele and The Value of Gait Analysis in Evaluation of Knee Function in Persons with Myelomeningocele. SRHSB Meeting, Sheffield, England, June 1999.

27. Thomson JD, Pierz K, Banta JV, Gahm N, Hartford J: The Effect of Tethered Cord Release on Scoliosis Curve Progression. SRHSB Meeting, Sheffield, England, June 1999.

28. Ounpuu S, Thomson JD, Davis RB, DeLuca PA: The Value of Gait Analysis in Evaluation of Knee Function in Persons with Myelomeningocele. AACPDM Meeting, Washington, D.C., September 1999.

29. Wiley J, Thomson JD, Mitchell T, Smith BG, Banta JV: The Effectiveness of The Boston Brace in the Treatment of Large Curves in Adolescent Idiopathic Scoliosis: Six to Thirteen Years After Treatment. SRS Meeting, San Diego, California, September 1999 & POSNA, Vancover, British Columbia, Canada, May 2000.

30. Thomson JD, Ounpuu S.: The Value of Three Dimensional Gait Analysis in Myelomeningocele. POSNA, Vancouver, British Columbia, Canada, May 2000.

31. Trivedi JM, Thomson, JD: The Results of Charleston Bracing in Skeletally Immature Patients with Idiopathic Scoliosis. SRS, Sydney, Australia, September 2000.

32. Smith BG, Silverstein E, Johnson D, Thomson JD: Use of the Mini C-Arm for Emergency Fracture Reduction in Children. POSNA, St. Louis, MO, 2004

33. Smith BG, Hakim M, Thomson JD: SMA Syndrome in Scoliosis Surgery. POSNA, San Diego, CA 2006.

34. Õunpuu S, Westwell M, Thomson JD, DeLuca P: Gait analysis for orthosis decision-making in myelomeningocele. Proceedings of the 12th Annual GCMAS meeting, April 11-14, 2007.

35. Westwell M, Õunpuu S and Thomson JD: Gait analysis for evaluating leg length discrepancy. Proceedings of the GCMAS Annual Meeting, page 178-79, April 2008.

36. Thomson JD, Ounpuu S: Motion Analysis for Patient Evaluation and Decision-Making in Myelomeningocele. World Congress on Spina Bifida, Orlando, FL March 2009.

37. Lee MC, Thomson JD, Smith BG: Loss in Spinal Motion from Inclusion of a Single Mid-Lumbar Level in Posterior Fusion for Adolescent Idiopathic Scoliosis. POSNA, Boston, MA May 2009 and SRS, San Antonio, TX September 2009.

38. Stone NE, Ritting AW, Johnson DA, Silverstein EA, Naujoks RA, Tate JP, Lee MC, Pierz KA, Thomson JD: Mini-C-Arm Fluoroscopy for Emergency Room Reduction of Pediatric Forearm Fractures. POSNA, Hawaii, May 2010.

39. Thomson, JD: The Role of Physical Therapy in the Treatment of Scoliosis. Scoliosis Research Society, San Antonio, TX, September 2009.

40. Factors That Influence Ambulatory Potential, Spina Bifida Association of America, Orlando, FL July 2009.

41. Ask the Doctor: Orthopedics, 38th SBA National Conference, Anaheim, CA June 26-29, 2011.

42. Evaluation and Management of Spinal Problems in Spina Bifida, 38th SBA National Conference, Anaheim, CA June 26-29, 2011.

EXHIBITS

1. Autologous Blood Use in Orthopaedic Surgery, Scientific Poster, 1986 and Scientific Exhibit, 1987. American Academy of Orthopaedic Surgeons, National Meeting.

2. Distal Femoral Physeal Fractures, Poster Exhibit, AAOS National Meeting, New Orleans, Louisiana 1990.

3. Childhood Leukemia Presenting with Back Pain and Vertebral Compression Fractures. NASS, April 1994.

4. Vascularized Rib Pedicle Graft for Anterior Spinal Fusion, NASS, April 1994.

5. In-Line Skating Injuries, AAOS, National Meeting, Orlando, Florida 1995.

6. False Negative Bone Scans in Children, AAOS Feb. 1996.

7. Predicted LLD Based on Age at Presentation. POSNA May 1996.

8. Patient Based Outcomes: The SRS Instrument. SRS September 2002.

9. Superior Mesenteric Artery in Scoliosis Surgery, SRS October 2005.

10. Slipped Capital Femoral Epiphysis, AAOS 2007.

INSTRUCTIONAL COURSE LECTURES/WORKSHOPS/TUTORIALS

1. Thomson JD: Congenital Brain Anomalies: Their Diagnosis, Classification and Treatment. American Academy for Cerebral Palsy and Developmental Medicine, 10-12 Oct. 1991, Louisville, Kentucky. Instructional Course Lecture.

2. Course Director-Scoliosis: An Update for Health Care Providers 1997, 1999.

3. The Use of Intraoperative Monitoring During Spine Surgery: It's Clinical and Medical Legal/Considerations. November 4-5, 1999, Hartford, CT

4. Treatment of Neuromuscular Scoliosis. ICL at AACPM Meeting, September 1999, Washington, D.C.

5. Symposium: "Meeting the Challenge" Workshop Director "Pitfalls in Transitioning Adolescents with Physical Disabilities to Adult Providers". May 19, 2000, Portland, CT

6. Spine Controversies in Cerebral Palsy. Specialty Day AACPDM, September 2000, Toronto, Canada

7. The Use Of Intraoperative Monitoring During Spine Surgery: It's Clinical and Medical Legal/Considerations. November 2-3, 2000, Hartford, CT.

8. Chairman: Update in Pediatric & Adult Spinal Deformity, April 28, 2007, Phoenix, AZ.

9. Co-Chairman with Sylvia Ounpuu, Center for Motion Analysis: Multidisciplinary Management of Ambulatory Cerebral Palsy, March 27, 2009, Hartford, CT.

10. Õunpuu, Sylvia and Thomson, Jeffrey: Instructional Course Lecture "Using Joint Kinetics to Understand Orthosis Prescription and Evaluation for the Correction of Gait Disorders for Persons with Myelomeningocele, AACPDM, September 22-25, 2010, Washington, DC.

PRESENTATIONS (Local & Regional)

1. Role of Surgery in Myelomeningocele; Management of Spinal Deformity in Myelomeningocele; Role of Gait Analysis in Myelomeningocele. Guest lecturer, Symposium on Spina Bifida, Chicago, IL May 2006.

2. Thomson JD, Dysart SD, Casteneda E, Phillips EL: Giant Cell Tumor of Bone, Grand Rounds of Washington, Oct. 1985.

3. Thomson JD, Renshaw TS: Analysis of Lumbar Lordosis in Posterior Spine Fusions for Idiopathic Scoliosis, Newington Children's Hospital - Residents Presentations, Nov. 1986.

4. Phillips El, Thomson JD, Dysart S, Callaghan JJ: Current Trends in Total Hip Replacement, Grand Rounds of Washington, Feb. 1987.

5. Thomson JD: Children's Elbow Fractures. Presented at Queens Medical Center, Honolulu, HI 1990.

6. Thomson JD: Distal Femoral Epiphyseal Fractures. Presented at Queens Medical Center, Honolulu, HI, July 1992 and Newington Children's Hospital, Oct. 1994.

7. Thomson JD: Orthopaedic Manifestations of Malignant Hematologic Disease. Shriner's Hospital, Honolulu, Hawaii, July 1993.

8. Thomson JD: Orthopaedic Manifestations of Leukemia, Lymphoma and Neuroblastoma. 31st Annual Newington Children's Orthopaedic Conference, Newington, CT., October 1993.

9. Adolescent Idiopathic Scoliosis. Windham Hospital, Willimantic, CT. Oct. 1994.

10. Evaluation of the Limping Child. Manchester Memorial Hospital, Manchester, CT. Nov. 1994. St. Francis Hospital, Hartford, CT. Dec. 1994. Stamford Hospital, Stamford, CT. Dec. 1994. Bridgeport Hospital, Bridgeport, CT. Jan. 1995. Hartford Hospital, Hartford, CT. Feb. 1995. UCONN Health Center, Farmington, CT. March, 1995.

11. Common Hip Disorders in Children, Middlesex Hospital, Middletown, CT. Dec. 1994.

12. Scoliosis: Update on School Screening. Co-Director, Newington Children's Hospital, Newington, CT. March 1995.

13. Grand Rounds, University of Massachusetts Medical Center: Distal Femoral Physeal Fractures. November 15, 1995.

14. Update for Primary Care. Torsional and Angular Deformities in Children. November 15, 1995.

15. Update for Primary Care. Foot Disorders in Children. November 15, 1995.

16. Hip Disorders in Children. New Britain General Hospital, New Britain, CT. April 1997.

17. Hip Disorders in Cerebral Palsy. Cromwell, CT. April 1998.

18. Evaluation of the Limping Child. Connecticut Children's Medical Center, Hartford, CT. August 1999.

19. How To Handle Minor Pediatric Orthopaedic Injuries In The Office, Cromwell, CT. October 1999.

20. Common Pediatric Hip Disorders, Newington, CT, April 2000.

21. A Comparison of Surgical Approaches for the Treatment of Congenital Vertical Talus. Shriner's Hospital for Children, Springfield, MA - May 2000.

22. Guest Professor 29th Annual Shriner's Pediatric Orthopaedic Lectureship. Houston, TX, March 15-16, 2001.

23. The Use of Gait Analysis in Spina Bifida, Gait Analysis Course, Hartford, CT. April 2000.

24. CCMC Experience with Ponseti Method of Treating Clubfeet, Shriners Hospital for Children, Springfield, MA, May 2001.

25. Ponseti Method of Treating Clubfeet, University of Miami School of Medicine, March 2002.

26. Practical Approach in Children with Back Pain, Grand Rounds, Connecticut Children's Medical Center, January 2005.

27. Treatment of SCFE, Shriner's Hospital for Children, Springfield, MA, May 2005.

28. Common Foot & Ankle Injuries in Children, Pediatric Sports Medicine Update, Hartford, CT, November 2006.

29. Gait Analysis in Myelomeningocele, Spina Bifida Association of CT, Hartford, CT, March 24, 2007.

30. Perils & Pitfalls in Evaluating Limping Children, Stamford Hospital Grand Rounds, April 26, 2007.

31. Pediatric Bone Disorders, Athletic Trainer's Sports Medicine Update, Hartford, CT, August 7, 2007.

32. Lower Extremity Disorders in Children, Middlesex Hospital Family Practice Residency, Middletown, CT, October 3, 2007.

33. Scoliosis, Middlesex Hospital Family Practice Residency, Middletown, CT, October 3, 2007.

34. Management of Idiopathic Scoliosis, National Nursing Conference, Hartford, CT, October 6, 2008.

35. Pediatric Hip Disorders, Physical Therapy Students, University of Hartford, Hartford, CT, October 8, 2008.

36. Gait Analysis and Spina Bifida, Spina Bifida Association of Connecticut, April 4, 2009.

37. Update in the Recognition and Treatment of Scoliosis, CT Osteopathic Medical Society, Mystic, CT May 3, 2009.

38. Pediatric Orthopaedic Conditions – Physical Therapy Program, University of Hartford, CT, October 7, 2009.

39. Pediatric Orthopaedics, Middlesex Hospital Family Practice Residency, Middletown, CT October 7, 2009.

40. Scoliosis Update. Association of Operating Room Nurses CT Chapter, Cromwell, CT May 7, 2010.

41. Pediatric Orthopaedic Hip Conditions – Physical Therapy Program, University of Hartford, Hartford, CT, October 25, 2010.

42. Upper Extremity Fractures in Children, Manchester Memorial Hospital, Manchester, CT, December 8, 2010.

43. Early Onset Scoliosis, Connecticut Children's Medical Center, January 11, 2011.

VISITING PROFESSOR PROGRAMS

1. Gait Analysis and Decision-Making in CP. CP and Scoliosis. Guest Professor 29th Annual Shriner's Pediatric Orthopaedic Lectureship, Houston, TX, March 15-16, 2001.

2. Role of Gait Analysis in Myelomeningocele. Neuromuscular Scoliosis. Visiting Professor, University of Virginia, December 2005.

3. Maximizing Ambulation in Myelomeningocele and Management of Neuromuscular Scoliosis, Visiting Professor, University of Virginia, December 2005.

CONTINUING MEDICAL EDUCATION

SRS 2006 Annual Meeting – Monterey, CA, September 14-16, 2006 (12 Credits)

Orthopaedic Practice Management: Building Essential Skills for a Successful Practice – Chicago, IL, October 13-15, 2006 (21 Credits)

Pediatric Sports Medicine Update – Hartford, CT, November 15, 2006 (4 Credits)

Upper Extremity Update - Hollywood, FL, May 23, 2007 (7.5 Credits)

POSNA 2007 Annual Meeting – Hollywood, FL, May 24-26, 2007 (16 Credits)

2007 ACPE Physician Conference – Tucson, AZ, November 12-16, 2007 (24.5 Credits)

POSNA 2008 Annual Meeting – Albuquerque, NM, April 30-May 3, 2008 (13.75 Credits)

PEDIATRIC ORTHOPAEDIC UPDATE, Hartford, CT, March 25, 2008 (2 Credits)

SRS Pre-Meeting, Salt Lake City, UT, September 10, 2008 (7 Credits)

SRS Annual Meeting, Salt Lake City, UT, September 11-13, 2008 (16.5 Credits)

Osteobiologics and Osteotomies, Salt Lake City, UT, September 10, 2008 (7.0 Credits)

0SAE Scored and Recorded AAOS 2008 (20.00 Credits)

POSNA 2009 Annual Meeting – Boston, MA, May 2009 (26.25 Credits)

AOA 122nd Annual Meeting – Bonita Springs, FL, June 2009

AAOS Board Maintenance of Certification Preparation and Review – Cambridge, MA, November 2009 (27.75 Credits)

AOA/Kellogg School of Business Leadership Series Module 5 (Financial), November 20-22, 2009

AACPDM – Washington, DC, September 2010 (16 Credits)

International Congress on Early Onset Scoliosis & Growing Spine, Toronto, Canada, November 2010.

AAOS Annual Meeting, San Diego, CA, February 16-19, 2011

AOA 124th Annual Meeting, Boston, MA, June 2-25, 2011

SRS Annual Meeting, Louisville, KY, September 14-17, 2011

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Appendix I
Referenced Literature
(see separate pdf)

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Craig Cesare Bonanni, M.D. FAAP

Office:

Department of Anesthesiology
Connecticut Children's Medical Center
282 Washington Street (860) 758-7907
Hartford, CT 06106
Phone: (860) 545-9899
Fax: (860) 545 – 9130
E-mail: cbonann@ccmckids.org
Internet: http://www.ccmckids.org/departments

Home:

50 Heritage Trail
Suffield, CT 06078

Marital Status: Married

Children: Maura (25 y.o.)
Kara (23y.o.)
Sean (21 y.o.)

Education:

Fellowship: Children's Hospital of Pittsburgh, UPMC
Pittsburgh, PA
1985-1986

Residency: Hospitals of the University of
Pittsburgh UPMC, Pittsburgh, PA
1982-1985

Medical: University of Pittsburgh, Pittsburgh, PA
M.D., 1982

Undergraduate: Johns Hopkins University, Baltimore,
BA in Natural Science, with Honors,
1978

The Peddie School, Hightstown, NJ
Cum Laude 1974

Employment: Hartford Anesthesiology Associates, Inc
1986 - Present

Medical Licensure: Connecticut (021217) Active
CT Drug #- 14051
DEA# - AB2488270

Certification: Diplomat of the American Board of Anesthesiology, 1986 – Lifetime Certification.

Certificate of Recertification, 2009 #13192

Fellow, American Academy of Pediatrics

Awards

Teacher of the Year 2010 – UCONN Anesthesiology
Healthcare Quality Improvement Star 2010
Teacher of the Year - HH Anesthesiology- 1989

Professional Memberships:

American Society of Anesthesiologists
American Academy of Pediatrics
Society of Pediatric Anesthesia
Society for Education in Anesthesia
Connecticut Society of Anesthesiologists
International Anesthesia Research Society
Society of Cardiovascular Anesthesia
American Medical Association
Hartford County Medical Society
American College of Physician Executives
Congenital Cardiac Anesthesia Society

Hospital Appointments:

Medical Director of Perioperative Services, 2005-Present

Peri-Operative Director of Quality and Patient Safety 2009 - present

Surgeon-in-Chief, Connecticut Children's Medical Center
2001- 2005

Acting Surgeon-in-Chief, Connecticut Children's Medical Center 1999-2001

Active Staff, Assistant Clinical Professor of Anesthesiology, John Dempsey Hospital, University of Connecticut, 1997- present

Director, Department of Anesthesiology
Connecticut Children's Medical Center -1997-Present

Assistant Director, Department of Anesthesiology, Connecticut Children's Medical Center, 1996 – 1997

Pediatric Anesthesia Subspecialty Chief, Hartford Hospital, 1987-1996

Active, Senior Staff, Department of Anesthesiology, Hartford Hospital, 1986 – Present

Active Staff, Department of Anesthesiology, Newington Children's Hospita1, 1986 -1996

Hospital Committees:

CCMC Patient Safety Committee 1999-Present, Chair
CCMC Peer Review Committee 1996-present
CCMC Medical Staff Committee 1996 – Present

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CCMC Performance Improvement Comm., 1997 – Present
CCMC Operating Room Committee1997 – Present
CCMC Surgical Chiefs Committee 1997 – Present
CCMC Leadership Committee 1997 – Present
CCMC Perioperative Service Redesign –Chair 1998
CCMC Tissue Committee, 1998 - 2005
CCMC Executive Management Team –1999 – 2005
CCMC Surgeon in Chief Search Committee 1999
Connecticut Children's Med Ctr. Medical Staff Executive Com 1995 – 2010
CCMC Medical Capital Equipment Comm.1997 – Present
Hartford Hospital Transplantation Committee1986 – 1993
Department of Anesthesia Executive Committee, 1987 – 1995
Department of Anesthesiology Education Committee, 1987 - 1995
Department of Anesthesia Library Committee 1987 – Present
Resident Selection Committee 1989 – Present
Credentials Committee - Department of Anesthesiology, 1992-1998

Corporate Appointments

Hartford Anesthesiology Assoc. Board of Directors – 1987- 1996
Hartford Anesthesiology Assoc. Vice president – 1992-1996
Hartford Anesthesiology Assoc. Personnel Director – 1990 -1996

Invited Lectures:

"The High Risk Surgical Patient"
Connecticut Academy of Physician Assistants,
November 13, 1992, Meriden, CT.

