

**ILLINOIS HEALTH FACILITIES AND SERVICES REVIEW BOARD
APPLICATION FOR PERMIT**

SECTION I. IDENTIFICATION, GENERAL INFORMATION, AND CERTIFICATION
This Section must be completed for all projects.

Facility/Project Identification

Facility Name: OrthoIllinois Surgery Center Elgin, LLC		
Street Address: NE Corner of Alft Lane and Westfield Drive, PIN: 03-31-277-062		
City and Zip Code: Elgin 60124		
County: McHenry	Health Service Area: HSA8	Health Planning Area: A-11

Applicant(s) [Provide for each applicant (refer to Part 1130.220)]

Exact Legal Name: OrthoIllinois Surgery Center Elgin, LLC		
Street Address: 324 Roxbury Road		
City and Zip Code: Rockford, IL 61107		
Name of Registered Agent: Jan H. Ohlander		
Registered Agent Street Address: 2902 McFarland Road Suite 400		
Registered Agent City and Zip Code: Rockford, IL 61107		
Name of Chief Executive Officer: Don Schreiner		
CEO Street Address: 324 Roxbury Road		
CEO City and Zip Code: Rockford, IL 61107		
CEO Telephone Number: 815-484-6915		

Type of Ownership of Applicants

<input type="checkbox"/>	Non-profit Corporation	<input type="checkbox"/>	Partnership	
<input type="checkbox"/>	For-profit Corporation	<input type="checkbox"/>	Governmental	
<input checked="" type="checkbox"/>	Limited Liability Company	<input type="checkbox"/>	Sole Proprietorship	<input type="checkbox"/> Other

- o Corporations and limited liability companies must provide an **Illinois certificate of good standing**.
- o Partnerships must provide the name of the state in which they are organized and the name and address of each partner specifying whether each is a general or limited partner.

APPEND DOCUMENTATION AS ATTACHMENT 1 IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Primary Contact [Person to receive ALL correspondence or inquiries]

Name: Don Schreiner
Title: CEO
Company Name: OrthoIllinois
Address: 324 Roxbury Road, Rockford, IL 61107
Telephone Number: 815-484-6915
E-mail Address: dons@orthoillinois.com
Fax Number: 815-381-7455

Additional Contact [Person who is also authorized to discuss the application for permit]

Name: Juan Morado Jr. and Mark J. Silberman
Title: Partner
Company Name: Benesch, Friedlander, Coplan & Aronoff, LLP
Address: 71 South Wacker Drive., 16th Floor, Chicago IL 60606
Telephone Number: 312-212-4949
E-mail Address: jmorado@beneschlaw.com ; msilberman@beneschlaw.com
Fax Number: 312-767-9192

Post Permit Contact

[Person to receive all correspondence subsequent to permit issuance-**THIS PERSON MUST BE EMPLOYED BY THE LICENSED HEALTH CARE FACILITY AS DEFINED AT 20 ILCS 3960**]

Name: Don Schreiner
Title: CEO
Company Name: OrthoIllinois Surgery Center Elgin, LLC
Address: 324 Roxbury Road, Rockford, IL 61107
Telephone Number: 815-484-6915
E-mail Address: dons@orthoillinois.com
Fax Number: 815-381-7455

Site Ownership

[Provide this information for each applicable site]

Exact Legal Name of Site Owner: Rockford Orthopedic Associates, Ltd. d/b/a Orthoillinois
Address of Site Owner: 324 Roxbury Road., Rockford, IL 61107
Street Address or Legal Description of the Site: Proof of ownership or control of the site is to be provided as Attachment 2. Examples of proof of ownership are property tax statements, tax assessor's documentation, deed, notarized statement of the corporation attesting to ownership, an option to lease, a letter of intent to lease, or a lease.
APPEND DOCUMENTATION AS ATTACHMENT 2, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Operating Identity/Licensee

[Provide this information for each applicable facility and insert after this page.]

Exact Legal Name: OrthoIllinois Surgery Center Elgin, LLC
Address: NE Corner of Alft Lane and Westfield Drive, Elgin Illinois 60124 PIN:03-31-277-062
<input type="checkbox"/> Non-profit Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> For-profit Corporation <input type="checkbox"/> Governmental <input checked="" type="checkbox"/> Limited Liability Company <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Other
<ul style="list-style-type: none"> o Corporations and limited liability companies must provide an Illinois Certificate of Good Standing. o Partnerships must provide the name of the state in which organized and the name and address of each partner specifying whether each is a general or limited partner. o Persons with 5 percent or greater interest in the licensee must be identified with the % of ownership.
APPEND DOCUMENTATION AS ATTACHMENT 3, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Organizational Relationships

Provide (for each applicant) an organizational chart containing the name and relationship of any person or entity who is related (as defined in Part 1130.140). If the related person or entity is participating in the development or funding of the project, describe the interest and the amount and type of any financial contribution.

APPEND DOCUMENTATION AS ATTACHMENT 4, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Flood Plain Requirements

[Refer to application instructions.]

Provide documentation that the project complies with the requirements of Illinois Executive Order #2006-5 pertaining to construction activities in special flood hazard areas. As part of the flood plain requirements, please provide a map of the proposed project location showing any identified floodplain areas. Floodplain maps can be printed at www.FEMA.gov or www.illinoisfloodmaps.org. **This map must be in a readable format.** In addition, please provide a statement attesting that the project complies with the requirements of Illinois Executive Order #2006-5 (<http://www.hfsrb.illinois.gov>).

APPEND DOCUMENTATION AS **ATTACHMENT 5**, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

Historic Resources Preservation Act Requirements

[Refer to application instructions.]

Provide documentation regarding compliance with the requirements of the Historic Resources Preservation Act.

APPEND DOCUMENTATION AS **ATTACHMENT 6**, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

DESCRIPTION OF PROJECT

1. Project Classification

[Check those applicable - refer to Part 1110.20 and Part 1120.20(b)]

Part 1110 Classification:

Substantive

Non-substantive

2. Narrative Description

In the space below, provide a brief narrative description of the project. Explain **WHAT** is to be done in **State Board defined terms**, **NOT WHY** it is being done. If the project site does NOT have a street address, include a legal description of the site. Include the rationale regarding the project's classification as substantive or non-substantive.

OrthoIllinois Surgery Center Elgin, LLC, is proposing to establish an ambulatory surgical treatment center ("ASTC") providing Podiatric, Pain Management, and Orthopedic categories of service in a newly constructed two story building made up of 19,945 total gross square feet. This building will be constructed on northeast quadrant of real property located at Alft Lane and Westfield Drive in Elgin, Illinois 60124, and currently identified by parcel identification number 03-31-277-062. The property has not yet been assigned an address by the United States Postal Service. This project is classified as substantive, in that it proposes the establishment of a licensed health care facility.

Project Costs and Sources of Funds

Complete the following table listing all costs (refer to Part 1120.110) associated with the project. When a project or any component of a project is to be accomplished by lease, donation, gift, or other means, the fair market or dollar value (refer to Part 1130.140) of the component must be included in the estimated project cost. If the project contains non-reviewable components that are not related to the provision of health care, complete the second column of the table below. Note, the use and sources of funds must be equal.

Project Costs and Sources of Funds			
USE OF FUNDS	CLINICAL	NONCLINICAL	TOTAL
Preplanning Costs	\$125,000	\$80,000	\$205,000
Site Survey and Soil Investigation	\$0	\$0	\$0
Site Preparation	\$241,000	\$241,000	\$482,000
Off Site Work	\$325,000	\$140,000	\$465,000
New Construction Contracts	\$4,589,255	\$2,939,745	\$7,529,000
Modernization Contracts	\$0	\$0	\$0
Contingencies	\$235,000	\$235,000	\$470,000
Architectural/Engineering Fees	\$405,000	\$300,000	\$705,000
Consulting and Other Fees	\$1,500,000	\$1,500,000	\$3,000,000
Movable or Other Equipment (not in construction contracts)	\$2,139,500	\$1,696,300	\$3,835,800
Bond Issuance Expense (project related)			\$0
Net Interest Expense During Construction (project related)	\$192,960	\$128,640	\$321,600
Fair Market Value of Leased Space or Equipment	\$0	\$0	\$0
Other Costs To Be Capitalized	\$450,360	\$300,240	\$750,600
Acquisition of Building or Other Property (excluding land)	\$0	\$0	\$0
TOTAL USES OF FUNDS	\$10,203,075	\$7,560,925	\$17,764,000
SOURCE OF FUNDS	CLINICAL	NONCLINICAL	TOTAL
Cash and Securities	\$800,000	\$200,000	\$1,000,000
Pledges	0	0	0
Gifts and Bequests	0	0	0
Bond Issues (project related)	0	0	0
Mortgages	\$9,403,075	\$7,360,925	\$16,764,000
Leases (fair market value)	0	0	0
Governmental Appropriations	0	0	0
Grants	0	0	0
Other Funds and Sources	0	0	0
TOTAL SOURCES OF FUNDS	\$10,203,075	\$7,560,925	\$17,764,000
NOTE: ITEMIZATION OF EACH LINE ITEM MUST BE PROVIDED AT ATTACHMENT 7, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.			

Related Project Costs

Provide the following information, as applicable, with respect to any land related to the project that will be or has been acquired during the last two calendar years:

Land acquisition is related to project <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Purchase Price: \$1,025,000 Fair Market Value: \$1,025,000
The project involves the establishment of a new facility or a new category of service <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, provide the dollar amount of all non-capitalized operating start-up costs (including operating deficits) through the first full fiscal year when the project achieves or exceeds the target utilization specified in Part 1100. Estimated start-up costs and operating deficit cost is <u>\$9,934,149</u>

Project Status and Completion Schedules

For facilities in which prior permits have been issued please provide the permit numbers.
Indicate the stage of the project's architectural drawings: <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> None or not applicable <input type="checkbox"/> Preliminary </div> <div style="display: flex; justify-content: space-around;"> <input checked="" type="checkbox"/> Schematics <input type="checkbox"/> Final Working </div>
Anticipated project completion date (refer to Part 1130.140): March 1, 2023
Indicate the following with respect to project expenditures or to financial commitments (refer to Part 1130.140): <div style="list-style-type: none; padding-left: 20px;"> <input type="checkbox"/> Purchase orders, leases or contracts pertaining to the project have been executed. <input type="checkbox"/> Financial commitment is contingent upon permit issuance. Provide a copy of the contingent "certification of financial commitment" document, highlighting any language related to CON Contingencies <input checked="" type="checkbox"/> Financial Commitment will occur after permit issuance. </div>
APPEND DOCUMENTATION AS ATTACHMENT 8 , IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

State Agency Submittals [Section 1130.620(c)]

Are the following submittals up to date as applicable: * <input type="checkbox"/> Cancer Registry *NOT APPLICABLE * <input type="checkbox"/> APORS *NOT APPLICABLE <input checked="" type="checkbox"/> All formal document requests such as IDPH Questionnaires and Annual Bed Reports been submitted <input checked="" type="checkbox"/> All reports regarding outstanding permits Failure to be up to date with these requirements will result in the application for permit being deemed incomplete.

Cost Space Requirements

Provide in the following format, the **Departmental Gross Square Feet (DGSF)** or the **Building Gross Square Feet (BGSF)** and cost. The type of gross square footage either **DGSF** or **BGSF** must be identified. The sum of the department costs **MUST** equal the total estimated project costs. Indicate if any space is being reallocated for a different purpose. Include outside wall measurements plus the department's or area's portion of the surrounding circulation space. **Explain the use of any vacated space.**

Dept. / Area	Cost	Gross Square Feet		Amount of Proposed Total Gross Square Feet That Is:			
		Existing	Proposed	New Const.	Modernized	As Is	Vacated Space
REVIEWABLE							
ASTC	\$10,203,075	N/A	10,980	10,980	N/A		N/A
Total Clinical	\$10,203,075	N/A	10,980	10,980	N/A		N/A
NON REVIEWABLE							
Canopy/Drop-Off	\$765,995	N/A	1,465	1,465	N/A		N/A
Building Utilities/Support Spaces	\$2,032,430	N/A	4,230	4,230	N/A		N/A
Building Penthouse & AHU Units	\$3,824,250	N/A	1,850	1,850	N/A		N/A
Public Lobby & Public Bypass Corridor	\$938,250	N/A	1,420	1,420	N/A		N/A
Total Non-clinical	\$7,560,925	N/A	8965	8965	N/A		N/A
TOTAL	\$17,764,000		19,945	19,945			

APPEND DOCUMENTATION AS ATTACHMENT 9, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

ILLINOIS HEALTH FACILITIES AND SERVICES REVIEW BOARD

APPLICATION FOR PERMIT- 10/2019 Edition

CERTIFICATION

The Application must be signed by the authorized representatives of the applicant entity. Authorized representatives are:

- o In the case of a corporation, any two of its officers or members of its Board of Directors;
- o in the case of a limited liability company, any two of its managers or members (or the sole manager or member when two or more managers or members do not exist);
- o in the case of a partnership, two of its general partners (or the sole general partner, when two or more general partners do not exist);
- o in the case of estates and trusts, two of its beneficiaries (or the sole beneficiary when two or more beneficiaries do not exist); and
- o in the case of a sole proprietor, the individual that is the proprietor.

This Application is filed on the behalf of Orthollinois Surgery Center Elgin, LLC *
 in accordance with the requirements and procedures of the Illinois Health Facilities Planning Act.
 The undersigned certifies that he or she has the authority to execute and file this Application on
 behalf of the applicant entity. The undersigned further certifies that the data and information
 provided herein, and appended hereto, are complete and correct to the best of his or her
 knowledge and belief. The undersigned also certifies that the fee required for this application is
 sent herewith or will be paid upon request.



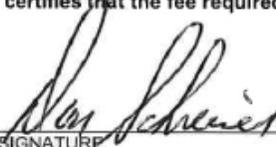
 SIGNATURE

Tom Stanley

 PRINTED NAME

Member

 PRINTED TITLE



 SIGNATURE

Don Schreiner

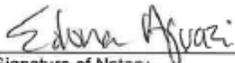
 PRINTED NAME

Managing Member

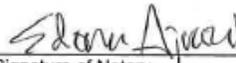
 PRINTED TITLE

Notarization:
 Subscribed and sworn to before me
 this 23rd day of JUNE

Notarization:
 Subscribed and sworn to before me
 this 23rd day of JUNE



 Signature of Notary



 Signature of Notary



*Insert the EXACT legal name of the applicant

SECTION III. BACKGROUND, PURPOSE OF THE PROJECT, AND ALTERNATIVES - INFORMATION REQUIREMENTS

This Section is applicable to all projects except those that are solely for discontinuation with no project costs.

1110.110(a) – Background of the Applicant

READ THE REVIEW CRITERION and provide the following required information:

<p>BACKGROUND OF APPLICANT</p> <ol style="list-style-type: none"> 1. A listing of all health care facilities owned or operated by the applicant, including licensing, and certification if applicable. 2. A listing of all health care facilities currently owned and/or operated in Illinois, by any corporate officers or directors, LLC members, partners, or owners of at least 5% of the proposed health care facility. 3. For the following questions, please provide information for each applicant, including corporate officers or directors, LLC members, partners and owners of at least 5% of the proposed facility. A health care facility is considered owned or operated by every person or entity that owns, directly or indirectly, an ownership interest. <ol style="list-style-type: none"> a. A certified listing of any adverse action taken against any facility owned and/or operated by the applicant, directly or indirectly, during the three years prior to the filing of the application. b. A certified listing of each applicant, identifying those individuals that have been cited, arrested, taken into custody, charged with, indicted, convicted or tried for, or pled guilty to the commission of any felony or misdemeanor or violation of the law, except for minor parking violations; or the subject of any juvenile delinquency or youthful offender proceeding. Unless expunged, provide details about the conviction and submit any police or court records regarding any matters disclosed. c. A certified and detailed listing of each applicant or person charged with fraudulent conduct or any act involving moral turpitude. d. A certified listing of each applicant with one or more unsatisfied judgements against him or her. e. A certified and detailed listing of each applicant who is in default in the performance or discharge of any duty or obligation imposed by a judgment, decree, order or directive of any court or governmental agency. 4. Authorization permitting HFSRB and DPH access to any documents necessary to verify the information submitted, including, but not limited to official records of DPH or other State agencies; the licensing or certification records of other states, when applicable; and the records of nationally recognized accreditation organizations. Failure to provide such authorization shall constitute an abandonment or withdrawal of the application without any further action by HFSRB. 5. If, during a given calendar year, an applicant submits more than one application for permit, the documentation provided with the prior applications may be utilized to fulfill the information requirements of this criterion. In such instances, the applicant shall attest that the information was previously provided, cite the project number of the prior application, and certify that no changes have occurred regarding the information that has been previously provided. The applicant is able to submit amendments to previously submitted information, as needed, to update and/or clarify data.
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APPEND DOCUMENTATION AS ATTACHMENT 11, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM. EACH ITEM (1-4) MUST BE IDENTIFIED IN ATTACHMENT 11.

Criterion 1110.110(b) & (d)

PURPOSE OF PROJECT

1. Document that the project will provide health services that improve the health care or well-being of the market area population to be served.
2. Define the planning area or market area, or other relevant area, per the applicant's definition.
3. Identify the existing problems or issues that need to be addressed as applicable and appropriate for the project.
4. Cite the sources of the documentation.
5. Detail how the project will address or improve the previously referenced issues, as well as the population's health status and well-being.
6. Provide goals with quantified and measurable objectives, with specific timeframes that relate to achieving the stated goals **as appropriate**.

For projects involving modernization, describe the conditions being upgraded, if any. For facility projects, include statements of the age and condition of the project site, as well as regulatory citations, if any. For equipment being replaced, include repair and maintenance records.

NOTE: Information regarding the "Purpose of the Project" will be included in the State Board Staff Report.

APPEND DOCUMENTATION AS ATTACHMENT 12, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM. EACH ITEM (1-6) MUST BE IDENTIFIED IN ATTACHMENT 12.

ALTERNATIVES

- 1) Identify **ALL** of the alternatives to the proposed project:

Alternative options **must** include:

 - A) Proposing a project of greater or lesser scope and cost;
 - B) Pursuing a joint venture or similar arrangement with one or more providers or entities to meet all or a portion of the project's intended purposes; developing alternative settings to meet all or a portion of the project's intended purposes;
 - C) Utilizing other health care resources that are available to serve all or a portion of the population proposed to be served by the project; and
 - D) Provide the reasons why the chosen alternative was selected.
- 2) Documentation shall consist of a comparison of the project to alternative options. The comparison shall address issues of total costs, patient access, quality and financial benefits in both the short-term (within one to three years after project completion) and long-term. This may vary by project or situation. **FOR EVERY ALTERNATIVE IDENTIFIED, THE TOTAL PROJECT COST AND THE REASONS WHY THE ALTERNATIVE WAS REJECTED MUST BE PROVIDED.**
- 3) The applicant shall provide empirical evidence, including quantified outcome data that verifies improved quality of care, as available.

APPEND DOCUMENTATION AS ATTACHMENT 13, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

SECTION IV. PROJECT SCOPE, UTILIZATION, AND UNFINISHED/SHELL SPACE

Criterion 1110.120 - Project Scope, Utilization, and Unfinished/Shell Space

READ THE REVIEW CRITERION and provide the following information:

SIZE OF PROJECT:

1. Document that the amount of physical space proposed for the proposed project is necessary and not excessive. **This must be a narrative and it shall include the basis used for determining the space and the methodology applied.**
2. If the gross square footage exceeds the BGSF/DGSF standards in Appendix B, justify the discrepancy by documenting one of the following:
 - a. Additional space is needed due to the scope of services provided, justified by clinical or operational needs, as supported by published data or studies and certified by the facility's Medical Director.
 - b. The existing facility's physical configuration has constraints or impediments and requires an architectural design that delineates the constraints or impediments.
 - c. The project involves the conversion of existing space that results in excess square footage.
 - d. Additional space is mandated by governmental or certification agency requirements that were not in existence when Appendix B standards were adopted.

Provide a narrative for any discrepancies from the State Standard. A table must be provided in the following format with Attachment 14.

SIZE OF PROJECT				
DEPARTMENT/SERVICE	PROPOSED BGSF/DGSF	STATE STANDARD	DIFFERENCE	MET STANDARD?
ASTC	10,980	11,000	N/A	Yes

APPEND DOCUMENTATION AS ATTACHMENT 14. IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

PROJECT SERVICES UTILIZATION:

This criterion is applicable only to projects or portions of projects that involve services, functions or equipment for which HFSRB has established utilization standards or occupancy targets in 77 Ill. Adm. Code 1100.

Document that in the second year of operation, the annual utilization of the service or equipment shall meet or exceed the utilization standards specified in 1110.Appendix B. **A narrative of the rationale that supports the projections must be provided.**

A table must be provided in the following format with Attachment 15.

UTILIZATION					
	DEPT./ SERVICE	HISTORICAL UTILIZATION (PATIENT DAYS) (TREATMENTS) ETC.	PROJECTED UTILIZATION	STATE STANDARD	MEET STANDARD?
YEAR 1	ASTC	2744 patients (avg. time 1:07)	81%	> 4500 hours	Yes
YEAR 2	ASTC	2881 patients (avg. time 1:07)	86%	> 4500 hours	Yes

APPEND DOCUMENTATION AS ATTACHMENT 15. IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

UNFINISHED OR SHELL SPACE: NOT APPLICABLE

Provide the following information:

1. Total gross square footage (GSF) of the proposed shell space.
2. The anticipated use of the shell space, specifying the proposed GSF to be allocated to each department, area or function.
3. Evidence that the shell space is being constructed due to:
 - a. Requirements of governmental or certification agencies; or
 - b. Experienced increases in the historical occupancy or utilization of those areas proposed to occupy the shell space.
4. Provide:
 - a. Historical utilization for the area for the latest five-year period for which data is available; and
 - b. Based upon the average annual percentage increase for that period, projections of future utilization of the area through the anticipated date when the shell space will be placed into operation.

APPEND DOCUMENTATION AS ATTACHMENT 16, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

ASSURANCES: NOT APPLICABLE

Submit the following:

1. Verification that the applicant will submit to HFSRB a CON application to develop and utilize the shell space, regardless of the capital thresholds in effect at the time or the categories of service involved.
2. The estimated date by which the subsequent CON application (to develop and utilize the subject shell space) will be submitted; and
3. The anticipated date when the shell space will be completed and placed into operation.

APPEND DOCUMENTATION AS ATTACHMENT 17, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

SECTION V. SERVICE SPECIFIC REVIEW CRITERIA

This Section is applicable to all projects proposing the establishment, expansion or modernization of categories of service that are subject to CON review, as provided in the Illinois Health Facilities Planning Act [20 ILCS 3960]. It is comprised of information requirements for each category of service, as well as charts for each service, indicating the review criteria that must be addressed for each action (establishment, expansion, and modernization). After identifying the applicable review criteria for each category of service involved, read the criteria and provide the required information **APPLICABLE TO THE CRITERIA THAT MUST BE ADDRESSED:**

G. Non-Hospital Based Ambulatory Surgery

Applicants proposing to establish, expand and/or modernize the Non-Hospital Based Ambulatory Surgery category of service must submit the following information.

ASTC Service
<input type="checkbox"/> Cardiovascular
<input type="checkbox"/> Colon and Rectal Surgery
<input type="checkbox"/> Dermatology
<input type="checkbox"/> General Dentistry
<input type="checkbox"/> General Surgery
<input type="checkbox"/> Gastroenterology
<input type="checkbox"/> Neurological Surgery
<input type="checkbox"/> Nuclear Medicine
<input type="checkbox"/> Obstetrics/Gynecology
<input type="checkbox"/> Ophthalmology
<input type="checkbox"/> Oral/Maxillofacial Surgery
<input checked="" type="checkbox"/> Orthopedic Surgery
<input type="checkbox"/> Otolaryngology
<input checked="" type="checkbox"/> Pain Management
<input type="checkbox"/> Physical Medicine and Rehabilitation
<input type="checkbox"/> Plastic Surgery
<input checked="" type="checkbox"/> Podiatric Surgery
<input type="checkbox"/> Radiology
<input type="checkbox"/> Thoracic Surgery
<input type="checkbox"/> Urology
<input type="checkbox"/> Other _____

3. READ the applicable review criteria outlined below and **submit the required documentation for the criteria:**

APPLICABLE REVIEW CRITERIA	Establish New ASTC or Service	Expand Existing Service
1110.235(c)(2)(B) – Service to GSA Residents	X	X
1110.235(c)(3) – Service Demand – Establishment of an ASTC or Additional ASTC Service	X	
1110.235(c)(4) – Service Demand – Expansion of Existing ASTC Service		X
1110.235(c)(5) – Treatment Room Need Assessment	X	X
1110.235(c)(6) – Service Accessibility	X	
1110.235(c)(7)(A) – Unnecessary Duplication/Maldistribution	X	
1110.235(c)(7)(B) – Maldistribution	X	
1110.235(c)(7)(C) – Impact to Area Providers	X	
1110.235(c)(8) – Staffing	X	X
1110.235(c)(9) – Charge Commitment	X	X
1110.235(c)(10) – Assurances	X	X

APPEND DOCUMENTATION AS ATTACHMENT 24, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

The following Sections **DO NOT** need to be addressed by the applicants or co-applicants responsible for funding or guaranteeing the funding of the project if the applicant has a bond rating of A- or better from Fitch's or Standard and Poor's rating agencies, or A3 or better from Moody's (the rating shall be affirmed within the latest 18-month period prior to the submittal of the application):

- Section 1120.120 Availability of Funds – Review Criteria
- Section 1120.130 Financial Viability – Review Criteria
- Section 1120.140 Economic Feasibility – Review Criteria, subsection (a)

VI. 1120.120 - AVAILABILITY OF FUNDS

The applicant shall document that financial resources shall be available and be equal to or exceed the estimated total project cost plus any related project costs by providing evidence of sufficient financial resources from the following sources, as applicable [**Indicate the dollar amount to be provided from the following sources**]:

<p><u>\$1,000,000</u></p>	<p>a) Cash and Securities – statements (e.g., audited financial statements, letters from financial institutions, board resolutions) as to:</p> <ol style="list-style-type: none"> 1) the amount of cash and securities available for the project, including the identification of any security, its value and availability of such funds; and 2) interest to be earned on depreciation account funds or to be earned on any asset from the date of applicant's submission through project completion;
<p>_____</p>	<p>b) Pledges – for anticipated pledges, a summary of the anticipated pledges showing anticipated receipts and discounted value, estimated time table of gross receipts and related fundraising expenses, and a discussion of past fundraising experience.</p>
<p>_____</p>	<p>c) Gifts and Bequests – verification of the dollar amount, identification of any conditions of use, and the estimated time table of receipts;</p>
<p><u>\$16,764,000</u></p>	<p>d) Debt – a statement of the estimated terms and conditions (including the debt time period, variable or permanent interest rates over the debt time period, and the anticipated repayment schedule) for any interim and for the permanent financing proposed to fund the project, including:</p> <ol style="list-style-type: none"> 1) For general obligation bonds, proof of passage of the required referendum or evidence that the governmental unit has the authority to issue the bonds and evidence of the dollar amount of the issue, including any discounting anticipated; 2) For revenue bonds, proof of the feasibility of securing the specified amount and interest rate; 3) For mortgages, a letter from the prospective lender attesting to the expectation of making the loan in the amount and time indicated, including the anticipated interest rate and any conditions associated with the mortgage, such as, but not limited to, adjustable interest rates, balloon payments, etc.; 4) For any lease, a copy of the lease, including all the terms and conditions, including any purchase options, any capital improvements to the property and provision of capital equipment; 5) For any option to lease, a copy of the option, including all terms and conditions.

<p>_____</p> <p>_____</p> <p>_____</p> <p><u>\$17,764,000</u></p>	<p>e) Governmental Appropriations – a copy of the appropriation Act or ordinance accompanied by a statement of funding availability from an official of the governmental unit. If funds are to be made available from subsequent fiscal years, a copy of a resolution or other action of the governmental unit attesting to this intent;</p> <p>f) Grants – a letter from the granting agency as to the availability of funds in terms of the amount and time of receipt;</p> <p>g) All Other Funds and Sources – verification of the amount and type of any other funds that will be used for the project.</p> <p>TOTAL FUNDS AVAILABLE</p>
<p>APPEND DOCUMENTATION AS <u>ATTACHMENT 33</u>, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.</p>	

SECTION VII. 1120.130 - FINANCIAL VIABILITY

All the applicants and co-applicants shall be identified, specifying their roles in the project funding or guaranteeing the funding (sole responsibility or shared) and percentage of participation in that funding.

Financial Viability Waiver

The applicant is not required to submit financial viability ratios if:

1. "A" Bond rating or better
2. All of the projects capital expenditures are completely funded through internal sources
3. The applicant's current debt financing or projected debt financing is insured or anticipated to be insured by MBIA (Municipal Bond Insurance Association Inc.) or equivalent
4. The applicant provides a third party surety bond or performance bond letter of credit from an A rated guarantor.

See Section 1120.130 Financial Waiver for information to be provided

APPEND DOCUMENTATION AS ATTACHMENT 34, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

The applicant or co-applicant that is responsible for funding or guaranteeing funding of the project shall provide viability ratios for the latest three years for which **audited financial statements are available and for the first full fiscal year at target utilization, but no more than two years following project completion.** When the applicant's facility does not have facility specific financial statements and the facility is a member of a health care system that has combined or consolidated financial statements, the system's viability ratios shall be provided. If the health care system includes one or more hospitals, the system's viability ratios shall be evaluated for conformance with the applicable hospital standards.

	Historical 3 Years			Projected
Enter Historical and/or Projected Years:	2017	2018	2019	Year 1
Current Ratio	N/A	N/A	N/A	1.93
Net Margin Percentage	N/A	N/A	N/A	23.52%
Percent Debt to Total Capitalization	N/A	N/A	N/A	69.09
Projected Debt Service Coverage	N/A	N/A	N/A	3.73
Days Cash on Hand	N/A	N/A	N/A	162.16
Cushion Ratio	N/A	N/A	N/A	3.13

Provide the methodology and worksheets utilized in determining the ratios detailing the calculation and applicable line item amounts from the financial statements. Complete a separate table for each co-applicant and provide worksheets for each.

Variance

Applicants not in compliance with any of the viability ratios shall document that another organization, public or private, shall assume the legal responsibility to meet the debt obligations should the applicant default.

APPEND DOCUMENTATION AS ATTACHMENT 35, IN NUMERICAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

SECTION VIII.1120.140 - ECONOMIC FEASIBILITY

This section is applicable to all projects subject to Part 1120.

A. Reasonableness of Financing Arrangements

The applicant shall document the reasonableness of financing arrangements by submitting a notarized statement signed by an authorized representative that attests to one of the following:

- 1) That the total estimated project costs and related costs will be funded in total with cash and equivalents, including investment securities, unrestricted funds, received pledge receipts and funded depreciation; or
- 2) That the total estimated project costs and related costs will be funded in total or in part by borrowing because:
 - A) A portion or all of the cash and equivalents must be retained in the balance sheet asset accounts in order to maintain a current ratio of at least 2.0 times for hospitals and 1.5 times for all other facilities; or
 - B) Borrowing is less costly than the liquidation of existing investments, and the existing investments being retained may be converted to cash or used to retire debt within a 60-day period.

B. Conditions of Debt Financing

This criterion is applicable only to projects that involve debt financing. The applicant shall document that the conditions of debt financing are reasonable by submitting a notarized statement signed by an authorized representative that attests to the following, as applicable:

- 1) That the selected form of debt financing for the project will be at the lowest net cost available;
- 2) That the selected form of debt financing will not be at the lowest net cost available, but is more advantageous due to such terms as prepayment privileges, no required mortgage, access to additional indebtedness, term (years), financing costs and other factors;
- 3) That the project involves (in total or in part) the leasing of equipment or facilities and that the expenses incurred with leasing a facility or equipment are less costly than constructing a new facility or purchasing new equipment.