"Special considerations in Pediatric Recovery"
Connecticut Post Anesthesia Care Nurses,
April 1993, New Britain, CT.

"Pediatric Airway Emergencies in the PACU"
Connecticut Society of Perianesthesia Nurses,
September 23, 1997

"Malignant Hyperthermia"
Grand Rounds Department of Pediatrics - UCONN,
December 1997

"Pediatric Airway Management"
The New England Emergency Medical Services for Children
Telemedicine Conference at University of Connecticut Health Center
Farmington, CT October 2, 1998

"Perioperative Management of the Child for Bladder Augmentation"
American Society of Anesthesiologist Annual Meeting
Dallas, TX October 14, 1999

"Anesthetic Considerations for Scoliosis Surgery"
Scoliosis Research Society Tutorial

Hartford, CT November 2, 1999

"Neonatal Anesthesia"
University of Connecticut, APRN Lecture series
Storrs, CT October 26, 2000

"Anesthesia and Evoked Potential Monitoring"
Scoliosis Research Society Tutorial
Hartford, CT November 2, 2000

"Management of Acute Pediatric Airway Problems"
Waterbury Hospital Pediatric Grand Rounds
Waterbury, CT May 24, 2001

"Anesthesia for Scoliosis Surgery"
American Society of Anesthesiologists Annual Meeting
New Orleans, LA October 2001

"Anesthesia for ENT Surgery"
University of Connecticut
Hartford, Ct. July 2002

"Sickle Cell Anemia"
University of Connecticut
Hartford, CT September 2004

"Malignant Hyperthermia, the Team Approach"
CCMC Grand Rounds
Hartford, CT December 2007

"Hemaglobinopathies"
University of Connecticut
Hartford, CT January 2008

ACLS Update
Connecticut GI Centers
Bloomfield, CT September 2010

Bier Block for Outpatient Management of Outpatient Fractures
University of Connecticut Department of Orthopedics
Hartford, CT September 2010

Surgery in Sickle Cell Disease
University of Connecticut
Hartford, CT October 2010

Neonatal Anesthetic Neurotoxicity
University of Connecticut
Farmington, CT December 2010

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Anesthesia and the Developing Brain
Department of Surgery, UCONN
Hartford, CT June 2011

Sedatives and Hypnotics – Safe Use in Pediatrics
Department of Emergency Medicine, CCMC
Hartford, CT August 2011

Publications:

AM Dressler, CM Finck, CL Carroll, CCBonanni, PC Spinella
"Use of a massive transfusion protocol with hemostatic resuscitation for severe intraoperative bleeding in a child"
Journal of Pediatric Surgery, 45:7 July 2010

J.Banta, C. Bonanni, J. Prebluda:
"Latex Anaphylaxis during Spinal Surgery"
EUR J Ped Surg Supp 1, 1992

J.Banta, C. Bonanni:
"Anaphylaxis in Patients with Meningomyelocele"
Developmental Medicine and Child Neurology
Vol.35, page(s) 543-548, 1993

Research Projects:

Premedication with Oral Dextromethorphan reduces postoperative pain after myringotomy and tube placement. 2001-2003

Comparison of Desflurane and Isoflurane for Face Mask operating room Laryngeal Mask Airway Anesthesia during Pediatric Surgery (MAPS) 2003-2004

Elizabeth (Liz) M. Crouch, R.N., M.S.N.

PROFESSIONAL GOALS

My healthcare career goal is to attain a senior leadership role that allows me to have the authority and responsibility to facilitate the care provided to the patient in either the in-patient operating room outpatient setting of an acute care facility.

PROFESSIONAL EXPERIENCE

Consistently served as the "go to" person for departments requiring evaluation and implementation of improvement in physician relations, customer service, cost savings operating room team building processes. My experience has included overall management of Clinical and Ancillary Services for a 106 bed regional medical center. These areas have also involved preparation and participation in JCAHO surveys as well as surveying departments for unannounced CMS inspections.

HIGHLIGTS OF EXPERIENCE

- Responsible for the day-to-day operational, financial and human resource management of multi-million dollar cost centers.
- Led cross functional teams to address process improvements, to reduce in-patient mortality, improve service excellence scores, improve revenue capture and reduce FTE/AOB without compromising care.
- Lead staff nurse initiative for a shared governance education committee.

WORK EXPERIENCE

Connecticut Children's Medical Center **Jan 2011 to Present**
Director, Perioperative Services

Responsibilities included:

1. Operational and fiscal oversight
2. Mentoring of mid-level managers

Accomplishments:

1. Successful Joint Commission survey
2. Reduction of inventory expense
3. Development of processes to improve revenue capture

B.E. Smith Consulting **March 2010 to Dec 2010**
Interim Assignment
Director, Perioperative Services

Responsibilities included:

1. Preparation of departments for Joint Commission survey
2. Operational and fiscal oversight of department
3. Evaluation and stabilization of department leadership

Accomplishments:

Successful Joint Commission survey
Increase in volume and charge capture for surgical cases
Stable leadership team

BlueJay Consulting **Nov 2009 to Jan 2010**
Interim Assignment
Administrative Director
Surgical Services

Responsibilities included:
1. Preparation of departments for Joint Commission survey
2. Implementation of staff competency program
3. Evaluate, reduce inventory

Accomplishments:
Completed staff and department preparation for Joint Commission Survey
Staff competency program initiated and annual calendar developed
Reduced inventory, unable to validate dollar amount as hospital did not have mechanism to validate
(Reduced inventory by returning unused product, removing out-dated sterile items OR)

Plains Regional Medical Center **2006 to 2009**
COO/CNO
Responsibilities have included:
1. Operational and fiscal oversight, quality improvement processes to improve care delivered by nursing and ancillary departments
2. Oversight of regulatory requirements to meet standards for CMS and JCAHO compliance
3. Function as Administrator in his absence
4. Participation in system-wide Baldrige committee's i.e. Employee Selection and Engagement Committee
5. Managed eighteen direct reports that oversaw 80% of the hospital services

Accomplishments have included:

- Successfully operationalized a surgery center following our purchase of the entity
- Fifty percent improvement in core measures of AMI, Pneumonia, CHF and SCIP
- Initiated and fostered staff nurse led committee for clinical education
- Developed process and tools for individualized physician performance reporting
- Successfully completed two year "Executive Excellence" program for high performers within Presbyterian
- Reduction in overtime(< 4% hospital wide) and agency usage to zero
- Successful completion of CMS and JCA surveys
- Reduced employee turnover from 26% to 16%
- Successfully captured unbilled charges of $350,000 monthly for glucose testing to increase revenue
- Successfully captured unbilled charges of $250,000 annually for urinary catheter supplies
- Reduced mortality rate to under target of 1.64% since institution of mortality review process
- Improved mandatory reporting for Donor services from low of 75% to consistently 100%
- Negotiated reduced contract with cath lab vendor by $2,000 monthly
- Completed Green Belt training

- Initiated RN and Nurse tech PRN pool to reduce overtime, eliminate agency use and provide candidate pool for pointage positions

Cardinal Health **2003 to 2006**

Consultant

Responsibilities have included:

1. Operational and fiscal analysis of multiple surgical service departments as well as surgeon and staff relationships within those departments.
2. Analysis of processes and productivity with implementation of daily measurement systems to provide monitoring of quality indicators and human resource needs.
3. Director level leadership of departments varied in size from 90 to 166 FTE's and operational budgets up to 157 million dollars.

Accomplishments included:

- Reviewed surgical services billing system for compliance and charge capture implementing new policies and procedures for billing system to produce accurate, timely and compliant patient billing. Improved charge capture by an average of 151,000 dollars per month.
- Created and collaborated with anesthesia to implement an acute pain management service resulting in significant improvement in surgeon and patient satisfaction. Improved revenue generation by 185,000 million dollars in 2005.
- Created an employee suggestion program for surgical services that resulted in $302,800 in suggestions. Actual savings implemented $223,000 in the first year.
- Through review of charge system identified procedure that was not being charged for resulting in generation of $97,500 charges in the last nine months of the year.
- Combined Endoscopy, Pre-op and PCU staff into one department and cross-trained for efficiency. Resulted in evenly distributed "on-call" time and ability to flex during census peaks.
- Implemented discharge criteria and transport policy for PACU reducing length of stay by an average of 30 minutes per case.

Plains Regional Medical Center, Clovis, NM **2002 – 2003**

Information Management, Project Coordinator

Facilitated interaction between hospital staff and McKesson staff for implementation of physician order entry system. System installed on time and without major issues

Interim Director – Surgical Services **2001 – 2002**

Leadership responsibility for the fiscal and operational aspects of the surgical services department to include: pre-op, surgery, PACU and Central Sterile Processing. Responsible for $36 million dollar operational budget as well as operational and capital budget preparation. Successfully changed culture of staff as evidenced by increase in work place and job satisfaction for staff working in surgical services. Accomplishments included.

- Assessed equipment needs and purchased within given budget capital and non-capital equipment resulting in improved surgeon satisfaction.
- Turned hostile work environment into one of quality driven teamwork as evidenced by facility survey.
- Prepared for JCAHO survey resulting in one recommendation for anesthesia
- Eliminated agency nurse usage

Department Director – Women's Services **1993 – 2001**

Leadership responsibility for all aspects of department fiscal and operational management functions for Women's Services. This included a 6 bed LDR, 12 post partum beds, and 13 bed Level II nursery for obstetrical care. Responsible for an operating budget of 7.4 million dollars and direct supervisory responsibility of 32 FTE's.

Assumed leadership responsibilities for 12 bed Pediatric unit in 2000.

Accomplishments included:

- Committee chair to evaluate current obstetrical charge mechanism for hospital system resulting in changes to the charge system that improved charge capture and increased billed charges by 150%.
- Oversight responsibility for the design, construction and opening of a new 2.2 million dollar obstetrical department providing space for 60% increase in volume and improved patient satisfaction as stated on patient satisfaction surveys.
- Implemented computerized fetal monitoring and documentation system that also provided real time web access for physicians.
- Organized Obstetrical Council for Presbyterian Healthcare Services to provide consistent practice across the healthcare system.
- Provided oversight for $95,000 renovation project on Pediatrics resulting in family centered care.

Coordinator-Infection Control/Staff Education **1990 - 1993**
Fire, Safety and Disaster Coordinator

Assumed responsibility for these roles working in the Emergency Room as a staff nurse.

Accomplishments included:

- Designed and implemented compliance program for PRMC with OSHA's Bloodborne Pathogen Standard for Hepatitis B and TB testing resulting in 100% employee participation by either receiving the series operating room declining based on choice
- Facilitated Fire, Safety and Disaster committee to resolve outstanding issues resulting in the JCAHO surveyor's statement of "outstanding" for work done with Fire, Safety and Disaster.
- Designed, implemented and documented Hepatitis-B vaccination program for the City of Clovis Fire and Police Department employees resulting in 100% participation and letter of appreciation from the city council
- Worked with city fire department to implement field treatment protocols
- Facilitated the implementation of city ambulance service program for semi-automatic defibrillator program-thereby improving the care delivered to the citizens of the community.

EDUCATION

West Texas A & M University, Canyon, Texas 2003
Master of Science, Nursing Administration
Graduated Magna Cum Laude

Eastern New Mexico University, Portales, New Mexico 1997
Bachelor of Science, Nursing
Magna Cum Laude

Henry Ford Hospital School of Nursing, Detroit, Michigan 1974
Diploma Degree, Nursing

AFFILIATIONS

Member, American College of Healthcare Executives
Past Board Member, New Mexico Health Resources, Albuquerque, New Mexico

Retired Board Member, Quality Committee, Presbyterian Healthcare Services, Albuquerque, New Mexico, 2001-2003. Board committee responsibility included oversight of Quality Initiatives for Presbyterian Healthcare Services
Member, Clovis Community College Nursing Education Council

References available upon request

Elizabeth A Cannon, RN, BSN
1696 Boulevard, West Hartford, CT 06107 (860) 521-0297
CT license #R43566 (Exp 12/12)

May 2003-Present

CONNETICUT CHILDREN'S MEDICAL CENTER
Hartford, CT.

Nurse Manager PACU/Pre-admissions Testing Office/Radiology Nursing/Dental Clinic

- Ensures adequate staffing plans to meet all unit needs
- Responsible for the day to day operation of all departments
- Responsible for the hiring and retention of staff
- Responsible for department budgets
- Ensure unit goals align with Balance Score Card Indicators and hospital strategic plan
- Responsible for the development and continued over sight of the PACU Critical Care program.
- Ensures unit operates under ASPAN standards
- Continually mentors Assistant Nurse Managers and Lead Nurses
- Member of the Perioperative Services leadership team that developed building and staffing plans for the Farmington Surgical Center due to open in September of 2013
- Assumes responsibility of staff evaluations
- Responsible for maintaining Press Ganey patient and family satisfaction scores

April 1996- May 2003
CONNECTICUT CHILDREN'S MEDICAL CENTER
Hartford, CT.

Staff RN- Pediatric Intensive Care Unit

- Provide Intensive care to children from birth to adolescence. Demonstrates knowledge of age related differences.
- Assumes resource nurse responsibilities
- Provides clinical expertise in providing safe, high quality patient care
- Precepts and mentors new employees and student nurses
- Assumes transport nurse responsibilities
- Provides patients and families education regarding the care of their child
- Partners with PICU Management by participating in interviews for new staff
- Follows hospital and unit policies and procedures
- Demonstrates effective communication by participating in unit rounds
- Partnered with peers in reorganization of primary nursing for the department

September 1988 – April 1996
HARTFORD HOSPITAL
Hartford, CT.

Staff RN – Pediatric Intensive Care Unit

- ❖ Responsibilities as described in Staff RN Pediatric Intensive Care Unit, Connecticut Children's Medical center

January 1988 – August 1988
CHILDREN'S HOSPITAL OF BUFFALO
Buffalo, NY.

Assistant Nurse Manager – Tanner 6, Infant Toddler Medical/Surgical Floor

- ❖ Provides unit leadership to staff daily in the charge nurse role
- ❖ Provides clinical expertise in providing safe, high quality patient care
- ❖ Assisted Nurse Manger in operating the department within budget
- ❖ Demonstrates effective communication by facilitating staff meetings with Nurse Manager
- ❖ Prepared daily staffing assignments
- ❖ Assisted with monthly scheduling
- ❖ Responsible for bi-weekly payroll

April 1987 – January 1988
CHILDREN'S HOSPITAL OF BUFFALO
Buffalo, NY.

Staff RN Tanner 6 – 18 Bed Infant Toddler Floor

- ❖ Provides clinical expertise in providing safe high quality patient care to children newborn to age two.
- ❖ Developed and followed individualized plans of care for each child
- ❖ Followed hospital policies and procedures
- ❖ Performed nursing charge role
- ❖ Oriented to and staffed other patient care areas in the hospital

Accomplishments

Nightingale Award Recipient – 2008
Nominee for Connecticut Children's above & beyond Award 2012

Professional Credentials

Pediatric Advanced Life Support (PALS) – Expires 9/2013
Basic Life Support (BLS) – Expires 9/2013

Community Contributions

St. Patrick St. Anthony House of Bread
St. Patrick St. Anthony's Catherine's Place

Education

University of Virginia, School of Nursing
Charlottesville, Virginia
Bachelor of Science in Nursing: May 1986

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Mary McLaughlin, RN, BSN, CNOR
54 Pyquag Lane Glastonbury, CT 06033
860-659-2279
marymcl55@cox.net

Connecticut Children's Medical Center
Operating Room Nurse Manager
December 2006 to Present

- Responsible for the staffing and coordination and evaluation/disciplinary process for the Operating Room and Central Sterile Services and Operating Room Scheduling.
- Managed the budget for Surgical Services and Central Sterile Services including input into Capital equipment requests, personnel and non-salary operating budgets. Initiated operating room specific inventory with the goal is to eliminate waste, improve quality, reduce cost, and positively influence the bottom line. This project is in the beginning stages of development.
- Planned for the retrofit of the minimally invasive suite. This included capital equipment requests and surgical scheduling. The opening of the suite was successfully operationalized resulting in physician and staff statisfaction as well as providing state of the art care for the pediatric patient undergoing and subsequent use of the operating room suite.
- Participated in Lean Process for Perioperative Services resulting in increased efficiency throughout the patient flow as well as decreased PACU closed times.
- Participated in the development and achievement of departmental goals and organizational strategic goals which support CT Children's mission statement.
- Member of multidisciplinary committees, Past member Clinical Council, present member of Clinical IT, Laser Safety, Risk Management, operating room Committee, Perioperative Leadership, and Chairman of Value Analysis, Co-Chair of Perioperative Clinical Improvement Committee, Member of Trauma Steering Committee.
- Facilitated staff nurse and surgical technologist's to develop service specialty teams resulting in surgeon satisfaction and improved quality care to patients.

Clinical Education Specialist
March 2005 to June 2006

- Accountable for assessing and meeting the clinical education needs of the Operating Room
- Conducted regular learning-needs assessement and used data to develop educational programs and instructional modules for staff in order to meet Joint Commission guidelines.
- Coordinated the operating room orientation for new staff with the unit manager
- Participated as an ad hoc member of the Operating Room Committee and the Perioperative Clinical Improvement Committee
- Assisted the unit manager and resource nurse with the day to day operations

Clinical Cardiac Care Coordinator and Neurosurgical Care Coordinator-Staff Nurse
March 2005-1996

- Coordinated and facilitated the progression of surgery of the pediatric cardiac surgery and neurosurgical patients
- Mentored, oriented and educated staff nurses and surgical technologists to the cardiac and neurosurgical services
- Utilized teaching strategies concomitant with appropriate patient developmental stages

- Facilitated smooth transition and synthesis of Newington Children's Hospital Operating Room facility to the creation of the CT Children's Medical Center

Newington Children's Hospital
1993-1996 Staff RN

- Coordinated services for Ilizarov, Laporoscopy/Cystoscopy and Neurosurgy.

Hartford Hospital Operating Room
1987-1993 Staff RN

- Scrub and circulate Neurosurgical, CV, General Surgery, OB-GYN, Assume charge nurse role responsibility in the absence of the Neurosurgical Manager, and Evening Nurse Manger, Facilitate and manage the workflow of from two to sixteen operating rooms. Triage Experience.

Neurosurgeons of Central Connecticut, Hartford
1986-1987 Office Nurse Manager

- Patient advocate. Facilitated patient education, resource for support staff. Liaison between Harford Hospital patient servies and private patient population

Hartford Hospital Operating Room
1983-1986 Neurosurgical Services, Nurse Manager

- Twenty four hour responsibility for Neurosurgical Services.
- Planned and prioritized care delivery for patients, provided support and education for the operating room nursing and technical staff.
- Collaborated with all other allied health services.

1980-1983 Staff Nurse Operating Room

- Scrubbed and circulated on al surgical procedures
- Assumed Charge responsibilities

Education
1997 BSN Saint Joseph's College West Hartford, CT
1980 AS Nursing Quinnipiac College Hamden, CT

Membership: AORN
Certification CPR
PALS
CNOR

Appendix I
Referenced Literature
(see separate pdf for electronic file)

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OR Manager

The monthly publication for OR decision makers

July 2009 Vol 25, No 7

Ambulatory Surgery Centers

ASC section on page 26.

In this issue

OR throughput

Fine-tuning the block schedule? Now could be the right time

If you want to fine-tune the block schedule, now may be the time. A silver lining of the recession is that surgeons and staff may be more accepting of changes to the schedule than they might be otherwise.

With the decline in elective surgery from the economic downturn, surgeons are less able to leverage one hospital against another.

In all, by the end of March 2009, 59% of hospitals were seeing a moderate or significant decrease in elective procedures, the American Hospital Association reports.

"This is allowing hospitals to make changes that are more politically challenging," observes William Mazzei, MD, medical director of perioperative services and clinical professor of anesthesiology at the University of California, San Diego.

"What is important to surgeons is good use of their time at one facility rather than playing one facility against another. They don't have the business to do that any more."

Facilities may be able to enforce stricter rules to improve OR utilization, he says. With more OR time available, they may be able to en-

Continued on page 8

OR business management

Solving the patchwork quilt of credentialing for vendors

Would you like to be on *60 Minutes* and answer the question as to why the supplier who had TB was allowed in the OR?" asks Tom Hughes, MBA, executive director for Strategic Marketplace Initiative (SMI), a nonprofit consortium of providers and suppliers from the healthcare supply chain. "Let's head off that question."

Vendors play a valuable role in the OR, but how can OR managers ensure staff and patients receive what they need while managing potential risks?

"We feel industry representatives have a role in training and use of equipment," says Fred Perner, MBA, JD, vice president of business development for AORN. "The question is how do you balance that with patient safety?"

One strategy is the booming business of vendor credentialing. But credentialing of vendors comes with its own challenges. A lack of standardization for credentialing requirements, the need for vendors to register for the multiple hospi-

Continued on page 14

___Sharp

___Sharper

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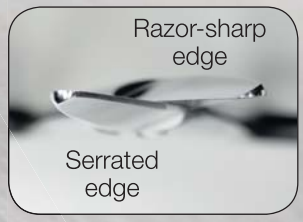

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OR Manager
The monthly publication for OR decision makers

July 2009 **Vol 25, No 7**

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Editorial

Why does health care cost so much more in some communities than others, with no apparent difference in outcomes? Big variations have been documented for more than 20 years by the Dartmouth Atlas Project.

One way to find out—hit the road. That's what surgeon and storyteller extraordinaire Atul Gawande, MD, did recently. He headed for McAllen, Texas, which has some of the nation's highest costs for Medicare patients. You may recognize his name as a driving force behind the World Health Organization's surgical safety checklist and a major study on retained foreign objects. He also wrote the best-selling books *Complications* and *Better*. He tells his story about the trip to McAllen in the June 1, 2009, *New Yorker*.

McAllen providers spent on average $15,000 per Medicare enrollee in 2006—almost twice the national average. This got his attention, given the predictions that Medicare could be broke by 2017.

What's up in McAllen?

In McAllen, he searched for reasons for higher costs. The city has a high poverty rate and a high incidence of heavy drinking and obesity, but its rates of heart disease, smoking, asthma, and other conditions are lower than average. El Paso County, further north along the Mexican border, has basically the same demographics but had Medicare expenditures half of McAllen's in 2006, at $7,504. By comparison, in Rochester, Minnesota, home of the Mayo Clinic, Medicare spending is in the lowest 15% in the country, at $6,688 per enrollee in 2006.

Dr Gawande finds no evidence McAllen's treatments and technologies are better. McAllen's 5 largest hospitals actually performed worse than El Paso's on 23 of Medicare's 25 quality metrics.

> **"Why are costs so much higher?"**

What McAllen does have more of are services—more testing, hospital treatment, surgery, and home care.

Dr Gawande observes there also seems to be a higher prevalence of physicians in McAllen who see their patients as a revenue stream.

As he talks with physicians and executives, he hears that something began to change in McAllen about 15 years ago—"the medical community came to treat patients the way subprime-mortgage lenders treated home buyers: as profit centers."

In most communities, he observes, physicians have a mix of attitudes about money; some place a lot of emphasis on revenue while others see it as secondary to patient care and clinical interests. McAllen's medical community, on the other hand, tends to be "at one extreme" in their focus on finances.

Dr Gawande then looks at communities and organizations that have controlled costs and achieved higher quality. Among these are the Mayo Clinic; the city of Grand Junction, Colorado; and Intermountain Healthcare in Salt Lake City.

The contrast between them and McAllen, he believes, "is a battle for the soul of American medicine." To him, the question the nation needs to ask is "whether the doctor is set up to meet the needs of the patient, first and foremost, or to maximize revenue."❖

—Pat Patterson

Dr Gawande's article is free at www.newyorker.com/reporting/2009/06/01/090601fa_fact_gawande

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William J. Mazzei, MD

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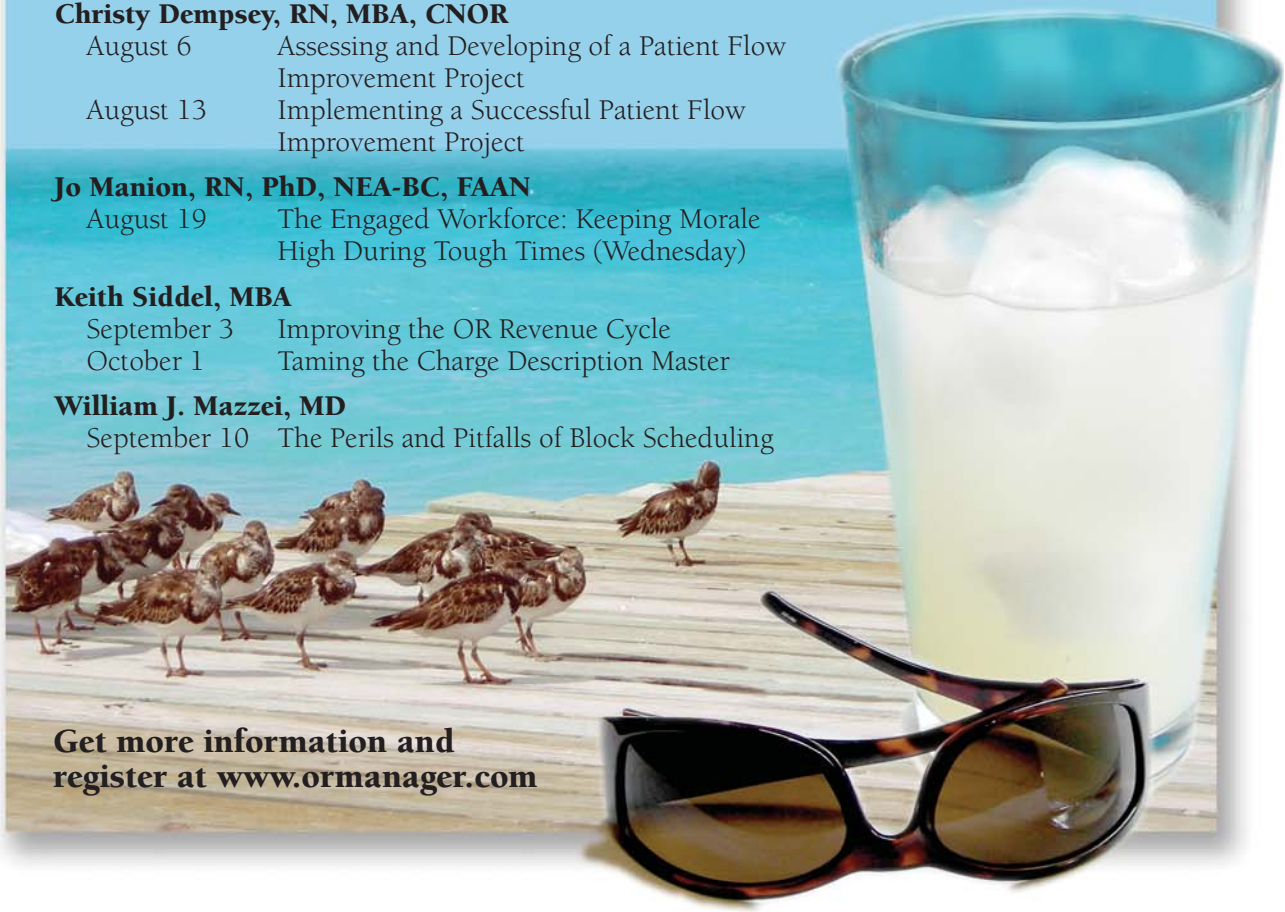

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Seminars to teach management tools

Managing the Lean way, keeping employees engaged, stopping bad behavior, improving patient flow, and getting the most out of the sterile processing department are among topics for 8 all-day seminars being offered Wednesday, Oct 7, at the Managing Today's OR Suite Conference. The conference runs Oct 7 to 9 at Caesars Palace in Las Vegas.

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Jenn Lingenfelter, Pamela Murphy

Weeding waste out of OR processes will be the focus of this seminar focusing on Lean manufacturing, pioneered by Toyota.

S-2: Orientation, Onboarding, and Employee Development

Judy Pins

Lessons from a progressive new hospital about bringing employees on board successfully and keeping them engaged throughout their careers.

S-3: Financial Skills for New Managers

Sherry Church, Gina Brennan

This session will help managers learn the vocabulary of finance and acquire financial skills needed to understand reports and make good management decisions.

S-4: Moving Beyond the Double Doors: A Journey on Improving Patient Flow

Christina Dempsey, Sherron C. Kurtz, Kenneth G. Murphy

A hospital shares its journey to optimize flow, resulting in less wait time for urgent patients, better block utilization, reduced case time after 5 pm, and more.

S-5: Management Strategies to Stop Bad Behavior for Patient Safety

Grena Porto

The speaker offers a road map for recognizing bad behavior, setting behavioral standards, and developing a code of conduct to improve patient safety.

S-6: Appreciative Leadership: Focus on What's Going Right

Jo Manion

In this energizing session, the speaker explores elements of appreciative leadership and concrete, positive approaches for addressing issues in the work environment.

S-7: SPD and the OR: Different Issues, Common Goals

Cynthia Spry, Martha Young

The speakers will offer strategies for building a foundation so both departments can understand each other's needs and improve processes.

S-8: Magic of Frontline Leadership: Secrets of Accountability and Engagement

Brian Lee

An expert on employee satisfaction teaches about creating incentives to improve productivity and offers practical tools for creating world-class patient, staff, and physician satisfaction. ❖

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Settlement on kyphoplasty billing

In the first settlement of a national investigation, HealthEast Care System agreed in May to pay the federal government $2.28 million to settle allegations that 3 of its hospitals overbilled Medicare for kyphoplasties.

Some 100 hospitals are under investigation, according to the legal expert who represented HealthEast. The investigation is being led by the US Attorney for the Western District of New York in Buffalo.

The settlement involves kyphoplasties performed from 2002 through 2007 at St Paul, Minnesota-based HealthEast's St Joseph's Hospital, St John's Hospital, and Woodwinds Hospital.

The investigation stems from a whistleblower lawsuit filed in 2006 by 2 former employees of Kyphon, Inc, the company that developed balloon kyphoplasty.

Kyphoplasty, a treatment for spinal fractures caused by osteoporosis or cancer, involves using a balloon catheter to create a cavity in the fractured bone and filling the cavity with bone cement.

The suit alleged that Kyphon conducted a fraudulent marketing campaign that induced hospitals to bill Medicare for kyphoplasty as an inpatient procedure even though the procedure can be performed safely as an outpatient procedure.

"By keeping patients overnight, hospitals could seek greater reimbursement from Medicare and make much larger profits on kyphoplasty," said Kathleen Mehltretter, acting US Attorney in Buffalo.

HealthEast says it "cooperated fully" with the investigation, and no penalties are involved.

In 2008, the government reached a $75 million settlement with Medtronic Spine LLC, which acquired Kyphon in 2007. The company did not admit wrongdoing.

> **"Settlement is only the beginning."**

Whistleblower allegations

The whistleblowers' original complaint, filed against Kyphon and a Buffalo hospital and recently unsealed, alleged Kyphon started in 1999 to develop a marketing scheme "to exploit high reimbursement under inpatient DRGs to persuade hospitals to perform kyphoplasty."

Kyphon was highly profitable, according to the court filings, with the profit margin on its products ranging from 87% to 92%.

DRGs that Kyphon recommended paid hospitals about $6,000 to $10,000 depending on the area of the country. That compared with outpatient reimbursement of about $2,000 in 2005, according to the court filing.

Billings for unnecessary inpatient admissions are considered false claims, which are illegal under the federal False Claims Act (sidebar).

Among allegations are that Kyphon representatives met with coders and medical record departments to explain how to code and bill the charges to ensure payment under the DRGs.

Court documents also say sales reps would be present in the OR during kyphoplasty and were taught to ask the OR nurses whether the patient had been admitted for an inpatient stay. If not, the sales rep allegedly would arrange for the physician to sign orders for inpatient admission in the OR.

Also part of the allegedly fraudulent scheme was to market an instrument for performing bone biopsies during kyphoplasties. The company, according to the whistleblower suit, advised physicians they had to perform bone biopsies on every patient regardless of medical history or condition.

What is the False Claims Act?

The False Claims Act and its amendments create incentives for people who know about fraud against government programs like Medicare to disclose the information by filing a whistleblower (*qui tam)* lawsuit.

Some specifics:

- Anyone who presents or causes to be presented false or fraudulent claims to the US government or makes false statements to induce the government to pay false claims is liable for a civil penalty of $5,500 to $11,000 for each claim, plus 3 times the amount of damages the government sustains.
- Anyone having information about false claims can bring an action for herself or himself and the government and share in any recovery, receiving 15% to 30% of the total amount recovered.
- The act provides protections for whistleblowers.

Only the beginning

The HealthEast settlement is only the beginning, says Ronald H. Clark, PhD, JD, the legal consultant who represented HealthEast and an expert on the False Claims Act.