C. Reasonableness of Project and Related Costs

Read the criterion and provide the following:

1. Identify each department or area impacted by the proposed project and provide a cost and square footage allocation for new construction and/or modernization using the following format (insert after this page).

COST AND GROSS SQUARE FEET BY DEPARTMENT OR SERVICE									
Department (list below)	A	B	C	D	E	F	G	H	Total Cost (G + H)
	Cost/Square Foot New	Mod.	Gross Sq. Ft. New	Circ.*	Gross Sq. Ft. Mod.	Circ.*	Const. \$ (A x C)	Mod. \$ (B x E)	
ASTC	\$417.96		10980				\$4,589,255		\$4,589,255
Contingency	\$21.40		0				\$235,000		\$235,000
TOTALS	\$439.37		10980				\$4,824,255		\$4,824,255
* Include the percentage (%) of space for circulation									
<p>D. Projected Operating Costs</p> <p>The applicant shall provide the projected direct annual operating costs (in current dollars per equivalent patient day or unit of service) for the first full fiscal year at target utilization but no more than two years following project completion. Direct cost means the fully allocated costs of salaries, benefits and supplies for the service.</p> <p>E. Total Effect of the Project on Capital Costs</p> <p>The applicant shall provide the total projected annual capital costs (in current dollars per equivalent patient day) for the first full fiscal year at target utilization but no more than two years following project completion.</p>									
<p>APPEND DOCUMENTATION AS <u>ATTACHMENT 36</u>, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.</p>									

SECTION IX. SAFETY NET IMPACT STATEMENT

SAFETY NET IMPACT STATEMENT that describes all the following must be submitted for ALL SUBSTANTIVE PROJECTS AND PROJECTS TO DISCONTINUE HEALTH CARE FACILITIES [20 ILCS 3960/5.4]:

1. The project's material impact, if any, on essential safety net services in the community, to the extent that it is feasible for an applicant to have such knowledge.
2. The project's impact on the ability of another provider or health care system to cross-subsidize safety net services, if reasonably known to the applicant.
3. How the discontinuation of a facility or service might impact the remaining safety net providers in a given community, if reasonably known by the applicant.

Safety Net Impact Statements shall also include all of the following:

1. For the 3 fiscal years prior to the application, a certification describing the amount of charity care provided by the applicant. The amount calculated by hospital applicants shall be in accordance with the reporting requirements for charity care reporting in the Illinois Community Benefits Act. Non-hospital applicants shall report charity care, at cost, in accordance with an appropriate methodology specified by the Board.
2. For the 3 fiscal years prior to the application, a certification of the amount of care provided to Medicaid patients. Hospital and non-hospital applicants shall provide Medicaid information in a manner consistent with the information reported each year to the Illinois Department of Public Health regarding "Inpatients and Outpatients Served by Payor Source" and "Inpatient and Outpatient Net Revenue by Payor Source" as required by the Board under Section 13 of this Act and published in the Annual Hospital Profile.
3. Any information the applicant believes is directly relevant to safety net services, including information regarding teaching, research, and any other service.

A table in the following format must be provided as part of Attachment 37.

Please note: The applicant is a new entity; thus has no history of services. However, the Saftey Net Impact of Orthollinois practice is provided below.

Safety Net Information per PA 96-0031			
CHARITY CARE			
Charity (# of patients)	2017	2018	2019
Inpatient	0	0	0
Outpatient	0	0	0
Total	0	0	0
Charity (cost In dollars)			
Inpatient	0	0	0
Outpatient	0	0	0
Total			
MEDICAID			
Medicaid (# of patients)	2017	2018	2019
Inpatient	0	0	0
Outpatient	77	98	86
Total	77	98	86
Medicaid (revenue)			
Inpatient	0	0	0
Outpatient	\$712,670	\$956,728	\$772,005
Total	\$712,670	\$956,728	\$772,005

APPEND DOCUMENTATION AS ATTACHMENT 37, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

SECTION X. CHARITY CARE INFORMATION

Charity Care information MUST be furnished for ALL projects [1120.20(c)].

1. All applicants and co-applicants shall indicate the amount of charity care for the latest three **audited** fiscal years, the cost of charity care and the ratio of that charity care cost to net patient revenue.
2. If the applicant owns or operates one or more facilities, the reporting shall be for each individual facility located in Illinois. If charity care costs are reported on a consolidated basis, the applicant shall provide documentation as to the cost of charity care; the ratio of that charity care to the net patient revenue for the consolidated financial statement; the allocation of charity care costs; and the ratio of charity care cost to net patient revenue for the facility under review.
3. If the applicant is not an existing facility, it shall submit the facility's projected patient mix by payer source, anticipated charity care expense and projected ratio of charity care to net patient revenue by the end of its second year of operation.

Charity care" means care provided by a health care facility for which the provider does not expect to receive payment from the patient or a third-party payer (20 ILCS 3960/3). Charity Care must be provided at cost.

A table in the following format must be provided for all facilities as part of Attachment 39.

Please note: The applicant is a new entity; thus has no history of services.

Safety Net Information per PA 96-0031			
CHARITY CARE			
Charity (# of patients)	2017	2018	2019
Inpatient	0	0	0
Outpatient	0	0	0
Total	0	0	0
Charity (cost in dollars)			
Inpatient	0	0	0
Outpatient	0	0	0
Total	0	0	0

APPEND DOCUMENTATION AS ATTACHMENT 38, IN NUMERIC SEQUENTIAL ORDER AFTER THE LAST PAGE OF THE APPLICATION FORM.

After paginating the entire completed application indicate, in the chart below, the page numbers for the included attachments:

INDEX OF ATTACHMENTS		
ATTACHMENT NO.		PAGES
1	Applicant Identification including Certificate of Good Standing	23-26
2	Site Ownership	27-47
3	Persons with 5 percent or greater interest in the licensee must be identified with the % of ownership.	48-51
4	Organizational Relationships (Organizational Chart) Certificate of Good Standing Etc.	52
5	Flood Plain Requirements	53
6	Historic Preservation Act Requirements	54-58
7	Project and Sources of Funds Itemization	59-61
8	Financial Commitment Document if required	N/A
9	Cost Space Requirements	62
10	Discontinuation	N/A
11	Background of the Applicant	63-108
12	Purpose of the Project	109-173
13	Alternatives to the Project	174
14	Size of the Project	175
15	Project Service Utilization	176-177
16	Unfinished or Shell Space	N/A
17	Assurances for Unfinished/Shell Space	N/A
Service Specific:		
18	Medical Surgical Pediatrics, Obstetrics, ICU	N/A
19	Comprehensive Physical Rehabilitation	N/A
20	Acute Mental Illness	N/A
21	Open Heart Surgery	N/A
22	Cardiac Catheterization	N/A
23	In-Center Hemodialysis	N/A
24	Non-Hospital Based Ambulatory Surgery	178-264
25	Selected Organ Transplantation	N/A
26	Kidney Transplantation	N/A
27	Subacute Care Hospital Model	N/A
28	Community-Based Residential Rehabilitation Center	N/A
29	Long Term Acute Care Hospital	N/A
30	Clinical Service Areas Other than Categories of Service	N/A
31	Freestanding Emergency Center Medical Services	N/A
32	Birth Center	N/A
Financial and Economic Feasibility:		
33	Availability of Funds	265-267
34	Financial Waiver	N/A
35	Financial Viability	268
36	Economic Feasibility	269-274
37	Safety Net Impact Statement	275
38	Charity Care Information	276

**ATTACHMENT 1- ARTICLES OF INCORPORATION FOR
ELGIN ORTHOPEDIC SURGERY CENTER, LLC**

Form LLC-5.5	Illinois Limited Liability Company Act Articles of Organization	FILE #08722714
Secretary of State Jesse White Department of Business Services Limited Liability Division www.cyberdriveillinois.com	Filing Fee: \$150 Approved By: <u>TLB</u>	FILED MAY 27 2020 Jesse White Secretary of State

1. Limited Liability Company Name: ELGIN ORTHOPEDIC SURGERY CENTER, LLC

2. Address of Principal Place of Business where records of the company will be kept:
324 ROXBURY ROAD
ROCKFORD, IL 61107

3. The Limited Liability Company has one or more members on the filing date.

4. Registered Agent's Name and Registered Office Address:

JAN H. OHLANDER
2902 MCFARLAND RD STE 400
ROCKFORD, IL 61107-6801

5. Purpose for which the Limited Liability Company is organized:
"The transaction of any or all lawful business for which Limited Liability Companies may be organized under this Act."

6. The LLC is to have perpetual existence.

7. Name and business addresses of all the managers and any member having the authority of manager:

ROCKFORD ORTHOPEDIC ASSOCIATES, LTD. #49639929
324 ROXBURY ROAD
ROCKFORD, IL 61107

8. **Name and Address of Organizer**
I affirm, under penalties of perjury, having authority to sign hereto, that these Articles of Organization are to the best of my knowledge and belief, true, correct and complete.

Dated: MAY 27, 2020

CRAIG P. THOMAS
2902 MCFARLAND ROAD, SUITE 400
ROCKFORD, IL 61107

This document was generated electronically at www.cyberdriveillinois.com

ATTACHMENT 1- ARTICLES OF AMENDMENT TO ORTHOILLINOIS SURGERY CENTER ELGIN, LLC

Form LLC-5.25	Illinois Limited Liability Company Act Articles of Amendment	FILE #: 0872271-4
Secretary of State Department of Business Services Limited Liability Division 501 S. Second St., Rm. 351 Springfield, IL 62756 217-524-8008 www.cyberdriveillinois.com	Filing Fee: \$50 Approved By: TLB	FILED Jun 03, 2020 Jesse White Secretary of State

- Limited Liability Company Name:
ELGIN ORTHOPEDIC SURGERY CENTER, LLC
- These Articles of Amendment are effective on the file date.
- The Articles of Organization are amended to change the name of the limited liability company as follows:
New Name:
ORTHOILLINOIS SURGERY CENTER ELGIN, LLC
- This amendment was approved in accordance with Section 5-25 of the Illinois Limited Liability Company Act.
- I affirm, under penalties of perjury, having authority to sign hereto, that these Articles of Amendment are to the best of my knowledge and belief, true, correct and complete.

Dated Jun 03, 2020
Month/Day Year

BRIAN BEAR
Name

PRESIDENT
Title

ROCKFORD ORTHOPEDIC ASSOCIATES, LTD. #49639929
If the applicant is a company or other entity, state name of company.

This document was generated electronically at www.cyberdriveillinois.com

**ATTACHMENT 1- ARTICLES OF AMENDMENT TO
ORTHOILLINOIS SURGERY CENTER ALGONQUIN, LLC**

Form LLC-5.25	Illinois Limited Liability Company Act Articles of Amendment	FILE #: 0872271-4
Secretary of State Department of Business Services Limited Liability Division 501 S. Second St., Rm. 351 Springfield, IL 62756 217-524-6008 www.cyberdriveillinois.com	Filing Fee: \$50 Approved By: TLB	FILED Aug 17, 2020 Jesse White Secretary of State

- Limited Liability Company Name:
ORTHOILLINOIS SURGERY CENTER ELGIN, LLC
- These Articles of Amendment are effective on the file date.
- The Articles of Organization are amended to change the name of the limited liability company as follows:
New Name:
ORTHOILLINOIS SURGERY CENTER ALGONQUIN, LLC
- This amendment was approved in accordance with Section 5-25 of the Illinois Limited Liability Company Act.
- I affirm, under penalties of perjury, having authority to sign hereto, that these Articles of Amendment are to the best of my knowledge and belief, true, correct and complete.

Dated Aug 17, 2020
Month/Day Year

BRIAN BEAR
Name

PRESIDENT
Title

ROCKFORD ORTHOPEDIC ASSOCIATES, LTD. #49639929
If the applicant is a company or other entity, state name of company.

ATTACHMENT 2- Site Ownership and Control

The land in which the ASTC will be located is subject to a Purchase and Sales Agreement between DML Enterprises Elgin, LLC an Illinois limited liability corporation (“Seller”) and OrthoIllinois. Attached as evidence of control is a copy of the Purchase and Sale Agreement.

PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT (this "Agreement") is dated as of September 25, 2020 (the "Effective Date"), by and between **DML Enterprises Elgin, LLC**, an Illinois limited liability company (the "Seller"), and **Rockford Orthopedic Associates, Ltd. d/b/a OrthoIllinois**, an Illinois professional corporation, or its assignee (the "Buyer").

WITNESSETH:

WHEREAS, Seller owns the Land (as defined below) located in Kane County, Illinois; and

WHEREAS, Seller has agreed to sell the Real Estate (as defined below) to Buyer and Buyer desires to purchase the Real Estate from Seller, all in accordance with and subject to the terms and conditions of this Agreement; and

NOW THEREFORE, Buyer and Seller, for good and valuable consideration given by each to the other, the receipt and sufficiency of which is hereby acknowledged, hereby enter into this Agreement and covenant and agree as follows:

I. Definitions.

(a) "Acceptance Date" means the date a fully executed counterpart of this Agreement has been delivered to each of Seller and Buyer.

(b) "Buyer's Continuing Obligations" means the obligations of the Buyer under Sections 5(a) and 5(b) of this Agreement, all of which shall survive the termination of this Agreement

(c) "Close or Closing" means the consummation of the transactions contemplated by this Agreement on or before the Closing Date (as defined below).

(d) "Closing Date" means the date falling thirty (30) days after the expiration of the Permitting Period or some other date mutually agreed to by Buyer and Seller.

(e) "Closing Statement" means the closing statement to be prepared by Escrow Agent (as defined below) for the sale of the Real Estate, setting forth the Purchase Price (as defined below), sources and uses of funds, prorations and other fees and expenses pursuant to the terms of this Agreement.

(f) "Deed" means the special warranty deed from Seller conveying fee simple marketable title of the Real Estate to Buyer or Buyer's nominee at Closing, subject only to the Permitted Exceptions, and to be recorded in the appropriate public records by Title Company immediately after Closing.

(g) "Due Diligence Period" means the period beginning on the Acceptance Date and expiring at 5:00 p.m. (CST) on the sixtieth (60th) day following the Acceptance Date.

(h) **“Environmental Law(s)”** means: (i) whenever enacted or promulgated, any applicable federal, state, foreign or local law, statute, ordinance, rule, regulation, license, permit, authorization, approval, consent, court order, judgment, decree, injunction, code, requirement or agreement with any governmental entity, (1) relating to pollution (or the cleanup thereof), or the protection of any environmental media, air, water vapor, surface water, groundwater, drinking water supply, land (including land surface or subsurface), plant, aquatic and animal life from injury caused by a Hazardous Substance or (2) concerning exposure to, or the use, containment, storage, recycling, reclamation, reuse, treatment, generation, discharge, transportation, processing, handling, labeling, production, disposal or remediation of Hazardous Substances, hazardous conditions, hazardous activities or environmental violations, in each case as amended and as now or hereafter in effect; and (ii) any common law or equitable doctrine (including, without limitation, injunctive relief and tort doctrines such as negligence, nuisance, trespass and strict liability) that may impose liability or obligations or injuries or damages due to or threatened as a result of the presence of, exposure to, or ingestion of, any Hazardous Substance. The term Environmental Law includes, without limitation, the federal Comprehensive Environmental Response Compensation and Liability Act of 1980 (“**CERCLA**”), the Superfund Amendments and Reauthorization Act, the federal Water Pollution Control Act, the federal Clean Air Act, the federal Clean Water Act, the federal Resources Conservation and Recovery Act of 1976 (including the Hazardous and Solid Waste Amendments to RCRA), the federal Solid Waste Disposal Act, the federal Toxic Substance Control Act, the federal Insecticide, Fungicide and Rodenticide Act, the federal Occupational Safety and Health Act of 1970, the federal National Environmental Policy Act and the federal Hazardous Materials Transportation Act.

(i) **“Environmental Liabilities”** means claims, liabilities, suits, causes of action at law or in equity, demands, losses, damages (including, without limitation, consequential damages, lost profits, punitive damages, and natural resource damages), fines, penalties, costs, taxes, charges, orders, judgments settlements, administrative proceedings, liens, obligations, remedial or removal actions and compliance requirements (including without limitation enforcement and cleanup actions and directives), third party claims (including without limitation, tort, personal injury, economic, diminution in value and property claims), expenses (including, without limitation, reasonable attorneys’ fees and expenses, costs of suit and of experts and consultants), all whether known or unknown, foreseeable or unforeseeable, past or present, contingent or otherwise, arising out of or in any way related to (A) any violation or non-compliance with an Environmental Law in connection with the Real Estate, (B) the environmental condition of the Real Estate or (C) the presence of any Hazardous Materials at, on, under, migrating to or from the Real Estate, or Hazardous Materials that have migrated or threaten to migrate to or from the Real Estate, (clauses (A), (B) and (C) above individually a **“Loss”** and collectively **“Losses”**), and for the absence of doubt, by way of example and not limitation, such Loss or Losses that might arise under common law, the Comprehensive Environmental Response and Liability Act, 42 USC § 9601 *et seq.*, Solid Waste Disposal Act, 42 USCA § 6901 *et seq.*, Federal Water Pollution Control Act, 33 USCA § 1251 *et seq.*, and the Illinois Environmental Protection Act, 415 ILCS 5/1 *et seq.*

(j) **“Escrow Agent”** means the Title Company.

(k) **"Existing Environmental Reports"** means all existing Phase I and Phase II environmental site assessments for the Real Estate and all other reports, studies, test results, notices, and the like, in any way related to the Real Estate, received by, or performed at the request of, Seller, in addition to any and all reports, studies, correspondence or other data from any local, state or federal governmental agency charged with oversight or enforcement of Environmental Laws.

(l) **"Hazardous Substance(s)"** means: (i) any substance, material, product, petroleum, petroleum product, derivative, compound or mixture, mineral (including asbestos), chemical, gas, medical waste, or other pollutant, in each case whether naturally occurring, man-made or the by-product of any process, that is toxic, harmful or hazardous or acutely hazardous to the environment or public health or safety; (ii) those materials included within the definitions of "hazardous substances," "extremely hazardous substances," "hazardous materials," "toxic substances" "toxic pollutants," "hazardous air pollutants" "toxic air contaminants," "solid waste," "hazardous waste," "pollutants," "contaminants" or similar categories under any Environmental Laws; or (iii) any substance supporting a claim under any Environmental Law, whether or not defined as hazardous as such under any Environmental Law. Hazardous Substances include, without limitation, any toxic or hazardous waste, pollutant, contaminant, industrial waste, petroleum or petroleum-derived substances or waste, radon, radioactive materials, asbestos, asbestos containing materials, urea formaldehyde foam insulation, lead and polychlorinated biphenyls.

(m) **"Improvements"** means all buildings and other structures and enhancements situated on the Land.

(n) **"Knowledge"** means the actual knowledge of the Seller without any duty of investigation or inquiry, and without imputation of knowledge from any other source.

(o) **"Land"** means the approximate 3.69 acres of the parcel of real property commonly known as Claymart Sub. Lot 2, Westfield Drive, Elgin, Illinois, and currently identified by PIN 03-31-277-062, as shown on the draft site plan attached hereto and made a part hereof as Exhibit A.

(p) **"Permitted Exceptions"** means and includes (i) all accrued taxes, fees and special assessments, which are not yet due and payable, credited to Buyer at Closing; (ii) building setbacks, use and occupancy restrictions, conditions and covenants of record; (iii) zoning laws and ordinances; (iv) easements for the use and maintenance of public utilities; (v) roads and highways; (vi) drainage ditches, feeders and laterals; (vii) the provisions of the Final Plat and the CCRs, and (viii) exceptions disclosed by the Title Commitment (as defined below) and which are not objected to by Buyer within twenty (20) days after receipt of the Title Commitment.

(q) **"Permitting Period"** means the period beginning on the first day following last day of the Due Diligence Period and expiring at 5:00 p.m. (CST) on the sixtieth (60th) day thereafter; provided, however that so long as Buyer is not then in default hereunder and this Agreement has not been sooner terminated, Buyer may extend the Permitting Period for up to two (2) additional periods (each a **"Permitting Period Extension"**) of thirty (30) days each,

but only (i) upon notice to Seller given not later than 5 days prior to the end of the then-current Permitting Period and (ii) the simultaneous payment by Buyer to Seller of a fee ("**Extension Fee**") of Ten Thousand Dollars (\$10,000.00) for each such Permitting Period Extension. Each Extension Fee, if paid by Buyer, shall not be refundable, but if this transaction closes, it shall be applied to the Purchase Price at Closing.

(r) "**Purchase Price**" means One Million Twenty-five Thousand and 00/00 Dollars (\$1,025,000.00).

(s) "**Real Estate**" means, collectively, all of Seller's right, title and interest in and to: (i) the Land; (ii) the Improvements; (iii) any covenants, easements, appurtenances, licenses, rights or interests in adjacent lands, streets, roads and rights of way; and (iv) any unpaid award in respect of any land, street, road or avenue in front of or adjoining the Land and Improvements, except for refunds due to any tax appeal filed by the Seller prior to the Acceptance Date. The Real Estate shall include beneficial rights to off-site water detention sufficient to satisfy all applicable water detention requirements for the Real Estate, utilities stubbed to the lot line and Seller-constructed access roadways built to the standards of a municipal street; additionally, Seller shall be responsible for any extraordinary development requirements which may be required by any governing body with jurisdiction over the Real Estate and/or covenants, for example but not limited to, recreations paths and the like.

(t) "**Title Company**" means Chicago Title Insurance Co.

2. **Transactions.** Contemporaneously at Closing, and subject to the terms and conditions of this Agreement, Seller agrees to convey to Buyer or Buyer's nominee, and Buyer agrees to purchase from Seller the following:

(a) Fee simple title to the Real Estate as shown on the property map and legal description attached as Exhibit A, together with all rights, privileges, easements, licenses, hereditaments and other appurtenances relating thereto, subject to the Permitted Exceptions;

(b) All of Seller's right, title and interest, if any, in and to (i) any land lying in the bed of any street, road, or highway, open or proposed, in front of or adjoining all or any part of the Land, (ii) any alleys, walls, sidewalks or other property abutting the Land, (iii) any award made or to be made to the owner of the Real Estate by reason of change of grade or the closing of any street, road or highway, and (iv) all strips and gores of land within the boundaries of the Land; and

(c) All of Seller's right, title and interest in and to the Improvements.

3. **Purchase Price.** The Purchase Price shall be paid to Seller at Closing, in cash or immediately available funds, delivered or wired to the Title Company on or before the Closing Date, plus or minus applicable prorations, adjustments, and credits agreed to by Buyer and Seller in writing, less the Earnest Money Deposit.

4. Earnest Money Deposit. Within ten (10) business days after the expiration of the Due Diligence Period, Buyer shall deposit a sum equal to Twenty-Five Thousand and 00/100 Dollars (\$250,000.00) with Escrow Agent (the "**Earnest Money Deposit**") to be held in escrow pursuant to the terms of the Title Company's standard strict joint order escrow agreement (the "**Earnest Money Escrow**"). In the event Buyer does not terminate this Agreement by written notice delivered to Seller prior to the expiration of the Due Diligence Period or Permitting Period, the Earnest Money Deposit shall: (a) become non-refundable (except in the case of a termination of this Agreement due to a Seller default) and be applied toward the Purchase Price at Closing; (b) be delivered to Seller as liquidated damages in the event Buyer defaults in the performance of its obligations under this Agreement and Seller elects to terminate this Agreement in consequence thereof (provided Seller is not then in default under this Agreement); (c) be returned to Buyer in the event Seller defaults in the performance of its obligations under this Agreement and Buyer elects to terminate this Agreement in consequence thereof (provided Buyer is not then in default under this Agreement); or (d) be returned to Buyer in the event the Real Estate is damaged or destroyed or becomes subject to a condemnation proceeding, in whole or in part, prior to Closing and Buyer elects to terminate this Agreement in consequence thereof.

5. Due Diligence.

(a) Within ten (10) business days after the Acceptance Date, Seller shall furnish to Buyer, or provide a written summary of items previously furnished to Buyer each of the following in Buyer's possession or control ("**Seller Background Materials**"), or a statement confirming to the best of their knowledge none exist and are within their possession or control: (i) any Existing Environmental Reports, (ii) a copy of all agreements with government bodies and/or surrounding land owners relating to or including the Real Estate and relevant follow-up correspondence, (iii) wetland and/or floodplain reports or studies, (iv) soil reports and engineering studies and (v) the Survey (per paragraph (b) below).

Buyer shall have the right at any time prior to the expiration of the Due Diligence Period to terminate this Agreement based upon the Seller Background Materials, any other matters disclosed during the Due Diligence Period, Buyer's financial or other feasibility analysis, or any other reason, or for no reason at all, by providing written notice to Seller, in which event this Agreement shall be null and void and of no further force and effect and the parties shall jointly direct the Escrow Agent to return the Earnest Money Deposit to Buyer, and thereafter neither Seller nor Buyer shall have any further rights or obligations under this Agreement except for Buyer's Continuing Obligations. At all times during the Due Diligence Period, Buyer and its agents shall have the right to enter upon the Real Estate, at their own risk and at reasonable times, to inspect the Real Estate and conduct such due diligence investigations as Buyer deems necessary. Seller agrees to provide access to all parts of the Real Estate and cooperate, at no expense to Seller, with such inspections and investigations in any way reasonably requested by Buyer.

Before conducting any invasive testing upon the Real Estate, Buyer shall procure and maintain, and shall assure that its contractors maintain, a policy or policies of public liability and property damage insurance so as to insure against claims arising out of bodily injury, death or property damage based upon acts or omissions of Buyer, its agents, employees or contractors, in connection with any entry or inspections of the Real Estate pursuant to the provisions hereof, with a combined

single limit of not less than \$2,000,000.00 (the "**Liability Insurance**"). Said Liability Insurance shall expressly name Seller as an additional insured, and Buyer shall provide Seller with evidence (in the form of a certificate) of such insurance coverage upon request by Seller. Buyer agrees to indemnify and hold Seller harmless from and against any loss, liability, mechanics' lien, cost, damage, expense, claim or judgment incurred or suffered by Seller arising out of or otherwise related to such investigations of the Real Estate by Buyer. Any provision of this Agreement to the contrary notwithstanding, the indemnification obligation of Buyer under this Section 5 shall survive Closing or any earlier termination of this Agreement. Seller shall have no liability to Buyer for any expenses related to Buyer's Due Diligence investigations.

(b) Buyer accepts the existing survey of _____ dated _____, provided to it by the Seller. Buyer at its own expense may obtain a current (dated after the date of this Agreement) boundary survey of the Real Estate, prepared by a surveyor licensed by the State of Illinois and certified to Seller, Buyer and the Title Company, in a form reasonably satisfactory to Buyer and in a form satisfactory to the Title Company for the issuance to Buyer of a title policy with no exceptions for matters of survey (the "**Survey**"). The legal description on the Survey shall coincide exactly with that to be set forth on the Title Commitment (as hereinafter defined). The Survey will further reflect the location of all utilities, utility easements, and access roadways, both actual or proposed. Buyer will review the Survey as part of its investigation of the Property during the Due Diligence Period.

6. Permitting.

(a) Buyer shall have the right at any time prior to the expiration of the Permitting Period to terminate this Agreement based upon Buyer's inability to obtain any permits or licenses necessary to design, construct and/or operate Buyer's intended medical office building and ambulatory surgical center (collectively, "**Required Permits**"), by providing written notice to Seller, in which event this Agreement shall be null and void and of no further force and effect, the Earnest Money Deposit and first Extension Fee (but not the second or third Extension Fees) shall be promptly refunded to Buyer, and thereafter neither Seller nor Buyer shall have any further rights or obligations under this Agreement, except for Buyer's Continuing Obligations.

(b) Not later than thirty (30) days after the expiration of the Due Diligence Period, Buyer shall make full and complete application for all Required Permits, and thereafter pursue the procurement of same with diligence (subject to Buyer's right to terminate under Section 6(a) above).

(c) At all times during the Permitting Period, Buyer and its agents shall have the right to enter upon the Real Estate, at their own risk and at reasonable times, to inspect the Real Estate and conduct such investigations as Buyer deems necessary in connection with the permitting process. Seller agrees to provide access to all parts of the Real Estate and cooperate, at no expense to Seller, with such inspections and investigations in any way reasonably requested by Buyer. Seller agrees to cooperate, at no expense to Seller, with Buyer in obtaining any permits or licenses necessary to design, construct and/or operate Buyer's intended medical office building and ambulatory surgical center in any way reasonably requested by Buyer. Before conducting any invasive testing upon the Real Estate, Buyer shall procure and maintain, and shall assure that its contractors maintain, a policy or policies of public liability and property damage

insurance so as to insure against claims arising out of bodily injury, death or property damage based upon acts or omissions of Buyer, its agents, employees or contractors, in connection with any entry or inspections of the Real Estate pursuant to the provisions hereof, with a combined single limit of not less than \$2,000,000.00 (the "**Liability Insurance**"). Said Liability Insurance shall expressly name Seller as an additional insured, and Buyer shall provide Seller with evidence (in the form of a certificate) of such insurance coverage upon request by Seller. Buyer agrees to indemnify and hold Seller harmless from and against any loss, liability, mechanics' lien, cost, damage, expense, claim or judgment incurred or suffered by Seller arising out of or otherwise related to such inspections and investigations of the Real Estate by Buyer. Any provision of this Agreement to the contrary notwithstanding, the indemnification obligation of Buyer under this Section 6 shall survive Closing or any earlier termination of this Agreement. Without limiting the generality of the foregoing, the Seller and Buyer acknowledge that the permits or licenses necessary to design, construct and/or operate Buyer's intended medical office building and ambulatory surgical center include without limitation a certificate of need and other licenses/permits issued by the State of Illinois as well as any zoning permits or variances issued by the county and/or municipality within which the Land is located.

7. Title.

(a) Within twenty-one (21) days following the Acceptance Date, Seller shall furnish a current title insurance commitment in the amount of the Purchase Price to Buyer (the "**Title Commitment**"), and a final ALTA Owner's Policy following Closing (the "**Owner's Policy**"), at Seller's expense, showing marketable title subject only to the Permitted Exceptions.

(b) Notwithstanding anything in this Agreement to the contrary, Buyer automatically objects to all mortgage liens, mechanic's liens, judgments and other monetary encumbrances of a definitive and ascertainable amount ("**Liquidated Cure Items**") affecting the Real Estate and the same shall be automatically excluded from the definition of Permitted Exceptions without the requirement of any notice of objection thereof by Buyer.

(c) Buyer reserves the right to review and approve all liens, encumbrances, easements, restrictions, reservations, rights and conditions affecting the Real Estate, whether or not said liens, encumbrances, easements, restrictions, reservations, rights and conditions are a matter of public record. In the event Buyer has any objections to the condition of the title to the Real Estate, as described in the Title Commitment, then Buyer shall notify Seller in writing ("**Buyer's Title Objection Notice**") of such objections within twenty days after its receipt of the Title Commitment. Within ten (10) days after receipt of any such objections, Seller shall notify Buyer in writing ("**Buyer's Title Cure Notice**") of those objections which Seller agrees to cure, and which it will not cure, at or prior to Closing. To the extent Seller fails to notify Buyer within said period, then Seller shall be deemed to have notified Buyer that Seller does not intend to cure and otherwise remedy Buyer's objections at or prior to Closing. If Seller notifies Buyer (or is deemed to have notified Buyer) that Seller cannot or will not cure any of Buyer's objections at or prior to Closing or fails to cure any of Buyer's objections prior to Closing, then Buyer may, as its sole and exclusive remedy, either, by written notice to Seller given not later than twenty (20) days after the date of Buyer's Title Objection Notice, : (i) terminate this Agreement and receive a refund of the Earnest Money Deposit and first Extension Fee (but not

the second or third Extension Fees); or (ii) proceed to Closing and thereby waive such objections, however, as to any Liquidated Cure Items, unless same are paid off by Seller or insured over by the Title Company on or before the Closing, a portion of the Purchase Price sufficient to cause the release of any such Liquidated Cure Items shall be deducted from the Purchase Price and used for such purpose.