"Basically, every hospital performing kyphoplasty could potentially be a subject of this investigation," he says.

He says HealthEast ran into problems despite having what he calls "the best compliance plan I have ever seen in a hospital. This shows you no compliance plan will catch everything."

The settlement holds lessons for hospitals and OR leaders, not only on billing for kyphoplasty but for any new technology introduced in a hospital.

The immediate lesson—if the US Attorney comes calling, cooperate, Clark advises. Kyphoplasty billing problems are easy to uncover, says Clark, who was formerly a senior counsel in the Civil Fraud Division of the US Department of Justice. Investigators can simply run a computer report on a hospital's claims. If most kyphoplasties come up as inpatient, that's a red flag.

He says HealthEast came out reasonably well because it cooperated fully with the US Attorney.

Clark outlines the approach hospitals should take in his blog at http://fcaexpert.blogspot.com/2009/02/new-national-kyphonplasty-enforcement.html

For those who don't cooperate, he says penalties can be much more severe. The government can assess $5,500 to $11,000 per each piece of paper associated with a false claim plus treble damages.

Best defense

Clark says a hospital's best defense is to invest in a "top-notch compliance plan.

> **"Consequences can be severe."**

"Have your plan reviewed. Make sure it is effective, supported with adequate resources and that you have a good compliance officer," he advises managers.

The settlement holds other lessons. Be sure the hospital has a policy stating that contact between employees and outside vendors and independent physician groups must be authorized, he advises. Compliance officers need to be aware of whom employees have contact with because under the law, the hospital will be treated as though it was fully aware of what was going on.

Also, though nothing precludes a salesperson from being in the OR to make sure a device is used correctly, "the danger is that in many hospitals in which kyphoplasty was performed, sales personnel were giving billing advice," he says. "That can work its way into becoming a billing rule, and that becomes a problem."

Another lesson: Include the compliance officer in the product evaluation process to make sure procedures involving new products are billed appropriately.

Educate employees

Employees and managers need to be educated about the compliance plan, Clark adds. They should know who the compliance officer is and feel comfortable going to the officer with any concerns. Employees who feel comfortable reporting concerns and know their concerns will be addressed are less likely to consider filing a whistleblower suit.

One way he judges if a hospital has a good compliance plan is to ask any employee, "Who's your compliance officer?" If he gets a blank stare, he knows something is lacking.

Every employee should have easy access to pertinent parts of the compliance plan. Two ideas are to provide color-coded notebooks or post information about the plan on the hospital's intranet.

"The consequences of not being proactive for hospital management are severe," he says. "It can mean huge amounts of money, affect your Medicare eligibility, and if you have a building project, it can affect any bonds that require approval from HHS."❖

Ronald Clark's website is at http://fcaexpert.com

C difficile infection rising in hospitals

Clostridium difficile is more prevalent in hospital patients than previously estimated. The majority of cases appear to be health care associated, finds a new survey.

The survey, completed by 648 hospitals, found 13 in 1,000 inpatients were either infected or colonized with *C difficile*—a rate 6.5 to 20 times higher than previous estimates, which the authors say is a minimal estimate. William Jarvis, MD, the principal investigator, said preventing C diff development and transmission should be a top priority for every institution. ❖

—Jarvis W R, Schlosser J, Jarvis A A, et al. Am J Infect Control. *2009;37:263-270.*

Continued from page 1

courage surgeons to stay at the facility longer than they might have in ordinary times.

For example, if the OR has allowed some surgeons to have half-day blocks, which is not optimal for utilization, it may be easier to make these full-day blocks.

If the surgeons object, the facility might respond by saying it will convert these blocks to open time into which anyone can schedule cases. In this environment, most surgeons will accept the change, says Dr Mazzei, who is also with Surgical Directions LLC, Chicago-based consultants.

It may also be easier to match staffing more closely to the surgical schedule, he notes. In a down economy, staff may be more accepting of scheduling changes.

The business of blocks

With fewer cases, ORs need to pay close attention to how surgeons' block time is affecting their business, comments Jerry Ippolito, MBA, MHSA, of consultants OR Efficiencies LLC, Naples, Florida.

When a surgeon asks for block time, he suggests the question should be: "What are you going to bring us?" How will the surgeon's cases benefit the hospital? He advises posing the same question to surgeons who already have block time.

The block time analysis should include not only how much of their block time surgeons are using but also the contribution margin of their cases. (Contribution margin = revenue – variable costs, such as implants and specialty staffing). The contribution margin should be calculated before indirect costs are allocated and should include revenue and expenses for the surgeon's patients hospitalwide, not just for the OR, he adds.

The literature includes a number of studies on OR time allocation, including use of contribution margin (related article, p 11).

> **"Policies must be transparent."**

Good governance

Nothing is more important to effective block scheduling than strong, active leadership, these experts say. The block scheduling system must be governed by policies and procedures endorsed by the medical staff and enforced by the OR's governing body. Policies must be transparent.

"The system must be scrupulously fair. If there is any favoritism, the surgeons will sniff it out, and it will never work," stresses Tom Blasco, MD, MS, an anesthesiologist and intensivist at Advocate Lutheran General Hospital, Park Ridge, Illinois, and a consultant with Surgical Directions LLC.

The OR governing body must be committed to ongoing measurement and evaluation, Ippolito adds. "Many organizations allocate block time to a surgeon and never look at it again, whether the surgeon uses it or not."

When blocks are poorly managed, surgeons have bad experiences and may end up rejecting block scheduling all together. (For more on OR governance, see the July 2008 *OR Manager*.)

Communication is a corollary

Communicating with surgeons about their blocks is essential in managing the block schedule, says Stephanie Davis, RN, MS, CNOR, assistant vice president, surgical services for the HCA Clinical Services Group of HCA Inc, the national health care company based in Nashville, Tennessee.

The surgeon's office often schedules the cases. The office may be scheduling some cases outside the block because these other times are more convenient, she notes.

"If we are not transparent with surgeons about their utilization, they may not know they are not meeting the target. They may volunteer on their own to adjust their block," she says.

Open communication is also part of customer service.

"If you have a good relationship with your surgeons, they will trust you to manage blocks fairly," says Davis, who has assembled a block scheduling toolkit for HCA Inc's 165 hospitals (related article, p 9).

Starting a conversation

Good relationships make it easier to start a conversation if a surgeon's block utilization is not what is expected. Davis says that when she was a perioperative director, she talked to the surgeons about low utilization as soon as she found out.

She might say, for example, "Dr Smith, I hope you got your letter about block utilization. Did you realize you were only running about 35%? Do you want to move your block to a different day? What can I do to help you get your utilization where it needs to be?"

Efforts to manage the block schedule can be worth it because everyone benefits, Dr Mazzei observes.

"The workday is more enjoyable for physicians and staff alike in hospitals that have completely full

Continued on page 12

A toolkit for managing block scheduling

HCA Inc, the national health care company, has developed a block scheduling toolkit for its 165 hospitals. The toolkit includes decision points, algorithms for managing blocks, and sample policies.

Here are HCA Inc's 10 decision points for block scheduling.

1. Is this the right time for block scheduling?

About 75% to 80% of HCA Inc's hospitals use block scheduling, estimates Stephanie Davis, RN, MS, CNOR, assistant vice president, surgical services for the HCA Clinical Services Group, Nashville, Tennessee, who developed the toolkit.

If an OR isn't using block scheduling, she suggests asking: "What are the reasons for not offering this service? Are those reasons still valid in today's environment?"

Not every OR decides to use block allocations. "If you don't have a lot of volume and are trying to get every case you can, you might not want to rock the boat with the medical staff," she notes.

In some parts of the country, "surgeons are really anti-block," says Jerry Ippolito, Jerry Ippolito, MBA, MHSA, director of perioperative services and pain management business development, Southeast Anesthesiology Consultants, Charlotte, NC.

That can happen if they have had a bad experience. To some, block scheduling means "preferential treatment." Surgeons may be more receptive to another term, such as "reserved time," he suggests.

An OR schedule with all open time has its own problems, he adds. Open time favors surgeons who perform mostly elective cases, such as ENT and ophthalmology, and can schedule far in advance.

> **"Open time is a strategic issue."**

Even in an OR with all open time, surgeons tend to establish patterns that are, in effect, like block time.

Leaders may have success getting the surgeons to accept block scheduling if they show them data demonstrating that their cases already fall into regular patterns, he suggests.

How much time should be blocked? Typically, 55% to 80%, though how much open time to offer depends on the situation, Ippolito says. A high-volume trauma center can't allocate as much time as an OR with a more predictable caseload. How much time to leave open is also a strategic issue. A more mature setting may have 80% to 85% of its time blocked, while a facility trying to attract new surgeons will want more open time available.

2. Does your block scheduling policy include key elements?

Davis suggests key elements of the policy should include:

- A block utilization rate is calculated monthly and reported to each surgeon quarterly. The toolkit recommends a block utilization rate of 70%. But there is no hard-and-fast rule, Davis says. "It's up to our facilities to set the level they think is appropriate."

Suggested block release times

Burn service (inpatient)	1 day
Cardiac	1 day
General surgery	7 days
Gynecology	7 days
Head and neck	7 days
Neurosurgery	4 days
Ophthalmology	7 days
Orthopedics (joint)	14 days
Orthopedics (spine)	3 days
Pediatrics	7 days
Plastic (cosmetic)	14 days
Radiology	3 days
Vascular	2 days
Thoracic	3 days

Source: William J. Mazzei, MD; Tom Blasco, MD. OR Manager. *2004;20(11):1, 9-12.*

Davis says monitoring of blocks requires discernment: "Your OR governance team has to look at each situation and be able to back up its decisions with facts."

(From a scientific point of view, adjusting blocks according to utilization isn't the best choice, notes a leading researcher, Franklin Dexter, MD, PhD. See related article, p 11.)

- Automatic block release times are stated and enforced consistently for all surgeons. In a general OR with a lot of specialties, a 72-hour release is appropriate, Davis says. "Some will argue 48 hours is better; others will argue 1 week. You have to decide with your group what fits." One option is release times by specialty (sidebar).
- The policy states that if a surgeon notifies the OR in advance

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to release block time, unused time will not count against the surgeon in the block utilization report. Advanced notice allows other procedures to be booked into the unused time.

3. Is there a physician champion?

Blocks are best managed by an executive committee made up of the OR director, the administrator responsible for surgery, the chief of surgery, and the chief of anesthesia.

"Everyone on the committee has a vested interest in making block scheduling work," Davis notes.

The physician champion helps to monitor and enforce the block schedule and communicate with the surgeons.

"Communication goes over better if the surgeon receives it from a peer," she notes.

The physician champion, with the OR director, should be willing to sign letters to the surgeons informing them of their block utilization.

4. Is there a grace period?

The block scheduling policy allows surgeons a 3-month grace period to improve their block utilization once informed of their utilization rates, the toolkit advises.

"Our plan is to inform surgeons of their block utilization once a quarter but to tell them we will wait one more quarter before doing anything to their block to allow for variances," Davis says.

5. How is the utilization rate communicated?

"It's important to communicate with every surgeon. If they have a block, you communicate with them once a quarter, regardless of their utilization," Davis says.

The toolkit recommends a tiered approach to communication. For example:

- A letter of congratulation is sent to surgeons with a block utilization rate of 70% or greater.
- Surgeons with utilization of 70% to 50% are informed they have not met the threshold and asked to decrease the time blocked or to consider changing their day or time to improve usage.
- Surgeons whose utilization falls below 50% are informed they are well below the threshold, and if they do not bring their utilization to 70% or above by the end of the next quarter, they will lose the privilege of having a block.

"Accurate data is critical."

6. Are at least 1 or 2 ORs reserved for first-come, first-served booking?

"Having open rooms allows new surgeons to book occasional cases in your OR and allows for recruitment of new business," Davis notes.

7. Do you have 1 OR for add-ons, emergencies, and flip-flopping of cases?

"In small ORs, this might not be possible, but in medium to large ORs, it is effective," Davis says.

Open rooms provide flexibility to move cases and add cases. There may be exceptions for facilities such as eye centers where routines are well established. The rule is not rigid; the point is to have flexibility. Providing an add-on room for urgent and emergent cases enabled St John's Regional Health Center, a regional trauma center in Springfield, Missouri, to increase its surgical volume by 5%, increase surgeon revenue by 4.6%, reduce the need for ORs after 3 pm, and reduce overtime. The project was part of an effort to smooth patient flow throughout the hospital. (See November 2003 and January 2005 *OR Manager*.)

8. Is the schedule accurate?

Are your OR analyst and schedulers making sure the schedule is accurate so utilization reports will reflect accurately each surgeon's block use? Accurate data is critical when reporting block utilization to surgeons.

9. Are you willing to enforce the block scheduling policy fairly?

Effective block scheduling requires maintenance and enforcement of rules, Davis says. The HCA Inc toolkit provides a sample policy for block scheduling.

10. Will the administration support the block scheduling policy?

Effective block scheduling always comes back to good governance. The administration must support the surgical executive committee that reviews the block allocations and not overturn their decisions. ❖

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The research on OR time allocation

What criteria should be used to make decisions about adjusting block time? Traditionally, OR committees have used surgeons' utilization of blocks. But OR utilization isn't the best way to make this decision, the research shows.

The method to use depends on why block time is being adjusted, notes Franklin Dexter, MD, PhD: Are blocks being adjusted for operational reasons; that is, to match staffing to the existing OR workload? Or are blocks being adjusted for tactical reasons, such as to provide more convenient access to OR time for some surgeons?

Consider these scenarios:

Scenario 1: Tactical decision

A group of neurosurgeons has 91% utilization of their block time. They're recruiting a new spine surgeon and need more OR time.

Dr Jenkins, a vascular surgeon, has 60% utilization of his block. It seems that he could use less time.

Should the OR committee take some of Dr Jenkins's block time and give it to the neurosurgeons? This is a tactical decision.

Scenario 2: Operational decision

The neuro service has a block allocation of 3 ORs on Mondays from 7:15 am to 3:30 pm. They have little underutilized time and often have overutilized time (ie, run late). How many nursing staff should be assigned for 8 hours and how many for 10 hours? This is an operational decision.

Tactical decisions

For tactical decisions like Scenario 1, decisions increasingly are being made at least partly to meet financial goals, Dr Dexter says. The OR committee might, for example, look at the contribution margin for spinal surgery to decide if giving the neurosurgeons more block time would help the hospital financially. (Contribution margin = revenue – variable costs.) More spinal surgery might or might not be a good idea, depending on the implant costs and the reimbursement.

> **"Making decisions on adjusting time."**

Tactical decisions also include strategic issues. Dr Dexter says "revenue" should be considered from a long-term perspective and should include not only reimbursement but also the intangible value of adding more cases in a focused strategic area. For example, executives decide your hospital is going to be a regional pediatric center. Of course, you will give your pediatric surgeon a great deal of block time, the cost and reimbursement issues aside. In this case, each additional pediatric patient has an intangible value, known in economics as utility, Dr Dexter explains.

Utilization not best choice for tactical decisions

Utilization is not the best choice for making tactical decisions on block time, Dr Dexter says, citing 5 reasons from the literature:

1. Utilization does not help to reduce patient waiting times, which is usually a goal of patients as well as clinicians and administrators.
2. Utilization is poorly related to contribution margin. A surgeon or service with high utilization can still lose the hospital money if reimbursement for these cases doesn't cover costs.
3. Efforts to increase utilization can actually reduce margins. For example, the hospital signs an insurance contract hoping to increase surgical volume, but not many of the patients have surgery, and the contracted rates are too low to cover costs.
4. Utilization is poorly related to variable costs. Surgeons with equal utilizations can have different variable costs. For example, 2 surgeons have 70% block utilization. The first surgeon performs outpatient breast surgery, which has low variable costs per OR hour. The second surgeon performs joint replacements, which have high variable costs per OR hour.
5. For surgeons with low utilization, it is questionable whether utilization can be estimated sufficiently precisely for this purpose. A 2003 study found, for example, that if during 1 quarter, Surgeon 1 had a block utilization of 65%, and Surgeon 2 had a block utilization of 80%, statistically, the difference may be due to random chance. For surgeons with low utilization, the study found it would take more than 10 years of data to measure block utilization accurately enough to be of practical value in making block-time decisions.

Operational decisions

Operational decisions should be made to improve OR efficiency, according to research findings. For

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this purpose, OR efficiency is defined as a balance between underutilized and overutilized OR time. If time is underutilized, revenue isn't coming in while the OR is incurring labor costs. Overutilized time means clinicians have to work late, which is a dissatisfier and can be costly if overtime is needed.

Achieving OR efficiency involves matching the staffing allocation as closely as possible to the existing workload.

In Scenario 2, depending on the details of the neuro service workload, a decision based on OR efficiency might be to increase the neuro service's OR allocation (or block) from 7:15 am to 6 pm in 2 of the 3 ORs. The anesthesia providers and nurses gain by having more predictable work hours (ie, fewer overutilized hours).

The purpose of this block adjustment is not to encourage more neurosurgery because the neurosurgeons are already getting their cases on the schedule. Rather, the purpose is to achieve a better balance between underutilized and overutilized time.