8. Seller's Representations and Warranties. Seller represents and warrants to Buyer that the following statements are true and correct as of the Acceptance Date and will be true and correct as of the Closing Date, and that the representations and warranties of each shall survive Closing for a period of one hundred eighty (180) days. Each of the following representations contained in this Section 12 is wholly qualified and limited by (i) any Ownership Materials or other documents provided by Seller to Buyer, (ii) any matters disclosed in any environmental reports or other studies obtained by Buyer, and (iii) any other matters of which Buyer has actual knowledge.

(a) Legal Status and Authority. Seller is duly organized, validly existing and in good standing under the laws of the State of Illinois, and in each State in which it is qualified to do business. Seller has the full power, authority and legal right to enter into this Agreement and to consummate the transactions contemplated by this Agreement. This Agreement has been, and all of the documents to be delivered by Seller at Closing will be, authorized and executed and constitute, or will constitute, as appropriate, the valid and binding obligations of Seller, enforceable in accordance with their terms.

(b) Compliance with Other Instruments. Neither the entering into of this Agreement nor the consummation of the transactions contemplated by this Agreement will constitute or result in a violation or breach of any contract or any other instrument or agreement to which Seller or its assets may be subject to or bound.

(c) Contracts. Seller is not a party to any unrecorded contracts of any kind relating to the Real Estate that will be binding on Buyer or the Real Estate after Closing.

(d) Compliance with Laws, Orders, Rules, Regulations, Etc. Neither the entering into of this Agreement nor the consummation of the transactions contemplated herein will constitute a violation or breach by Seller of any judgment, order, writ, injunction or decree issued against or imposed upon Seller or the Real Estate or will result in a violation by Seller of any applicable law, order, rule or regulation of any federal, state or local governmental authority. There are no actions, suits, proceedings or investigations pending or, to Seller's knowledge, threatened against Seller, in law or in equity, before any federal, state or local governmental authority, that would prevent or impair Seller's ability to convey the Real Estate to Buyer, or that would question the validity or enforceability of this Agreement or any action taken or to be taken by Seller under this Agreement in order to consummate the transactions contemplated by this Agreement. No approval, consent, order or authorization of, or designation, registration or filing (other than for recording purposes) with any governmental authority is required in connection with the due and valid execution and delivery of this Agreement by Seller or Seller's performance under this Agreement.

(e) Bankruptcy. No bankruptcy, insolvency, rearrangement or similar actions or proceedings, whether voluntary or involuntary, are pending or, to Seller's knowledge

threatened against Seller, nor has Seller any intention of filing or commencing any such action or proceeding in the foreseeable future.

(f) Condemnation. No portion of the Real Estate is subject to requisition or use by any governmental authority or has been condemned or taken in any proceeding similar to a condemnation proceeding. Seller has no knowledge and has not received written notice that any such proceeding is pending, threatened or contemplated.

(g) Leases. There are no leases, written or oral, affecting the Real Estate.

(h) Hazardous Substances. Seller has delivered to Buyer copies of any Existing Environmental Reports in Seller's possession or control. Except as may be disclosed by the Existing Environmental Reports, Seller has not received written notice of any violation of any Environmental Law in connection with the ownership or operation of the Real Estate, and during Seller's ownership or, to Seller's Knowledge, any time prior thereto (i) the Real Estate has not been previously used for the storage, manufacture, treatment or disposal of Hazardous Substances; (ii) no complaint, order, citation, penalty, fine or other written notice with regard to Hazardous Substances from any person, entity, or governmental authority, has been received by Seller; (iii) Seller has not taken any action in violation of any Environmental Laws; and (iv) no portion of the Real Estate has ever been enrolled in or been subject to any voluntary remediation or clean-up program process.

If, prior to the Closing Buyer determines or is advised that any of Seller's representations and warranties are not correct in all material respects (such inaccuracy being hereinafter called a "Known Inaccuracy" and the date as of which Buyer learns of same being hereinafter called the "Inaccuracy Date"), Buyer may, as its sole and exclusive remedy, either: (i) terminate this Agreement by written notice to Seller given (A) prior to the end of the Due Diligence Period (if the Inaccuracy Date precedes the end of the Due Diligence Period by more than 7 days) or otherwise (B) within seven (7) days of the Inaccuracy Date, in which event the Earnest Money shall be returned to Buyer, and neither party shall have any further rights, liability or obligations to the other hereunder except as provided in Paragraph 9(g), or (ii) waive such Known Inaccuracy by written notice to Seller given on or before the aforesaid deadline for Buyer's election to terminate as specified in the preceding clause (i) and proceed to Closing. If Buyer fails to elect to terminate this Agreement by reason of any Known Inaccuracy within the time and in the manner provided in this paragraph, then Buyer shall be deemed to have elected to waive such Known Inaccuracy, Seller shall have no liability to Buyer with respect thereto, and the obligation of Buyer to proceed to Closing hereunder shall not be affected thereby.

9. Buyer's Representations and Warranties. Buyer represents and warrants to Seller that the following statements are true and correct as of the Acceptance Date and will be true and correct as of the Closing Date, and that representations and warranties of each shall survive Closing for a period of two (2) years:

(a) Legal Status. Buyer is an Illinois corporation duly organized, validly existing and in good standing under the laws of the State of Illinois and has the power to enter into this Agreement and to consummate the transactions contemplated by this Agreement, and the officer executing this Agreement on behalf of Buyer has full power, authority and legal right

to enter into this Agreement and to bind Buyer to the transactions contemplated by this Agreement.

(b) Compliance with Other Instruments. Neither the entering into of this Agreement nor the consummation of the transactions contemplated herein will constitute or result in a violation or breach by Buyer of any contract, instrument or agreement to which Buyer, Buyer's assets or Buyer's properties may be subject to or bound.

(c) Compliance with Laws, Orders, Rules, Regulations, Etc. Neither the entering into of this Agreement nor the consummation of the transactions contemplated herein will constitute a violation or breach by Buyer of any judgment, order, writ, injunction or decree issued against or imposed upon Buyer or result in a violation by Buyer of any applicable law, order, rule or regulation of any federal, state or local governmental authority. There are no actions, suits, proceedings or investigations pending or threatened against Buyer, in law or in equity, before any federal, state or local governmental authority, that would prevent or impair Buyer's ability to purchase the Real Estate from Seller, or that would question the validity or enforceability of this Agreement or any action taken or to be taken by Buyer under this Agreement in order to consummate the transactions contemplated hereby. No approval, consent, order or authorization of, or designation, registration or filing (other than for recording purposes) with any governmental authority is required in connection with the due and valid execution and delivery of this Agreement by Buyer or Buyer's performance under this Agreement.

(d) Bankruptcy. No bankruptcy, insolvency, rearrangement or similar actions or proceedings, whether voluntary or involuntary are pending or threatened against Buyer, nor has Buyer any intention of filing or commencing any such action or proceeding in the foreseeable future.

10. Matters Prior to Closing.

(a) Hazardous Waste Notice. Seller shall give written notice to Buyer immediately upon Seller's acquiring knowledge of the presence of any Hazardous Substances in violation of any Environmental Laws in, on or under the Real Estate that are not otherwise already disclosed to Buyer in writing or referred to in any Existing Environmental Report provided to Buyer.

(b) Release of Liens. Seller shall cause to be released of record prior to or concurrently with Closing any and all mortgages, deeds of trust, collateral security agreements, mechanic's liens, judgment liens, tax liens and any and all other monetary liens or charges encumbering the Real Estate.

(c) Notice of Governmental Violations and/or Inspections. Seller agrees to give written notice to Buyer immediately upon acquiring at any time between the Acceptance Date and the Closing: (i) notice from a governmental authority of a violation concerning the Real Estate; (ii) knowledge of the conduct or occurrence of an inspection of the Real Estate by a governmental authority, (iii) any update of or newly discovered item constituting Seller Background Material.

11. Conditions Precedent to the Obligation of Buyer to Close. Unless waived in writing by Buyer, the obligation of Buyer to proceed to Closing is subject to the fulfillment of all of the following conditions on or prior to the Closing Date:

(a) Performance. The representations and warranties made by Seller in this Agreement shall be true and correct in all material respects on and as of the Closing Date, and all of the terms, provisions, covenants, conditions, agreements and obligations required to be performed by Seller under this Agreement at or prior to the Closing Date shall have been performed, met or complied with in all material respects, and an authorized representative of Seller shall execute and deliver a certificate as of the Closing attesting to same.

(b) No Litigation. There shall be no action or proceeding instituted, pending or threatened before any court, governmental agency or other regulatory agency, administrative agency or commission seeking to restrain, prevent, change or challenge the transactions contemplated by this Agreement or question the validity of such transactions, which cannot be discharged by bond or other procedures.

(c) Title. Title Company must be prepared to issue at Closing, upon payment of the title policy insurance premiums, the Owner's Policy, subject only to the Permitted Exceptions. Any title defect, matter, encumbrance or exception, first disclosed to or discovered by Buyer after the issuance of the Title Commitment and prior to Closing other than one created by, through, or under the Buyer, may be reviewed and objected to by Buyer, and, if any of Buyer's objections to said defect, matter, encumbrance or exception cannot, may not or will not be cured by Seller within a reasonable period of time after Buyer's objection, then Buyer shall have the right to terminate this Agreement and receive a refund of the Earnest Money Deposit or close and exercise any right of offset as to a Liquidated Cure Item available under paragraph 7(c) above.

12. Conditions Precedent to the Obligation of Seller to Close. The obligation of Seller to proceed to Closing is subject to the fulfillment of all of the following conditions on or prior to the Closing Date (unless waived in writing by Seller):

(a) Performance. The representations and warranties made by Buyer in this Agreement shall be true and correct in all material respects on and as of the Closing Date, and all of the terms, provisions, covenants, conditions, agreements and obligations required to be performed by Buyer under this Agreement at or prior to the Closing Date shall have been performed, met or complied with in all material respects.

(b) No Litigation. There shall be no action or proceeding instituted, pending or threatened before any court, governmental agency or other regulatory agency, administrative agency or commission seeking to restrain, prevent, change or challenge the transactions contemplated by this Agreement or question the validity of such transactions, which cannot be discharged by bond or other procedures.

(c) Buyer Performance and Deliveries. Buyer shall not be in default hereunder and shall have performed all other covenants, undertakings and obligations required by this Agreement to be performed or complied with by Buyer at or prior to Closing.

13. Closing.

(a) Closing Location. Closing shall take place in the office of the Title Company or at such other location as may be agreed upon by Seller and Buyer, on or before the Closing Date. Closing shall be accomplished through an escrow with Title Company, in accordance with the general provisions of the usual form of Deed and Money Escrow Agreement then in use by said company, with such special provisions inserted in the escrow agreement to permit an immediate ("New York-Style") closing and as otherwise may be required to conform with this Agreement. Upon the creation of such an escrow, anything herein to the contrary notwithstanding, payment of the Purchase Price and delivery of the Deed shall be made through the escrow and the cost of said escrow shall be shared equally by the parties.

(b) Instruments of Conveyance to be Delivered by Buyer. Buyer shall cause to be delivered to Title Company the following instruments of conveyance on or before the Closing Date: (i) a counterpart of the Closing Statement, duly executed by Buyer; (ii) documentation satisfactory to Seller evidencing that this Agreement and the documents necessary to consummate the transactions contemplated by this Agreement have been duly authorized by Buyer and that the individual(s) who signed on behalf of Buyer has/have been empowered to bind Buyer thereto; and (iii) any other documents, instruments or agreements called for under this Agreement which have not previously been delivered or which are reasonably necessary to close the transactions contemplated by this Agreement.

(c) Instruments of Conveyance to be Delivered by Seller. Seller shall cause to be delivered to Title Company the following instruments of conveyance on or before the Closing Date: (i) a counterpart of the Closing Statement, duly executed by Seller; (ii) the original Deed, duly executed by Seller; (iii) certificates evidencing Seller's good standing and authority to transact business in Seller's state of formation and in the state where the Real Estate is located; (iv) documentation satisfactory to Buyer evidencing that this Agreement and the documents necessary to consummate the transactions contemplated by this Agreement, including the Deed, have been duly authorized by Seller and that the individual(s) who signed on behalf of Seller has/have been empowered to bind Seller thereto; and (v) any other documents, instruments or agreements called for under this Agreement which have not previously been delivered or which are reasonably necessary to close the transactions contemplated by this Agreement, including, without limitation, terminations of any tenancies to be extinguished at closing, curatives for title objections which Seller agreed to cure at or prior to Closing, and such affidavits as the Title Company shall reasonably require in order to issue, without additional charge, the Owner's Policy.

(d) Possession. Seller shall deliver to Buyer possession and occupancy of the Real Estate at Closing free from all claims of occupancy of any kind whatsoever except for Permitted Exceptions.

(e) Costs. Seller shall pay for the premium charged for the Owner's Policy and the costs of the title search and exam in connection therewith. Seller shall also pay for the recording costs to remove encumbrances which Seller has agreed to remove, any and all documentary stamps on the Deed and all transfer taxes due to the city, town, county and/or the State of Illinois for this transaction. Buyer shall pay for the premium charged for any lender's

policy, title policy endorsements, extended coverage and the cost to record the Deed and mortgage, if any. Buyer and Seller shall split evenly the closing costs and escrow fees charged by the Escrow Agent to prepare the Closing Statement and perform the standard closing and recording duties.

(f) Prorations and Apportionments. Property taxes shall be prorated through the Closing Date. Tax prorations shall be based upon 105% of the most recent tax bill issued with respect to the Real Estate, and shall be final as of Closing. Seller shall pay at Closing all special assessments, fees, or use taxes against the Real Estate enacted or confirmed prior to the Acceptance Date by a public body, private association, or a Court.

(g) No Assumption of Liabilities. Buyer shall not assume any contracts, agreements, orders, liabilities or obligations of Seller, whether with respect to the Real Estate or otherwise, except for any non-delinquent covenants or obligations arising under the CCRs.

(h) Further Assurances. Buyer and Seller agree that they will, at any time and from time to time after Closing, upon request of the other party, do, execute, acknowledge and deliver, or will cause to be done, executed, acknowledged and delivered, all such further acts, assignments, transfers, conveyances, and assurances as may be required in order to more fully complete the terms of this Agreement to the extent usual and customary for commercial real estate closings in the State of Illinois. This mutual request shall survive Closing and not merge with the deed.

14. Default and Remedies.

(a) If any of Seller's representations and warranties set forth in this Agreement shall prove to be untrue as of the Closing Date, or if Seller defaults in the performance of its obligations under this Agreement at no fault of Buyer, and Seller fails to cure such default within ten (10) days after Buyer has provided written notice of such default to Seller, Buyer may at any time thereafter, provided Buyer is not then also in default under this Agreement, as Buyer's sole remedies in consequence of such default by Seller, either (a) pursue the right of specific performance to compel Seller to convey title to the Real Estate to Buyer in exchange for the Purchase Price and in accordance with the terms of this Agreement, or (b) terminate this Agreement upon written notice delivered to Seller, in which event the Earnest Money and any previously paid Permitting Period Extension Fees shall be promptly refunded to Buyer and this Agreement shall upon such refund and reimbursement be deemed null and void and Seller and Buyer shall have no further rights, except for Buyer's Continuing Obligations and as otherwise provided in this Agreement,

(b) If Buyer has not terminated this Agreement prior to the expiration of the Due Diligence Period or Permitting Period and Buyer thereafter defaults in the performance of its obligations under this Agreement at no fault of Seller, and Buyer fails to cure such default within 10 days after Seller has provided written notice of such default to Buyer, Seller may at any time thereafter, provided Seller is not then also in default under this Agreement, as Seller's sole remedy in consequence of such default by Buyer, terminate this Agreement upon written notice delivered to Buyer, in which event the Earnest Money Deposit shall be promptly paid over to Seller, and Seller shall have the right to retain the entire Earnest Money Deposit and any

Extension Fees as liquidated damages and not as a penalty, and this Agreement shall upon such termination and remittance be deemed null and void and neither Seller nor Buyer shall have any further rights, except for Buyer's Continuing Obligations and as otherwise provided in this Agreement. Seller and Buyer hereby agree that it would be impossible to ascertain the damages accruing to Seller as a result of a default by Buyer in the performance of its obligations under this Agreement following the expiration of the Permitting Period, and Seller and Buyer agree that such liquidated damages are a reasonable estimate thereof.

(c) Notwithstanding the foregoing, no representation, warranty or covenant made in this Agreement shall merge into any instrument of conveyance delivered at or effective upon Closing and thereby prevent Buyer or Seller from seeking any and all remedies available at law or in equity in connection with a breach first discovered after the Closing, subject to the applicable survival limitations set forth herein.

15. Condition of the Real Estate: As-Is. Except for the Seller's representation and warranties expressly provided in this Agreement, it is hereby agreed that (i) Seller has made no representations or warranties concerning the Physical Condition (as hereafter defined) of the Real Estate, and (ii) Buyer has agreed to purchase the Real Estate in its "as is/ where is" condition. Accordingly, the parties do further agree that, from and after the Closing hereunder:

- (a) The Seller shall have no responsibility for the repair, replacement or correction of, or for any response or corrective actions or remediation of any Physical Condition (as hereafter defined) at, on, under or about the Premises (as hereafter defined); and
- (b) The Buyer hereby waives and releases any claim for contribution against, and covenants not to sue the Seller or the Seller's members, managers, successors, agents or attorneys (collectively, the "**Seller Group**"), whether asserted directly or indirectly by Buyer, and whether in the nature of an action by way of contract, for contribution, third party proceeding or any other action or proceeding whatsoever, for all damages, including, without limitation, punitive damages, liabilities, costs, losses, diminutions in value, fines, penalties, demands, claims, cost recovery actions, lawsuits, administrative proceedings, orders, response action costs, compliance costs, investigation expenses, consultant fees, attorneys' and paralegals' fees and litigation expenses, including, by way of example only, claims and causes of actions in cost recovery, contribution or seeking equitable remedies, such as declaratory or injunctive relief, arising under the Comprehensive Environmental Response and Liability Act, 42 USC § 9601 et seq., Solid Waste Disposal Act, 42 USCA § 6901 et seq., Federal Water Pollution Control Act, 33 USCA § 1251 et seq., and the Illinois Environmental Protection Act, 415 ILCS 5/1 et seq., (collectively "**Claims**") arising out of or in connection with any Physical Condition (as defined in Section 15(f) below) or otherwise with respect to any other Environmental Liabilities or environmental law or with the migration of any such Physical Condition to any other site or location; and

- (c) The grant to the Buyer of the right to conduct inspections and investigations of the Property as provided in Section 5 of this Agreement is (i) in lieu of all representations or warranties concerning the environmental condition of the Premises other than those as set forth herein; and (ii) with the understanding and agreement of the Buyer that if Buyer proceeds to acquire the Premises pursuant to the terms hereof then, as of the closing, Buyer will purchase the Premises in its "as is" condition with no direct recourse or direct rights of action against Seller; and
- (d) The Buyer, for itself and its successors, assigns and grantees, hereby covenants and agrees that in consideration of this Agreement neither the Buyer nor its successors or assigns shall directly or indirectly sue Seller for any Claims with respect to, or arising out of any Physical Condition (as hereafter defined) or other condition of, or situation existing with respect to the Premises, Environmental Liabilities pertaining to the Premises, or any Environmental Law (as hereafter defined). (The covenant and agreement of the Buyer as set forth in the preceding sentence shall hereinafter be called the "**Covenant Not To Sue**"). The parties hereto understand and agree that the Buyer's Covenant Not To Sue as stated herein does not (i) apply to any breach by Seller of any of the Seller's representations as are set forth in this Agreement or to any action taken by the Buyer to enforce any contractual obligations of the Seller as may be specifically set forth in this Agreement, and (ii) constitute an agreement or undertaking by Buyer to indemnify Seller from third-party claims; provided, however, that the Buyer agrees not to assign any claims against Seller to any third parties.
- (e) For Purposes of this Section 15:
- (i) "**Physical Condition**" shall mean any condition or situations existing on, under, at or about the Premises, the groundwater, sub-surface water, and / or the underground soil and geologic condition thereunder, as of the date of the execution of this Agreement which (i) constitutes any structural or mechanical defect in or violation of any code, law, ordinance or regulation with respect to the building, mechanical systems, site improvements or other improvements on the Real Estate or (ii) constitutes a violation of any State of Illinois or federal Environmental Law, regulation or ordinance and/or and which does or reasonably might form the basis of any public or private claim or cause of action for the clean-up or remediation as a result of the release, threatened release, migration or the existence of any contaminants, pollutants, toxic or hazardous substances or wastes, petroleum and petroleum by-products, crude oil or any fraction thereof, chemicals, wastes or substance (including, without limitation, regulated substances and hazardous waste and hazardous substances as such terms as commonly used and understood within

the framework of existing federal and Illinois Environmental Laws and regulations).

- (ii) **"Premises"** shall mean the Real Estate described in this Agreement together with the sub soils, geologic formations and groundwater thereunder.
 - (iii) **"Environmental Law"** shall mean any federal or State of Illinois law, statute, regulation, rule, order, decree, judgment or direction concerning environmental protection or health and safety, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, the Resource Conservation and Recovery Act, as amended, the Toxic Substances Control Act, as amended, and the Illinois Environmental Protection Act, as amended.
 - (iv) **"Seller"** shall mean the party designated herein and such party's members, managers, officers, employees, agents, and legal representatives.
- (f) The provisions of this Section 15 shall survive the Closing hereunder and any termination of this Agreement however caused and shall not be merged into any escrow, deed or any other agreement.

16. **Repairs.** Between the Acceptance Date and the Closing Date, Seller shall, at its sole cost and expense, perform all reasonable and customary ordinary maintenance of the Real Estate as Seller has customarily previously performed in its ordinary course of business to maintain it in substantially the same condition as it is in as of the Acceptance Date.

17. **Broker's Fees.** Seller and Buyer hereby represent and warrant to each other that Seller has not utilized the services of any real estate broker or agent relating to the sale of the Property other than Marvin Vestuto of Vestuto Real Estate Corp. ("**Seller's Broker**") and Buyer has not utilized the services of any real estate broker or agent relating to the sale of the Property other than Steve Clark of Dickerson Neiman Commercial ("**Buyer's Broker**"). Seller acknowledges and agrees that at, and contingent upon the consummation of the Closing hereunder, it shall be Seller's sole responsibility for the payment of the brokers' fee owed to Seller's Broker under the terms of the Seller's agency agreement with the Seller's Broker. The Buyer's Broker shall look to the Seller's Broker for compensation under the agreement between said parties, and shall have no direct claim for commission or other compensation as against the Seller. Seller and Buyer hereby agree to indemnify, defend and hold each other harmless for, from and against any and all claims, obligations, liabilities, demands, losses, damages, liens, causes of actions, suits, costs and expenses (including attorneys' fees and court costs) associated with the claim or claims of any other real estate broker, agent or brokerage firm for real estate commissions, finder's fees or any other compensation or fee arising from this transaction.

18. Tax Deferred Exchange. Buyer and Seller agree to cooperate with each other in effecting for the benefit of either party a tax deferred exchange pursuant to Section 1031 of the United States Internal Revenue Code and similar provisions of applicable state law; provided that (a) neither party shall be obligated to delay the Closing and (b) neither party shall be obligated to execute any note, contract, deed or other document not otherwise expressly provided for in this Agreement providing for any personal liability, nor shall either party be obligated to take title to any property other than the Real Estate as otherwise contemplated in this Agreement or incur additional expense for the benefit of the other party. Each party shall indemnify and hold the other harmless against any liability which arises or is claimed to have arisen on account of any exchange proceeding which is initiated on behalf of the indemnifying party.

19. Confidentiality. Seller shall not disclose the Buyer's identity prior to Closing without the prior written approval of Buyer.

20. Miscellaneous.

(a) Modifications and Waivers. No modification, waiver, amendment, discharge or change of this Agreement, except as otherwise provided herein, shall be valid unless the same is in writing and signed by the party against which the enforcement of such modification, waiver, amendment, discharge or change is sought. This Agreement contains the entire agreement between the parties relating to the transactions contemplated hereby, and all prior or contemporaneous agreements, understandings, representations and statements, oral or written, are merged herein. Without limiting the generality of the foregoing, this Agreement alone fully and completely expresses the agreement between the parties and it is specifically understood that no oral representation and no provision of any document or statement delivered by or on behalf of Seller or Buyer, except to the extent expressly provided herein, is binding on Seller or Buyer.

(b) Successors and Assigns. All terms of this Agreement shall be binding upon, and inure to the benefit of and be enforceable by the parties hereto and their respective legal representatives, successors and permitted assigns.

(c) Governing Law and Venue. This Agreement is intended to be performed in the State of Illinois and shall be construed and enforced in accordance with the internal laws thereof. The principle that an agreement should be construed against the party drafting the agreement shall not apply to this Agreement as both parties hereto have contributed substantially in the negotiation and drafting of this Agreement. Each party hereto consents to the jurisdiction of any court situated in the county in which the Land is located, for any action arising out of matters related to this Agreement. Each of the parties hereto waives the right to commence an action in connection with this Agreement in any court outside of said county.

(d) Notices. Any and all notices required or permitted under this Agreement may be given on behalf of either party by the party's attorney, and may be directed to the other party or such other party's counsel as identified herein. Any notice or other communication permitted or required to be given hereunder by one party to the other shall be either hand delivered, sent by overnight delivery service (e.g., Federal Express), or sent via electronic mail to the party entitled or required to receive the same as follows:

Seller: DML Enterprises Elgin, LLC
 Attn: Denise Lindley,
 DVM _____
 2475 Westfield Drive
 Elgin, IL 61024
 Ph.: (708) 227-4949
 Email: Denise.lindley19@gmail.com

With a copy to: Nigro, Westfall & Gryska, P.C.
 Attn: Michael T. Nigro
 One Tiffany Pointe
 Suite 206
 Bloomingdale, IL 60108
 Ph.: (630.703.7803) _____
 Email: mike@nigrowestfall.com
 with copy to Diane@nigrowestfall.com

Buyer: Rockford Orthopedic Associates, Ltd.
 d/b/a OrthoIllinois
 Attn: Don Schreiner, CEO
 324 Roxbury Road
 Rockford, IL 61107
 Ph.: (815) 398-9491
 Email: dons@rockfordortho.com

With a copy to: Reno & Zahm LLP
 c/o Craig P. Thomas, Esq.
 2902 McFarland Road, Suite 400
 Rockford, IL 61107
 Ph.: (815) 987-4050
 Email: cpt@renozahm.com

(e) Captions. The captions of this Agreement are inserted for convenience of reference only and do not define, describe or limit the scope or the intent of this Agreement of any term hereof.

(f) Terminology. All personal pronouns used in this Agreement, whether used in the masculine, feminine, or neuter gender, shall include all other genders; the singular shall include the plural and vice versa.

(g) Assignment. This Agreement may be assigned by Buyer to any corporation, partnership or limited liability company of Buyer's choosing without the prior written consent of Seller; provided, however, that Buyer shall not be released and shall guarantee performance of all of the assignee's obligations under this Agreement until Closing.

(h) Invalid Provision. If any provision of this Agreement is held to be illegal, invalid, or unenforceable under present or future laws, such provision shall be fully severable and the remaining provisions of this Agreement shall remain in full force.

(i) Time of Essence. Time is of the essence of this Agreement. However, if the final date of any time period under or provided by this Agreement falls on a Saturday, Sunday or legal holiday under the laws of the United States or the State of Illinois, then, and in such event, the time of such period shall be extended to the next day which is not a Saturday, Sunday or legal holiday.

(j) Waiver. Buyer reserves the right to waive, in whole or in part, any provision hereof which is for the benefit of Buyer. Seller reserves the right to waive, in whole or in part, any provision hereof which is for the benefit of Seller.

(k) Attorney Fees. In the event it becomes necessary for either party hereto to file suit to enforce this Agreement or any provision contained herein, the party prevailing in such suit shall be entitled to recover, in addition to all other remedies or damages, reasonable attorney fees incurred in such suit and any appeal thereof and court costs.

(l) Counterparts. This Agreement may be executed in any number of counterparts and by different parties hereto on separate counterparts, each of which, when so executed, shall be deemed an original, but all of which when taken together shall constitute but one and the same instrument. Signatures on counterparts of this Agreement that are delivered via facsimile or by other electronic means are hereby authorized and shall be acknowledged as if such signatures were an original execution, and this Agreement shall be deemed as executed when an executed counterpart hereof is transmitted by a party to the other party via any electronic means.

(m) Joint Preparation. This Agreement is and shall be deemed and construed to be the joint and collective work product of Purchaser and Seller and, as such, this Agreement shall not be construed against either party, as the otherwise purported drafter of same, by any court of competent jurisdiction in order to resolve any inconsistency, ambiguity, vagueness or conflict in terms or provisions, if any, contained herein.

(n) Final Date for Execution. This Agreement shall be null and void if not executed by all parties and a counterpart executed original delivered to each party on or before September 21, 2020.

[Signature Page To Follow]

[Signature Page to Purchase and Sale Agreement]

IN WITNESS WHEREOF, the parties have executed this Purchase and Sale Agreement as of the dates set forth below.

SELLER:

BUYER:

DML Enterprises Elgin, LLC

Rockford Orthopedic Associates, Ltd.
d/b/a Ortho Illinois

By: *Denise M. Lindley*
Print Name: Denise M. Lindley, President
Its: President

By: *Don Schaeiner*
Print Name: DON SCHAEINER, CEO
Its: CEO

ATTACHMENT 3- ARTICLES OF INCORPORATION FOR ELGIN ORTHOPEDIC SURGERY CENTER, LLC

Form LLC-5.5	Illinois Limited Liability Company Act Articles of Organization	FILE #08722714
Secretary of State Jesse White Department of Business Services Limited Liability Division www.cyberdriveillinois.com	Filing Fee: \$150 Approved By: <u>TLB</u>	FILED MAY 27 2020 Jesse White Secretary of State

1. Limited Liability Company Name: ELGIN ORTHOPEDIC SURGERY CENTER, LLC

2. Address of Principal Place of Business where records of the company will be kept:
324 ROXBURY ROAD
ROCKFORD, IL 61107

3. The Limited Liability Company has one or more members on the filing date.

4. Registered Agent's Name and Registered Office Address:

JAN H. OHLANDER
2902 MCFARLAND RD STE 400
ROCKFORD, IL 61107-6801

5. Purpose for which the Limited Liability Company is organized:
"The transaction of any or all lawful business for which Limited Liability Companies may be organized under this Act."

6. The LLC is to have perpetual existence.

7. Name and business addresses of all the managers and any member having the authority of manager:

ROCKFORD ORTHOPEDIC ASSOCIATES, LTD. #49639929
324 ROXBURY ROAD
ROCKFORD, IL 61107

8. **Name and Address of Organizer**
I affirm, under penalties of perjury, having authority to sign hereto, that these Articles of Organization are to the best of my knowledge and belief, true, correct and complete.

Dated: MAY 27, 2020

CRAIG P. THOMAS
2902 MCFARLAND ROAD, SUITE 400
ROCKFORD, IL 61107

This document was generated electronically at www.cyberdriveillinois.com

ATTACHMENT 3- ARTICLES OF AMENDMENT TO ORTHOILLINOIS SURGERY CENTER ELGIN, LLC

Form LLC-5.25	Illinois Limited Liability Company Act Articles of Amendment	FILE #: 0872271-4
Secretary of State Department of Business Services Limited Liability Division 501 S. Second St., Rm. 351 Springfield, IL 62756 217-524-8008 www.cyberdriveillinois.com	Filing Fee: \$50 Approved By: TLB	FILED Jun 03, 2020 Jesse White Secretary of State

- Limited Liability Company Name:
ELGIN ORTHOPEDIC SURGERY CENTER, LLC
- These Articles of Amendment are effective on the file date.
- The Articles of Organization are amended to change the name of the limited liability company as follows:
New Name:
ORTHOILLINOIS SURGERY CENTER ELGIN, LLC
- This amendment was approved in accordance with Section 5-25 of the Illinois Limited Liability Company Act.
- I affirm, under penalties of perjury, having authority to sign hereto, that these Articles of Amendment are to the best of my knowledge and belief, true, correct and complete.

Dated Jun 03, 2020
Month/Day Year

BRIAN BEAR
Name

PRESIDENT
Title

ROCKFORD ORTHOPEDIC ASSOCIATES, LTD. #49639929
If the applicant is a company or other entity, state name of company.

This document was generated electronically at www.cyberdriveillinois.com

ATTACHMENT 3- ARTICLES OF AMENDMENT TO ORTHOILLINOIS SURGERY CENTER ALGONQUIN, LLC

Form LLC-5.25	Illinois Limited Liability Company Act Articles of Amendment	FILE #: 0872271-4
Secretary of State Department of Business Services Limited Liability Division 501 S. Second St., Rm. 351 Springfield, IL 62756 217-524-8008 www.cyberdriveillinois.com	Filing Fee: \$50 Approved By: TLB	FILED Aug 17, 2020 Jesse White Secretary of State

1. Limited Liability Company Name:
ORTHOILLINOIS SURGERY CENTER ELGIN, LLC

2. These Articles of Amendment are effective on the file date.

3. The Articles of Organization are amended to change the name of the limited liability company as follows:
 New Name:
ORTHOILLINOIS SURGERY CENTER ALGONQUIN, LLC

4. This amendment was approved in accordance with Section 5-25 of the Illinois Limited Liability Company Act.

5. I affirm, under penalties of perjury, having authority to sign hereto, that these Articles of Amendment are to the best of my knowledge and belief, true, correct and complete.

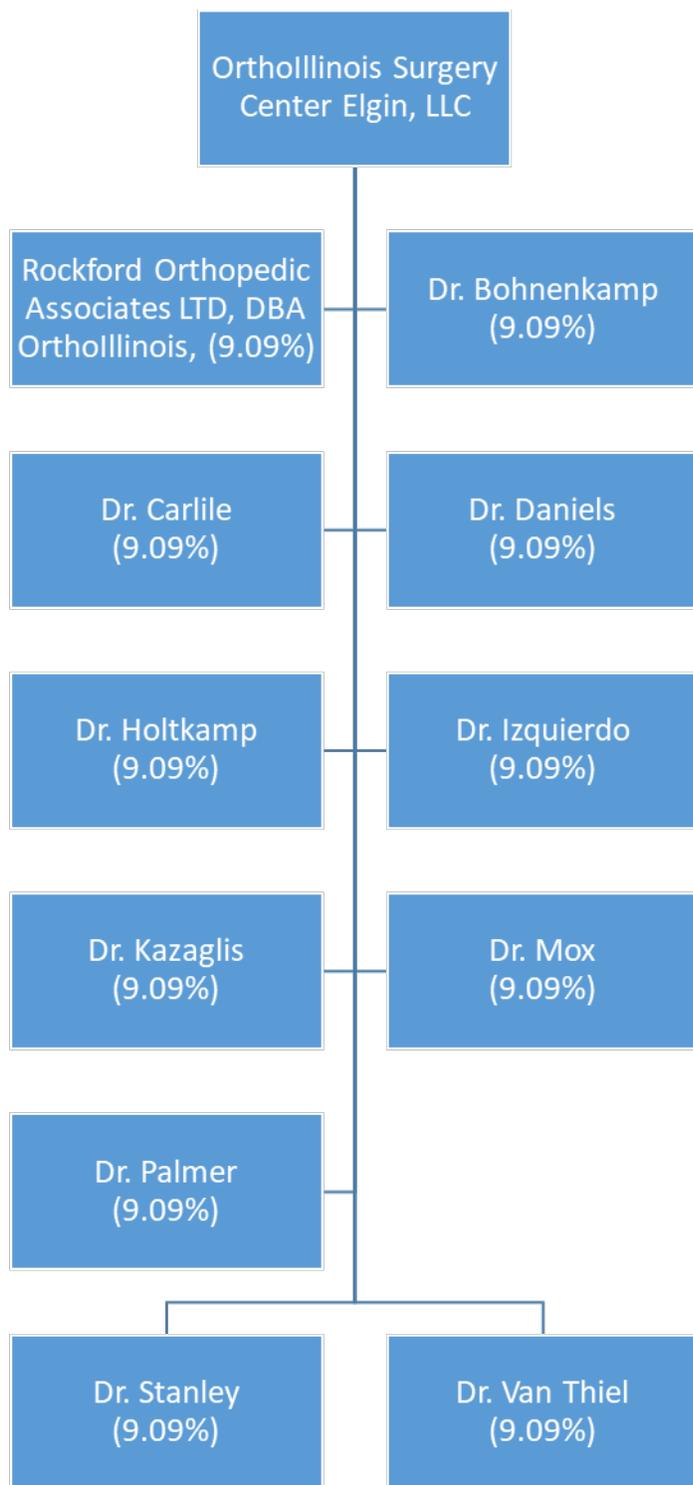
Dated Aug 17, 2020
Month/Day Year

BRIAN BEAR
Name

PRESIDENT
Title

ROCKFORD ORTHOPEDIC ASSOCIATES, LTD. #49639929
If the applicant is a company or other entity, state name of company.

ATTACHMENT 4- ORGANIZATIONAL CHART



ATTACHMENT 5- FLOOD PLAIN MAP

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, A-1, A-2 With BFE or Depth Zone AE, AO, AH, VE, AP Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee. See Notes. Zone X Area with Flood Risk due to Levee Zone D
OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall
OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation Coastal Transect Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary Coastal Transect Baseline Profile Baseline Hydrographic Feature
MAP PANELS	Digital Data Available No Digital Data Available Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/9/2020 at 1:11 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ATTACHMENT 6- HISTORICAL PRESERVATION LETTER

The applicant submitted a request for determination to the Illinois Department of Natural Resources- Preservation Services Division on October 5, 2020. A final determination has not yet been received, however, with the certification made with this application, the applicant certifies that either a determination from the Department will be provided to the HFSRB staff prior to Board review of this CON application or if the HFSRB approves this application, the project will not be obligated until the determination is made by DNR.



Juan Morado, Jr.
71 South Wacker Drive, Suite 1600
Chicago, IL 60606
Direct Dial: 312.212.4967
Fax: 312.757.9192
jmorado@beneschlaw.com

October 5, 2020

VIA EMAIL

Jeffrey Kruchten
Chief Archaeologist
Preservation Services Division
Illinois Historic Preservation Office
Illinois Department of Natural Resources
1 Natural Resources Way
Springfield, IL 62702
Jeffrey.kruchten@illinois.gov

**Re: Certificate of Need Application for the Establishment of an Ambulatory
Surgical Treatment Center**

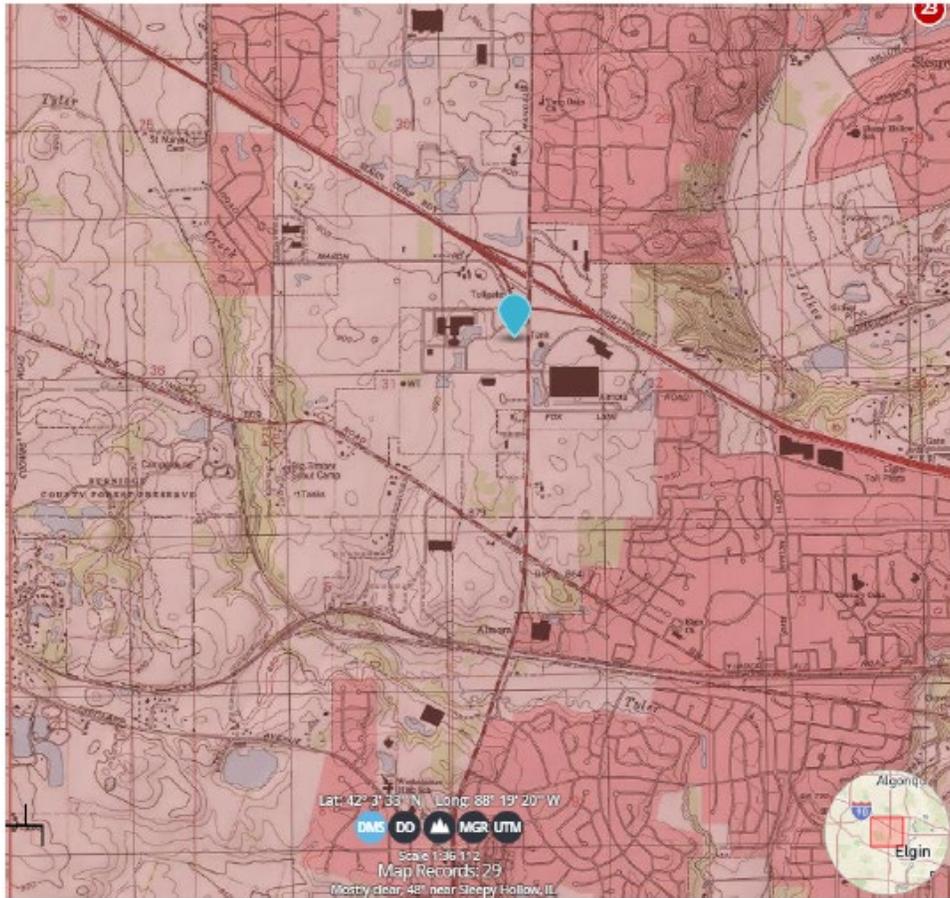
Dear Jeffrey:

I am writing on behalf of my client, OrthoIllinois to request a review of the project area under Section 4 of the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420/1 et. seq.). OrthoIllinois is submitting an application for a Certificate of Need from the Illinois Health Facilities and Services Review Board. OrthoIllinois is proposing to establish a multi-specialty ambulatory surgical treatment center to be located at northeast corner of Alft Lane and Westfield Road with a PIN of 03-31-277-062 Road in Elgin, Illinois 60124. OrthoIllinois plans to construct the new facility to meet Illinois Department of Public Health regulations for licensure as an ambulatory surgical treatment center.

The proposed facility will have four operating rooms for performing procedures in the categories of services of orthopedic surgery, pain management, and podiatry. For your reference, we have included pictures of the existing lot and topographic maps (Attachments 1-2) showing the general location of the project.

October 5, 2020
Page 4

Topographic Map



October 5, 2020
Page 5

Overhead View



October 5, 2020
Page 6



ATTACHMENT 7- INSERT DETAILED PROJECT COSTS AND SOURCES OF FUNDS

Project Costs and Sources of Funds			
USE OF FUNDS	CLINICAL	NONCLINICAL	TOTAL
Preplanning Costs	\$125,000	\$80,000	\$205,000
Site Survey and Soil Investigation	\$0	\$0	\$0
Site Preparation	\$241,000	\$241,000	\$482,000
Off Site Work	\$325,000	\$140,000	\$465,000
New Construction Contracts	\$4,589,255	\$2,939,745	\$7,529,000
Modernization Contracts	\$0	\$0	\$0
Contingencies	\$235,000	\$235,000	\$470,000
Architectural/Engineering Fees	\$405,000	\$300,000	\$705,000
Consulting and Other Fees	\$1,500,000	\$1,500,000	\$3,000,000
Movable or Other Equipment (not in construction contracts)	\$2,139,500	\$1,696,300	\$3,835,800
Bond Issuance Expense (project related)			\$0
Net Interest Expense During Construction (project related)	\$192,960	\$128,640	\$321,600
Fair Market Value of Leased Space or Equipment	\$0	\$0	\$0
Other Costs To Be Capitalized	\$450,360	\$300,240	\$750,600
Acquisition of Building or Other Property (excluding land)	\$0	\$0	\$0
TOTAL USES OF FUNDS	\$10,203,075	\$7,560,925	\$17,764,000
SOURCE OF FUNDS	CLINICAL	NONCLINICAL	TOTAL
Cash and Securities	\$800,000	\$200,000	\$1,000,000
Pledges	0	0	0
Gifts and Bequests	0	0	0
Bond Issues (project related)	0	0	0
Mortgages	\$9,403,075	\$7,360,925	\$16,764,000
Leases (fair market value)	0	0	0
Governmental Appropriations	0	0	0
Grants	0	0	0
Other Funds and Sources	0	0	0
TOTAL SOURCES OF FUNDS	\$10,203,075	\$7,560,925	\$17,764,000

PROJECT COSTS

Preplanning Costs	\$205,000.00
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Eval. Of Alternatives	\$50,000.00
Need and project scope assmnt.	\$40,000.00
Feasibility assessment	\$40,000.00
Architect & consultant selection	\$25,000.00
Misc./other	\$50,000.00

Site Preparation	\$482,000.00
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Site grading	\$150,000.00
Site utilities	\$100,000.00
Exterior signage and lighting	\$52,000.00
Landscaping	\$95,000.00

Misc./other	\$25,000.00	
Site Survey and Investigation	\$60,000	
New Construction Contracts		\$7,529,000.00
Per Attachment		
Offsite work		\$465,000.00
Drainage, Pipes and Utilities	\$325,000	
Signal Improvement	\$140,000	
Contingencies		\$470,000.00
Const. and modernization contingencies		
Architectural and Engineering Fees		\$705,000.00
Assessment of alternatives	\$40,000.00	
Design Services	\$495,000.00	
Specifications	\$30,000.00	
Governmental agency interaction	\$40,000.00	
Inspections/supervision	\$30,000.00	
Reimbursables	\$30,000.00	
Misc./other	\$40,000.00	
Consulting and Other Fees		\$3,000,000.00
CON and permit-related	\$160,000.00	
Project management	\$825,000.00	
Landscape design	\$115,000.00	
Interior Signage	\$80,000.00	
Civil Engineering	\$425,000.00	
Survey	\$40,000.00	
Traffic Study	\$25,000.00	
Agency interaction	\$150,000.00	
Interior design	\$75,000.00	
Process improvement consultant	\$80,000.00	
Equipment planning	\$100,000.00	
Legal	\$100,000.00	
Insurance	\$75,000.00	
Systems testing	\$50,000.00	
Commissioning	\$275,000.00	
Village planning commission	\$275,000.00	
Misc./other	\$150,000.00	
Movable Equipment		\$3,835,800.00
Communications Systems	\$55,800.00	

Security system	\$45,000.00
Information systems	\$85,000.00
Equip-related soft costs	\$450,000.00
Fixed equipment	\$1,100,000.00
Gen'l med equipment	\$1,250,000.00
Equipment support	\$200,000.00
IS/AV Equipment	\$250,000.00
Furniture	\$225,000.00
Misc./other	\$100,000.00
Installation	\$75,000.00

Other Costs to be Capitalized	\$750,600.00
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Premium weekend signal work	\$250,000.00
Demolition-existing building	\$370,600.00
HVAC system commissioning	\$30,000.00
Miscellaneous Fee	\$100,000.00

ATTACHMENT 9- COST SPACE REQUIREMENTS

Dept. / Area	Cost	Gross Square Feet		Amount of Proposed Total Gross Square Feet That Is:			
		Existing	Proposed	New Const.	Modernized	As Is	Vacated Space
REVIEWABLE							
ASTC	\$10,203,075	N/A	10,980	10,980	N/A		N/A
Total Clinical	\$10,203,075	N/A	10,980	10,980	N/A		N/A
NON REVIEWABLE							
Canopy/Drop-Off	\$765,995	N/A	1,465	1,465	N/A		N/A
Building Utilities/Support Spaces	\$2,032,430	N/A	4,230	4,230	N/A		N/A
Building Penthouse & AHU Units	\$3,824,250	N/A	1,850	1,850	N/A		N/A
Public Lobby & Public Bypass Corridor	\$938,250	N/A	1,420	1,420	N/A		N/A
Total Non-clinical	\$7,560,925	N/A	8965	8965	N/A		N/A
TOTAL	\$17,764,000		19,945	19,945			

ATTACHMENT 11- 1110.110(a) – Background of the Applicant

The following information is provided to illustrate the qualifications, background and character of the Applicant/Licensee and to assure the Review Board that the proposed Ambulatory Surgical Treatment Center will provide a proper standard of health care services for the community.

Orthollinois Surgery Center of Elgin, LLC

1. The proposed project is brought by Orthollinois Surgery Center of Elgin, LLC, an entity owned by physicians affiliated with Orthollinois. Orthollinois Surgery Center of Elgin, LLC is owned by in equal shares as reflected in Attachment 4.
2. No owner of Orthollinois Surgery Center of Elgin, LLC maintains an ownership interest in excess of 5% in any other healthcare facility, and thus can certify that there have been no adverse action during the three (3) years prior to the filing of this Application. A letter certifying to the above information is attached at Attachment 11.
3. We have included a letter authorizing access to the HFSRB and IDPH to verify information about Orthollinois Surgery Center of Elgin, LLC at Attachment 11.

Background of Orthollinois

This project is proposed by physicians affiliated with Orthollinois. Orthollinois is a bone and joint physician practice comprised of 40 musculoskeletal subspecialty physicians and anesthesiologists founded in 1967. The practice includes four clinics and nine rehabilitation locations serving Winnebago, McHenry and Kane counties, with a fifth clinic opening in McHenry, Illinois in August 2020. This expansion has required strong partnership with each of the community hospitals in which they serve, working collaboratively to offer the specialty care needed in cooperative relationships. Orthollinois has been committed to exceptional patient care and meeting the orthopedic needs of the community throughout its period of consistent growth.

Patients are viewed holistically with their individual needs driving treatment and surgical decisions. Orthollinois utilizes highly-skilled case managers to guide patients through preparation for surgery and post-surgery planning. Patients seek care with Orthollinois for all varieties of pain and injury, often for worsening conditions negatively impacting function and quality of life such as arthritis. Our medical care reaches all members of the community, including just over 39% provided to Medicare, Medicaid and uninsured patients.

Press Ganey benchmarking for patient satisfaction with Orthollinois has consistently exceeded 95% for medical patient satisfaction, and ranked in the 99% nationally for “willingness to recommend.” Furthermore, Orthollinois has long been committed to community service and volunteerism as a core principle for the organization. Our physicians dedicate their time and financial support to many charitable organizations including the United Way, University of Illinois School of Medicine, and the Northern Illinois Food Bank after-school and weekend meal programs for children.

Enclosed with this application is a letter from Orthollinois CEO Don Schreiner describing in greater detail who Orthollinois is and curriculum vitae for several of the physicians investing in the project.



October 5, 2020

Illinois Health Facilities and Services Review Board
525 West Jefferson Street, 2nd Floor
Springfield, Illinois 62761

RE: Certificate of Need Application OrthoIllinois Surgery Center – Elgin

As you prepare to review our Certificate of Need application for an ancillary surgery center in Elgin, Illinois, I'd like to share a little about who we are, what we stand for, and how we serve our community members.

Rockford Orthopedic Associates, Ltd., D/B/A OrthoIllinois is a subspecialty practice based in northern Illinois. The practice is comprised of 40 musculoskeletal subspecialty physicians and anesthesiologists serving communities in Winnebago, McHenry, and Kane Counties from four clinic and nine rehabilitation locations. The practice has served the bone and joint needs of northern Illinois residents since 1967.

Since its humble beginning as a single physician practice, OrthoIllinois has remained committed to recognizing and filling the orthopedic need of the community with top quality providers focused on the highest level of patient care and respect. Adherence to this focus led to becoming the largest and most highly preferred orthopedic practice serving the Rockford area region, always through understanding where the gaps in care occurred and seeking to fill them with orthopedic subspecialists.

In 2003, the practice recognized a further need: the additional availability of an outpatient surgery center to provide a cost-effective, safe environment for orthopedic surgeries and procedures. Through partnership with OSF Saint Anthony Medical Center we opened OrthoIllinois Surgery Center in July of 2004. Since opening, this ASC has maintained AAAHC accreditation and performed over 46,000 surgeries, including being one of the first in the country to perform outpatient total joint procedures.

In 2013, OrthoIllinois acquired Crystal Lake Orthopedics and in 2018 Elgin-based Associates in Orthopaedic Surgery, expanding the practice into Chicago's northwest suburbs. Again, analysis of area community needs indicated provider gaps for the area and OrthoIllinois stepped forward to recruit the additional specialists needed. A new state-of-the-art clinic and rehabilitation facility was opened in Algonquin, joining the Elgin office in serving multiple communities along the Randall Road corridor perpendicular to I-90. In August of 2020 OrthoIllinois will be opening its fifth clinic location in McHenry, Illinois, further expanding access to care in the northwest suburbs.

ROCKFORD
724 DuSable Blvd. 61107

ALGONQUIN
600 S. Randall Rd. 60107

ELGIN
Medical Plaza - Associates Hospital



Quality is what we stand for. Patient response to the level of care provided by OrthoIllinois has resulted in consistent Press Ganey benchmarking in the 90+ percentiles for medical practice patient satisfaction and 95+ percentile ranking for OrthoIllinois Surgery Center (as of May 2020, our surgery center ranked in the 99th percentile nationally for the question "willingness to recommend.") This level of ongoing patient satisfaction has contributed to the practices continued growth and patient appointment volumes of over 292,000 annually.

Patients come to us in pain, often as the result of injury, sometimes devastating. More often patients come to us because of worsening conditions like arthritis that are negatively impacting function and quality of life. We strive to view our patients holistically and developed programs to address growing needs. For example, we utilize case managers to help guide patients through preparation for surgery and built bundle payment programs for a number of common procedures to help effectively control medical costs. And for patients in need of hip or knee replacement but are ineligible due to high BMI concerns, we proactively partnered with local YMCAs and Judson University to offer a minimum cost weight loss and nutrition program that has helped many patients reach their weight goal and undergo the surgery they needed.

We do not take the trust placed in us for granted and recognize the responsibilities that come from being a leader in our industry. We have built strong partnerships with each of the hospitals in the communities in which we serve, working to collaboratively offer the specialty care needed in cooperative relationships.

Volunteerism and community support is highly encouraged in our organization. Our providers offer their time as team physicians for area school sports teams, and financial support in the form of sponsorships, charitable giving, and capital campaign pledges is directed to the hospital foundations, United Way programs, University of Illinois School of Medicine, community development programs, and dozens of non-for-profit agencies in our area. Of special note is the focus of our annual holiday party, which engages staff, physicians, and our vendor partners in raising monies to support Northern Illinois Food Bank's after school and weekend meal programs for children facing nutrition and hunger challenges at home. Since 2004, we have raised over \$450,000 for the programs enabling tens of thousands of children to be served.

With this CON application, we are again recognizing a growing consumer demand for a safe, convenient, cost-effective alternative to hospital procedures and are stepping forward to meet that demand. With this second ASC, we are committed to providing the same high-level quality care for our patients in the Chicago northwest suburbs as we have offered in the Rockford area since 2004. Thank you for your review and consideration.

Sincerely,

Don Schreiner, CEO
OrthoIllinois

ROCKFORD
724 Rockford Road 61107

ALGONQUIN
600 S. Randall Rd. 60107

ELGIN
Medical Plaza - Arkonata Hospital

Tom Stanley, M.D., M.P.H.

Employment

2018 - Current OrthoIllinois
650 S. Randall Rd
Algonquin, IL 60102

2010 – 2018 Midwest Bone and Joint
2350 Royal Blvd, Suite 200
Elgin, IL 60123

Hospital/Surgery Center Privileges

Full Medical Staff

Advocate Sherman Hospital
Elgin, IL

Presence St. Joseph Hospital
Elgin, IL

Algonquin Road Surgery Center
Algonquin, IL

Northwestern Huntley Hospital
Huntley, IL

Guest Medical Staff

Rockford Memorial Hospital
Rockford, IL

OSF Saint Anthony Medical Center
Rockford, IL

Swedish American Hospital
Rockford, IL

Education

- 2009 – 2010 Hospital for Joint Diseases
New York University Medical Center
New York, NY
Fellowship in Orthopedic Spine Surgery
- 2004 – 2009 Rush University Medical Center
Chicago, IL
Residency in Orthopedic Surgery
- 2000 – 2004 Tulane University, School of Medicine
New Orleans, LA
M.D.
- 2000 – 2004 Tulane University, School of Medicine
New Orleans, LA
M.P.H. in Health Systems Management
- 1996 – 2000 Tulane University, School of Engineering
B.S.E. in Biomedical Engineering
Honors in Biomedical Engineering

Certifications

Fellow of the American Academy of Orthopedic Surgeons – 2013, current
American Board of Orthopedic Surgery Part I – Passed in July, 2009
American Board of Orthopedic Surgery Part II – Passed in July, 2012
American Academy of Disability Evaluating Physicians CEDIR (Certification in the Evaluation of Disability and Impairment Rating) – Passed January 2013

Publications

Singh K, Dumonski M, Stanley T, Phillips F. Repeat use of rhBMP-2 at an Adjacent Lumbar Level: An Assessment of Efficacy and Immunologic Response. *Spine*. 2011 Feb 1;36(3): 192-196.

Lee MJ, Dumonski M, Cahill P, Stanley T, Park D, Singh K. Percutaneous treatment of vertebral compression fractures: a meta-analysis of complications. *Spine*. 2009 May

15;34(11):1228-32.

DeWald CJ, Stanley T. Instrumentation-related complications of multilevel fusions for adult spinal deformity patients over age 65: surgical considerations and treatment options in patients with poor bone quality. *Spine*. 2006 Sep 1;31(19 Suppl):S144-51.

Barrack RL, Stanley T, Burt M, Hopkins S. The effect of stem design on end-of-stem pain in revision total knee arthroplasty. *J Arthroplasty*. 2004 Oct;19(7 Suppl 2):119-24.

Cook SD, Salkeld SL, Stanley T, Faciane A, Miller SD. Biomechanical study of pedicle screw fixation in severely osteoporotic bone. *Spine J*. 2004 Jul-Aug;4(4):402-8.

Barrack RL, Stanley T, Butler AR. Treating extensor mechanism disruption after total knee arthroplasty. *Clin Orthop Relat Res*. 2003 Nov;(416):98-104.

Book Chapters

Stanley T, Lee M, Dumonski M, Singh K. Posterior Thoracic and Lumbar Approaches. *Operative Techniques in Spine Surgery*. Edited by Rhee J, Boden S, Flynn J. LWW 2013.

Dumonski M, Stanley T, Lee M, Wojewnik B, Singh K. Posterolateral Thoracolumbar Fusion with Instrumentation. *Operative Techniques in Spine Surgery*. Edited by Rhee J, Boden S, Flynn J. LWW 2013.

Spivak J, Stanley T, Balderston R. Lumbar Total Disc Replacement. *Rothman-Simeone The Spine*, 6th Edition. Edited by Herkowitz H, Garfin S, Eismont F, Bell G, Balderston R. Elsevier. 2011.

Stanley T, Wojewnik B, Vaccaro A, Singh K. Spinal Cord Injury: Rehabilitation and Recovery. *Neurotrauma and Critical Care of the Spine*. Edited by Jack Jallo, MD, and Alexander R. Vaccarro, MD. Thieme, New York, September 2008.

Stanley T, Dumonski M, Lee M, Singh K. Basic Approaches: Posterior Thoracic and Lumbar. *Operative Techniques in Orthopedics*. Lippincott Williams & Wilkins. Edited by John Rhee, MD, Scott Boden, MD. Lippincott Williams & Wilkins. 2007.

Lee M, Dumonski M, Stanley T, Singh K. Iliac Crest Bone Graft Harvest. In Weisel S (Ed.), *Operative Techniques in Orthopaedic*. Lippincott Williams & Wilkins. 2007.

Dumonski M, Stanley T, Lee M, Wojewnik B, Singh K. Posterolateral Thoracolumbar Fusion with Instrumentation. *Operative Techniques in Orthopedics*. Lippincott Williams & Wilkins. Edited by John Rhee, MD, Scott Boden, MD. Lippincott Williams & Wilkins. 2007.

Presentations

Stanley T, Singh K, Dumonski M, Phillips F. Repeat use of rhBMP-2 at an Adjacent Lumbar Level: An Assessment of Efficacy and Immunologic Response. Presented at the North American Spine Society Meeting. Toronto, Canada, October 2008.

Awards/ Honors

Advocate Patient Engagement Award 2018
Advocate Physician Quality of Care Award 2015
Advocate Physician Communications Award 2014
Sherman Hospital Patient Care Award 2013
NYU/HJD Fellow Research Award 2010
Rush University Senior Research Award 2009
Caldwell Society Award for Excellence in Orthopedics 2004
Tulane Medical School Merit Scholarship 2000-2004
Tulane School of Public Health Merit Scholarship 2000-2004
National Institutes of Health Research Fellow 1999

GEOFFREY S. VAN THIEL, MD/MBA
CURRICULUM VITAE

Full Name: Geoffrey S. Van Thiel, MD/MBA

POSITION/TITLE

Orthopedic Surgeon – Board Certified 2014

Sports Medicine Subspecialty Certification 2014– Knee, Hip and Shoulder
OrthoIllinois

Assistant Professor

Department of Orthopedics
Rush University Medical Center

Assistant Professor

Department of Surgery
University of Illinois – Chicago

Team Physician

Chicago Blackhawks Medical Network
Rockford Ice Hogs

Team Physician

US National Soccer Teams

Managing Partner

OrthoIllinois – Rockford, IL

EDUCATION/TRAINING

Department of Sports Medicine - Rush University Medical Center <i>Fellowship in Sports Medicine</i>	Chicago, IL 2011 – 2012
Rush University Department of Orthopaedic Surgery <i>Resident</i>	Chicago, IL 2006 – 2011
UCLA David Geffen School of Medicine <i>M.D. Degree – May 2006</i>	Los Angeles, CA 2001 – 2006
UCLA Anderson School of Management <i>M.B.A Degree– May 2006</i>	Los Angeles, CA 2004 – 2006
University of Wisconsin-Madison <i>B.S. Biological Sciences</i> ▪ Graduated with Honors (3.8 GPA)	Madison, WI 1998 – 2001

HONORS/AWARDS

Associate Editor - Surgical Techniques of the Shoulder, Elbow, and Knee in Sports
Medicine, 2nd Edition. Elsevier 2012.