"Generally, what surgeons care about are tactical decisions: 'How can I grow my practice?'" Dr Dexter says. "What anesthesiologists and nurses generally care about are decisions on the day of surgery: 'Will I finish on time?'"❖

More information on Dr Dexter's research and consulting is at www.FranklinDexter.net

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Block scheduling

Continued from page 8

blocks, do lots of cases during the day, and have limited overtime and limited nights and weekends," he says. "They find this is a win-win situation." That may not be obvious to people in systems that have had the same underutilized block times for 20 years, he adds. Today's environment may create the opportunity to change that situation. ❖

—Pat Patterson

Stephanie Davis will speak on block scheduling at the Managing Today's OR Suite Conference Oct 7 to 9 in Las Vegas.

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Infection prevention funding is cut

Hospitals are cutting staff, resources, and education for infection prevention, a survey by the Association for Professionals in Infection Control and Epidemiology (APIC) shows.

Of about 2,000 respondents, 41% reported their budgets had been cut primarily because of the economic downturn. Of these, 75% said education on infection prevention had decreased. Nearly 40% had layoffs or reduced hours, and a third had hiring freezes.

"At a time when the federal government will be requiring hospitals to meet national targets for HAI reduction, infection prevention departments need to be growing, not shrinking," APIC's president said. HAI are health care-associated infections. ❖

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Joint Commission's perspective

On April 15, 2009, the Joint Commission posted a response on its website to a question about standards that address vendor representatives in clinical areas. The commission says it does not have specific standards or credentialing requirements in this area because accepted national standards on competence for vendor reps are lacking.

But the commission notes, "… some organizations are recommending general credentialing requirements for these individuals" and refers readers to AdvaMed's website (www.advamed.org).

The commission also cites several standards relevant to any person who enters a health care organization and affects the quality and safety of patient care.

—www.jointcommission.org/AccreditationPrograms/Hospitals/Standards/09_FAQs/HR/hc_industry_vendor_representatives.htm

Continued from page 1

tals they service, and costs of the process all play a role.

In 2006, SMI took a step to help end the patchwork quilt of credentialing requirements by publishing *Management Guidelines for Vendor Access* (www.smisupplychain.com).

"We identified the need for vendor management from a safety and quality standpoint," says Hughes.

New joint best practices

AORN and the Advanced Medical Technology Association (AdvaMed), which represents medical device manufacturers, recently

> **"More is needed to reduce confusion."**

took another step toward consistency, releasing *Joint Best Practices Recommendations for Clinical Health Care Industry Representative Credentialing* at the AORN Congress in March 2009. The recommendations include credentialing criteria representing best practices from 11 organizations and are designed to provide guidance for streamlining vendor credentialing.

Perner says the organizations hope the recommendations will help OR managers establish a vendor credentialing policy.

"It's also important to determine how to implement the policy and communicate it to others so it's followed," he adds.

Some hospitals have used medical credentialing as a template for vendor credentialing, but Terry Chang, MD, director of legal and medical affairs for AdvaMed, says there's a difference. "With physicians, it makes sense to have primary source verification such as graduation from medical school. That kind of rigor makes sense because of the risk. But the risk [from what a vendor does] is not the same as practicing medicine."

Who's on first?

More is needed to reduce confusion. "Suppliers are asking who's on first, who's on second," says Hughes. "What are we supposed to be doing for each system?"

Vendor credentialing requirements vary because individual hospitals interpret risk, industry expectations, and infection control practices differently.

"Some hospitals ask for vaccinations, and some don't ask for any," says John Wills, founder and president of Status Blue, LLC, a third-party credentialing verification organization (CVO). Companies like Status Blue use databases and software to manage sales rep credentialing; vendors pay an annual processing fee to be included.

Reciprocity needed

"In a perfect world, you do the paperwork once and be squared away for all the hospitals," says Wills. In essence, there would be reciprocity. Variations in hospital requirements make reciprocity difficult.

"The notion of there being a 'one size fits all' industry guideline and documentation repository sounds good in principle but is difficult to conceptualize in real-world practice," says Wills. "Best practices and industry guidelines are important, and we need more consistency with vendor credentialing, but if clinicians have to meet different requirements and medical staff expectations for each facility so they can be on staff or have privileges, why would the industry operate differently for vendors?"

The good news is most third-party CVOs allow sales representatives access to all the hospitals in a single system rather than charging the system for each hospital.

"Reps can log on and send their profile with their credentials attached to whomever they want," says Wills. "It's the equivalent of sending an email with a link." That includes other CVOs the vendor might want to register with.

The AORN recommendation encourages hospitals to "institute a policy of reciprocity," which, along with a coordinated credentialing process, could save resources. CVOs

Credentialing verification organizations

REPtrax
214/222-7484
www.reptrax.com

Status Blue
866/383-2583
www.status-blue.com

Vendor Credentialing Service
281/ 863-9500
www.vcsdatabase.com

VendorClear
888/850-7484
https://secure.vendorclear.com

Vendormate
877/483-6368
www.vendormate.com

typically provide an option in case of emergencies. For example, a patient who arrives in the ED has a pacemaker from a manufacturer the hospital doesn't have a contract with, and the manufacturer's representative needs access. In cases like this, hospitals can allow the vendor entry into the OR.

"The system then badges the rep as a vendor visitor and records the visits," says Wills.

Who pays?

Who bears the cost of vendor credentialing? There are 3 options.

Hughes opposes the first option, where hospitals charge suppliers. "It's like selling shelf space. I'll give you 3 feet of shelf space if you give me a certain amount of money," he says, adding, "I get very nervous when I see money going from suppliers to providers not for goods sold."

Wills adds that this system "is not efficient," given the amount of work involved. He says hospitals typically charge $100 to $250 per sales rep, although one system charges $400 per rep.

> "Who bears the cost?"

The second option is for vendors to pay CVOs. Wills sees his and other companies as time savers for the hospital.

"Everyone is busy enough so why not log into a system that other hospitals in your area are using?" he says. "You can monitor and track visitors. It's apparent to the staff this person isn't an employee. If they have the badge on, then it's thumbs up."

Hughes says the drawback of this option for vendors is, "an annual fee, even though 90% of work is done in the first year. It's like the Energizer Bunny for cash flow." He also worries that larger manufacturers, which can better afford the fees, have an unfair advantage over smaller companies.

"Of 3,000 manufacturers, about 20 make up 60% to 70% of business," Hughes says. "But you're still dealing with nearly 3,000 manufacturers who deserve access to present their products. It needs to be managed carefully." He also wonders if antitrust charges by smaller companies could be a possibility in the future.

Fee structure varies

The fee structure for CVOs can vary. The Independent Medical Distributors Association (IMDA) recommends the universal membership model, defined as "a single annual fee good for all installations of the same branded service solution," in which a vendor representative's membership grants access to unlimited hospitals for one fee.

CVOs deny fees are out of line, citing costs of annual updates needed to meet hospital requirements for TB testing and liability insurance, adding new hospitals, and technology costs.

"Nearly all vendors find our business model to be fair and equitable compared to alternative business models or hospitals charging individually," says Wills.

Hughes proposes a novel third option: funding by group purchasing organizations (GPOs) such as Novation, Premier, MedAssets, and others. The cost to fund credentialing would come from the administrative fee (typically up to 3% of total volume) GPOs can charge. He believes this option would lower the number of credentialing companies down to "3 or 4," also reducing the number of companies a vendor must register with.

What's next?

Perner says the recent joint recommendations are, "a living document. More organizations can join, and we welcome input."

Hughes at SMI also welcomes AORN's involvement, saying, "Their involvement is powerful. They cast a large net." He also cautions, "Guidelines are not standard; there will always be variation." The goal is to cut down on the variation, while still moving forward. "In health care everyone wants it to be perfect so they don't do anything. No matter what the solution, it won't solve everything."❖

—Cynthia Saver, RN, MS

Cynthia Saver is a freelance writer in Columbia, Maryland.

A vendor policy for a large system

An effective plan to manage vendors is crucial for any OR, but designing such a system for a large health system is complex. Nurse leaders at the Sisters of Mercy Health System, based in St Louis with 19 hospitals in 4 states, have collaborated with their colleagues to craft a policy that works.

The policy is at the heart of the system's Vendor Access Program, a credentialing process for vendors to manage access in the hospital.

"Our number-one driving force is a safe environment for patients, coworkers, and vendors," says Ruth Damron, RN, BSN, clinical resource manager for ROi Performance Consulting (the operating division of Sisters of Mercy Health System), who coordinated the task force charged with developing the program. The program also helps the system manage potential risks of vendors in the OR and adhere to professional guidelines such as those from AORN and regulatory requirements such as the Health Insurance Portability and Accountability Act (HIPAA).

Unified approach, local flexibility

"In the past, each hospital had its own vendor policy. The rules were different at different hospitals, making it confusing for vendors," Damron says.

For the task force, she pulled together key stakeholders including representatives from materials management, pharmacy, security, clinical engineering, capital management, facilities management, support services, the OR, and any other areas where vendors interact with staff.

The task force tapped into work by the Strategic Marketplace Initiative (SMI), which published *Management Guidelines for Vendor Access* in 2006 (www.smisupplychain.com).

> "The program helps manage risks."

"We used the SMI guidelines as a starting point and adapted them to our hospitals," says Damron. This approach gave Mercy the consistency it needed while allowing for some individual approaches to implementation at the hospital level.

For several months, the task force held a weekly conference call to develop the program. "We hashed out what would work for all of our facilities and different areas," says Melissa Castleberry, RN, BSN, OR supervisor for St Edward Mercy Medical Center, Fort Smith, Arkansas, part of Sisters of Mercy Health System, which averages about 5,500 cases per year.

After implementation, the task force met biweekly to share issues and best practices and now meets as needed.

Program details

Sisters of Mercy Health System classifies vendors as Level 1 (nonclinical) or Level 2 (clinical), based on proximity to patients (sidebar, p 18). Level 2 vendors must meet more stringent requirements.

"Most companies already have the needed training in place," says Damron. "They either provide it themselves or use a third party." Mercy's legal, risk management, and infection control departments reviewed the courses to be sure they provide the necessary information.

Vendors covered

The vendor access program applies to all vendors, except those involved in capital construction, which is covered by another policy, and vendors who visit physician offices and clinics.

The program outlines responsibilities of the director of materials management, the vendor, department directors, and medical and administrative staff.

During the registration process, vendors sign off on the required areas as they complete them.

"By doing this, they acknowledge and accept the guidelines established in Vendormate," says Castleberry.

Vendors who don't comply face escalating consequences. First violations are documented, vendors receive a verbal warning, and the policy is reviewed with them.

For a second violation, the director of materials management or the applicable department director notifies the vendor's regional or corporate office of his or her company. In the case of a third violation, the vendor is suspended from further business with Mercy. Repeated violations by vendors from the same company may result in a ban of all the company's vendors for a specified period or permanently.

Spreading the word

Sisters of Mercy Health System targeted 3 primary groups for education—staff, physicians, and vendors—before launching the program. Strategies included webinars, e-mails, signs in the physician

and staff lounges and on bulletin boards, letters to vendors and physicians, presentations at meetings, education programs, and articles in newsletters and on websites.

"The directors of materials management at the hospitals were the champions," says Damron. She provided education kits that included a PowerPoint presentation and supporting materials.

Mercy's leaders, including the CEOs of each hospital, received talking points so they could answer questions. Damron also presented to the CEO council.

E-mail and phone scripts were used to inform vendors. Employees were given a sample script for how to approach a vendor who did not have a badge. The staff was armed with postcards for vendors that explained what they needed to do to register.

3, 2, 1—liftoff!

The vendor access program was launched on July 1, 2008, with an e-mail and letter to vendor companies.

"Identifying which reps need to be included is a huge undertaking," says Damron. Some smaller hospitals had vendor information only on a card file, so the information had to be entered into a database.

National account representatives for companies with a Mercy contract were asked to disseminate the information. Materials management had to inform local companies.

By the Sept 1, 2008, deadline, only a small number of vendors were compliant, so Mercy set Nov 1 as a "hard" deadline and started to deny access to vendors without the required information.

"Some vendors were unhappy with the new system because they had been doing the same thing for years," says Cynthia Sharp, surgical ancillary services supervisor at St Edward Mercy Medical Center.

> **"Reps have to sign in every day."**

"Some were bucking the system a bit," agrees Castleberry. "We did progressive discipline [for 3 vendors] and ultimately had [2 of] them removed by going to their company."

As of April 2009, 21% of vendor representatives met all requirements. Damron attributes the low percentage to 2 factors: Some vendors only visit a hospital once or twice a year, and it's more difficult for smaller companies to provide needed training.

The goal is to have 80% of vendors in compliance in November 2009, with interim goals of 40% by July and 60% by September.

"We started at zero, and it takes time to get everyone registered, so we're pleased with our progress," says Damron.

Daily operations

Sisters of Mercy Health System chose Vendormate as its partner for managing vendor access. "Vendormate looks at both the sales rep level and the vendor," says Damron. The company checks vendors for bankruptcy or anything else that would affect Medicare reimbursement.

"We felt we had more control because reps have to sign in every day," adds Sharp. "We liked the services and how they manage point of entry."

Mercy does not pay any fees to Vendormate. Instead, fees are calculated based on the type and amount of business each vendor conducts with Mercy and an assessment of each company's potential legal risk. The fees, which vendor companies pay directly to Vendormate, are assessed per company, not individual sales representatives. Responsibilities of Vendormate and Mercy are defined in writing to avoid confusion.

New vendor representatives receive a card explaining what they need to do for credentialing. The vendor creates an online account that includes documentation of training and immunizations.

Checking in

On-site, the vendor checks in at a kiosk or department computer to receive a daily badge. After the visit, the vendor signs out and returns the badge holder. Log-ins are password protected.

New vendors have a month to complete the application. When a vendor plans to be in an operating room room, the physician's office calls to notify the OR inventory staff.

During normal business hours, vendors sign in through Vendormate's automated system. Damron says determining the sign-in points can be eye-opening. "One hospital found they had 19 points of entry for its new tower." The hospital worked to improve security before implementing the vendor access program.

At St Edward Mercy Medical Center, badge readers are located at all entrances to the OR. If vendors don't have the appropriate access code on their badges, they are not allowed into the restricted area.

In the case of emergency surgery, trauma representatives have "contract" badges that allow them access to the OR.

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Sample vendor access requirements

Level 1 (nonclinical) vendors

1. Meet insurance requirements
2. Written statement from the company that documents the health care industry representative's competencies:
   - Company's products
   - General hospital safety training
   - Patient confidentiality
   - Business ethics
3. Picture identification that is time sensitive
4. Disclose any apparent or potential conflict of interest
5. Personnel changes

Level 2 (clinical) vendors

Meet all the Level 1 access requirements plus:

1. Undergo a criminal background check
2. Corporate information including regional and corporate supervisory contacts
3. Must be accompanied by hospital-designated staff when in patient care areas
4. Provide information on company's products
5. Demonstrate FDA approval when requested
6. Licensing for biologicals (tissue banking & distribution)
7. Possess evidence of annual instruction in:
   - Confidentiality, patient rights, and HIPAA
   - Product complaints and medical device reporting (MDR) requirements
   - Aseptic principles and techniques
   - Infection control
   - Bloodborne pathogens
   - Fire, electrical, and other safety and emergency protocols
   - Appropriate conduct in the clinical environment
   - Hospital vendor rules and visitation policy
   - The medical system, device, product, procedure, or service they will be delivering and/or operating
8. Business ethics, including disclosure of any financial relationships with the institution, physicians, or other staff; and code of conduct expectations
9. Education and training documents
10. Hospital product standardization program
11. New product introduction processes
12. Product recall processes
13. Written proof of immunization status:
    - TB testing
    - Hepatitis vaccination
    - Measles, mumps, and rubella (MMR) vaccine
    - Chicken pox vaccination
    - State-required vaccinations (varies by state; refer to hospital-specific protocol)

Source: Sisters of Mercy Health System. Reprinted with permission.

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"In the future, we'd like to see the access program set up so these vendors could log in," says Sharp.

The Vendormate system can generate an electronic, searchable log of all visitors, including company name; vendor's name and e-mail address; meeting contact, location, and purpose; and sign-in/out dates and times.

Helpful tips

As with most large projects, communication is key.

"When you think you've communicated enough, you've forgotten something. Over-communicate and don't overlook stakeholders," says Damron, who also recommends tapping into the corporate communications department, which can add a vendor resource link to a hospital's web page and help disseminate information.

The information technology (IT) department is also important. Although the Vendormate tool is web-based, IT has to supply printers so reps can print their badges. Damron recommends starting the process as soon as possible because of the many priorities facing IT departments.

Worth the effort

Creating a systemwide vendor access system is worth the effort.

"It has proven to be an efficient and helpful tool to help the entire system to track who is in our facility," says Sharp. "It has helped us to be able to monitor who is following the rules and who is not."

Damron adds an unexpected benefit. "It helped all of us be better collaborators."❖

—Cynthia Saver, RN, MS

Cynthia Saver is a freelance writer in Columbia, Maryland.

RACs: What is the OR's role in readiness?

After some delay, Medicare's program to have outside companies audit claims is getting underway. The companies, called recovery audit contractors (RACs), will be checking to see that claims filed by hospitals, physicians, and other providers follow Medicare policies and procedures.