2012

PRESENTATIONS

- 1) *Van Thiel GS*, Verma N; Yanke A; Basu; Farr J; Cole BJ. Meniscal Allograft Size Can be Predicted by Height, Weight and Gender.
 - Poster Presentation AOSSM Annual Meeting 2008 – Orlando, FL
- 2) *Van Thiel GS*, Piasecki D; Nicholson GP. Vertical Humeral Osteotomy for Revision of Well-Fixed Humeral Components.
 - Podium Presentation AAOS Annual Meeting 2009 – Las Vegas, NV
- 3) *Van Thiel GS*, Wang FC, Wang V, Nho SJ, Piasecki D, Romeo AA. Biomechanical Evaluation of Three Different Subscapularis Tendon Repairs.
 - Poster Presentation International Symposium on Ligaments and Tendons 2009 – Las Vegas, NV
- 4) Nho SJ, *Van Thiel GS*, Frank RM, Wang F, Wang V, Provencher MT, Mazzocca A, Romeo AA, Verma N. A Biomechanical Analysis of Anterior Bankart Repair with Capsular Plication using Suture Anchors.
 - Podium Presentation International Symposium on Ligaments and Tendons 2009 – Las Vegas, NV
- 5) *Van Thiel GS*, Verma N; Yanke A; Basu; Farr J; Cole BJ. Meniscal Allograft Size Can be Predicted by Height, Weight and Gender.
 - Poster Presentation ISAKOS Annual Meeting 2009 – Osaka, Japan
- 6) *Van Thiel GS*, Frank RM, Gupta A, Ghodadra N, Bach BR, Cole BJ, Verma NN, Provencher MT. Biomechanical Evaluation of Meniscal Transplantation with a High Tibial Osteotomy.
 - Podium Presentation International Cartilage Repair Society Annual Meeting 2009 – Miami, FL
- 7) *Van Thiel GS*, Sheehan S, Frank RM, Slabaugh M, Romeo AA, Nicholson GP, Cole BJ, Verma N. Arthroscopic Management of Glenohumeral Degenerative Disease.
 - Poster Presentation International Cartilage Repair Society Annual Meeting 2009 – Miami, FL
- 8) Frank RM, *Van Thiel GS*, Slabaugh M, Nho SJ, Romeo AA, Nicholson GP, Cole BJ, Verma NN. Clinical Outcomes after Microfracture of the Glenohumeral Joint.
 - Poster Presentation International Cartilage Repair Society Annual Meeting 2009 – Miami, FL
- 9) Ghodadra N, Provencher M, *Van Thiel GS*, Romeo AA, Goldstein J, Shewman E, Bach BR, Verma NN. Optimization of Glenohumeral Forces after Latarjet or Iliac Crest Bone Augmentation for Glenoid Bone Loss: Impact of Graft Type and Coracoid Position.
 - Poster Presentation International Cartilage Repair Society Annual Meeting 2009 – Miami, FL
- 10) Provencher MT, Ghodadra N, *Van Thiel GS*, Bach BR, Romeo AA. Novel Osteochondral Allograft for the Treatment of Shoulder Instability with Glenoid Bone Loss.
 - Podium Presentation International Cartilage Repair Society Annual Meeting 2009 – Miami, FL
- 11) *Van Thiel GS*, Verma N; Yanke A; Basu; Farr J; Cole BJ. Meniscal Allograft Size Can be Predicted by Height, Weight and Gender.
 - Poster Presentation AANA Annual Meeting 2009 – San Diego, CA
- 12) *Van Thiel GS*, Frank RM, Gupta A, Ghodadra N, Bach BR, Cole BJ, Verma NN, Provencher MT. Biomechanical Evaluation of Meniscal Transplantation with a High Tibial Osteotomy.
 - Poster Presentation Western Orthopedic Association Annual Meeting 2009 – Seattle, WA
- 13) *Van Thiel GS*, Sheehan S, Frank RM, Slabaugh M, Romeo AA, Nicholson GP, Cole BJ, Verma N. Arthroscopic Management of Glenohumeral Degenerative Disease.
 - Podium Presentation Western Orthopedic Association Annual Meeting 2009 – Seattle, WA

- 14) Provencher MT, Ghodadra N, *Van Thiel GS*, Bach BR, Romeo AA. Novel Osteochondral Allograft for the Treatment of Shoulder Instability with Glenoid Bone Loss.
 - Podium Presentation Western Orthopedic Association Annual Meeting 2009 – Seattle, WA
- 15) Ghodadra N, *Van Thiel GS*, Romeo AA, Bach BR, Provencher MT. Characterization of Glenoid and Distal Tibia Cartilage: Implications in Reconstruction of Glenoid in Shoulder Instability.
 - Poster Presentation AOSSM Annual Meeting 2009 – Keystone, CO
- 16) Nho SJ, *Van Thiel GS*, Frank RM, Wang F, Wang V, Provencher MT, Mazzocca A, Romeo AA, Verma N. A Biomechanical Analysis of Anterior Bankart Repair with Capsular Plication using Suture Anchors.
 - Podium Presentation AOSSM Annual Meeting 2009 – Keystone, CO
- 17) *Van Thiel GS*, Frank RM, Gupta A, Ghodadra N, Bach BR, Cole BJ, Verma NN, Provencher MT. Biomechanical Evaluation of Meniscal Transplantation with a High Tibial Osteotomy.
 - Poster Presentation AOSSM Annual Meeting 2009 – Keystone, CO
- 18) *Van Thiel GS*, Wang FC, Wang V, Nho SJ, Piasecki D, Romeo AA. Biomechanical Evaluation of Three Subscapularis Repairs After Shoulder Arthroplasty.
 - Podium Presentation ASES Open Meeting 2010 – New Orleans, LA
- 19) *Van Thiel GS*, Berend KR, Della Valle CJ, Gordon AC, Klein GR, Lombardi AV. Articulating Antibiotic Spacers in the Treatment of Total Knee Arthroplasty Infection.
 - Scientific Exhibit – AAOS Annual Meeting 2010 – New Orleans, LA
- 20) *Van Thiel GS*, Halloran JP, Piasecki DP, Provencher MT, Romeo AA, Nicholson GP. Vertical Humeral Osteotomy in Revision Shoulder Arthroplasty.
 - Featured Multimedia Presentation – AAOS Annual Meeting 2010 – New Orleans, LA
- 21) *Van Thiel GS*, Wang FC, Wang V, Nho SJ, Piasecki D, Romeo AA. Biomechanical Evaluation of Three Subscapularis Repairs After Shoulder Arthroplasty
 - Podium Presentation – AAOS Annual Meeting 2010 – New Orleans, LA
- 22) Nho SJ, *Van Thiel GS*, Frank RM, Wang F, Wang V, Provencher MT, Mazzocca A, Romeo AA, Verma N. A Biomechanical Analysis of Anterior Bankart Repair with Capsular Plication using Suture Anchors.
 - Podium Presentation – AAOS/ASES Shoulder and Elbow Meeting 2010 – Miami, FL
- 23) Nho SJ, *Van Thiel GS*, Frank RM, Wang F, Wang V, Provencher MT, Mazzocca A, Romeo AA, Verma N. Biomechanical Analysis of Posterior-Inferior Glenohumeral Capsular Plication.
 - Podium Presentation – AAOS/ASES Shoulder and Elbow Meeting 2010 – Miami, FL
- 24) *Van Thiel GS*, Berend KR, Della Valle CJ, Gordon AC, Klein GR, Lombardi AV. Articulating Antibiotic Spacers in the Treatment of Total Knee Arthroplasty Infection.
 - Podium Presentation – Mid-America Orthopaedic Association Annual Meeting 2010 Austin, TX
- 25) *Van Thiel GS*, Nho SJ, Frank RM, Wang F, Wang V, Provencher MT, Mazzocca A, Romeo AA, Verma N. A Biomechanical Analysis of Anterior Bankart Repair with Capsular Plication using Suture Anchors.
 - Podium Presentation – Mid-America Orthopaedic Association Annual Meeting 2010 Austin, TX
- 26) Provencher MT, Ghodadra N, *Van Thiel GS*, Verma NN, Romeo AA. Characterization of Glenoid Chondral Loss in Shoulder Instability: Implications for Amount of Chondral Loss and Reconstruction with a Novel Distal Tibia Allograft
 - Podium Presentation – AAOS/ASES Shoulder and Elbow Meeting 2010 – Miami, FL
- 27) Nho SJ, *Van Thiel GS*, Frank RM, Wang F, Wang V, Provencher MT, Mazzocca A, Verma N, Romeo AA. A Biomechanical Analysis of Anterior Bankart Repair with Capsular Plication using Suture Anchors.
 - Podium Presentation – Annual Congress of the French Arthroscopic Society 2009 of Deauville
- 28) Nho SJ, *Van Thiel GS*, Frank RM, Wang F, Wang V, Provencher MT, Mazzocca A, Verma N, Romeo AA. Biomechanical Analysis of Posterior-Inferior Glenohumeral Capsular Plication.
 - Poster Presentation – Annual Congress of the French Arthroscopic Society 2009 of Deauville

- 29) Frank RM, *Van Thiel GS*, Slabaugh M, Nho SJ, Romeo AA, Nicholson GP, Cole BJ, Verma NN. Clinical Outcomes after Microfracture of the Glenohumeral Joint.
 • Poster Presentation – Annual Congress of the French Arthroscopic Society 2009 of Deauville
- 30) *Van Thiel GS*, Frank RM, Gupta A, Ghodadra N, Bach BR, Cole BJ, Verma NN, Provencher MT. Proximal Tibial Osteotomy and Meniscal Transplantation: A Biomechanical Analysis
 • Poster Presentation – Orthopaedic Research Society (ORS), New Orleans 2010
- 31) Bell R B, Slabaugh M A, Frank R M, *Van Thiel G S*, Provencher M T, Romeo A A, Wang V M, Verma N N. Biceps Tenodesis with Interference Screw Fixation: A Biomechanical Comparison of Screw Size and Technique
 • Poster Presentation – Orthopaedic Research Society (ORS), New Orleans 2010
- 32) Frank R M, Nho S J, Romeo AA, *Van Thiel GS*, Wang F C, Wang VM, Provencher MT, Mazzocca AD, Verma NN. A Biomechanical Analysis of Shoulder Stabilization: Anterior Bankart Repair using Suture Anchors
 • Poster Presentation – Orthopaedic Research Society (ORS), New Orleans 2010
- 33) Frank R M, Nho S J, Romeo A A, *Van Thiel G S*, Wang F C, Wang V M, Provencher M T, Mazzocca AD, Verma N N. A Biomechanical Analysis of Shoulder Stabilization: Posterior-Inferior Glenohumeral Capsular Plication
 • Poster Presentation – Orthopaedic Research Society (ORS), New Orleans 2010
- 34) Provencher MT, *Van Thiel GS*, Solomon DJ. Characterization of Anterior Shoulder Instability.
 • Featured Multimedia Presentation – AAOS Annual Meeting 2010 – New Orleans, LA
- 35) Nho SJ, *Van Thiel GS*, Frank RM, Wang F, Wang V, Provencher MT, Mazzocca A, Verma N, Romeo AA. Biomechanical Analysis of Posterior-Inferior Glenohumeral Capsular Plication and Anterior Bankart Repairs with Suture Anchor.
 • Poster Presentation – Society of Military Orthopaedic Surgeons (SOMOS) 2009
- 36) *Van Thiel GS*, Frank RM, Gupta A, Ghodadra N, Bach BR, Cole BJ, Verma NN, Provencher MT. Proximal Tibial Osteotomy and Meniscal Transplantation: A Biomechanical Analysis
 • Podium Presentation - Society of Military Orthopaedic Surgeons (SOMOS) 2009
- 37) Ghodadra N, *Van Thiel GS*, Bach BR, Romeo AA, Provencher MT. Characterization of Glenoid and Distal Tibia Cartilage: Implications
 • Poster Presentation – Arthroscopy Association of North America (AANA) 2010 Annual Meeting
- 38) Nho SJ, *Van Thiel GS*, Frank RM, Wang F, Wang V, Provencher MT, Mazzocca A, Verma N, Romeo AA. A Biomechanical Analysis of Shoulder Stabilization: Posterior-Inferior Glenohumeral Capsular Plication.
 • Poster Presentation – Arthroscopy Association of North America (AANA) 2010 Annual Meeting
- 39) Ode GE, McArthur S, *Van Thiel GS*, Kercher J, Dishkin-Paset J, Shewman E, Wang VM, Cole BJ. Effects of Serial Sectioning and Repair of Radial Tears in the Lateral Meniscus.
 • Podium Presentation – Meniscal Transplantation Study Group Meeting 2010 – New Orleans, LA
- 40) *Van Thiel GS*, Frank RM, Gupta A, Ghodadra N, Bach BR, Cole BJ, Verma NN, Provencher MT. Biomechanical Evaluation of Meniscal Transplantation with a High Tibial Osteotomy.
 • Podium Presentation – Meniscal Transplantation Study Group Meeting 2010 – New Orleans, LA
- 41) Ode GE, McArthur S, *Van Thiel GS*, Kercher J, Dishkin-Paset J, Shewman E, Wang VM, Cole BJ. Effects of Serial Sectioning and Repair of Radial Tears in the Lateral Meniscus.
 • Podium Presentation – AOSSM Annual Meeting 2010 – Providence, RI
- 42) Ghodadra N, *Van Thiel GS*, Bach BR, Romeo AA, Provencher MT. Characterization of Glenoid and Distal Tibia Cartilage: Implications.
 • Special Emphasis Presentation – AOA Annual Meeting – San Diego, CA 2010

- 43) Kang RW, *Van Thiel GS*, Nho SJ. The Presence of an Increased Alpha Angle in Young Hip Arthroplasty Patients.
- Poster Presentation – International Society for Hip Arthroscopy – Cancun 2010
- 44) Yanke AB, *Van Thiel GS*, Provencher MT. Posterior Shoulder Instability.
- Featured Video Presentation – AAOS Annual Meeting – San Diego, CA 2011
- 45) Slabaugh M, Bell R, Frank RM, *Van Thiel GS*, Wang VM, Provencher MT, Romeo AA, Verma NN. Biceps Tenodesis with Interference Screw Fixation: A Comparison of Screw Size and Technique.
- Poster Presentation – AAOS Annual Meeting – San Diego, CA 2011
- 46) Ghodadra N, *Van Thiel GS*, Romeo AA, Provencher MT. Characterization of Glenoid and Distal Tibia Cartilage: Implications for Glenoid Reconstruction.
- Podium Presentation – AAOS Annual Meeting – San Diego, CA 2011
- 47) Biswas D, *Van Thiel GS*, Della Valle C, Berger RA. Medial Unicompartmental Knee Arthroplasty in Patients Younger Than 55.
- Podium Presentation – Mid-America Orthopaedic Association Annual Meeting – Tucson, AZ 2011
- 48) McArthur S, *Van Thiel GS*, Ode G, Wang VM, Cole BJ. Effects of Serial Sectioning and Repair of Radial Tears in the Lateral Meniscus.
- Podium Presentation – Mid-America Orthopaedic Association Annual Meeting – Tucson, AZ 2011
- 49) Kang RW, *Van Thiel GS*, Nho SJ. Increased Alpha Angle in Young Hip Arthroplasty Patients.
- Podium Presentation – Mid-America Orthopaedic Association Annual Meeting – Tucson, AZ 2011
- 50) Verma NN, Frank RM, Nho SJ, Romeo AA, *Van Thiel GS*, Wang VM, Provencher MT, Mazzocca A. A Biomechanical Analysis of Shoulder Stabilization: Anterior Bankart Repair Using Suture Anchors.
- Poster Presentation – ISAKOS Annual Meeting – Rio de Janeiro, Brazil 2011
- 51) Verma NN, Frank RM, Nho SJ, Romeo AA, *Van Thiel GS*, Wang VM, Provencher MT, Mazzocca A. A Biomechanical Analysis of Posterior-Inferior Glenohumeral Capsular Plication.
- Poster Presentation – ISAKOS Annual Meeting – Rio de Janeiro, Brazil 2011
- 52) Bell R, Slabaugh M, Frank RM, *Van Thiel GS*, Wang VM, Provencher MT, Romeo AA, Verma NN. Biceps Tenodesis with Interference Screw Fixation: A Biomechanical Comparison of Screw Size and Technique.
- Poster Presentation – ISAKOS Annual Meeting – Rio de Janeiro, Brazil 2011
- 53) Dishkin-Paset J, Ode GE, McArthur S, *Van Thiel GS*, Kercher J, Shewman EF, Wang VM, Cole BJ. Effects of Serial Sectioning and Repair of Radial Tears in the Lateral Meniscus.
- Podium presentation; Orthopaedic Research Society 2011 Annual Meeting, Long Beach, CA, 2011
- 54) Ode GE, McArthur S, *Van Thiel GS*, Kercher J, Dishkin-Paset J, Shewman EF, Wang VM, Cole BJ. Effects of Serial Sectioning and Repair of Radial Tears in the Lateral Meniscus.
- Poster presentation; World Congress of the International Cartilage Repair Society, Spain, 2010
- 55) Biswas D, Van Thiel GV, Pack B, Della Valle C. Medial Unicompartmental Knee Arthroplasty in Patients Younger than 55 Years of Age: Results at Minimum of Two Years
- Poster presentation: AAOS San Francisco 2012
- 56) Lin E, Van Thiel GV, Romeo AA, Cole BJ, Verma NN, Nicholson GP. Clinical Outcomes of Reverse Total Shoulder Arthroplasty in Patients Under the Age of 60.
- Podium Presentation; AAOS San Francisco 2012.
- 57) Lenart BA, Van Thiel GS, Dhawan A, Freedman R, McGill K, Provencher MT, Cole BJ, Romeo AA, Verma NN. "MRI Evaluation of Normal Glenoid Height and Width: an Anatomic Study."

- Poster presentation at the European Society for Surgery of the Shoulder and the Elbow (SECEC/ESSSE) Annual Meeting, Lyon, France. September 14-17, 2011
- 58) Lin EC, Sershon RA, Van Thiel GS, Gupta D, McGill KC, Cole BJ, Verma NN, Romeo AA, Nicholson GP. "Clinical Outcomes of Reverse Total Shoulder Arthroplasty in Patients Under the Age of 60"
- Poster presentation at the European Society for Surgery of the Shoulder and the Elbow (SECEC/ESSSE) Annual Meeting, Lyon, France. September 14-17, 2011.

PUBLICATIONS/BOOK CHAPTERS

- 1) **Van Thiel GS**, Verma N, Yanke A, Basu, Farr J, Cole BJ. Meniscal Allograft Size Can be Predicted by Height, Weight and Gender. *Arthroscopy*; 2009 Jul;25(7):722-7.
- 2) **Van Thiel GS**, Piasecki D, Nicholson GP. Vertical Humeral Osteotomy for Revision of Well-Fixed Humeral Components. *American Journal of Orthopedics*; Feb. 2009, 2; 67-71.
- 3) **Van Thiel GS**, Baker C, Bush-Joseph C. A Chronic Posterolateral Knee and Patella Dislocation: Case Report. *J Orthop Trauma*. 2009 Aug;23(7):541-5.
- 4) Nho SJ, Reiff S, **Van Thiel GS**, Romeo AA. Arthroscopic Repair of L-Shaped Tear of the Anterior Band of the Inferior Glenohumeral Ligament Complex in a Pediatric Patient. Technical Note. *Knee Surg Sports Traumatol Arthrosc*. 2009 Dec;17(12):1454-7.
- 5) **Van Thiel GS**, Nho SJ; Provencher M; Romeo A. Subacromial Decompression. *Operative Techniques: Sports Medicine. Reider, Terry, Provencher*. 2010.
- 6) **Van Thiel GS**, Bach BR Jr. Chapter 16: Arthrometric evaluation of the failed ACL—normal ACL, injured ACL, reconstructed ACL and the failed ACL. *ACL Surgery: How to Get it Right the First Time and What to do When Your Surgery Fails*. Bach and Provencher. Elsevier. 2010.
- 7) **Van Thiel GS**, Wang FC, Wang V, Nho SJ, Piasecki D, Bach BR, Romeo AA. Biomechanical Similarities Among Subscapularis Repairs Following Shoulder Arthroplasty. *J Shoulder Elbow Surg*. 2010 Jul;19(5):657-63
- 8) Frank RM, **Van Thiel GS**, Slabaugh M, Romeo AA, Cole BJ, Verma NN. Clinical Outcome after Microfracture of the Glenohumeral Joint. *Am J Sports Med*. 2010 Apr;38(4):772-81.
- 9) **Van Thiel GS**, Sheehan S, Frank RM, Slabaugh M, Romeo AA, Nicholson GP, Cole BJ, Verma NN. Arthroscopic Management of Glenohumeral Degenerative Joint Disease. *Arthroscopy*. 2011 Feb;27(2):161-6.
- 10) **Van Thiel GS**, Frank RM, Gupta A, Ghodadra N, Bach BR, Cole BJ, Verma NN, Provencher MT. Biomechanical Evaluation of Meniscal Transplantation with a High Tibial Osteotomy. *Journal of Knee Surgery*. 2011 Mar; 24(1): 45-53.
- 11) Nho SJ, Frank RM, **Van Thiel GS**, Wang FC, Wang VM, Provencher MT, Mazzocca AD, Verma NN, Romeo AA. A biomechanical analysis of shoulder stabilization: posteroinferior glenohumeral capsular plication. *Am J Sports Med*. 2010 Jul;38(7):1413-9.
- 12) Nho SJ, Frank RM, **Van Thiel GS**, Wang FC, Wang VM, Provencher MT, Mazzocca AD, Verma NN, Romeo AA. A Biomechanical Analysis of Anterior Bankart Repair using Suture Anchors. *Am J Sports Med*. 2010 Jul;38(7):1405-12.
- 13) **Van Thiel GS**, Bach BR. Chapter 54: Knee Bracing for Athletic Injuries. *Insall & Scott Surgery of the Knee 5th ed*. 2010.
- 14) **Van Thiel GS**, Berend KR, Della Valle CJ, Gordon AC, Klein GR, Lombardi AV. Articulating Antibiotic Spacers in the Treatment of Total Knee Arthroplasty Infection. *Clin Orthop Relat Res*. 2011 Apr;469(4):994-1001.

- 15) Provencher MT, LeClere LE, **Van Thiel GS**, Solomon DJ. Chapter 12: Posterior Instability of the Shoulder. *ANA Advanced Arthroscopy of the Shoulder – Eyn.* 2010.
- 16) **Van Thiel GS**, Ghodadra N, Provencher MT. Chapter: Biceps Tendon Disorders Treatment and Rehabilitation. *Clinical Orthopaedic Rehabilitation, Third Edition – Brozman B and Manske RC.* 2010.
- 17) Ghodadra N, **Van Thiel GS**, Provencher MT. Chapter: Shoulder Instability Treatment and Rehabilitation. *Clinical Orthopaedic Rehabilitation, Third Edition – Brozman B and Manske RC.* 2010.
- 18) Slabaugh M A, Frank R M, **Van Thiel G S**, Provencher M T, Romeo A A, Wang V M, Verma N N. Biceps Tenodesis with Interference Screw Fixation: A Biomechanical Comparison of Screw Size and Technique. *Arthroscopy.* 2011 Feb;27(2):161-6.
- 19) **Van Thiel GS**, Ghodadra N, Romeo AA, Provencher MT. Chapter: Management of Chronic Shoulder Dislocations. *Shoulder Instability: A Comprehensive Review – Provencher and Romeo.* 2011.
- 20) Gross CE, **Van Thiel GS**, Verma NN. Chapter: Incidence, Epidemiology, and Etiology of Articular Cartilage Disease of the Glenohumeral Joint. *Management of the Active Patient with Glenohumeral Arthritis: An AAOS Monograph.* AAOS Monograph Series 49. Rosemont, IL: AAOS. 2013
- 21) **Van Thiel GS**, Halloran JP, Twigg S, Romeo AA, Nicholson GP. Vertical Humeral Osteotomy for Revision of Well-Fixed Humeral Components: Results and Surgical Technique. *J Shoulder Elbow Surg.* 2011 Dec;20(8):1248-54.
- 22) **Van Thiel GS**, Romeo AA, Provencher MT. Chapter: Arthroscopic Management of Antero-Inferior Instability. *Minerva Ortopedica e Traumatologica.* 2010.
- 23) Garbis N, **Van Thiel GS**, Ghodadra N, Romeo AA. Platelet Rich Plasma Use in the Shoulder. *Operative Techniques in Orthopaedics 2011.*
- 24) Yanke AB, **Van Thiel GS**, LeClere LE, Solomon DJ, Bach BR, Provencher MT. Diagnosis and Arthroscopic Management of Posterior Shoulder Instability. *AAOS Orthopaedic Knowledge Online.*
- 25) Provencher MT, **Van Thiel GS**, Solomon D. Characterization of Anterior Shoulder Instability. Standing Room Only: Annual Meeting Ed. Controversies in Shoulder Surgery. AAOS Publication 2011.
- 26) **Van Thiel GS**, Romeo AA. Video Chapter: Cuff Repair-Subscapularis. Video Atlas of Shoulder Surgery. Jaypee Brothers Medical Publishers LTD. 2011.
- 27) **Van Thiel GS**, Cole BJ. Cartilage Replacement. *Knee Reconstruction, Replacement, and Revision.* Editor: Javad Parvizi. 2012.
- 28) **Van Thiel GS**, Forsythe B, Bach BR. Revision Anterior Cruciate Ligament Reconstruction. *Cole & Seikya: Surgical Techniques of the Shoulder, Elbow, and Knee in Sports Medicine, 2nd edition.* Elsevier. 2012.
- 29) Ellman MB, Rosenthal MD, **Van Thiel GS**, Provencher MT. Chapter 3: Rehabilitation of Revision ACL Reconstruction. *Current Concepts in Evaluation, Examination, and Rehabilitation of the Knee.* Editor: Robert C. Mansake. SPTS 2011.
- 30) **Van Thiel GS**, Nicholson GP. Video Chapter: The Vertical Humeral Osteotomy. Video Atlas of Shoulder Surgery. Jaypee Brothers Medical Publishers LTD. 2011.
- 31) Bhatia S, **Van Thiel GS**, Wang VM, Shewman E, Gupta D, Bach BR, Provencher MT, Romeo AA, Verma NN. Comparison of Glenohumeral Contact Pressures and Contact Area after Glenoid Reconstruction with Latarjet or Distal Tibial Osteochondral Allograft. *Am J Sports Med.* 2013 Aug;41(8):1900-8

- 32) Bhatia S, Korth K, *Van Thiel GS*, Gupta D, Cole BJ, Verma NN, Bach BR. Anatomic Transtibial ACL Reconstruction: Effect of Tunnel Placement and Reamer Size. *Am J Sports Med.* 2013 Jun;41(6):1282-9.
- 33) Riff A, Yanke A, *Van Thiel GS*, Cole BJ. Double Row Rotator Cuff Repair. Chapter - Surgical Techniques of the Shoulder, Elbow, and Knee in Sports Medicine, 2nd Edition. Elsevier 2012.
- 34) Frank R, Chahal J, *Van Thiel GS*, Cole BJ. Management of Complex Knee Cartilage Problems. Chapter - Surgical Techniques of the Shoulder, Elbow, and Knee in Sports Medicine, 2nd Edition. Elsevier 2012.
- 35) *Van Thiel GS*, Cole BJ. Knotless Anchor Fixation. Chapter - Surgical Techniques of the Shoulder, Elbow, and Knee in Sports Medicine, 2nd Edition. Elsevier 2012.
- 36) Frank J, *Van Thiel GS*, Cole BJ. Osteochondritis Dissecans. Chapter - Surgical Techniques of the Shoulder, Elbow, and Knee in Sports Medicine, 2nd Edition. Elsevier 2012.
- 37) *Van Thiel GS*, Yanke AB, Forsythe B, Bach BR. Chapter: Revision Anterior Cruciate Ligament Reconstruction. Cole & Seikya: Surgical Techniques of the Shoulder, Elbow, and Knee in Sports Medicine, 2nd edition. Elsevier. 2012.
- 38) *Van Thiel GS*, Frank RF, Verma NN. Chapter: Arthroscopic Management of Glenohumeral Arthritis. Cole & Seikya: Surgical Techniques of the Shoulder, Elbow, and Knee in Sports Medicine, 2nd edition. Elsevier.
- 39) *Van Thiel GS*, Mall N, Cole BJ. Chapter: Cartilage Replacement. Knee Reconstruction, Replacement, and Revision. Editor: Javad Parvizi. 2012
- 40) Bhatia S, *Van Thiel GS*, Boychuk J, Bach BR. Chapter: Post-surgical Rehabilitation after soft tissue ACL reconstruction (autograft and allograft). *Orthopaedic Rehabilitation of the Athlete: Getting Back in the Game.* Elsevier. 2012
- 41) Hammond J, Mall N, *Van Thiel GS*, Romeo AA. Chapter: Scapulothoracic Fusion. Cole & Seikya: Surgical Techniques of the Shoulder, Elbow, and Knee in Sports Medicine, 2nd edition. Elsevier. 2012.
- 42) Ode G, *Van Thiel GS*, McArthur S, Dishkin J, Shewman E, Wang VM, Cole BJ. Effects of Serial Sectioning and Repair of Radial Tears in the Lateral Meniscus. *Am J Sports Med.* 2012 Aug;40(8):1863-70.
- 43) Chahal J, Mall N, *Van Thiel GS*, Romeo AA, Cole BJ. The role of subacromial decompression in patients undergoing arthroscopic repair of full-thickness tears of the rotator cuff: a systematic review and meta-analysis. *Arthroscopy.* 2012 May;28(5):720-7.
- 44) *Van Thiel GS*, Mall N, Chahal J, Heard W, Nho SJ. Injection Techniques for the Hip. *Operative Techniques in Sports Medicine*, 2012.
- 45) *Van Thiel GS*, Riff A, Cole BJ. Review – Management of Articular Cartilage Lesions in the Glenohumeral Joint. *Rush Orthopedics Journal*, 2012.
- 46) *Van Thiel GS*, Heard W, Romeo AA, Provencher MT. Acute and Chronic Shoulder Dislocations. *Orthopedic Knowledge Update – Shoulder 3*, AAOS, 2013.
- 47) Jordan M, *Van Thiel GS*, Chahal J, Nho SJ. Management of Articular Cartilage Lesions in the Hip. *Curr Rev Musculoskelet Med.* 2012 Sep;5(3):244-53.
- 48) Slikker W, Chahal J, *Van Thiel GS*, Nho SJ. Technique: Double Anchor Capsular Repair in Hip Arthroscopy. *Arthrosc Tech.* 2012 Nov 2;1(2):e213-7.