OR Manager asked Keith Siddel, MBA, an expert on health care business operations, to give readers an introduction to RACs. Siddel is CEO of HRM Consulting, Creede, Colorado.

Q Why did the government decide to go with the RAC approach?

Siddel: The RAC program was mandated by Congress in 2006. Medicare decided to use third-party companies to see if by paying incentives, the RACs could do a better job of identifying claims problems than fiscal intermediaries (FIs). (FIs are private companies that process Medicare claims and perform other services.) Over the years, the FIs have become more focused on adjudicating claims and addressing medical necessity than on targeting areas to audit.

RACs, which were selected by competitive bidding, will be paid a contingency fee for finding claims that were overpaid and underpaid. For the most part, the RACs are not health care companies but companies that audit businesses like grocery stores or Home Depot.

In a 3-year pilot study of RACs in 6 states (California, Florida, New York, Massachusetts, South Carolina, and Arizona), the government says it collected over $900 million in overpayments and identified nearly $38 million in underpayments.

> "Problems deal mostly with coding."

Q What is the status of RACs?

Siddel: The RAC program was held up by a protest over the contract awards. The final protests were settled in February 2009. The program is now going forward and is being expanded to all 50 states. The country has been divided into 4 regions with a RAC for each one. A map and other information are at www.cms.hhs.gov/RAC

Outreach in all 4 regions is being conducted this spring and summer. About half the states were to be phased in by March 1, 2009, with the rest to follow.

Q How will RACs look for problem claims?

Siddel: RACs take basically 2 approaches. The first approach is to data mine. They take millions of claims and analyze them using computers to look for trends and problem areas. On the basis of the analysis, they will do an audit.

The second approach is to send hospitals a letter asking for copies of a certain number of medical records that the RAC will examine for problems. RAC auditors can go back only to October 2007.

During the pilot study, hospitals protested that the record requests were burdensome. Medicare has now restricted the number of records a RAC can request in a 30-day period based on the hospital's volume of patients.

Q What will happen when a RAC finds a problem?

Siddel: If a problem is found, such as coding for wound care, where the RAC believes it can recover money, it may contact all of the hospitals in the area asking for these types of records.

If the RAC determines the case is clear-cut, and the hospital shouldn't have been paid, it will request that the money be taken back and will not bother requesting the records. The hospital will then get a letter from the FI saying it has taken the money back on a group of claims and explaining the reason. The hospital then has a certain period of time to appeal the RAC's decision.

Q What types of surgical issues are the RACs looking at?

Siddel: The problems deal mostly with coding. There have been some coding issues with inpatient-only procedures. These are procedures that are supposed to be done on an inpatient basis but slip through and are done in the outpatient setting. Most of the time, the FI catches this but not always.

Documentation is an area to focus on because coding is supported by documentation. OR managers will want to make sure nursing documentation conforms with hospital policy and regulatory requirements.

It also makes sense to make sure coding guidelines are coordinated between your hospital's health information management (HIM) department and the physicians' offices. Inconsistent coding between

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hospitals and physician practices will become easier to spot as Medicare transitions from FIs to Medicare Administrative Contractors (MACs). The MACs will handle claims for both Part A and Part B, so there will be an easy place for Medicare and RACs to go to see if there is consistency between hospital and physician claims.

Q How should we be getting ready?

Siddel: Every hospital should have a RAC team. The team should identify where RACs were successful in taking payments back during the pilot study and review claims in those areas. If the team identifies a problem, let's say with pneumonia coding, the team should do an audit and resubmit the claims so the hospital doesn't have to deal with RAC auditors.

One caution—there are a lot of vendors trying to sell databases and tracking software. You have to be careful where you spend money. There is software that will track all of your claims and send you a daily report on which claims are at risk based on the RAC demonstration project. What it doesn't tell you is that some of the information from the demonstration may have been overturned or shown to be wrong. I would caution about spending a lot of money on software until the RAC program really gets going, and the hospital can see what best fits its needs.

Q Medicare rules on coding and claims are complicated and sometimes unclear. How will these issues be resolved?

Siddel: We saw in the demonstrations that in these cases, the RAC would say, "This is our interpretation." Then the hospital had to fight it. There is supposed to be education. But it is not really in the RACs' interest to tell you quickly what your problems are. They make money by taking payments back when you haven't solved the problems.

So the education has to come from within the hospital and the hospital industry. With the first notice you get from a RAC saying, "We want these 10 accounts," your RAC team should be saying, "Ah ha. This is what they are looking for." Then the RAC team should gather the forces and tackle the problem.

Q What are the penalties for claims problems?

Siddel: The RACs will not *per se* assign penalties. They will just request the money back. But the fact that the RAC has identified a problem area means it would be naïve to think that the Health and Human Services Office of Inspector General or whistleblowers would not grab that issue and perhaps argue for penalties. This action would not come specifically from the RACs, but it certainly is a potential effect from the RAC process. ❖

More about the RAC program is at www.cms.hhs.gov/RAC/

Have a question on the OR revenue cycle?

Keith Siddel will respond to questions in a regular column.

Send your questions to Pat Patterson, Editor, at ppatterson@ormanager.com.

You can reach Siddel at ksiddel@hrmlc.com.

CDC issues draft UTI guideline

The Centers for Disease Control and Prevention (CDC) in June 2009 issued the Draft *Guideline for Prevention of Catheter-Associated Urinary Tract Infections*. Comments are invited until July 6, 2009.

The guideline, which updates and expands the CDC's 1981 guideline, addresses prevention of catheter-associated UTI for pediatric and adult patients needing short-term or long-term catheterization in any type of health-care setting.

The guideline addresses 3 key questions:

1. Who should receive urinary catheters?
2. What are the best practices for those who require urinary catheters?
3. What are best practices for preventing infections associated with obstructed urinary catheters?

The CDC says catheter-associated UTI is the second most common health care-associated hospital infection, accounting for just under one-third of the more than 28,000 infections reported to the CDC's surveillance system in 2006-2007.

The infections are associated with increased morbidity, mortality, hospital cost, and length of stay.

Surgery recommendations

Among recommendations pertaining to surgery:

- Urinary catheters should be used in surgical patients only as necessary, rather than routinely.
- Indwelling catheters should be removed as soon as possible after surgery, preferably within 24 hours unless there are indications for continued use. ❖

The draft guideline is at www.cdc.gov/ncidod/dhqp/pdf/pc/cauti_GuidelineApx_June09.pdf

Educating patients on SSI prevention

Though the Joint Commission is in the midst of revising its National Patient Safety Goals, organizations are expected to continue plans to meet the goals by Jan 1, 2010. Proposed revisions were issued May 12 for a 6-week field review. Final goals are expected in October.

The commission is conducting a comprehensive review of the safety goals during 2009 and will introduce no new goals for 2010. Complying with some of the goals has been "a struggle" for some organizations, the commission acknowledges.

"We want to make sure not only that our guidance is up to date but also that [all of the requirements] are still worthy of that type of focus and that everything being required truly adds to patient safety," Louise Kuhny, RN, MPH, MBA, CIC, senior associate director of the Joint Commission's Standards Interpretations Group, told *OR Manager.*

Preventing SSIs

Of particular interest to OR leaders, NPSG 7, which focuses on reducing the risk of health care-associated infections (HAI), is being expanded from 1 to 5 subgoals, including surgical site infection (SSI). There is a 1-year phase-in of the new requirements with full implementation expected by Jan 1, 2010. In the field review, the Joint Commission proposed deleting 1 new subgoal: NPSG.07.02.01, manage as sentinel events HAI-related deaths or permanent loss of function.

Four subgoals remain:

- **NPSG.07.01.01:** Comply with hand hygiene guidelines.
- **NPSG.07.03.01:** Implement evidence-based practices to prevent HAI due to multi-drug resistant organisms.

> **"Patient education affects safety."**

- **NPSG.07.04.01:** Implement best practices or evidence-based guidelines to prevent central line-associated bloodstream infections.
- **NPSG.07.05.01:** Implement best practices for preventing surgical site infections (SSI) (sidebar).

As a guide to evidence-based practice, Kuhny suggests referring to the compendium of strategies for preventing HAI in hospitals from the Society for Healthcare Epidemiology of America and other organizations (www.shea-online.org/about/compendium.cfm).

Educating patients on SSI

One specific element of performance (EP) under the SSI subgoal is to educate patients who are having a surgical procedure and their families about SSI prevention.

Kuhny notes the requirement has a tie-in to other patient education standards.

"We have always had a significant patient education requirement," she says. "Patient education often affects safety, and we obviously want patients to be as much a part of their care as they can be."

In preparing to meet the EP, she advises managers to refer to these other standards:

Provision of Care

Two standards in the Provision of Care chapter are relevant to patient education on SSIs:

- PC.02.03.01 requires patient education and training based on the patient's needs and abilities. A key requirement is EP 25:

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Safety goal requirements for surgical site infection

National Patient Safety Goal 07.05.01 requires hospitals to implement best practices to prevent surgical site infection (SSI). Eight elements of performance (EPs) remain in the proposed revision to the safety goals issued May 12, 2009. Briefly, the 8 EPs would be:

- Educate health care workers involved in surgical procedures about SSI prevention.
- Implement policies and procedures to meet regulatory requirements and align with evidence-based standards or guidelines.
- Conduct risk assessments, select measures, monitor compliance with best practices or evidence-based guidelines, and evaluate prevention efforts.
- Measure SSI rates for the first 30 days following procedures without implants and for 1 year following procedures with implants.
- Provide SSI measures to key stakeholders.
- Administer antimicrobial prophylaxis according to evidence-based standards and guidelines.
- Use clippers or depilatories when hair removal is necessary (shaving is inappropriate).

www.jointcommission.org

Examples of patient education material on SSI

Institute for Healthcare Improvement. Fact Sheet for Patients and Families
—www.ihi.org/NR/rdonlyres/0EE409F4-2F6A-4B55-AB01-16B6D6935EC5/0/SurgicalSiteInfectionsPtsandFam.pdf

JAMA Patient Page: Wound Infections
—http://jama.ama-assn.org/cgi/reprint/294/16/2122

Compendium of Strategies to Prevent Healthcare-Associated Infections in Acute Care Hospitals. Patient guides on HAI
—www.preventinghais.com/index.php?sid=S200905181228114Z032S

Surgical Care Improvement Project. Tips for Safer Surgery
—www.ofmq.com/Websites/ofmq/Images/FINALconsumer_tips2.pdf

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"The hospital evaluates the patient's understanding of the education and training it provided."

The intent is to make sure the patient understands the education provided, Kuhny says. This can be done in a number of ways, such as having the patient repeat back what was heard.

- PC.03.01.03 EP 4 has an obvious link to education on SSIs: "The hospital provides the patient with preprocedural education, according to his or her plan for care."

It's up to the organization whether to use printed patient education information. The Joint Commission does not require that, Kuhny says. (Examples are in the sidebar.)

> "Education might be in a tracer."

Record of Care

Documentation is addressed in the Record of Care chapter:

- RC.02.04.01 EP 3 requires documentation in the medical record of information provided to the patient and family.

"There needs to be some indication in the record that education occurred," Kuhny says, adding that the type of documentation "is totally up to the organization." Examples are placing a copy of the education form in the patient's chart; making a brief progress note such as, "Education provided on preventing surgical site infection;" or having a check box in the patient's record to say education was provided, and the patient verbalized understanding.

Rights of the Individual

The chapter on Rights and Responsibilities of the Individual under RI.01.01.03 requires the hospital to respect a patient's right to receive information in a manner he or she understands.

That applies to patients who speak another language as well as to those who have vision, speech, hearing, or cognitive impairments.

What will surveyors look for?

One way surveyors are likely to assess compliance is to include patient education on SSI prevention in a patient tracer, says Kuhny, who is also a surveyor.

In a tracer, a surveyor selects a patient and using the patient's record, traces care the person received. The purpose is to assess the organization's systems for providing care and services.

In a tracer involving a surgical patient, for example, Kuhny says she would talk with the patient and some of the care providers, observe the education process, and ask the patient about the education received. She would also ask caregivers about the education chosen for the patient and how they knew the patient understood what they were trying to teach. In addition, she would ask about the organization's policies on patient education.

"I would look at the policies to see what the organization would expect for documentation," she notes. Though the approach to patient education is up to each organization, she adds, the organization needs to define how it will document education. In a tracer, "I would compare the documentation in the patient's record with what the policy required," she says.

Kuhny encouraged managers to proceed with their plans for meeting the requirements on preventing SSIs. Though there may be some revisions, many of the requirements are in other standards hospitals already are addressing. ❖

—Pat Patterson

Have an idea?

Do you have a topic you'd like to see covered in *OR Manager?* Have you completed a project you think would be of help to others? We'd be glad to consider your suggestions. Please e-mail Editor Pat Patterson at ppatterson@ormanager.com

Applying the Surgical Apgar Score

"This patient is a 10. Everything went well." Or "This patient is a 5. She will need close monitoring." Before long, physicians and nurses may be using a numerical score like this when transferring patients from the OR to the next level of care.

Researchers have validated a 10-point Surgical Apgar Score that can be used to provide a quick report on how well a patient fared during surgery and the risk for major postoperative complications.

Patterned after the familiar Apgar score for newborns, the Surgical Apgar Score is derived from 3 intraoperative variables:

- estimated blood loss
- lowest mean arterial pressure
- lowest heart rate.

"With these 3 pieces of information, you can make a pretty good guess at how a patient might do in the first 30 days after the operation," says Scott Regenbogen, MD, MPH, of the Harvard Medical School and Massachusetts General Hospital, Boston, the lead author of a report in the *Archives of Surgery.*

Predictors of complications

After evaluating dozens of variables, the researchers determined these 3 were the only independent predictors of 30-day major complications. The Surgical Apgar Score is intended to be a useful tool that can be used in "any setting without a lot of cost or difficulty," Dr Regenbogen told *OR Manager.*

The study involved a sample of 4,119 general and vascular surgery patients from the National Surgical Quality Improvement Program (NSQIP) database at Massachusetts General.

An analysis showed that of 1,441 patients with scores of 9 or 10, only 72 (5%) developed major complications, and 2(0.1%) died within 30 days of surgery. In contrast, of 128 patients with scores of 4 or less, 72 (56%) developed major complications, and 25 (19.5%) died within 30 days. The researchers found the 3-variable Surgical Apgar Score achieved C statistics of 0.73 for major complications and 0.81 for deaths.

Ready to use

The tool is ready for clinical use, Dr Regenbogen says. The article outlines a number of applications. Surgical teams could use the Surgical Apgar score to give immediate feedback on a patient's condition. The score can aid communication between surgical teams and the postanesthesia care unit and nursing unit. It could be used to assist in decisions about admitting patients to the ICU.

At one Boston teaching hospital that participated in the study, Dr Regenbogen says, residents and nurses use the Surgical Apgar Score when transferring a patient after surgery.

"It's a shorthand way of communicating the overall stability of the patient and success of the operation," he says.

The score is being validated for other types of surgery, including total hip and knee replacement, radical cystectomy, and colon and rectal resection. A poster presented at the American Academy of Orthopaedic Surgeons meeting in February 2009 reported the Surgical Apgar Score is "strongly predictive" of major postoperative complications after total joint replacements. Data on colon and rectal resections presented at the American Society of Colon and Rectal Surgeons meeting in May 2009 shows the score also predicts which patients are likely to develop a late complication after they leave the hospital.

A quality improvement tool

The Surgical Apgar score can be

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The 10-point Surgical Apgar Score

	Surgical Apgar Score, No. of points				
	0	1	2	3	4
Estimated blood loss, mL	>1,000	601-1,000	101-600	≤100	
Lowest mean arterial pressure, mmHg	<40	40-54	55-59	≥70	
Lowest heart rate/min	>85[a]	76-85	66-75	56-65	≤55[a]

Note: The Surgical Apgar Score is calculated at the end of any general or vascular surgical operation from the estimated blood loss, lowest mean arterial pressure, and lowest heart rate entered in the anesthesia record during the operation. The score is the sum of the points from each category.

a. Occurrence of pathologic bradyarrhythmia, including sinus arrest, atrioventricular block or dissociation, junctional or ventricular escape rhythms, and asystole, also receives 0 points for lowest heart rate.

Source: Regenbogen S E, Ehrenfeld J M, Lipsitz S R, et al. Arch Surg. *2009;144:30-36.*

Continued from page 23

used as an outcome measure for quality improvement and safety efforts, Dr Regenbogen notes.

For example, a surgical division chair might choose to review every elective operation with a score of less than 5 to try to understand what is going on with those operations. Or the chair might look at patients with scores of 8 or more who go to the ICU to see if that was an appropriate use of resources. The score does not allow for comparison among institutions, the authors note.

To evaluate its broader applicability, Surgical Apgar Scores were collected for all patients enrolled in the World Health Organization study of the Surgical Safety Checklist in 8 countries. Use of the checklist was shown to be linked to lower patient deaths and complication rates (March 2009 *OR Manager*). A report on the study's results for the Surgical Apgar Score is being reviewed for publication.