- 49) Van Thiel GS, Harris JD, Kang RW, Chahal J, Della Valle CJ, Bush-Joseph CA, Nho SJ. Age-related differences in radiographic parameters for femoroacetabular impingement in hip arthroplasty patients. *Arthroscopy*. 2013 Jul;29(7):1182-7.
- 50) Biswas D, Van Thiel GS, Wetters NG, Pack BJ, Berger RA, Della Valle CJ. Medial Unicompartmental Knee Arthroplasty in Patients Less Than 55 Years Old: Minimum of Two Years of Follow-Up. *J Arthroplasty*. 2013 May 31.
- 51) Mall NA, Lee AS, Chahal J, Van Thiel GS, Romeo AA, Verma NN, Cole BJ. Transosseous-equivalent rotator cuff repair: a systematic review on the biomechanical importance of tying the medial row. *Arthroscopy*. 2013 Feb;29(2):377-86.
- 52) Cvetanovich GL, Mall NA, Van Thiel GS, Chahal J, Bach B. Screw Fixation of an OCD Loose Body: 21-Year Results. *J Knee Surg*. 2012 May 15.
- 53) Gross CE, Chalmers PN, Chahal J, Van Thiel G, Bach BR Jr, Cole BJ, Romeo AA. Operative treatment of chondral defects in the glenohumeral joint. *Arthroscopy*. 2012 Dec;28(12):1889-901.
- 54) Chahal J, Van Thiel GS, Mall N, Heard W, Bach BR, Cole BJ, Nicholson GP, Verma NN, Whelan DB, Romeo AA. The role of platelet-rich plasma in arthroscopic rotator cuff repair: a systematic review with quantitative synthesis. *Arthroscopy*. 2012 Nov;28(11):1718-27.
- 55) Bhatia S, Korth K, Van Thiel GS, Frank RM, Gupta D, Cole BJ, Bach BR Jr, Verma NN. Effect of tibial tunnel diameter on femoral tunnel placement in transtibial single bundle ACL reconstruction. *Knee Surg Sports Traumatol Arthrosc*. 2014 Sep 19.
- 56) Lenart BA, Freedman R, Van Thiel GS, Dhawan A, McGill KC, Basu S, Meyer JR, Provencher CM, Cole BJ, Romeo AA, Verma NN. Magnetic resonance imaging evaluation of normal glenoid length and width: an anatomic study. *Arthroscopy*. 2014 Aug;30(8):915-20.
- 57) J Salata M, J Nho S, Chahal J, Van Thiel G, Ghodadra N, Dwyer T, A Romeo A. Arthroscopic anatomy of the subdeltoid space. *Orthop Rev (Pavia)*. 2013 Sep 9;5(3):e25.
- 58) Nho SJ, Freedman RL, Federer AE, Mather RC 3rd, Espinoza Orias AA, Wang VM, Van Thiel GS. Computed tomographic analysis of curved and straight guides for placement of suture anchors for acetabular labral refixation. *Arthroscopy*. 2013 Oct;29(10):1623-7.
- 59) Sex-Dependent Differences in Preoperative, Radiographic, and Intraoperative Characteristics of Patients Undergoing Hip Arthroscopy: Results From the Multicenter Arthroscopic Study of the Hip Group. Salvo JP, Nho SJ, Wolff AB, Christoforetti JJ, Van Thiel GS, Ellis TJ, Matsuda DK, Kivlan BR, Chaudhry ZS, Carreira DS. *Arthroscopy*. 2018 Mar;34(3):844-852.
- 60) Multicenter Outcomes After Hip Arthroscopy: Epidemiology (MASH Study Group). What Are We Seeing in the Office, and Who Are We Choosing to Treat? Kivlan BR, Nho SJ, Christoforetti JJ, Ellis TJ, Matsuda DK, Salvo JP Jr, Wolff AB, Van Thiel GS, Stubbs AJ, Carreira DS. *Am J Orthop (Belle Mead NJ)*. 2017 Jan/Feb;46(1):35-41.
- 61) Surgical Exposures of the Shoulder. Chalmers PN, Van Thiel GS, Trenhaile SW. *J Am Acad Orthop Surg*. 2016 Apr;24(4):250-8.
- 62) Is Skin Tenting Secondary to Displaced Clavicle Fracture More Than a Theoretical Risk? A Report of 2 Adolescent Cases. Chalmers PN, Van Thiel GS, Ferry ST. *Am J Orthop (Belle Mead NJ)*. 2015 Oct;44(10):E414-6.

- 63) Assessment of glenoid chondral healing: comparison of microfracture to autologous matrix-induced chondrogenesis in a novel rabbit shoulder model. Wang VM, Karas V, Lee AS, Yin Z, Van Thiel GS, Hussey K, Sumner DR, Chubinskaya S, Magin RL, Verma NN, Romeo AA, Cole BJ. *J Shoulder Elbow Surg.* 2015 Nov;24(11):1789-800.
- 64) The Patient Acceptable Symptomatic State for the Modified Harris Hip Score and Hip Outcome Score Among Patients Undergoing Surgical Treatment for Femoroacetabular Impingement. Chahal J, Van Thiel GS, Mather RC 3rd, Lee S, Song SH, Davis AM, Salata M, Nho SJ. *Am J Sports Med.* 2015 Aug;43(8):1844-9.
- 65) Effect of tibial tunnel diameter on femoral tunnel placement in transtibial single bundle ACL reconstruction. Bhatia S, Korth K, Van Thiel GS, Frank RM, Gupta D, Cole BJ, Bach BR Jr, Verma NN. *Knee Surg Sports Traumatol Arthrosc.* 2016 Jan;24(1):51-7.
- 66) Arthroscopic hip preservation surgery practice patterns: an international survey. Smith KM, Gerrie BJ, McCulloch PC, Lewis BD, Mather RC, Van Thiel G, Nho SJ, Harris JD. *J Hip Preserv Surg.* 2016 Dec 7;4(1):18-29.
- 67) The Impact of Depression on Patient Outcomes in Hip Arthroscopic Surgery. Martin RL, Christoforetti JJ, McGovern R, Kivlan BR, Wolff AB, Nho SJ, Salvo JP Jr, Ellis TJ, Van Thiel G, Matsuda D, Carreira DS. *Orthop J Sports Med.* 2018 Nov 15;6(11).
- 68) Minimal Clinically Important Difference and Substantial Clinical Benefit Values for the 12-Item International Hip Outcome Tool. Martin RL, Kivlan BR, Christoforetti JJ, Wolff AB, Nho S, Salvo JP Jr, Ellis TJ, Van Thiel G, Matsuda D, Carreira DS. *Arthroscopy.* 2019 Feb;35(2):411-416.
- 69) The Patient Acceptable Symptomatic State of the 12-Item International Hip Outcome Tool at 1-Year Follow-Up of Hip-Preservation Surgery. Kivlan BR, Martin RL, Christoforetti JJ, Wolff AB, Nho SJ, Salvo JP Jr, Ellis TJ, Van Thiel G, Matsuda D, Carreira DS. *Arthroscopy.* 2019 May;35(5):1457-1462.
- 70) Minimal Clinically Important Difference and Substantial Clinical Benefit Values for a Pain Visual Analog Scale After Hip Arthroscopy. Martin RL, Kivlan BR, Christoforetti JJ, Wolff AB, Nho SJ, Salvo JP Jr, Ellis TJ, Van Thiel G, Matsuda D, Carreira DS. *Arthroscopy.* 2019 Jul;35(7):2064-2069.
- 71) Unique Substantial Clinical Benefit Values for the 12-Item International Hip Outcome Tool (iHOT-12) Based on Preoperative Level of Function. Martin RL, Kivlan BR, Christoforetti JJ, Wolff AB, Nho SJ, Salvo JP Jr, Ellis TJ, Van Thiel G, Matsuda D, Carreira DS. *Arthroscopy.* 2020 Jan 6. pii: S0749-8063.

EXPERIENCE

Medical Director of Orthopedics – OSF St. Anthony Medical Center	2015 - 2018
Implemented and currently direct a co-management service line that encompasses all facets of orthopedic care.	
Multi-Center Arthroscopic Study of the Hip	2016 - Present
Team Physician – Blackhawks Medical Network – Rockford Ice Hogs	2012 - Present
Vice Chairman Outcomes Committee – The OrthoForum	2017 - Present
Team Physician – US National Soccer Teams	2013 - 2017

Assistant Team Physician Chicago Bulls	2011 – 2012
Assistant Team Physician Chicago White Sox	2011 - 2012
Editorial Reviewer -Journal of Clinical Orthopaedics and Related Research (CORR) <i>Reviewer</i>	2009-current
Editorial Reviewer – American Journal of Sports Medicine <i>Reviewer</i>	2012 - Present
Editorial Reviewer – Journal of Arthroscopy <i>Reviewer</i>	2009-current
Movasck <i>Early Stage Medical Device Company</i>	Los Angeles, CA 2004 – 2006
<ul style="list-style-type: none"> • Developed the VibraDIV and VibraShot (low tech medical devices). • Contracted with an engineering and finance professional. • Wrote business plan and sought initial financing for the venture. 	
UCLA Pathology - Biomarker Institute <i>Dr. Scott Binder</i>	Los Angeles, CA 2005 – 2006
<ul style="list-style-type: none"> • Assisted in the development of an infrastructure and “take to market” strategy for a novel prostate cancer biomarker. 	
Breast Mammography CAD Software <i>Consultant</i>	Los Angeles, CA 2005 – 2006
<ul style="list-style-type: none"> • Completed a market analysis and take-to-market strategy for an early stage medical technology company. 	

ADDITIONAL/VOLUNTEER

Haiti Relief <i>Participated in the Haiti Relief Program in 2010</i>	Port au Prince, Haiti 2010
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MEMBERSHIPS/ LICENSURES

- AAOS
- MENSA – Society
- AOSSM
- AANA
- ISAKOS

COURSE INSTRUCTOR AND SPEAKING ENGAGEMENTS

1. *****Many more presentations. list available upon request**
2. Presentation - AOSSM 2018 – Outcomes Impact Discussion
3. Presentation - AOSSM 2018 – Business of Medicine
4. Visiting Surgeon Program at OrthoIllinois 7/2018
5. Presentation – MACI and Cartilage Restoration 6/2019
6. Presentation – Sole source implant business webinar

7. Sports Rep Training 6/2018
8. Presentation – Business of Medicine – Chicago 5/2018
9. Presentation – Meniscal Repair 4/2018
10. Surgeon Training – Hip Arthroscopy surgeon training 4/2018
11. Cartilage Advisory Board 3/2018
12. Presentation – Outcomes collection
13. Presentation – National Sales Meeting – the business of medicine
14. Sports Rep Training 12/2017
15. Surgeon Training – AANA Hip course 9/2017
16. Presentation – Business of Medicine 9/2017
17. Presentation and Surgeon Training – Bone Marrow Edema treatment 8/2017
18. Presentation – Chicago Sports Meeting – Capsular release
19. Presentation – Chicago Sports Meeting – Abductor Repair
20. Presentation – Chicago Sports Meeting – Cartilage Restoration
21. Surgeon Training – AOSSM Fellow training 8/2017
22. Presentation – AOSSM 7/2017
23. Presentation – MACI and Cartilage 6/2017

ROLANDO IZQUIERDO, JR., M.D.**CURRICULUM VITAE**

ORTHOILLINOIS

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EDUCATION:

<i>Undergraduate:</i> Major: Biology B.A. Degree University of Illinois at Urbana-Champaign Urbana, IL	1989-1993
<i>Medical School:</i> M.D. Degree Loyola University Stritch School of Medicine Maywood, IL	1993-1997
<i>Residency:</i> Orthopaedic Surgery University of Cincinnati Hospitals Cincinnati, OH	1997-2002
<i>Fellowship:</i> Shoulder and Elbow Reconstruction and Sports Medicine Columbia University - Columbia Presbyterian Hospital New York, NY	August, 2002 – July, 2003

HOSPITAL STAFF AFFILIATIONS:

Centegra Hospital - McHenry McHenry, IL	August, 2003 – present
Algonquin Road Surgery Center Lake in the Hills, IL	August, 2003 – present
OSF-Saint Anthony Medical Center Rockford, IL	August 2013 – present
Advocate Sherman Hospital Elgin, IL	January 2016 – present
Swedish American Hospital Rockford, IL	March 2016 – present
Centegra Hospital - Huntley Huntley, IL	August, 2017 – present

CERTIFICATIONS:

- American Board of Orthopaedic Surgery July, 2005
- Subspecialty Certification in Orthopaedic Sports Medicine November, 2008

ADMINISTRATIVE POSITIONS:

- Chief of Surgery, Centegra Woodstock Hospital January, 2009 – 2012
- Board of Directors, Algonquin Road Surgery Center 2006 – present
- President of the Board, Algonquin Road Surgery Center January, 2009 – present

SOCIETIES:

- American Academy of Orthopaedic Surgeons
- Arthroscopy Association of North America
- Columbia Shoulder and Elbow Society
- American Shoulder and Elbow Society – Active Member

AAOS/ASES COMMITTEES:

- Chairman – AAOS Guideline and Evidence-Based Medicine Work Group
The Treatment of Glenohumeral Joint Osteoarthritis 2009-2010
- ASES Research Committee 2015 - present

PUBLISHED ARTICLES/BOOK CHAPTERS:

- “Comparison of Tendon Bone Interface Motion for Suture Anchor and Transosseous Suture Rotator Cuff Repair Techniques.” *Am J Sports Med.* 2005 Nov; 33(11): 1667-71
Ahmad CS, Stewart AM, Izquierdo R, Bigliani LU
- “A Survey of Sports Medicine Specialists Investigating the Preferred Management of Contaminated Anterior Cruciate Ligament Grafts.” *Arthroscopy* 2005, 21:1348-53
Izquierdo R, Marshall K, Voloshin I, Blaine TA, Levine WN, and Bigliani LU
- “Arthroscopic Acromioplasty: History, Rationale, and Technique.”
Instructional Course Lecture 2004; 53:13-20 Review
Izquierdo R, Stanwood WG, Bigliani LU
- “Conversion of Painful Hemiarthroplasty to Total Shoulder Arthroplasty: Long-Term Results.”
J Shoulder Elbow Surg. 2004 Nov-Dec; 13(6): 599-603
Carroll RM, Izquierdo R, Vazquez M, Blaine TA, Levine WN, Bigliani LU.
- “American Academy of Orthopaedic Surgeons Clinical Practice Guideline on the Treatment of Glenohumeral Joint Osteoarthritis.” *J Bone Joint Surg Am*, Jan 2011; 93(2):203-5
Izquierdo R, Voloshin I, Turkelson CM
- “Treatment of Glenohumeral Osteoarthritis.”
J Am Acad Orthop Surg, 2010 Jun; 18(6):375-82
Izquierdo R, Voloshin I, Turkelson CM
- “Postoperative Day One Discharge Following Elective Shoulder Arthroplasty.” *J Shoulder Elbow Arthroplasty.* 2017 Volume 1:1-6
Onsen L, Rivers M, Cheski R, Izquierdo R

"Disorders of the Rotator Cuff and Biceps Tendon." Editors Provencher, Romeo and Cole. Chapter: The Failed Cuff Repair: What To Do Next? Set for Publication Elsevier 2018
Izquierdo R, Rivers M, Van Thiel G

PRESENTATIONS:

"Total Shoulder Arthroplasty Offers Long-Term Solution for Osteoarthritis Sufferers"
71st Annual Meeting of the American Academy of Orthopaedic Surgeons,
San Francisco, CA March 10-14, 2004
Izquierdo R, Marshall K, Voloshin I, Blaine TA, Levine WN, and Bigliani LU.

"Results of Anterior-Inferior Capsular Shift in Females."
9th International Congress of Shoulder Surgeons, Washington DC, May, 2004
Izquierdo R, Stanwood W., Blaine TA, Levine WN, Bigliani LU

Columbia Shoulder Society 2007 Biennial Meeting – Ojai, California
"Sports Related Injuries and Management" June, 2007

AAOS/ASES Orthopedic Learning Center - Course Instructor and Presenter July, 2007
"Shoulder Reconstruction – Arthroscopic and Open Procedures"

"Pop Goes the Shoulder" – FOCUS conference for Centegra Health System February, 2008

AAOS/ASES Orthopedic Learning Center - Course Instructor and Presenter July, 2008
"Arthroscopic Management of Rotator Cuff Disease and Instability"

AAOS/ASES Orthopedic Learning Center - Course Instructor and Presenter January, 2009
"Shoulder and Elbow Surgical Techniques & Management"

Centegra Lecture Series: Common Shoulder Problems May, 2009

Centegra Lecture Series: Shoulder & Elbow Problems June, 2009

Columbia Shoulder Society 2009 Biennial Meeting - Bermuda
"Biceps: Arthroscopic vs. Open Tenodesis" June, 2009

"OR Live" Moderator - Arthroscopic Rotator Cuff Repair December, 2009

AAOS/ASES Orthopedic Learning Center - Course Instructor and Presenter July, 2010
"Arthroscopic Management of Rotator Cuff Disease and Instability"

Columbia Shoulder Society 2011 Biennial Meeting – Deer Valley, Utah
"TM Glenoid Experience" June, 2011

AANA Masters Experience Shoulder Arthroscopy Course #913 – Course Instructor October, 2011

GLATA - Wheeling, IL
"Shoulder Instability: Traumatic & Non-Traumatic Shoulder Instability
Of the Shoulder" March, 2013

Columbia Shoulder Society 2013 Biennial Meeting – Palm Beach, Florida
"My Trabecular Metal Glenoid Experience (Who and When and How do They Do)" June, 2013

Contemporary Challenges in Shoulder Surgery – Annual Scientific Meeting - Milan, Italy
“rTSA: Are we extending the indications too much?” July, 2014

3rd International SMR Advanced Techniques in Shoulder Arthroplasty – Las Vegas, NV
“Glenoid exposure techniques, soft tissue reconstruction” August, 2014

AAOS/ASES Orthopedic Learning Center - Course Instructor “Open and Arthroscopic
Techniques in Shoulder Surgery” May, 2015

AAOS/ASES Orthopedic Learning Center – Course Instructor “Reverse Total Shoulder and Latarjet
Procedures” January, 2016

AAOS/ASES Orthopedic Learning Center – Course Instructor and Presenter “Anatomic and Reverse
Total Shoulder Arthroplasty: State-of-the-Art” November, 2016

DISCLOSURES

Lima
Catalyst

MANUSCRIPT REVIEWER

Journal of Shoulder and Elbow 2013-Present

Kevin R. Carlile, M.D.

324 Roxbury Rd, ROCKFORD, IL 61107
815-398-9491

EMPLOYMENT

Date(s)

OrthoIllinois, 324 Roxbury Road, Rockford, IL 61107 *September 2016 – present*
 Current Hospital Affiliations:
 OSF St. Anthony's Medical Center, Rockford, IL
 Swedish American Hospital of UW Health, Rockford, IL
 Rockford Memorial Hospital of Mercy Health, Rockford, IL
 Advocate Sherman Hospital, Advocate Health Care, Elgin, IL

EDUCATION & TRAINING

Date(s) Attended

Allegheny General Hospital, Drexel University College of Medicine, Pittsburgh, PA *Aug 1st, 2015 – July 31st, 2016*
 • Orthopaedic Trauma Fellowship – Dr. Daniel T. Altman, Fellowship Director

McGaw Medical Center Northwestern University Feinberg School of Medicine, Chicago, IL *June 2010 – June 2015*
 • Orthopaedic Surgery Residency – Dr. Terrance Peabody, Chairman
 o Northwestern Memorial Hospital
 o Ann & Robert H. Lurie Children's Hospital of Chicago
 o John H. Stroger, Jr. Hospital of Cook County
 o Jesse Brown Veterans Affairs Medical Center
 • Surgical Internship – Dr. Nathaniel Soper, Chairman
 o Northwestern Memorial Hospital

The Ohio State University College of Medicine, Columbus, OH *August 2006 – June 2010*
 • Doctor of Medicine, Cum Laude, June 13th, 2010

The University of Michigan, Ann Arbor, MI *September 2002 – May 2006*
 • Bachelor of Science, With Distinction, April 29th, 2006
 • Major: Brain, Behavior & Cognitive Sciences. Minor: Philosophy

RESEARCH EXPERIENCE

The University of Michigan, Ann Arbor, Department of Internal Medicine-Molecular *May 2005 – May 2006*
 Medicine & Genetics PI: Yuan Zhu, Ph.D. Research laboratory focus – Tumors of the CNS & PNS
 • Undergraduate Research Technician/Laboratory Manager
 Duties included genotyping mouse colony, misc. basic science techniques, ordering lab supplies

The Ohio State University, Columbus, Department of Orthopaedics, Mentor/PI: David Flanigan, M.D.
 Sacral stress fractures in long-distance runners: a report of 4 cases and review of the literature.
 Unpublished report, June 2010.

Ann & Robert H. Lurie Children's Hospital of Chicago, Department of Orthopaedics
 Mentor/PI: Michelle Sagan, M.D. *Measuring Postural Stability in Children with Recent Upper
 Extremity Fracture Using the Balance Error Scoring System.*
 IRB approved, recruitment in progress.

Northwestern Memorial Hospital, McGaw Medical Center, Northwestern University FSM
 Mentor/PI: George Sisson, Jr, M.D. *Case Report: Bilateral Acute Exertional Compartment Syndrome
 of the Thigh in a Patient with McArdle's Disease.*
 Manuscript in process.

Northwestern Memorial Hospital, McGaw Medical Center, Northwestern University FSM

Mentor/PI: Michael D. Stover, M.D. *Improving Residents' Ability to Classify Acetabular Fractures: A Comparison of Educational Tools.*
 IRB approved, multi-center recruitment ongoing.

PROFESSIONAL EXPERIENCES / COURSES ATTENDED

Perioperative Care Attendant, Miami Valley Hospital, Dayton, OH *Summer 2002, 2003, & 2004*
 • Duties included cleaning and preparing operating rooms, errands for circulating RNs

Global Health Elective, Child Family Health International *July 2nd-27th, 2007*
 • HIV/AIDS program, 4 weeks duration, Durban, South Africa

13th Annual Chicago Trauma Symposium, Chicago, IL *August 4-7th, 2011*

OTA Comprehensive Fracture Course for Residents, San Antonio, TX *October 12-15th, 2011*

AO Basic Principles & Techniques of Operative Fracture Management, Dallas, TX *March 8-11th, 2012*

14th Annual Chicago Trauma Symposium, Chicago, IL *August 2nd-6th, 2012*

AO North America Hand and Wrist Fracture Management Workshop, Indianapolis, IN *December 15th, 2012*

Orthopaedic Resident & Fellow Surgical Anatomy and Dissection Course, Evanston, IL *April 5-6th, 2013*

15th Annual Chicago Trauma Symposium, Chicago, IL *August 1st-5th, 2013*

Advanced Concepts in Joint Arthroplasty for Senior Residents, Rosemont, IL *September 26-28th, 2013*

16th Annual Chicago Trauma Symposium, Chicago, IL *Sept 4-7th, 2013*

Health Volunteers Overseas Orthopaedics Traveling Fellowship Recipient *January 5th - February 4th, 2015*
 • Volunteer instructor, 4.5 weeks duration, Blantyre, Malawi

AO North America Advanced Principles of Fracture Management, New Orleans, LA *February 26th-March 1st, 2015*

AAOS Orthopaedic Board Preparation and Review Course, Chicago, IL *April 21st-24th, 2015*

OTA Annual Meeting, San Diego, CA *October 7th-10th, 2015*
 • International Orthopaedic Trauma Care Forum *October 7th, 2015*

AAOS/AAHKS Enhancing Surgical Skills: Revision Total Hip Arthroplasty for Fellows, Chicago, IL *Nov 21st, 2015*

DePuy Synthes Trauma Future Leaders Workshop – Strategies Internal Fixation, West Chester, PA *Dec 5th, 2015*

AOTrauma Fellows Cadaver Symposium, Las Vegas, NV *February 11-13th, 2016*

AOTrauma Solutions for Problem Fractures and Post-Traumatic Complications, Chicago, IL *April 13th-16th, 2016*

DePuy Synthes Trauma Future Leaders Workshop – Arthroplasty Applications, West Chester, PA *May 7th, 2016*

Health Volunteers Overseas Orthopaedic Global Health Project *August 1st – August 26th, 2016*
 • Volunteer instructor, 4 weeks duration, Kumasi, Ghana

AO North America Surgical Preservation of the Hip: Update 2017, Marco Island, FL *January 17th – 20th, 2017*

PRESENTATIONS

Northwestern Residency Program

Fracture Conference Series: Fractures of the Adult Forearm *September 20th, 2011*

Chairman's Conference Lecture Series: Charcot Arthropathy of the Foot & Ankle *January 8th, 2012*

Basic Science Conference Series: Orthopaedic Infections *March 21st, 2012*

Resident Case Presentation Series: Case of LE deformity correction with limb lengthening *April 27th, 2012*

Fracture Conference Series: Pediatric Hip and Pelvis Fractures *November 16th, 2012*

Fracture Conference Series: Pediatric Forearm and Wrist Fractures	<i>February 14th, 2013</i>
Fracture Conference Series: Fractures of the Acetabulum	<i>April 23rd, 2013</i>
Basic Science Conference Series: Kinesiology - Upper Extremities	<i>May 22nd, 2013</i>
Basic Science Conference Series: Kinesiology - Lower Extremities	<i>May 29th, 2013</i>
Chairman's Conference Lecture Series: The Rheumatoid Cervical Spine	<i>September 17th, 2013</i>
Fracture Conference Series: AO Preoperative Planning Session for Fractures	<i>September 24th, 2013</i>
Fracture Conference Series: Nonunion	<i>January 7th, 2014</i>
Basic Science Conference Series: Bone Grafts and Bone Graft Substitutes	<i>February 5th, 2014</i>
Resident Case Presentation Series: Case of Lemierre Syndrome presenting with septic hip	<i>March 7th, 2014</i>
Fracture Conference Series: Fractures of the Acetabulum	<i>October 7th, 2014</i>
Chairman's Conference Lecture Series: Tibial Nonunion	<i>February 17th, 2015</i>
Fracture Conference Series: Clavicle, Scapula Fractures and Shoulder Girdle Injuries	<i>April 22nd, 2015</i>
NU Department of Orthopaedic Surgery Grand Rounds – Health Care Delivery in Malawi	<i>May 1st, 2015</i>
AGH Department of Orthopaedic Surgery Grand Rounds – Health Care Delivery in Malawi	<i>March 29th, 2016</i>

National / Regional Conferences

7 th Annual Nuts & Bolts of General Orthopaedics, Naples, FL – The Not So Simple Ankle Fracture	<i>Oct 2nd, 2015</i>
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SERVICE, LEADERSHIP and AWARDS

-
- Miami Valley Male Athlete of the Year, Scholarship Recipient *May 2002*
 - Western Ohio regional athletic and academic based scholarship award, singular recipient
 - The Alpha Delta Phi Literary Fraternity, Peninsular Chapter, P'06 *Jan 2003 – May 2006*
 - Chapter President *Jan 2004 – Dec 2004*
 - 172th Annual Leadership Conference and Convention Representative *August 4-7th, 2004*
 - Medical Students for Kids, Biweekly mentor for 5th grade student, Hubbard Elementary *Oct 2006 – May 2007*
 - Orthopaedic Surgery Interest Group, Co-Chairman, Ohio State University COM *June 2007 – May 2008*
 - Ultrasound Academy Participant & Model Pool Volunteer, Ohio State University COM *Aug 2007 – May 2008*
 - Semi-frequent commitment
 - Outstanding Student Academic Scholarship, Ohio State University COM *April 2008 & Sept 2009*
 - Chicago Public Schools Elementary & Middle School Football Games, Sideline Physician *Fall 2013*
 - Periodic commitment
 - Medical Student MSK Physical Examination Teaching Sessions, Northwestern University FSM *2012-2015*
 - Occasional commitment
 - Alumni Relations & Graduate Medical Education of Northwestern University FSM Teaching Award *May 2015*
 - Recognition of commitment to teaching of medical students and interns
 - Staff Assistant Volunteer, Orthopaedic Learning Center, Rosemont, IL

Course: AAOS/OTA Strategies and Tactics in Orthopaedic Extremity Trauma	<i>December 2nd-3rd, 2012</i>
Course: AAOS/OTA Fractures of the Pelvis and Acetabulum	<i>November 1st-2nd, 2013</i>
Course: AAOS/OTA Strategies and Tactics in Orthopaedic Extremity Trauma	<i>December 7th, 2013</i>
Course: AAOS/ASES 21 st Century Elbow Reconstruction: Update on Concepts	<i>November 14-15th, 2014</i>
Course: AAOS/OTA Strategies and Tactics in Orthopaedic Extremity Trauma	<i>December 6th, 2014</i>
Course: AAOS/AAKHS Total Hip Arthroplasty: From Primary to Revision	<i>June 26th, 2015</i>

Course: AAOS/AAKHS/AOSSM/POSNA Adolescent and Young Adult Hip Preservation

July 24th, 2015

BOARD CERTIFICATION & EXAMINATION

USMLE Step 1, May 2008, score 251

USMLE Step 2 CK, November 2009, score 260

USMLE Step 2 CS, December 2009, Pass

USMLE Step 3, March 2011, score 238

AAOS Orthopaedic In-Training Examination, November 2011, percentile rank 82 among same post-graduate year

AAOS Orthopaedic In-Training Examination, November 2012, percentile rank 88 among same post-graduate year

AAOS Orthopaedic In-Training Examination, November 2013, percentile rank 94 among same post-graduate year

AAOS Orthopaedic In-Training Examination, November 2014, percentile rank 99 among same post-graduate year

American Board of Orthopaedic Surgery Part I Certifying Examination completed July 9th, 2015 – Board Eligible

MEMBERSHIPS

• American Academy of Orthopaedic Surgeons – Resident Member

June 2010 – present

• AO Trauma

2015 – present

• OTA Candidate Member

2016 – present

• Health Volunteers Overseas

2014 – present

INTERESTS

Family, friends, fitness, music, travel, golf, skiing, international service

Frank C. Bohnenkamp MD

750 EAST TERRA COTTA AVENUE, CRYSTAL LAKE, IL 60014
PHONE (815) 398-9491

Professional Experience

Orthoillinois: Partner Physician. Orthopedic Surgeon-Subspecialty: Adult hip and knee reconstruction.

Crystal Lake and Huntley , IL
August 2014 - Present

Education

Washington University Joint Preserving, Resurfacing, and Replacement Fellowship

St. Louis, MO
August 2013-July 2014

ABOS Board Certified

ABOS Part 1 passed 7/11/2013
ABOS Part 2 passed 7/26/2016

Medical Licensure

Illinois: #036135407
Missouri: #2013002761

University of Illinois at Chicago Orthopaedic Surgery Residency Program Chicago, IL
Including Internship in General Surgery June 2008-June 2013

University of Illinois at Chicago College of Medicine Chicago, IL
Doctor of Medicine (MD)-with Honors August 2004-May 2008

Department of Physiologic Imaging-University of Iowa Hospitals and Clinics Iowa City, IA
Research Assistant I-post graduate experience Biomedical Engineering August 2003- May 2004

University of Iowa College of Engineering Iowa City, IA
Bachelor in Science-Biomedical Engineering August 1999-August 2003
Graduated with Distinction

Honors and Awards

University of Illinois College of Medicine at Chicago, Department of Orthopaedics-Recipient June 22, 2013
Asok K. Ray MD Academic Achievement Award for superior knowledge of Orthopaedic Surgery

Mid-America Orthopaedic Association
Senior Resident Education Grant Award- Recipient 2013

University of Illinois-Chicago College of Medicine
Association of Pathology Chairs Honor Society - Inducted 2006
Arnold Zimmerman Award for highest achievement in Gross Anatomy and Embryology - 2004 - 2005
Alpha Omega Alpha Honor Medical Society - Inducted 2007

University of Iowa-College of Engineering
Graduation with Distinction (top 10% of class) in the College of Engineering - 2003
Tau Beta Pi National Engineering Honor Society, inducted 2002
Phi Eta Sigma Honor Society 2000

Research Interests and Academic Work• **Publications:**

- Jeffrey B. Stambough, Denis Nam, Jacob A. Haynes, Adam A. Sassoon, **Frank C. Bohnenkamp**, Robert L. Barrack, Ryan M. Nunley. Revision Total Hip Arthroplasty in the Setting of a Well-Fixed Cup: Early Report on the Cup-in-Cup Technique. *Journal of Hip Surgery* 2017; 01(03): 158-166.
 - Stambough J., Pashos G., **Bohnenkamp F.**, et.al. Long-term results of total hip arthroplasty with 28-millimeter cobalt-chromium femoral heads on highly cross-linked polyethylene in patients 50 years or less. *The Journal of Arthroplasty*. Vol 31, Number 1, January 2016.
 - Savin D., Lee S., **Bohnenkamp F.**, Pastor A, Goldberg B. Technical errors may affect accuracy of torque limiter use with locking plate osteosynthesis. *The American Journal of Orthopedics*. AMJORTHOP-D-14-00261R1. In Publication.
 - Shah R., **Bohnenkamp F.**, Radiographic Evaluation of The Hip. Chapter 110. *Comprehensive Orthopaedic Review 2nd Ed.* AAOS. Publication in 8/2014.
 - Metz, M., **Bohnenkamp F.**, Sulo, S., Gordon, A., Goldstein, W. Perioperative Differences in Conventional and Computer-Assisted Surgery in Bilateral Total Knee Arthroplasty *The American Journal of Orthopedics*. Accepted for publication 2/20/2014-The American Journal of Orthopedics. AMJORTHOP-D-14-00011R2.
 - Watson, J., **Bohnenkamp F.**, Moretti V. Variability in locations of hip neurovascular structures and their proximity to hip arthroscopic portals. Accepted for publication 12/17/2013-The Journal of Arthroscopic and Related Surgery.
 - **Bohnenkamp F.**, Shah R. Biomaterials and Biomechanics of Total Hip Arthroplasty. *Pocket Orthopaedics*. Lippincotts. Submitted 7/2012 for print.
- **CME accredited Grand Rounds presentations, Chicago IL:**
- February 27, 2010: Subtalar Dislocations: epidemiology, management and outcomes-Foot and ankle, Trauma
 - March 27, 2010: Tibial Plafond Fractures: epidemiology, management and outcomes-Trauma
 - May 1, 2010: Distal Radioulnar joint Arthroplasty: case series and management and clinical outcomes-Hand Surgery
 - November 6, 2010: Hip dysplasia, Pelvic Osteotomies: management of primary and revision surgeries-Pediatric Orthopaedics
 - April 2, 2011: Extensor Tendon Reconstruction after failed Total Knee Arthroplasty-Adult Reconstruction.
 - June 25, 2011: Adult Elbow Trauma-Adult Trauma.
 - October 22, 2011: Treating the Mangled Foot- Adult Trauma.
 - December 10, 2011: Recurrent Total Hip Dislocation-Hip Reconstruction.
 - April 21, 2012: Charcot Marie Tooth Disease-Foot and Ankle Surgery.
 - December 15, 2012: Insertional Achilles Tendinopathy-Rehab medicine.