"We have always looked at this as a way that hospitals with relatively low resource availability for quality monitoring might have a useful tool for their ORs," Dr Regenbogen says. "The idea is that it can be used both by surgical teams in their care and by the administration in quality audits or attempts to make improvements." ❖

—Pat Patterson

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Regenbogen S E, Ehrenfeld J M, Lipsitz S R, et al. Utility of the Surgical Apgar Score. *Arch Surg.* 2009;144:30-36.

OR business conference in Chicago opportunity for ideas, networking

Participants attending the 2009 OR Business Management Conference in May in Chicago heard speakers address issues challenging OR leaders today, from implementing Lean principles in perioperative settings to managing implant costs. Discussions in and out of the sessions supplemented speakers' presentations and gave attendees the opportunity to exchange ideas, opinions, and strategies.

OR directors, OR business managers, materials managers, and others interested in the business side of surgery chose among 3 all-day seminars and 8 breakout sessions and spent time networking with exhibitors.

OR Business Management

The keynote address focused on 3 worries—money, patient safety, and talent shortages—keeping health care leaders awake at night. "What's important to the boss drives the agenda," said Connie Curran, RN, EdD, FAAN, president of Curran Associates, a health care management consulting firm and editor emeritus of *Nursing Economics,* in explaining the need to understand concerns of upper management. Curran noted what OR leaders could do to address each worry.

What, me worry?

In setting the stage for money concerns, Curran said US health care spending is now 17% of our gross domestic product (GDP), with a projected increase to 19.2% by 2013. That compares to the 7% to 8% average in the United Kingdom, Canada, Australia, and Germany. Despite spending more than twice what those countries spend, Curran said, "We don't have extraordinary outcomes. We don't have the highest life expectancy, at least 45 million are uninsured, and our infant mortality is number 35 in the world."

Although Curran said 2007 was a "very good year" for hospitals, 2008 reflected the changing economic scene. "Charitable gift giving slowed, elective surgery dropped, credit ratings were downgraded, increased unemployment resulted in increased uncompensated care, and there was declining reimbursement from Medicare and Medicaid," she summed up.

Troubles continue in 2009. The construction boom has ended, and unionization is a growing force.

To counteract money concerns, Curran advised participants to "seek out profitable service lines and surgeons. Determine where you are making money, and where you are losing money."

Patient safety worries

On patient safety, the second worry, OR leaders are especially concerned about wrong-site surgery and what Curran called "surgical souvenirs": Items left behind after surgery in about 1 in 5,000 cases.

A retained object is a "never" event, defined as an identifiable, preventable occurrence with seri-

ous patient consequences. Examples of other never events are catheter-associated urinary tract infection, pressure ulcer, and surgical site infection after coronary artery bypass graft surgery. The Centers for Medicare and Medicaid Services (CMS) no longer pays for certain never events acquired in the hospital, and private payers have followed suit.

Nurses: A source of revenue

Curran noted the focus on patient safety translates into a focus on nursing. "Nurses can drive money and be a source of revenue," she said and recommended nurses get involved in quality initiatives.

"Use a balanced scorecard and try to improve every year even if it's just 2%."

Despite recent hospital layoffs, Curran said the shortage of health care workers, including nurses, will continue, making it leaders' third worry.

The average age of a nurse is 47, but an OR nurse's average age is even higher at 52 years. "We're a chronologically gifted profession," said Curran. Two-thirds of nurses worked less than full time last year but enough hours so they qualified for benefits.

In the current recession, nurses are staying in the workforce, but as Curran said, "The recession will end," leaving a shortage of nurses to care for an aging population. Another factor affecting workforce is nurses' exiting hospitals because of dissatisfiers such as inadequate compensation and excessive paperwork.

Curran sees a silver lining in the recession cloud. "It's a good time to clean house," she said. "Get rid of [sub-performing personnel]. Invite them to update their resumes and free up their future. You can be picky."

> **"Seek out profitable service lines."**

Supply chain insights

Jamie Kowalski, MBA, FACHE, FAAHC, FAHRMM, who has been in the supply chain field for more than 35 years, sums up the current state of affairs as, "I've never seen anything like it. It's like a perfect storm." The storm includes economic recession, reduced volumes and revenues, proliferation of technology, and lack of access to capital. Kowalski is vice president of business development for Owens & Minor, Inc, a health care distributor and supply chain management company. He and Carl Natenstedt, CPA, also of Owens & Minor, discussed how OR leaders can manage supply chain more effectively, particularly because the OR has a significant impact on the hospital's bottom line.

"Supplies is the fastest growing expense category in a hospital," said Kowalski. "Cardiovascular and orthopedic supplies are driving the spend growth by a big amount."

Supply chain strategy

Unfortunately, the OR supply chain is often not optimized; for example, the typical OR writes off 30% of charges. Managing the supply chain yields large benefits. For instance, Natenstedt said, "Increasing inventory turns from 2 to 4 frees up an average $5 million in capital."

Kowalski advised working with all elements of the supply chain, from evaluating products to charging. "They are interdependent," he said. "You can create a [negative] ripple effect by only focusing on one thing."

Managing supply chain begins with a strategic plan. Kowalski recommended writing down the steps in the chain and analyzing how to improve each one.

Measure it, manage it

"Focus on opportunities with the biggest rewards," said Kowalski. That usually means physician preference items, which represent the largest (45%) piece of the supply chain pie.

A total supply chain solution should include spend analytics, distribution and inventory management, contract management, charge capture, and clinical utilization. At the center are metrics. "If you can't measure it, you can't manage it," said Kowalski.

Both speakers emphasized that OR leaders don't have to do this work in isolation.

"Use your partners," said Kowalski, including, "suppliers, consultants, and purchasing companies."❖

—Cynthia Saver, RN, MS

Cynthia Saver is a freelance writer in Columbia, Maryland.

ASCs seek to get policy message across

Ambulatory surgery centers (ASC) have been getting more attention from regulators and health policymakers over the past year, and not all of it has been welcome.

From quality reporting legislation to Medicare payment issues, ASCs have been under review. That is due in part to efforts by hospitals to curtail what they see as unfair competition from physician groups with access to the most profitable patients and procedures, without the added strains of emergency and uninsured care.

It is time to address these issues, speakers and attendees agreed during the April annual conference of the Ambulatory Surgery Center Association in Nashville, Tennessee.

The association's president, Kathy Bryant, urged members to communicate with legislators, regulators, and their own communities about the contributions they make and the hardships some of the new regulations will cause.

"We have to stay on message,"

> **"Concern about payment disparities."**

she warned. "It's important that we're all saying the same thing."

Payment disparities

Changes in Medicare reimbursement levels for 2009 show ASCs are losing ground on payment for high-volume procedures. Payments will decline up to 22% (for paravertebral procedures for pain management). Other declines include:

- cataract surgery: -1%
- upper GI endoscopy: -7%
- diagnostic colonoscopy: -6%
- lesion removal during colonoscopy: -6%.

Because of differences in the way adjustments are calculated, hospital outpatient departments do not face such serious cuts. For example, the Medicare Payment Advisory Commission (MedPAC), the advisory panel for Medicare, recommended an inflation update factor of 3.6% for hospitals but only 0.6% for ASCs. Bryant noted MedPAC's original recommendation was a factor of 0% for ASCs until intensive industry lobbying succeeded in raising it to a positive level.

The reason, she said, is that MedPAC and other federal agencies have been listening to hospitals. A MedPAC report to Congress in March defends the lower reimbursement rate by claiming advantages that ASCs have.

It states, "Physicians have greater control and may be able to perform more surgeries per day in ASCs because they often have customized surgical environments and specialized staffing." The panel also appeared to conclude that because volumes and revenues had risen in preceding years, ASCs were thriving.

Until 2003, according to ASC As-

CMS allows exception on advanced notice

In late May, ASCs celebrated news that Medicare will allow an exception in its new ASC Conditions for Coverage (CfCs) that reflects one of their concerns about the patient notification rule. The CfCs took effect May 18, 2009.

The exception came in interpretive guidelines for state survey agencies issued May 15 by the Centers for Medicare and Medicaid Services (CMS). The guidelines allow an exception in certain cases to the rule that a patient must receive written notice of patient rights and ASC ownership at least a day in advance of surgery.

The exception applies to situations in which the patient is referred for surgery on the same day the procedure is scheduled, and the referring physician states in writing that the procedure is medically necessary that day and is appropriate for an ASC.

The ASC Association lobbied CMS for relaxation of the advance notice rule, which they say presents a hardship in many cases. Association president Kathy Bryant said of the change, "We appreciate CMS's willingness to reconsider its decision. This is a great example of the impact ASCs can have when we work together on issues like these."

She noted the exception is unlikely to occur often because ASCs normally perform elective procedures and rarely schedule them on the same day.

More information is at http://ascassociation.org/coverage/

sociation figures, Medicare payments to ASCs were about 80% of the amounts paid to hospital outpatient departments. The rate is now 59%, and the association says if nothing is done, the rate is on track to drop to 50% within 5 years.

MedPAC's argument, according to its January meeting transcript, is that lower rates for ASCs are appropriate because ASCs have lower costs than hospitals, which may be because they have less complex patients and fewer regulatory requirements than hospitals. MedPAC also expressed concern that as the number of ASCs increases, the volume of outpatient surgery will grow and increase Medicare spending.

The ASC Association has argued to MedPAC that one goal should be to get 60% to 70% of services now performed at hospitals at a higher cost into the "most cost-effective, clinically apt place" where they can be performed.

Regulatory hardships

The changes that took effect this year in Medicare Conditions for Coverage also cause concern, despite some modifications. "Overnight stay," for example, now means "24 hours," rather than "continuing past 11:59 pm," a change that permits more procedures beginning later in the day. Still, Bryant noted, an ASC cannot schedule a procedure that would include, as a matter of treatment protocol, subsequent transfer to a hospital. "If you do," she says, "you are risking your certification, not just the payment."

Another sore point is the 24-hour notice requirement for advising patients of their rights and the ownership status of the surgery center because it forces some patients to wait longer than necessary for treatment, just to wait out the notification period (sidebar).

In response to quality reporting requirements that penalize nonparticipants with decreased reimbursement, the association has sponsored a collaboration that generated 11 quality measures for surgery centers, of which 6 have been approved by the National Quality Forum.

As with other requirements, Bryant says of performance measures, "We want to share our data. But we want to share our data in a fair way."

'Playing the charity card'

One of the main reasons regulators have tended to sympathize with hospital protests is that hospitals play the charity card in what ASCs believe is a misleading way, Bryant says. ASCs, especially those affiliated with hospitals, often provide charity care as a public service or to comply with hospital policy. Hospitals, which are required by law to treat all emergency patients, act as if that were a sacrifice, Bryant noted.

She maintained that the physicians who provide uncompensated care in their own surgery centers really do make a personal sacrifice of time and money.

Hospitals that say they are losing needed revenues to ASC competition also are misrepresenting the case, Bryant said.

Between 2003 and 2006, hospital outpatient volume nationwide grew by 2.1%. However, revenues from outpatient procedures increased by 9.3%, meaning those

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Testing practices need a closer look

Is too much preoperative testing being done for ambulatory surgery patients? New research suggests testing practices may need a close look.

"If anesthesiologists are just ordering tests as a routine, they need to look at our study and re-examine what they're doing," advises Frances Chung, FRCPC, a well-known researcher in ambulatory anesthesia.

In the new pilot study, Dr Chung and her colleagues evaluated whether preoperative testing can be eliminated in healthy ambulatory surgery patients without an increase in adverse events. Savings for the health care system could be significant. About 65% to 70% of surgery is outpatient, and preoperative testing in the US is estimated to cost more than $18 billion a year.

First randomized trial

Though preoperative testing for ambulatory surgery has been debated for almost 30 years, the study is the first prospective, randomized, controlled trial to assess if such testing can be eliminated for ambulatory surgery patients.

An American Society of Anesthesiologists (ASA) 2002 practice advisory states that preoperative tests should not be ordered routinely but may be ordered, required, or performed selectively to guide or optimize perioperative management.

Case series reports have suggested that even indicated testing may be unnecessary in healthy ambulatory surgery patients. An indicated test is one ordered for a specific clinical indication or purpose.

> "How necessary is testing?"

Because the new study is small (1,026 patients), Dr Chung says results should be considered preliminary. In addition, the study had strict exclusion criteria and did not include patients with major medical issues, especially related to cardiac and respiratory disease, such as patients who had a myocardial infarction within 3 months before surgery.

Still, the findings add another important piece of evidence on the merits of preoperative testing.

Study protocol

The researchers randomized the 1,026 patients to 2 groups:

- indicated testing: 527 patients
- no testing: 499 patients.

The testing group had a complete blood count (CBC), electrolytes, blood glucose, creatinine, electrocardiogram (ECG), and chest x-ray, as indicated by the Ontario Preoperative Testing Grid, consensus guidelines used by hospitals in Ontario, Canada.

No tests were ordered for the no-testing group. Patient age, gender, type of surgery, anesthesia, and ASA physical status were similar for the 2 groups. Most patients were ASA P1 or P2, and 12% of patients in each group were ASA P3.

No significant differences

No significant differences were found between the groups in rates of perioperative adverse events within 7 and 30 days after surgery. Most events were not serious. More patients in the testing group returned to the hospital within 7 days. The main reasons were severe pain, infection, and urinary retention.

In the no-testing group, none of the adverse events was associated with patients not having preoperative testing.

Cost savings were US $14,800 ($30.90 per patient) in the no-testing group.

Little need for testing

Because of the sample size, the findings aren't strong enough to warrant changing preoperative testing protocols, notes Dr Chung, who is professor of anesthesiology at the University of Toronto and medical director of the ambulatory surgical unit and combined surgical unit at Toronto Western Hospital.

The authors say their findings justify a large multicenter study, which is not underway at this time.

Because most study patients were ASA P1 and P2, the findings apply primarily to those 2 groups, though Dr Chung says the findings can also apply to stable patients with higher ASA classifications. The testing decision also depends on the type of surgery. For example, she says testing is not ordered for cataract patients even if they are ASA P3 or P4.

Toronto Western Hospital has changed its practice since the study, she notes, though some pre-

Better screening needed for ASC patients

Patients who are not properly assessed before procedures in ambulatory surgery facilities are at risk for postoperative complications and hospitalization, according to the Pennsylvania Patient Safety Authority.

Of 467 events submitted to the Authority from 2004 through 2008, 43% were serious, most often requiring patients to be transferred to a hospital. Half of reports involved patients over age 65, and 5% involved a pediatric patient.

More than one-fourth (27%) of the facilities showed a need for improved screening. In 85 reports, the patient had a condition such as an arrhythmia or sleep apnea that might have put the patient at risk during the procedure.

"Our data shows many ambulatory surgical facilities need to improve their screening and assessment processes," said the authority's executive director, Mike Doering.

He added that patients can help by telling their providers about conditions they have, such as heart or respiratory problems.

The report offers risk reduction strategies. Two sample preoperative screening tools are posted on the authority's website:

- a health history sample
- a nursing preoperative screening sample form.

—www.patientsafetyauthority.org/NewsAndInformation/PressReleases/Pages/pr_2009_March_31.aspx

ASC policy

Continued from page 27

procedures brought in a higher proportion of income to hospitals.

As an industry organization, the ASC Association said it will step up lobbying efforts this year but is also trying to involve individual ASC owners and staff members, beginning with a legislative and compliance seminar in June. Letter-writing campaigns are continuing, and the association's staff distributed sample letters and talking points to attendees with the admonition that personal messages from constituents count with policymakers.

The ASC Association also is planning a national open house day August 11, when ASCs around the country will invite community residents to visit and learn about the benefits of receiving diagnosis and treatment at local facilities.

It is also rounding up support for the Ambulatory Surgical Center Access Act of 2009 (HR 2049). The bill would tie ASC payments to hospital outpatient payments and maintain the 59% rate.

"ASCs are a critical point of access for important screening benefits and other nondiscretionary services such as diagnostic colonoscopies and cataract removal surgery," a sample letter to legislators notes. The bill would also modify the patient rights and ownership notification rule to allow surgery the same day it is scheduled.

Stay informed and speak up

While making their voices heard, ASCs also need to keep their ears open as broader health care issues emerge, ASC Association lobbyist Sarah Walters told a conference audience. "We're seeing a lot of traction" on health care reform, she said, with the White House letting Congress take the lead in drafting specific legislation.

She predicted it would address delivery systems, such as insurance and Medicare, along with types of coverage. Expect more emphasis on prevention and wellness, she advised.

ASCs can be a part of the national discussion of health care reform, she said, as offering cost savings and patient choice. But first, she added, "there's the problem with payments that we need to address."

Continued on page 30

operative testing is still being done. For example, chest x-rays are not ordered for all patients who are heavy smokers and have pulmonary disease. ECGs aren't ordered for all patients over age 45 with a cardiac history or hypertension.

"We should encourage anesthesiologists to consider changing their practice in preoperative testing. This study helps them in understanding that there is not a lot of need for testing," she says. ❖

—Judith M. Mathias, RN, MA

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ASC policy

Continued from page 29

Both listen and speak up, she urged. "It is critically important for ASCs to be informed, and don't hesitate to write your members of Congress. I think the challenge is to make sure our voice is heard."

Time to speak up

The association's chair, Alsie Sydness-Fitzgerald, CASC, agreed that ASCs need to speak up more.