Attended and Completed Specialty Courses:

- Faculty Instructor for Fundamentals of Hip and Knee Arthroplasty for Orthopedic Residents by AAOS/AAHKS, Hip Society and Knee Society # 43 , April 2017
- Oxford Advanced Instructional Course and Certification, February 2016. San Francisco, CA.
- Birmingham Hip Resurfacing procedure, certified provider July 2014. St. Louis, MO.
- St. Louis Hip Skills Course: Hip Arthroscopy and Preservation Procedures, St Louis, MO.
- Oxford Unicondylar knee arthroplasty non-certifying course, St. Louis, MO.
- AO North America Basic Principles and Techniques of Operative Fracture Management Course for Residents, Covington, KY.
- AANA (Arthroscopic Association of North America): Fundamentals in Arthroscopy. Copernicus Initiative Project Participant. Orthopaedic Learning Center, Rosemont IL.
- University of Illinois At Chicago Department of Orthopaedics Upper Extremity Trauma Symposium-

AAOS Orthopaedic Learning Center, Rosemont IL

- NASS (North American Spine Society) Spine Symposium-NASS headquarters, Burr Ridge, IL
- University of Illinois At Chicago Department of Orthopaedics Adult Reconstruction course-AAOS Orthopaedic Learning Center, Rosemont IL
- DePuy Orthopaedics: Introduction to Total Knee & Total Hip Arthroplasty-Hotel Intercontinental Rosemont, IL.
- Rush University Department of Orthopaedics Lower Extremity Trauma Course, Chicago, IL.
- 13th Annual Chicago Trauma Symposium, Palmer House Hilton, Chicago, IL.
- Minimally Invasive Percutaneous Osteosynthesis, Styker Course, Phoenix, Az.
- 14th Annual Chicago Trauma Symposium, Palmer House Hilton, Chicago IL.
- University of Chicago Annual Pathology and Bone/Soft Tissue Tumor Course, Chicago, IL .
- Miller Orthopaedic Review Course 2013, Westminster, Co.

Regional Presentations

- Total Joint Revision. Case presentations. CDI CEU Seminar. Elgin, Illinois 11/1/2014.
- **Bohnenkamp F.**, Pashos G, Clohisy J. Midterm comparison of radiographic and clinical outcomes between different bearing surfaces in total hip arthroplasty in patients younger than 50. Washington University in St. Louis, St. Louis 7/24/2014.
- Extensor Mechanism Pathology in Total Knee Arthroplasty. Grand Rounds Presentation. Washington University in St. Louis. St. Louis 12/4/2013.
- Case presentation of total hip arthroplasty in the setting of an acute intertrochanteric hip fracture. Bi-annual St. Louis Orthopaedic Society. 10/02/2013.
- Variability in Neurovascular Anatomy and its Relationship to Hip Arthroscopy. Senior Thesis Presentation-University of Illinois at Chicago 6/23/2013.
- Charcot Marie Tooth Disease-Foot and Ankle. Presented at Shriner's Hospitals for Children, Oak Park Illinois - 7th Annual Millar Symposium Day 5/11/2012.

National Posters/Presentations

- Sassoon A., **Bohnenkamp F.**, Cass J., Sems S. Distal Femoral Replacement in the Treatment of Fractures: Low Complication Rates and Early Ambulation. Paper #390 AAOS annual meeting 2016. Orlando, Florida.
- Sassoon, A., **Bohnenkamp F.**, Baca G., Pashos G., Clohisy J. THA in Patients 21 and Younger Using Highly Cross Linked Polyethylene: Encouraging Mid-term Results. Paper #408 AAOS annual meeting 2016. Orlando, Florida.
- **Bohnenkamp F.**, Martell J., Pashos G., Clohisy J. Wear analysis and outcomes of total hip arthroplasty using three different bearing couples in young patients. Paper # 10 AAOS annual meeting 2015. Las Vegas, Nevada.
- **Bohnenkamp F.**, Keeney J., Stambough J., Martell J., Pashos G., Clohisy J. 10 year results of total hip arthroplasty with highly cross-linked polyethylene in patients 50 years and less. Paper #7 AAOS annual meeting 2015. Las Vegas, Nevada.
- Schwindel L., **Bohnenkamp F.**, Moretti V., Esposito D, Gouzeneni, P. Radiographic Evidence of Femoroacetabular Impingement Increases the Risk of Traumatic Dislocation of the Hip. AO North America annual meeting. February 5-7, 2015. Las Vegas, Nevada.
- Clohisy J.,Keeney J., Martell J., Pashos G., **Bohnenkamp F.** 10 year results of total hip arthroplasty with highly cross-linked polyethylene in patients 50 years and younger. AAHKS annual meeting. November 6-9, 2014. Dallas, Texas.
- Sassoon A., **Bohnenkamp F.**, Baca G., Pashos G., Clohisy J. Total hip arthroplasty in patients 21 and younger using highly crossed linked polyethylene: excellent survivorship at 5 years. AAHKS annual meeting. November 6-9, 2014. Dallas, Texas.
- Sassoon A., **Bohnenkamp F.**, Baca G., Pashos G., Clohisy J. Total hip arthroplasty in patients 21 and younger using highly crossed linked polyethylene: excellent survivorship at 5 years. Southern Orthopaedic

Association 31st Annual Meeting, July 16-19, 2014. Beaver Creek, Colorado.

- **Bohnenkamp F.**, Nunley R., et.al. New TKA designs: Did the patient's notice? Paper #10 presentation 4/24/2014. Mid-America Orthopaedic Association 32nd Annual Meeting, April 23-27, 2014. 71. San Antonio, Texas.
- **Bohnenkamp F.**, Sassoon A., Baca G., Pashos G. Clohisy J. Total hip arthroplasty in patients 21 and younger using highly crossed linked polyethylene: excellent survivorship at 5 years. POSNA April 30-May 3, 2014. Paper Presentation #38. Hollywood, California.
- Savin D., **Bohnenkamp F.**, Pastor A., Goldberg B. Accuracy and Precision of Torque Limiters with Locking Plate Osteosynthesis. #193-TR07 Podium Presentation AOA/COA meeting, Montreal June 2014.
- Moretti V., Wang O., **Bohnenkamp F.**, Schwindel L., Hutchinson M. Variability of Brachial Artery Position with Elbow Flexion and Forearm Rotation. 60th Annual Meeting of the ORS, March 15-18, 2014. #1915. New Orleans, Louisiana.
- Schwindel L., **Bohnenkamp F.**, Moretti V., Esposito D, Gouzineni, P. Radiographic Evidence of Femoroacetabular Impingement Increases the Risk of Traumatic Dislocation of the Hip. Mid-America Orthopaedic Association 32nd Annual Meeting, April 23-27, 2014. 71. San Antonio, Texas.
- Moretti V., Wang O., **Bohnenkamp F.**, Schwindel L., Hutchinson M. Variability of Brachial Artery Position with Elbow Flexion and Forearm Rotation. Mid-America Orthopaedic Association 32nd Annual Meeting, April 23-27, 2014. 42. San Antonio, Texas.
- Merz M., **Bohnenkamp F.**, Sadr K., Goldstein W., Gordon A. Complications in conventional versus computer-assisted navigation in sequential bilateral total knee arthroplasty. 13th Annual Meeting of the International Society for Computer Assisted Orthopaedic Surgery, Orlando, Florida.
- Merz M., **Bohnenkamp F.**, Sadr K., Gordon A. Complications in Conventional Versus Computer-Assisted Navigation in Sequential Bilateral Total Knee Arthroplasty. Mid-America Orthopaedic Association 31st Annual Meeting, April 17-21, 2013. 24-AB. Amelia Island, Florida.
- Merz M., **Bohnenkamp F.**, Goldstein J., Goldstein W. 6-Year Review of Efficacy of Preoperative Vena Cava Filters in Arthroplasty Patients at Risk for Pulmonary Embolism. Mid-America Orthopaedic Association 31st Annual Meeting, April 17-21, 2013. Podium Presentation. Amelia Island, Florida.
- Simons M., **Bohnenkamp F.**, Bronsnick D., Goldstein W. Radiographic Comparison of Limb Length Discrepancies in Single-Stagevs. Two-Stage Bilateral Total Hip Arthroplasty. Mid-America Orthopaedic Association 31st Annual Meeting, April 17-21, 2013. 42-A. Amelia Island, Florida.
- **Bohnenkamp F.**, Simons M., Goldstein W. Radiolucent Lines of the posterior femoral condyles in rotating versus fixed-bearing total knee arthroplasties. Mid-America Orthopaedic Association 31st Annual Meeting, April 17-21, 2013. 31-A. Amelia Island, Florida.
- Merz M., **Bohnenkamp F.**, Goldstein J., Goldstein W. 6-Year Review of Efficacy of Preoperative Vena Cava Filters in Arthroplasty Patients at Risk for Pulmonary Embolism. Poster AAOS 2013.
- **Bohnenkamp F.**, Siemionow K, Amouiche F. "The Effects of Progressive Adjacent Level Intervertebral Disc Degeneration on Stress Distribution in the Fused Lumbar Spine, a Finite Element Analysis" Lumbar Spine Research Society's 4th Annual Meeting in Chicago, Illinois. May 5-6th, 2011.
- Kumar D, Cong W, **Bohnenkamp F.** "Development of Lung Tissue Phantoms for Bioluminescent Imaging" SPIE optics and Photonics Proc. Denver CO. August 4, 2004.

Activities/Affiliations (Current and Past)

- Vice Chairman Department of Orthopedic Surgery-Centegra Hospital System 2018
- Peer reviewer for Journal of Arthroplasty-2017 to present
- Centegra Health Systems Trauma Committee – member 2016
- American Association of Orthopaedic Surgery - member 2014
- American Association of Hip and Knee Surgeons-Member 2014
- The J. Albert Key Washington University Orthopaedic

Society-member 2014

- Mid-America Orthopaedic Association- Member 2013
- UIC Orthopaedic Alumni Association-Member 2014
- Arthroscopic Association of North America-resident member-2009

-Graduate Medical Education Internal review Board-Review Board Resident Member 2011

-Medical Student instructor in Musculoskeletal examinations and Orthopaedics Sub-specialty, co-author of instructional guide to orthopaedics for medical students 2010-2011

-Volunteer for UIC sporting events as participating team physician 2009-2013

-Fracture Conference, designed and initiated by 2013 class at UIC Orthopaedic residency

-Theta Tau professional engineering fraternity, alumnus 2003

Shawn W Palmer DO

thehipandkneecenter.com**PROFILE**

Fellowship trained reconstructive joint surgeon with 19 years of experience. I perform anterior approach hip replacement, outpatient and minimally invasive surgery, and all aspects of revision and limb salvage procedures.

EXPERIENCE**Ortho Illinois - Present**

A single-specialty private Orthopedic practice.

Midwest Bone and Joint Institute – 2005 - 2020

A single-specialty private Orthopedic practice.

University of Chicago Bone and Joint Replacement Center – 2003 - 2005

Academic single-specialty practice.

DeKalb Clinic Chartered – 2002-2003

A Multi-specialty group medical practice.

EDUCATION**University of Chicago – Fellow, 2002.**

A one year ACGME accredited Fellowship in Adult Reconstruction surgery.

Midwestern University - Chicago College of Osteopathic Medicine – 1997 - 2001.

A four year residency in Orthopedic Surgery

University Of Medicine and Dentistry of New Jersey – 1996 - 1997

A one year rotating internship in Medicine and Surgery

Midwestern University - Chicago College of Osteopathic Medicine – 1992 - 1996.

Completion of Doctor of Osteopathic Medicine

Pittsburg State University – 1988 - 1992

Completion of Bachelor of Arts

ORTHOILLINOIS
750 E. TERRA COTTA (ROUTE 176), CRYSTAL LAKE, IL, 60014
PHONE 815 455-0800

KELLY A. HOLTKAMP, M.D.

POSTGRADUATE TRAINING

2003-2004	Mayo Clinic	Rochester, MN
	<i>Hand Surgery Fellowship</i>	
1999 - 2003	Northwestern University Medical School	Chicago, IL
	<i>Orthopaedic Surgery Program</i>	
1998-1999	Northwestern University Medical School	Chicago, IL
	<i>Internship</i>	

EDUCATION

1994-1998	Northwestern University Medical School	Chicago, IL
	<i>Doctor of Medicine</i>	
1992-1993	University of Chicago	Chicago, IL
	<i>Foundation course work</i>	
1986-1990	Northern Illinois University	DeKalb, IL
	<i>Bachelor of Science degree in Physical Therapy</i>	
	Dean's List and Golden Key National Honor Society	

PROFESSIONAL ORGANIZATIONS

The American Board of Orthopaedic Surgery
Board Certified in Orthopaedic Surgery, 2007
Board Certified in Hand Surgery, 2009
Combined Hand Recertification, 2015

CURRICULUM VITAE

Jeffrey Anthony Kazaglis, M.D.
Associates in Orthopaedic Surgery, S.C.
1435 North Randall Road, Suite 103
Elgin, IL 60123
847-888-0750
www.bonedoctors.com

PROFESSIONAL EXPERIENCE

Orthopaedics & Sports Medicine: August 1, 2010 to present.

HOSPITAL AFFILIATIONS

Sherman Hospital, Elgin, IL
Provena St. Joseph Hospital, Elgin, IL
Centegra Hospital, Huntley, IL

MILITARY ASSIGNMENTS

2005-2010: Fort Riley, Irwin Army Community Hospital, Chief of Orthopaedic Surgery.
2005-2010: Fort Riley, Irwin Army Community Hospital, Medial Director, Phase II, P.A. Training Program.
2004-2005: Iraq, 555 Forward Surgical Team, Orthopaedic Surgeon.
2003-2004: Fort Riley, Irwin Army Community Hospital, Staff Orthopaedic Surgeon.
1999-2003: Fort Sam Houston, Brooke Army Medical Center, Orthopaedic Resident.
1997-1999: 67th Combat Support Hospital, Germany, General Medical Officer.
1996-1997: Walter Reed Army Medical Center, Transitional Intern.

EDUCATION

1999-2003: Brooke Army Medical Center, Orthopaedic Surgery Residency.
1996-1997: Walter Reed Army Medical Center, Transitional Internship.
1992-1996: University of Chicago, Pritzker School of Medicine--M.D.
1988-1992: United States Military Academy, West Point, N.Y.--B.S.

MEDICAL LICENSURE

Illinois State Licensed Physician and Surgeon: January, 2015.
Michigan State Medical License: March, 2015

BOARD CERTIFICATION

Certificate of Additional Qualification in Orthopaedic Sports Medicine: Jan 2016 -Dec 2025
American Board of Orthopaedic Surgery: Jan 2016 – Dec 2025

MEMBERSHIPS AND ASSOCIATIONS

Elgin Medical Seminar
American Legion
Veterans of Foreign War
Society of Military Orthopaedic Surgeons
AAOS Fellow

COMMITTEE WORK**Sherman Hospital**

Sherman Hospital Surgical Time-Out Champion
Assistant Chief, Department of Surgery

St. Joseph Hospital

St. Joseph Hospital Orthopaedic Co-Management Operations Committee
Former Chief, Department of Surgery

ABSTRACTS AND PRESENTATIONS

- 2017: "Fragility Fractures." Presence St. Joseph Hospital
2016: "Orthopedic Trauma." Advocate Trauma Symposium, Elgin Community College
2016: "New treatments for New Pain." Presence St. Joseph Hospital
2015: "Diagnosis and Treatment of Common Sports Injuries." Illinois School Nurses Conference
2015: "Evaluation of Upper Extremity Injuries." Advocate Health Sports Conference
2015: "Evaluation of the Painful Elbow: Northwest Suburban Hand Study Group
2014: "Common Sports Injuries" St. Joseph Hospital
2014: "Osteoporosis and Common Fractures" St. Joseph Hospital
2014: "Sports Injuries and Elbow Pain" Illinois State Trust Fund
2014: "Osteoporosis and Common Fractures" Del Webb
2013: "Osteoporosis and Common Fractures" Sherman West Court
2013: "Evaluation and Treatment of Knee Pain" VFW, Huntley IL
2013: "Evaluation and Treatment of Shoulder Pain" Grafton Township
2013: "Evaluation and Treatment of Shoulder Pain" St. Joseph Hospital
2012: "What Every Coach and Parent Needs to Know About Athletic Injuries."
2011: "Common Sports Injuries." Sherman Hospital.
2006: "War Injuries." Grand Rounds. Irwin Army Community Hospital.
2004: "Deltoid Ligament Injuries in Ankle Fractures." Poster Presentation American Academy of Orthopaedic Surgeons Meeting.
2003: "Deltoid Ligament Injuries in Ankle Fractures." Podium presentation, Texas Orthopaedic Society.
2002: "Deltoid Ligament Injuries in Ankle Fractures." Podium presentation Society of Military Orthopaedic Surgeons.
2000: "Common Tumors of Childhood." Grand Rounds, University of Texas, Health Science Center.
2000: "Slipped Capital Femoral Epiphysis." Orthopaedic Grand Rounds, Denver Children's Hospital.
1992: "The Effects of Endotoxemia on Gut and Tissue Perfusion." Poster Presentation, University of Chicago Medical School.

PUBLICATIONS

- "Systemic and Gut Oxygen Extraction during Endotoxemia."
American Journal of Critical Care. 151:107-116. Schumacker, PT, Kazaglis, JA, et al.
"Spinal Osteosarcoma in a 10-year old Female Presenting with Abdominal Pain."
Submitted to Journal of Pediatric Neurosurgery. Kazaglis, JA, Erickson, MJ, et al.

PROFESSIONAL TRAINING

- 2017: AAOS
2016: AAOS Rotator Cuff, From Repair To Shoulder Arthroplasty.
2015: Current Advances in Orthopedic Sports Medicine
2014: Current Advances in Orthopedic Sports Medicine
2013: AAOS/OTA: Orthopedic Trauma Update
2011: AAOS Shoulder Arthroscopy and Arthroplasty.

2010: Advanced Cardiac Life Support.
 2009: Nuts and Bolts of General Orthopaedics Symposium.
 2008: AAOS Elbow Arthroscopic/Reconstruction Course
 2008: Boston Trauma Symposium.
 2007: AAOS TKA Course.
 2007: AAOS Knee Cartilage Preservation Course.
 2006: AANA Hip Arthroscopy Course.
 2006: University of St. Louis Upper Extremity Fracture Course.
 2006: Basic Life Support.
 2006: AAOS Arthroscopic Shoulder Odyssey Course.
 2005: AAOS Wrist/Hand Reconstruction Course.
 2005: AAOS Comprehensive Shoulder Course.
 2005: Advanced Trauma Life Support.
 2003: AAOS Summer Institute.
 2003: Enneking Musculoskeletal Pathology Course.
 2000: AO Basic Course.

MILITARY TRAINING

2000: Dive Chamber Medicine Course.
 1996: Combat Casualty Care Course.
 1993: Medical Corps Basic Course.
 1992: Master Fitness Trainer.

HONORS AND AWARDS

2014: Staff Service Award: Sherman Hospital
 2012-2014: "Top Doctors," USA
 2010: Meritorious Service Ribbon
 2005-2009: P.A. Program Preceptor of the Year. (4 years in a Row)
 2005: Army Commendation Medal with Oak Leaf Cluster.
 2005: Overseas Service Ribbon.
 2003: Finalist, San Antonio Research Society Competition.
 2003: First Place, Texas Orthopaedic Society Quiz Bowl.
 1999: Army Commendation Medal.
 1998: Meritorious Service Ribbon.
 1997: United Nations Peacekeeping Medal.
 1993: Honors, Officer Basic Course.
 1992: National Qualifier in Crew.
 1992: Phi Kappa Phi Honor Society.
 1992: Soldier's Medal for Valor.

CONTINUING MEDICAL EDUCATION CREDITS

Advocate Health Care, Clinical Integration Overview 2019, March 22, 2019, 0.5 AMA PRA Category 1 Credits

American Academy of Orthopaedic Surgeons, 2019 Annual Meeting Las Vegas, Nevada, March 12-16, 2019, 33 AMA PRA Category 1 Credits

Advocate Health Care, Compliance Education 2019, February 18, 2019, 1.5 AMA PRA Category 1 Credits

Illinois State Medical Society, Fellowship: Process Improvement, September 4, 2018, 1 AMA PRA Category 1 Credit.

Illinois State Medical Society, Fellowship: Improving the Overall Patient Experience, September 4, 2018, 1 AMA PRA Category 1 Credit.

American Academy of Orthopaedic Surgeons, 2018 Annual Meeting New Orleans, LA; March 6 – 10; 25 AMA PRA Category 1 Credits.

Illinois State Medical Society, Patient Nonadherence: What's Really Going On?, September 29, 2017, 1 AMA PRA Category 1 Credit.

Illinois State Medical Society, Not the Blame Game, September 29, 2017, 1 AMA PRA Category 1 Credit.

Advocate Health Care, Medical Staff High Reliability Education: Part 1, May 30, 2017, 1 AMA PRA Category 1 Credit

Advocate Health Care, Compliance Education April 17, 2017, 1 AMA PRA Category 1 Credit.

Advocate Health Care, Clinical Integration Overview, March 24, 2017, 0.5 AMA PRA Category 1 Credit.

American Academy of Orthopaedic Surgeons, 2017 Annual Meeting, 25.5 AMA PRA Category 1 Credit.

Advocate Health Care, 2016 Clinical Integration Program Overview, March 10, 2016, .50 AMA Category 1 Credit.

Illinois State Medical Society, Difficult Conversations, March 10, 2016, 2 AMA Category 1 credits.

Illinois State Medical Society, Cognitive Biases March 10, 2016, 2 AMA Category 1 Credit.

University of Nevada School of Medicine, 11th Annual Sports, Trauma and Biologics Update 17.5 PRA Category 1 Credits, February 11 – 14, 2016.

ABMS, 60 AMA PRA Category 1 Credits, January 1, 2016

Advocate Intranet, "High Risk Medications for Seniors," 1.00 AMA PRA Category 1 Credit, December 19, 2015.

Advocate Intranet, "Compliance and Cultural Competence," 1.00 AMA PRA Category 1 Credit, December 19, 2015.

Keck School of Medicine of USC Orthopedics, "Unipolar Versus Bipolar Hemiarthroplasty for Displaced Femoral Neck Fractures in Elderly Patients," AMA PRA Category 1, 1 credit, November 1, 2015.

New York Medical College, 10th Annual Current Advances in Orthopaedic Sports Medicine and Trauma (CME #9048) March 5-9th, 2015. 13 AMA PRA Category 1 Credits

Keck School of Medicine of USC Orthopedics, The Hip-Spine Connection: Understanding Its Importance in the Treatment of Hip Pathology, 01/01/2015, 1 AMA PRA Category 1 Credit.

Advocate Health Care, Enduring Material, 2015 Clinical Integration Program Overview, Advocate Intranet on 02/09/2015, 0.75 AMA PRA Category 1 credit.

Illinois State Medical Society – “Weed, Work and Wreckage: Educating our Physicians on the Toxicology and Legality of Medicinal Marijuana”, Judson Tower, Elgin IL, November 19, 2014, 2 AMA PRA Category 1 Credits.

Advocate Health Care, Enduring Material - Clinical Integration Program Update 2014 at Advocate Internet on 10/30/2014, awarded 0.50 AMA PRA Category 1 Credit.

Advocate Health Care, Enduring Material – Compliance and Cultural Competence at Advocate Internet on 10/29/14, awarded 1.00 AMA PRA Category 1 Credit.

Keck School of Medicine of USC, Infection After ACL Reconstruction, July 1, 2014. 1 AMA PRA Category 1 Credit.

New York Medical College, 9th Annual Current Advances in Orthopaedic Sports Medicine and Trauma, Naples FL on February 20-23, 2014, 14.5 AMA PRA Category 1 Credits

AAOS Board Maintenance of Certification Preparation and Review #3356, Santa Monica CA. 27.5 Category I CME Credits towards the Physicians Recognition Award Program of the AMA claimed by the physician, December 5-7, 2013

Keck School of Medicine of USC Orthopedics – “Osteoid Osteoma” – 1 AMA PRA Category 1 credit, October 1, 2013

Vindico Medical Education LLC – Treatment of Osteoid Osteoma, CME 4 credits, August 1, 2013

Keck School of Medicine of USC Orthopedics, June 1, 2013, “Driving after Orthopedic Surgery”, 1 AMA PRA Category 1 Credit

Keck School of Medicine of USC Orthopedics, May 1, 2013, “Comparison of Cemented and Uncemented Fixation in TKA. 1 AMA PRA Category 1 Credit

13th Annual AAOS/OTA Ortho Trauma Update #3339, April 25-27 2013, LaJolla CA, 20.5 Category I CME credits towards Physician’s Recognition Award Program of the AMA

Medical Risk Management Inc – “Risk Management Essentials for Physicians: Documentation, Part I” 5.00 AMA PRA Category 1 credits, December 30, 2012

Illinois State Medical Society – “Risk Management Issues and the Obese Patient: 1.00 AMA PRA Category I Credit, December 29, 2012

Meditech Provider Education – Certificate of Completion for the enduring material. 2.0 AMA PRA Category 1 Credits, October 24, 2012

AAOS – Arthroscopic Surgical Techniques: Hip Arthroscopy, Category 1, 4 credits, October 11, 2012.

Orthopaedic Self-Assessment Examination 2011 (OSAE) Scored and Recorded AAOS, 20 credits October 2, 2012.

Orthopaedic Knowledge Update 10 Home Study Program AAOS, 50 credits, October 2, 2012.

- “Orthopedics – Hematogenous Pyogenic Spinal Infection”
Vindico Medical Education, 1 AMA PRA Category 1 Credit, October 1, 2012
- “Radial Nerve Palsy Associated with Acute Humeral Shaft Fractures”,
Vindico Medical Education, 1 AMA PRA Category 1 Credit, August 1, 2012
- AAOS/AAHKS Webinar “Total Knee Arthroplasty – Alignment and Balancing; The Keys to Success”
AAOS, 1 AMA PRA Category 1 credit, July 18, 2012
- “Orthopedics – Failed Hip Arthroscopy: Causes and Treatment Options
Vindico Medical Education, 1 AMA PRA Category 1 Credit, July 1, 2012
- Illinois State Medical Society for the Fellowship Fundamentals:
Communications AMA PRA Category 1, 2 credits, June 12, 2012
- “8th Biennial AAOS/ASES Shoulder and Elbow Current Techniques and Controversies #3249”
American Medical Association Physician’s Recognition Award Program,
Category 1, 20.25 credits May 3-May 5, 2012
- “Diagnostic Medical Imaging Radiation Exposure and Risk of Development of Solid and Hematologic
Malignancy”
Vindico Medical Education, 1 AMA PRA Category 1 Credit, May 1, 2012
- “Cam Morphology”, Orthopedics, Journal CME activity,
Vindico Medical Education, 1 AMA PRA Category 1 credit, April 1, 2012
- “Relationship Between Deep Vein Thrombosis and Pulmonary Embolism following THA and TKA”,
Vindico Medical Education, 1 AMA PRA Category 1 credit, March 1, 2012
- “Monteggia Fractures”, Orthopedics, Journal CME activity,
Vindico Medical Education, 1 AMA PRA Category 1 credit, February 1, 2012
- “Dupuytren’s Disease”, Orthopedics, Journal CME activity,
Vindico Medical Education, 1 AMA PRA Category 1 credit, January 1, 2012
- “Recurrent Anterior Shoulder Instability Associated With Bony Defects.”
Vindico Medical Education, AMA PRA, Category 1, 1 credit, July 1, 2011.
- “AAOS/ASES Shoulder Arthroplasty; Surgical Indications and Techniques”
AAOS/Rosemont IL , AMA PRA Category 1, 15.25 credits, November 12, 2010
- “Never Events and Related Quality Measures Following Total Hip and Total Knee Replacement.”
Vindico Medical Education, AMA PRA, Category 1, 1 credit, November 1, 2010.
- “Acute Achilles Tendon Ruptures.”
Vindico Medical Education, AMA PRA, Category 1, 1 credit, October 1, 2010.
- Arthroscopy Association of North America, 2010 OLC 804, Category 1, 17.5 credits, April 16, 2010.
- “Platelet Rich Plasma: A Review of the Science and Possible Clinical Applications.”
Vindico Medical Education, AMA PRA, Category 1, 1 credit, February 1, 2010.

"Quadriceps Tendon Injuries."

Vindico Medical Education, AMA PRA: Category 1, 1 credit, January 1, 2010.

"Midshaft Clavicle Fractures: Are Surgical Indications Changing?"

Vindico Medical Education, AMA PRA, Category 1, 1 credit, December 1, 2009.

"Contemporary Management of Symptomatic Bipartite Patella."

Vindico Medical Education, AMA PRA, Category 1, 1 credit, November 1, 2009.

"The Nuts and Bolts of General Orthopaedics."

Allegheny General Hospital, AMA PRA, Category 1, 12.75 credits, October 22-24, 2009.

"Meniscal Repair of the Knee."

Vindico Medical Education, AMA PRA, Category 1, 1 credit, March 1, 2009.

AAOS Annual Meeting, Las Vegas, NV: Category 1, 23 credits, February 25-28, 2009.

"Acute Acromioclavicular Injuries in Adults."

Vindico Medical Education, AMA PRA, Category 1, 1 credit, December, 2008.

"AAOS Elbow Reconstruction: Arthroscopy, Instability and Arthroplasty #3213."

American Academy of Orthopaedic Surgeons, Category 1, 17 credits, December 12-13, 2008.

9TH Annual Boston Orthopaedic Trauma Symposium, Category 1, 15.75 credits, September 12-13, 2008.