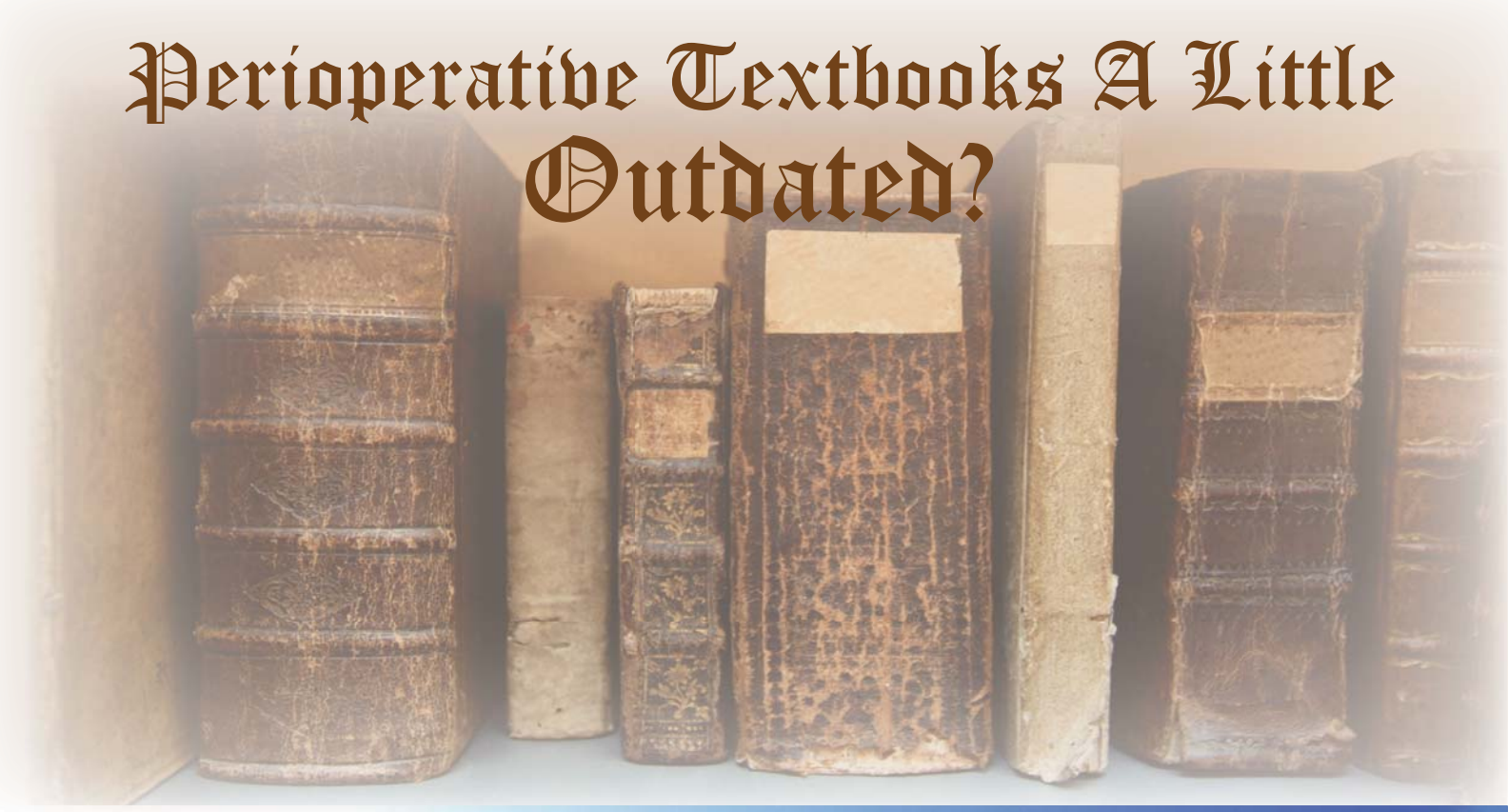
"Speaking as a nurse, I don't understand, if we perform, say, an arthroscopy, why we get paid less for it than a hospital."

She noted that when the first ASCs emerged during the 1970s, they were seen as a source of more personalized care but faced little controversy. It has been their success in recent years that led to greater regulatory scrutiny, and she said it now is time to confront the misconceptions that have arisen.

"We've been around a long time," Sydness-Fitzgerald said. "The reason people don't know about us is we've been very quiet."❖

—Paula DeJohn

Perioperative Textbooks A Little Outdated?



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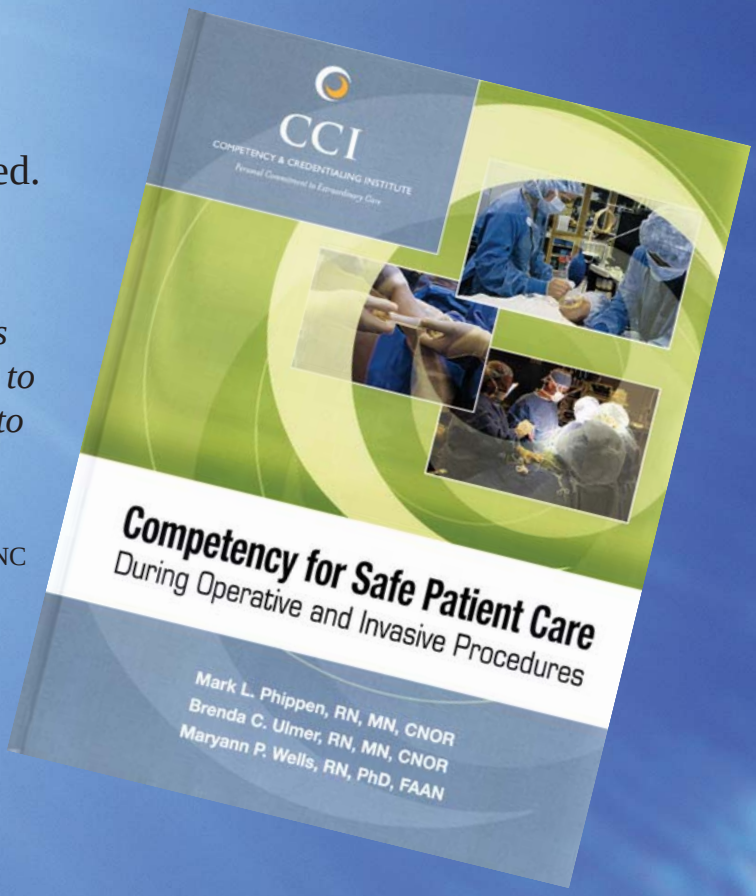

Updated Title and Content

"Many references in this text are from 2008. This is impressive in a textbook that may take several years to produce. This allows the nurse to have the most up to date information and be able to apply it directly to current practice".*

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At a Glance

Surge in nurse employment —but it won't last

With the recession, the RN shortage has eased or even ended in many parts of the country, a new study finds. Older nurses have delayed retirement or returned to work, and part-time nurses have become full time in response to the economy. The increase has been stunning—in 2007-2008, RN employment in hospitals increased by 243,000, or 18%.

But the relief will be temporary. A new shortage will loom in the next decade, with a shortfall developing about 2018 and growing to about 260,000 by 2025. The data is from Peter Buerhaus of Vanderbilt University.

—Buerhaus P, Auerbach D I, Staiger D O. H Affairs. *2009;28(4):w657-w668. http://content.healthaffairs.org*

Cost-effectiveness of preventing retained sponges

New technologies can substantially reduce the incidence of retained sponges at an acceptable cost, researchers have found. They compared standard sponge counting with new technologies for preventing retained sponges using a model they developed to compare cost-effectiveness of the methods.

Findings showed standard counting prevents 82% of retained sponges. Bar-coded sponges and radiofrequency-tagged sponges prevented 97% of retained sponges. X-rays were most costly but less effective than bar-coded sponges. Bar-coded sponges were the most cost-effective of the methods studied.

— Regenbogen S E, Greenberg C C, Resch S C, et al. Surgery. *May 2009;145:527-535.*

Doubts raised over hip resurfacing

Enthusiasm is waning for hip resurfacing after recent studies show the procedure is no better than the newest types of total hips at helping patients resume an active lifestyle, according to the June 4 *Wall Street Journal.* Studies also show women are more likely to suffer complications after resurfacing compared with total hip.

Hip resurfacing has been touted as an alternative to total hip replacement for younger, more active patients. The surgeon replaces the socket but preserves the femoral head after smoothing away the arthritic damage.

Hip resurfacing is more difficult, takes more OR time, and requires longer incisions than total hips, according to the *Journal.* Both procedures cost $30,000 to $50,000 and generally are covered by private insurance and Medicare.

—www.wsj.com

Las Vegas hepatitis C outbreaks spur 5 new state laws

Nevada has passed 5 new state laws in response to hepatitis C outbreaks in 2 Las Vegas endoscopy centers last year, the Associated Press reports. The outbreaks led to the largest patient notification in US history. More than 50,000 patients may have been exposed to bloodborne diseases because of reuse of syringes and vials of anesthetic drugs. Nine patients contracted hepatitis C, and more than 100 cases may be linked to the now-closed centers.

One law requires ASCs to have unannounced inspections yearly. Another requires that a nurse accompany all inspection teams. A third law puts more teeth in protections for whistleblowers because some nurses reportedly were afraid to step forward about the problems for fear of losing their jobs. Two other laws are intended to bridge gaps in communication during a public health crisis.

—www.mercurynews.com/news/ci_12490632?nclick_check=1

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
Office of Health Care Access

June 29, 2012

VIA FAX ONLY

Mr. Thomas C. Richardson
Vice President of Strategic Planning
CT Children's Medical Center
282 Washington Street
Hartford, CT 06106

RE: Certificate of Need Application; Docket Number: 12-31762-CON
Connecticut Children's Medical Center
Proposal to Establish and Operate a Pediatric Outpatient Surgery Center in Farmington

Dear Mr. Richardson:

On June 1, 2012, the Office of Health Care Access ("OHCA") received your Certificate of Need application filing on behalf of Connecticut Children's Medical Center ("CCMC" or "Applicant"), for the establishment and operation of an outpatient surgery facility with four operating rooms, including two to be equipped and utilized and two to be build and shelled for future use.

OHCA has reviewed the CON application and requests the following additional information pursuant to General Statutes §19a-639a(c):

1. What best practices or other efficiencies have been utilized in order to maximize the number of surgical procedures that may be performed in the eight operating rooms located currently at the CCMC?

2. Provide a discussion on alternate proposals that have been considered by the Applicant to address the constraints of the CCMC's current operating room.

3. On page 5 of the initial CON application it states that the market share of outpatient surgery patients aged 0 -17 grew from 24% in 2006 to 31% in 2011. Please discuss the derivation of this percentage and provide documentation supporting the reported percentages.

4. Also on page 5 it states that 25 of 30 acute care hospitals have experienced a reduction in market share for ages 0-17. Please provide additional information and documentation to support this statistic.

5. Page 5 of the initial CON submission provides the market share for pediatric patients aged 0-17. Table C on page 10 shows the served pediatric population as ages 0-19. For consistency purposes, please revise either Table C or the market share calculation for the same age group.

6. On page 6 of the CON application it states that surgeons "prefer to perform surgeries at CCMC because of the special equipment and resources only CCMC has and CCMC's unique setting designed to meet the needs of pediatric patients." Explain why the CCMC setting is unique for pediatric patients and provide supporting documents. What special equipment and resources are available only at CCMC?

7. On page 6 it also states, "best practice in the industry suggests that 65-80% of operating room time be dedicated in blocks". The supporting documentation in Appendix I states 55 to 80%, whereas, the CON application provides a range of 65 to 80%. Please discuss the discrepancy and provide further discussion on block scheduling and provide additional supporting documentation.

8. Please provide, as available, the current number of physicians by specialty by county that refers patients to CCMC. At a minimum, please utilize the same list of specialties as provided in Table 5.

9. Please provide the information about how many surgeons will be utilizing the new facility by specialty and employment/affiliation with CCMC.

Specialty	Number of Surgeons	Currently in the affiliated CT Children's Specialty Group	Affiliated with CCMC but not in CT Children's Specialty Group	Other

10. Please provide the utilization by surgeon and procedure in Table below.

Specialty	Number of Surgeons	FY11 Number of Procedures

11. It appears that Table 1 on page 11 includes information for the proposed facility as well as the existing operating rooms at CCMC. Please complete the table based solely on the existing operating rooms at CCMC. The number equipped for proposal is the number of operating rooms at CCMC that are able to provide the same procedures that are proposed for the new facility. The estimated capacities, minimum and maximum, also need to be revised to exclude the proposed new facility.

Provider Name Street Address Town, Zip Code	Number of Operating Rooms				Estimated Capacity for Proposal		Current Utilization [3]
	Avail-able	Util-ized	Not Utilized	Equipped for Proposal	Min [1]	Max [2]	
Connecticut Children's Medical Center, 282 Washington St., Hartford	8	8	0				

[1] Minimum number of surgeries to be performed in a single operating room for one year. Provide an explanation of the criteria or basis used to estimate the number.
[2] Maximum number of surgeries of the type included in the proposal that can optimally be performed in a single operating room in one year. Provide an explanation of the criteria or basis used to estimate the number.
[3] Report the number of procedures for the most current 12 month period and identify the period covered

12. On page 13 of the initial submission, Table 2a provides the outpatient surgical volume for Fiscal Years ("FY") 2009, 2010 and 2011. Please provide the following:

a) The number of surgeries performed in the current fiscal year through May 31, 2012.

b) The breakdown of outpatient surgical volume by operating room (similar to table 2b) for the same four time periods.
c) Explain the variance in surgical procedures between tables 2a and 2b for FY09, FY10 and FY11. Revise the tables as required.
d) Table 2a shows 10,450 of the estimated surgeries for FY16. Table A on pg. 7 shows 10,442 for same period. Please revise or explain the variance.

13. Table 2b of the initial submission provides the Projected Outpatient Room volume. Question 2 b printed on page 6 of the CON application requests that the Applicant provide the calculations used to determine the proposed number of operating rooms and include any documentation to support the calculation. Please provide a discussion with a table that supports the number of operating rooms being requested. The discussion and table must include the four operating rooms being proposed, i.e, the two to be utilized immediately and the two shelled operating rooms for future growth.

14. Table 2c of the initial submission provides the Inpatient Surgical volume. Please respond to the following:

a) Indicate and describe any effect the proposal will have on the Inpatient volume.
b) Provide the information by procedure type.

15. Please provide a table that reports for the past three fiscal years as well as the most current fiscal year to date, the number of patients by town of origin. Patients from outside Connecticut may be grouped using "New York", "Massachusetts", "Rhode Island", and "Other".

16. Table 5 on page 17 provides the proposed number of procedures by specialty. Please revise Table 2c on page 14 to report the number of procedures by the same specialties.

17. Please confirm that the proposal does not include the purchase of any regulated imaging equipment, i.e., computed tomography (CT), magnetic resonance imaging (MRI) or positive emission tomography (PET or PET-CT).

18. Currently, Table 5 on page 17 shows the actual number of outpatient and inpatient surgeries for FY 09-11. Table A on page 7 provides the same data. Please revised or explain the variance between two tables for total inpatient and outpatient surgeries for FY 09-11.

19. The Applicant proposes to finance the proposal using revenue from operations and philanthropy. Please provide a breakup as to how many dollars will come from operating revenue and how many from philanthropy. Are the philanthropic funds currently available? If not, please provide details on the fundraisers planned specifically to finance the proposal. Also please provide the history of your past fundraising ability and results.

20. Explain how and where the pediatric patients will be transferred if they require inpatient services. Provide copies of any transfer agreement that CCMC has with any of the area's acute care hospitals.

21. Please provide a draft lease agreement. What is the length of time that the lease will be in effect?

22. Appendix A on page 30 shows the CCMC Outpatient Surgery volume is equal to 7,560 surgeries for FY11. Table A (pg.7) and table 2a (pg.13) report 8,062 surgeries. Please revise or explain the variance.

In responding to the questions contained in this letter, please repeat each question before providing your response. Paginate and date your response, i.e., each page in its entirety. Information filed after the initial CON application submission (i.e. completeness letter, late file submissions, and the like must be numbered sequentially from the Applicant document preceding it. As the current submission for the application concludes with page 124, please begin with the completeness response with page 125. Reference Docket Number: 12-31762-CON and submit one (1) original and six (6) hard copies of your response in its entirety, including any supporting documentation. Submit a scanned copy of your response in Adobe format, an electronic copy in MS Word format and any worksheets in MS Excel, including all attachments, on CD.

Sincerely,

L K Greci

Laurie K. Greci
Associate Research Analyst

A. Veyberman

Alla Veyberman
Health Care Analyst

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*** TX REPORT ***
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STATE OF CONNECTICUT
OFFICE OF HEALTH CARE ACCESS

FAX SHEET

TO: THOMAS C. RICHARDSON

FAX: 860.545.8558

AGENCY: CCMC

FROM: OHCA

DATE: 06/29/2012 **Time:**

NUMBER OF PAGES: 6
(including transmittal sheet

Comments:

Completeness Letter
Docket Number: 12-31762-CON
CCMC Proposal to Establish and Operate a Pediatric OP Surgery Center in Farmington