"Acute & Chronic Management Posterolateral Corner Injuries of the Knee."

Vindico Medical Education, AMA PRA, Category 1, 1 credit, May, 2008.

AAOS Annual Meeting, San Diego, CA: Category 1, 31 credits, February 14-18, 2007.

JOHN L. DANIELS, M.D.
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EDUCATION:*Undergraduate:*

Drake University, Iowa
B.A. Degree Major: Biology August, 1980 - June, 1984

Graduate Work:

Masters Work in Biology, Laboratory Instructor
Minor: Chemistry August, 1984 - June, 1985

Southern Illinois University
Springfield, IL August, 1985 - June, 1989

Michigan State University
Resident in Orthopaedic Surgery
Flint, MI June, 1989 – June 1994

Board Certification:

American Board of Orthopaedic Surgery
Passed July 12, 1996
Most Recently Passed April 10, 2015

PROFESSIONAL EXPERIENCE:

OrthoIllinois
Crystal Lake, IL September, 2013 - Present

Crystal Lake Orthopaedic Surgery and Sports Medicine, Ltd.
Crystal Lake, IL July, 1994 – September, 2013

HOSPITAL STAFF AFFILIATIONS:

Northwestern Medicine McHenry/Huntley/Woodstock
McHenry, IL 60050 July, 1994 to Present

Algonquin Road Surgery Center
Lake in the Hills, IL June, 2004 to Present

ACCOMPLISHMENTS:**Past:**

Fellow American Academy of Orthopaedic Surgery
Chief of Orthopaedics - Northern Illinois Medical Center
Chief of Surgery - Memorial Medical Center
Vice-President of Medical Staff - Memorial Medical Center
Secretary of Medical Staff - Memorial Medical Center

Present:

Clinical Instructor Rosalind Franklin University of Medicine
Director Total Joint Center- Northwestern Medicine
McHenry/Huntley/Woodstock
OrthoIllinois Executive Committee Member

CURRICULUM VITAE

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PROFESSIONAL EXPERIENCE

Orthopaedic & Sports Medicine: August 1, 1988 to present.

HOSPITAL AFFILIATIONS

Sherman Hospital, Elgin, IL, Assistant Chief of Surgery, 2000-2001, Chief of Surgery 2001-2002.
 Provena St. Joseph Hospital, Elgin, IL
 Algonquin Road Surgery Center, Lake in the Hills, IL

EDUCATION

1984-1988: Post Graduate, Residency, Orthopaedics, Rush-Presbyterian-St.Luke's, Jorge Galante, M.D.,
 Chief of Orthopaedics, Chicago, IL.
 1983-1984: Post Graduate Surgery Internship, Rush-Presbyterian-St. Luke's Medical Center.
 1979: B.A., University of Illinois, Urbana, IL, (Biology, Cum Laude).
 M.D., Pritzker School of Medicine, University of Chicago, Chicago, IL.

MEDICAL LICENSURE

Illinois State Licensed Physician and Surgeon.

BOARD CERTIFICATION

Board Certified, American Board of Orthopaedic Surgery, recertified 01/02/2012 valid through 12/31/2021.
 Board Certified, Orthopaedics, August, 1991, recertified, February, 1999.

MEMBERSHIPS AND ASSOCIATIONS

Elgin Medical Seminar
 American Medical Association
 Illinois State Medical Society
 Kane County Medical Society
 American Academy of Orthopaedic Surgeons
 American College of Sports Medicine
 Illinois Association of Orthopaedic Surgeons

HONORS AND AWARDS

1987: Chief Resident, Shriners' Hospital, Chicago, IL.
 1978-1980: Summer Research Fellowship, Northwestern University, Evanston Hospital (Biochemistry).
 1979: Phi Beta Kappa, Phi Kappa Phi.

COMMITTEE WORK

Sherman Hospital	
Infection Committee	1989-1990
Disaster Planning & Trauma Committee	1993-1997
Pharmacy & Therapeutics Committee	1993-1995, 1999-2000
Surgical MCE Subcommittee	1993-1999, Chairman 2000-2003, 2006-2007
Operating Room Committee	1997-1998, Chairman 2001-2003, 2006-2007
Medical Education Advisory Committee	1999-2003, 2006-2007
Specialized Care Committee	2000-2003
Surgical Steering Committee, Chair	2001-2002
Surgical Steering Subcommittee	2006-2007
St. Joseph Hospital	
Medical Staff Infection Committee	1994-1996
Infection Control Committee	1994-1996

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CONTINUING MEDICAL EDUCATION CREDITS

Illinois Medical Society, Patient Non-Adherence: What's Really Going On, September 19, 2019, 1 AMA PRA Category 1 Credit

MedRisk Management Inc, Risk Management Focus: Common Missed Diagnoses & Errors, February 24, 2017, 1 AMA PRA Category 1 Credit

Advocate Health Care, The Journey to High Reliability: Engaging our Medical Staff Part 1, February 23, 2017, 1 AMA PRA Category 1 Credit

Advocate Health Care, Compliance Education, February 22, 2017, 1 AMA PRA Category 1 Credit

Illinois State Medical Society, Handoffs, February 22, 2017, 2 AMA PRA Category 1 Credits

Advocate Health Care, Clinical Integration Overview 2017, January 25, 2017, 0.5 AMA PRA Category 1 Credits

Illinois State Medical Society, Cognitive Biases, March 23, 2016, 2 AMA Category 1 credits.

Illinois State Medical Society, Difficult Conversations, March 23, 2016, 2 AMA, Category 1 credits.

AAOS 2016 Annual Meeting, March 1, 2016, 37 AMA Category 1 credits

Illinois State Medical Society, Fellowship Fundamentals: Communications on November 28, 2015, 3 AMA PRA Category 1 Credits.

AAOS 2015 Annual Meeting March 25, 2015, 25 AMA Category 1 credits

AAOS, Specialty Day, March 28, 2015, 4.25 AMA Category 1 credits.

Advocate Health Care, Enduring Material 2015 Clinical Integration Program Overview, on 03/06/2015, 0.75 AMA PRA Category 1 Credit, Jih-Jing Yang PhD, Director, Advocate CME office

Advocate Health Care/Intranet, "Enduring material titled Clinical Integration Program Update 2014", Jih-Jing Yang, PhD, 10/31/2014, 0.50 AMA PRA Category 1 credit.

Illinois State Medical Society, June 30, 2014, participated in enduring material, Fellowship Fundamentals: Medicolegal Overview, 1 AMA PRA Category 1 Credit

Illinois State Medical Society, June 30, 2014, participated in enduring material, Fellowship Fundamentals: Systems, Awarded 1 AMA PRA Category 1 Credit.

Advocate Health Care – 2014 Clinical Integration Program Overview at Advocate Intranet on March 06, 2014. Awarded 0.75 AMA PRA Category 1 Credit

American Academy of Orthopaedic Surgeons, Attended 2013 Annual Meeting March 19-23 2013, Chicago IL for 29.5 AMA PRA Category 1 Credits

American Academy of Orthopaedic Surgeons 2012 Annual Meeting, AMA PRA, Category 1, 38.5 credits, February 7-11, 2012.

AMA Certificate of Attendance, 16th Annual Vail Orthopaedic Symposium State-of-the-Art Total Hip and Knee Replacement: Controversies and Solutions, 1/27/12 through 2/01/12, Category 1, 26 hours credit

“Contemporary Approaches Peer Review and Medical Staff Accountability.”
The Greely Company, division of HCPro, Inc., Category 1, 2.75 credits, October 8, 2011.

American Academy of Orthopaedic Surgeons, AMA PRA, New Orleans, LA, Category 1, 35.5 credits, March 9-13, 2010.

AAOS Board Certification Preparation & Review, November 18, 2010, 26 AMA Category 1 credits

2009 AAOS Annual Meeting, Las Vegas, NV: Category 1, 27 credits, February 25-28, 2009.

2008 AAOS OSAE Scored and Recorded: Category 1, 70 credits, December 11, 2009.

2008 AAOS Upper Extremity Examination, Self-Scored, Category 1, 15 credits, December 14, 2009.

2008 AAOS Musculoskeletal Tumors and Diseases, Examination Self-Scored, Category 1, 10 credits, December 15, 2009.

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CURRICULUM VITAE, Scott Warren Mox, M.D.

Certificate of Attendance 11/20-11/21/2008, Anterior Approach for Total Hip Arthroplasty Learning Center, Salt Lake City, UT, Drs. Bourne, Clark, Ferguson, Locker, Mariani, Matta

Surgical QA/QI Peer Review Case Review, Surgical MCE Subcte, Category 1, 1 credit, January 3, 2008.

2006 AAOS Annual Meeting, McCormick Place, Chicago, IL: Category 1, 31 credits, March 22-26, 2006.

“Transforming Orthopaedics: Advances in Technology & Techniques.”

Pfiedler Enterprises, ACCME Category 1, 21.5 credits, February 8-12, 2006.

Sherman Rehabilitation Network, Clinical Education, 11/29/1999, Laurie Hill PT, Michael Duchaj PT

Certificate of Completion, Kellogg Alumni Club of Chicago, New Directions in Management Series/Health Care Trends into the 21st Century, February 8, 1997, Dr. Joel Shalowitz

Certificate of Completion, Kellogg Alumni Club of Chicago, New Directions in Management Series/Political Influences in Health Care Policy, February 8, 1997, Professor Peter Budetti

Certificate of Completion – Sherman Hospital in conjunction with St. Joseph Hospital – Mandatory Credentialing for Conscious Sedation, CME Coordinator Kim Crish

**ATTACHMENT 11- CERTIFICATION AND AUTHORIZATION
LETTER****OrthoIllinois Surgery Center Elgin, LLC**

October 5, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Service Review Board
525 West Jefferson Street, 2nd Floor
Springfield, Illinois 62761

Re: Certification and Authorization

Dear Ms. Avery,

As representative of OrthoIllinois Surgery Center Elgin, LLC, I, Don Schreiner, give authorization to the Health Facilities and Services Review Board and the Illinois Department of Public Health (IDPH) to access documents necessary to verify the information submitted including, but not limited to: official records of IDPH or other state agencies, the licensing or certification records of other states, and the records of nationally recognized accreditation organizations.

I further verify that, OrthoIllinois Surgery Center Elgin, LLC has no ownership interest in a health care facility, and thus has had no adverse action in the past three (3) years.

I hereby certify this is true and based upon my personal knowledge under penalty of perjury and in accordance with 735 ILCS 5/1-109.

Sincerely,



Don Schreiner
CEO of the Managing Member
OrthoIllinois Surgery Center Elgin, LLC

ATTACHMENT 12- PURPOSE OF THE PROJECT

The purpose of this project is to provide increased access to care for the existing patient base served by Orthollinois as well as for the surrounding community. The planning area includes the market area within 10 mile radius of the proposed facility, encompassing several north Chicago suburbs. Orthollinois, being familiar with the market, has been determined that increased access to necessary pain management and orthopedic procedures is important to improve this patient population's quality of life. The vast majority of the expected patients are already being treated by Orthollinois physicians. As experts in their respective fields, the doctors also receive referrals from a wide range of physicians in the same community as the proposed site of the facility.

We are submitting referral letters from ten (10) Orthollinois physicians that reflect 4,945 historical referrals to healthcare facilities in the market area. These physicians anticipate sending 2,279 referrals to the proposed facility, and these patients reside within the proposed market area. The market area as defined by Illinois Admin. Code Section 1110.510(d), consists of portions of Cook, DuPage, Kane, and McHenry counties. As documented in this application the vast majority of patients to be referred to the facility reside in the market area.

There has been immense growth in the number of outpatient bone and joint procedures performed in ASTC's. For example, in a ten year period from 2005-2015, nearly 45% of all spine-related procedures were performed on an outpatient basis. The Centers for Medicare and Medicaid Services ("CMS") has continued to make changes that have fundamentally altered the reimbursement models available for outpatient spine procedures. Since 2015 there have been 10 new procedure codes added to the ASTC payable list by CMS. This is the clearest evidence yet that CMS is pushing to have these procedures performed in a lower-cost ASTC setting.

A study recently published in *Surgical Neurology International* showed that the cost associated with an outpatient single-level cervical disc arthroplasty were a stunning 84% less than the same inpatient procedure in a hospital surgical suite. Additionally, outpatient single level cervical anterior discectomy and fusion using allograft and plate proved to cost 62% less than the same procedure in an inpatient hospital surgical suite. Both the Medicare Payment Advisory Commission (MedPAC) and U.S. Government Accountability Office (GAO) have found ASC's to be cheaper for the patient and overall when compared to other health care.

Establishing an ASTC will provide patients with increased options for orthopedic, podiatric and pain management procedures. It also allows surgeons greater control over time spent in the operating room. These factors alone increase efficiency of an ASTC while maintaining quality, increasing access to care for patients, and providing services at a greatly reduced cost. Moreover, recent events have illustrated the importance of having meaningful access to surgical options outside of a traditional hospital setting so as to minimize infection control and potential exposure to the risks associated with a broader patient population.

Establishment of the ASTC is designed to allow Orthollinois patients the ability to receive quality care in a facility where they are familiar with the doctors and staff, on an outpatient basis. We know the CMS does not reimburse certain procedures unless they are performed in an ASTC or a hospital surgical suite setting. This reduces the available options for patients and puts them in the position of needing to see a different doctor or take their chances with obtaining an appointment in a hospital surgical suite.

The concern with scheduling an appointment in a hospital surgical suite is a very common one with procedures that are reimbursed at a lower rate. This makes hospital surgical suites ineffective at accommodating the majority of the procedures that can be performed at Orthollinois. As such Orthollinois physicians and their patients often have experience being bumped or rescheduled by a hospital. This results in inconvenience, lost wages and revenue, unnecessary and extended periods of chronic pain, and an overall reduction in quality of life.

Generally speaking, outpatient bone and joint care offers several other benefits that have not yet been mentioned. Procedures in the outpatient setting are preferred by patients who desire the ability to be treated quickly and given a plan of treatment that allows them to return to regular daily life. Outpatient orthopedic surgery also allows the significant improvement in anesthesia, and the ability to take advantage of improved technology at a lower cost than in the inpatient hospital surgical suite. The aforementioned benefits are consistent with the recent charges by CMS to improve patient access, increase efficiency, and certain costs.

We have included several articles to provide additional documentation about the current trends in spinal care that were previously mentioned. With our existing patient base and anticipated referrals we expect to meet the state's target utilization standards.

Finally, many of the pain management procedures offered at this facility are designed to lessen the dependence these patients have on opioid-based pain medication. Overreliance on opioid based pain medications can lead to addiction and exacerbate other medical conditions. Establishing this surgery center, focused on the pain management and orthopedic needs of the community solves the problem these conditions present and ensures there is available care for those in need.

ATTACHMENT 12

Original Research

Cost Comparison of Outpatient Versus Inpatient Unicompartmental Knee Arthroplasty

Dustin L. Richter,*† MD, and David R. Diduch,* MD

Investigation performed at the Department of Orthopaedic Surgery, University of Virginia, Charlottesville, Virginia, USA

Background: Outpatient unicompartmental knee arthroplasty (UKA) has been shown to be safe and feasible when compared with inpatient surgery; however, no studies have evaluated the cost-effectiveness and cost-benefit of performing outpatient versus inpatient UKA.

Hypothesis: Significant cost savings can be achieved by transitioning UKAs from an inpatient to an outpatient procedure in an outpatient surgical facility, with no appreciable difference in complication or readmission rates.

Study Design: Economic and decision analysis; Level of evidence, 3.

Methods: A retrospective chart review of 25 consecutive medial UKAs was performed. A total of 10 inpatient UKAs with a mean length of stay of 1.6 days (range, 1-4 days) and 12 outpatient UKAs were included in the final analysis. A simple difference in costs incurred, reimbursements, and percentage difference between inpatient and outpatient surgery in an outpatient surgical facility was calculated. Charges were subdivided into surgical facility fees, inpatient room charges, operating room supply fees, and other fees. Secondary outcome measures included reason for greater than 1 day stay for the inpatient UKAs, complications, readmissions, and the type of regional anesthesia utilized.

Results: The outpatient UKA charges were a mean \$20,500 less per patient than the inpatient average charge of \$46,845. The primary cost savings were attributed to the outpatient surgical facility fee, which averaged \$3800 per patient, while the inpatient facility charge was 350% more expensive at \$13,200 per patient (approximately \$9500 savings). On the inpatient side, the average reimbursement was 55% of charges, or \$25,550. For outpatient procedures, the average reimbursement was 47%, or \$12,370. There was no difference between the inpatient and outpatient groups in terms of complications or readmissions.

Conclusion: This work demonstrated that significant cost savings of roughly 50% can be achieved with an outpatient UKA protocol done at an outpatient surgical facility. Not only is it feasible and economically attractive to perform outpatient UKA, but it can reduce inpatient bed occupancy and resource allocation for a busy hospital.

Keywords: unicompartmental knee arthroplasty; outpatient unicompartmental knee arthroplasty; cost savings; cost reduction; reimbursement

Unicompartmental knee arthroplasty (UKA) has traditionally been considered an inpatient procedure. Physician and patient concerns regarding uncontrolled pain, perioperative complications, and decreased mobility have resulted

in at least a 1-night stay in the hospital. Unlike total knee arthroplasty (TKA), which involves extensive dissection and a typical 2- to 3-day inpatient stay, UKA can be done in a minimally invasive fashion with a smaller incision and substantially reduced pain since it involves only 1 part of the knee. Studies have shown increased patient satisfaction and improved outcomes with an accelerated recovery protocol and decreased length of hospital stay.^{4,11}

There are a few studies in the literature that have shown UKA performed as an outpatient surgery to be safe and feasible when compared with inpatient surgery, with no increased risk of complications or change in patient outcomes. Beard et al¹ published a pilot study involving 7 patients wherein all patients were discharged home within 24 hours from the time of surgery. No significant complications were noted in their series, but 1 patient failed to

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The authors declared that they have no conflicts of interest in the authorship and publication of this contribution.

Ethical approval for this study was waived by the University of Virginia (IRB-HSR # 18459).

The Orthopaedic Journal of Sports Medicine, 5(8), 2325967117694352
DOI: 10.1177/2325967117694352
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2 Richter and Diduch

The Orthopaedic Journal of Sports Medicine

progress with knee flexion and required a manipulation under anesthesia. They commented that convalescence at home removes the patient from the threat of hospital-acquired infection, permits a more functional rehabilitation, and the cost for the institution is reduced.³ Berger et al² prospectively followed 111 patients who had primary knee arthroplasty (25 UKA, 86 TKA) completed by noon. Ninety-four percent of patients (96% UKAs) met discharge criteria and were discharged directly to home the day of surgery. Within the first week after surgery, there were 4 readmissions and 1 emergency department visit without readmission—all in patients who underwent TKA. There were no deaths, cardiac events, or pulmonary complications.² Another case-controlled study compared outpatient UKA with the standard inpatient UKA.¹³ Eighty-five percent of patients in the outpatient UKA study arm were able to be discharged home on the day of surgery. Delayed discharge was present in 2 patients who suffered from a high pain intensity and 1 patient who was fearful of going home. One outpatient UKA patient developed stiffness requiring manipulation under anesthesia at 6 weeks postoperative.¹³ Cross and Berger⁷ published their results on 105 consecutive patients undergoing UKA. All 105 patients (100%) were able to be discharged home the same day utilizing a rapid recovery protocol. No patients required readmission within the first week after surgery, and only 1 patient required readmission between weeks 1 and 12 for management of postoperative infection.⁷

To our knowledge, no studies have been published evaluating the cost-effectiveness and cost-benefit of performing outpatient versus inpatient UKA. One study in the literature evaluated the efficacy of an accelerated recovery protocol after UKA with the goal of discharging patients home the day after surgery.²⁰ Their protocol achieved a cost savings of 27% and significantly reduced hospital bed occupancy. In addition, patient satisfaction was greater with the accelerated discharge than with the routine discharge time. Ambulatory surgery centers (ASCs) and outpatient surgery departments are focused on ensuring that patients have the best surgical experience possible while providing cost-effective care that can save the government, third-party payors, and patients money. For instance, Medicare pays significantly less for procedures performed in ASCs when compared with rates paid to hospitals for the same procedures. Accordingly, patient co-pays are also significantly lower when care is received in an ASC. However, the long-term growth of ASCs is threatened by the widening disparity in reimbursement that ASCs and hospitals receive for the same procedures.

Given the current focus on the cost of health care delivery, orthopaedic surgeons are encouraged to find methods of safely reducing the duration of inpatient stay after knee arthroplasty. With the opening of a new, more modern outpatient surgical center at our hospital, the principal investigator (D.R.D.) has been able to perform all UKA surgeries on an outpatient basis during the past year, unlike previous years when they were done as an inpatient surgery. The purpose of this study was to directly compare the costs and savings of performing outpatient UKA in an outpatient surgical facility versus inpatient UKA. We hypothesize that

outpatient UKA done in an outpatient surgical facility will demonstrate significant cost savings when compared with inpatient UKA and that outpatient UKA will be shown to be safe and effective with equivalent complication and readmission rates as inpatient UKA.

METHODS

Detailed patient account information and cost data are readily available at our institution for a 39-month period. Thus, between July 1, 2012, and September 30, 2015, a total of 25 patients underwent medial UKA surgery by the senior author (D.R.D.). The initial 12 consecutive patients were treated with inpatient surgery. Since the opening of the new outpatient surgical center, the next 13 consecutive patients were treated with outpatient surgery over a 10-month period.

A retrospective chart review of all 25 patients was performed. All patients had undergone medial UKA surgery and were at least 3 months out from surgery at the time of chart review. Cost data were also gathered from our accounting department. Two subjects who had inpatient surgery were excluded from the study. One patient did not have complete cost data available. The other subject was determined to not be representative of the inpatient cohort as the patient developed postoperative atrial fibrillation requiring an extended hospital stay and the resultant charges were nearly double that of the rest of the patients. The first subject who had outpatient surgery was also excluded as this individual had surgery at the main hospital and was charged the more expensive surgical facility fees associated with this setting as opposed to outpatient ambulatory surgical fees like the rest of our outpatient surgery cohort. After excluding the above patients, the final cohort consisted of 10 inpatient and 12 outpatient UKAs.

In all cases, patellar eversion, knee dislocation, and knee hyperflexion were avoided. A fixed-bearing unicompartmental system was utilized in all UKA cases (Unicompartmental High Flex Knee; Zimmer, now Smith & Nephew) (Figure 1). All patients received a regional nerve block in addition to general anesthesia as outlined below. Tourniquet was used for all patients. None of the outpatient UKA patients had a Foley catheter placed.

A simple difference in costs incurred, reimbursements, and percentage difference between inpatient and outpatient surgery was calculated. Furthermore, the charges were subdivided into surgical facility fees, inpatient room charges, operating room (OR) supply fees, pharmacy fees, therapy fees, and laboratory fees. The surgeon's professional fee was not included in the overall charges. Secondary outcome measures included the reason for a stay greater than 1 day for inpatient UKAs, complications, readmissions, and the type of regional anesthesia used for the outpatient UKA surgeries.

RESULTS

Our study included 10 inpatient and 12 outpatient UKA patients. The inpatient cohort consisted of 8 males and 2



Figure 1. Anteroposterior and lateral radiographs demonstrating medial compartment knee osteoarthritis (A and B) before and (C and D) after medial unicompartmental knee arthroplasty.

females, with a mean age of 64.5 ± 9.8 years. The outpatient cohort consisted of 7 males and 5 females, with a mean age of 67.2 ± 9.2 years. The outpatient cohort had a slightly higher mean body mass index (BMI) (28.7 vs 25.8 kg/m^2), and both groups had similar American Society of Anesthesiologists (ASA) classifications based on their medical comorbidities, with the majority of patients being classified as ASA 2. Similar surgical times, as measured by tourniquet time, were noted between the 2 groups. Degree of medial compartment deformity as measured by the Kellgren-Lawrence knee osteoarthritis scale and knee alignment as measured by deviation from mechanical axis were recorded (Table 1).^{5,10,14}

For the 10 inpatient UKAs (Table 2), the average charge to a patient's insurance carrier was \$46,845. On average, 55% of charges were reimbursed through insurance, for an average total reimbursement of \$25,551. The charge for OR supplies made up the largest percentage of overall charges at 52%. These include items such as gowns, drapes, saw blades, cement, and the actual charge for the UKA implant components. The charge for surgical facility fees made up the second largest percentage at 28%. This includes separate fees for OR time (per minute), recovery time, and anesthesia time. Another 6% of charges were accounted for by pharmacy, 4% were the actual cost of the hospital room, and 2% for inpatient physical and occupational therapy services.

For the 12 outpatient UKAs done in an outpatient surgical facility (Table 3), the average charge to a patient's

TABLE 1
Patient Characteristics and Surgical Factors^a

	Inpatient	Outpatient
Age at time of surgery, y, mean \pm SD	64.5 ± 9.8	67.2 ± 9.2
Sex, n (%)		
Males	8 (80)	7 (58)
Females	2 (20)	5 (42)
BMI, kg/m^2 , mean \pm SD	25.8 ± 8.1	28.7 ± 5.1
Length of stay, d, mean (range)	2 (1-4)	n/a
ASA classification, n (%)		
ASA 2	9 (90)	10 (83)
ASA 3	1 (10)	2 (17)
Tourniquet time, min, mean \pm SD	95.4 ± 12.7	93.9 ± 15.3
Deformity		
Location, compartment (%)	Medial (100)	Medial (100)
K-L scale, n (%)		
K-L 2	7 (70)	5 (42)
K-L 3	3 (30)	7 (58)
Knee alignment: deviation from mechanical axis, ^b deg, mean \pm SD	3.5 ± 2.0	2.6 ± 2.3

^aASA, American Society of Anesthesiologists; BMI, body mass index; K-L, Kellgren-Lawrence.

^bAs measured on standing, flexion radiographs. All degrees are varus angulation as all patients had medial compartment osteoarthritis. One patient in both the inpatient and outpatient cohorts was excluded due to poor imaging, with no standing flexion view available for review.

TABLE 2
Inpatient UKA Costs^a

Patient	Age, y	LOS, h	Total Charges, \$	Reimbursed, \$	OR Supplies, \$ ^b	Surgical Facility Fee, \$ ^c	Hospital Room, \$	Laboratory Charges, \$	Medications, \$	PT and OT, \$	Other, \$ ^d
1	64	58.9	40,749	27,587	20,856	12,990	3006	872	2435	590	0
2	55	39.2	42,530	28,288	22,106	11,566	1503	549	3575	254	2977
3	83	106.2	55,755	20,001	25,800	14,249	6012	711	4385	858	3740
4	73	65.9	49,962	18,863	23,894	14,006	3006	407	4446	883	3320
5	62	33.9	47,681	32,340	25,082	14,367	1503	671	1948	254	3856
6	66	36.6	49,410	19,501	25,914	13,947	1503	796	2658	996	3594
7	59	40.7	46,803	32,078	24,914	13,431	1503	596	2571	928	2860
8	74	55.8	46,321	9460	23,486	12,658	3006	1052	5590	741	2794
9	58	39.2	45,609	35,281	26,395	12,522	1503	273	1240	996	2680
10	51	38.2	43,627	32,109	25,253	12,588	1503	294	502	847	2640
Average	65	51.5	46,845	25,551	24,370	13,232	2104	622	2935	735	2846

^aLOS, length of inpatient hospital stay; OR, operating room; OT, occupational therapy; PT, physical therapy; UKA, unicompartmental knee arthroplasty.

^bOR supplies includes gowns, drapes, saw blades, cement, and UKA implant charge.

^cSurgical facility fee includes separate fees for OR time (per minute), recovery time, and anesthesia time.

^dOther includes primarily CRNA (certified registered nurse anesthetist) fees and any miscellaneous charges for radiographs, respiratory therapy, electrocardiography, and so on.

TABLE 3
Outpatient UKA Costs^a

Patient	Age, y	Total Charges, \$	Reimbursed, \$	OR Supplies, \$ ^b	Surgical Facility Fee, \$ ^c	Hospital Room, \$	Laboratory Charges, \$	Medications, \$	PT and OT, \$	Other, \$ ^d
1	63	29,545	21,367	21,999	3723	0	0	1010	0	2814
2	78	27,060	9622	20,392	3723	0	0	582	0	2363
3	65	28,509	9639	21,392	3723	0	0	623	0	2771
4	76	23,975	9458	19,130	3723	0	0	1122	0	0
5	51	26,764	9450	19,576	3723	0	0	1119	0	2346
6	68	23,358	9478	18,804	3723	0	0	831	0	0
7	59	26,063	7891	18,804	3723	0	0	1105	0	2431
8	61	26,434	21,982	18,804	3909	0	0	1255	0	2465
9	66	27,065	21,453	19,486	3909	0	84	1104	0	2482
10	61	25,502	9005	18,204	3909	0	0	1060	0	2329
11	83	25,453	9612	18,335	3909	0	0	1084	0	2125
12	75	25,538	9458	18,335	3909	0	0	1372	0	1921
Average	67	26,272	12,368	19,439	3801	0	7	1022	0	2004

^aOR, operating room; OT, occupational therapy; PT, physical therapy; UKA, unicompartmental knee arthroplasty.

^bOR supplies includes gowns, drapes, saw blades, cement, and UKA implant charge.

^cSurgical facility fee is a fixed charge that includes OR time (per minute), recovery time, and anesthesia time.

^dOther includes primarily CRNA (certified registered nurse anesthetist) fees and any miscellaneous charges for radiographs, respiratory therapy, electrocardiography, and so on.

insurance carrier was \$26,272. On average, 47% of charges were reimbursed through insurance, for an average total reimbursement of \$12,368. The charge for OR supplies made up the largest percentage of overall charges at 74%, while the charge for surgical facility fees made up only 14% of the total cost. The surgical facility fee for outpatient procedures is a fixed charge that incorporates anesthesia, OR time, and recovery fees based on the type of surgery the patient is having (Surgical Facility Fee, Table 3). Furthermore, for outpatient UKA, there were no hospital room, laboratory, or therapy charges.

Patients receiving inpatient UKAs stayed an average of 1.6 days (range, 1-4 days) in the hospital. The reason that any patient stayed longer than 1 day (4 patients total) was due to inadequate pain control or difficulty with mobilization. All patients had an ASA score of 2, except 1 patient who had an ASA score of 3. Three mild postoperative complications were noted. One patient developed a superficial infection that was successfully treated with oral antibiotics, another patient had a traumatic mild wound dehiscence treated with local wound care, and a third patient had a postoperative urinary tract infection.

TABLE 4
Average Inpatient Versus Outpatient Surgery Center UKA
Cost Comparison^a

	Inpatient, \$	Outpatient, \$
Total charges	46,845	26,272
Reimbursed	25,551	12,368
OR supplies ^b	24,370	19,439
Surgical facility fee ^c	13,232	3801
Hospital room	2104	0
Laboratory charges	622	7
Medications	2935	1022
PT and OT	735	0
Other ^d	2846	2004

^aOR, operating room; OT, occupational therapy; PT, physical therapy; UKA, unicompartmental knee arthroplasty.

^bOR supplies includes gowns, drapes, saw blades, cement, and UKA implant charge.

^cSurgical facility fee incorporates anesthesia, OR time, and recovery room fees. This is a fixed charge for outpatient surgical facilities.

^dOther includes primarily CRNA (certified registered nurse anesthetist) fees and any miscellaneous charges for radiographs, respiratory therapy, electrocardiography, and so on.

All outpatient UKA patients were successfully discharged home on the day of surgery. Ten patients had an ASA score of 2 and 2 patients had an ASA score of 3. For regional anesthesia, 8 patients had single-shot femoral nerve blocks and 4 patients had continuous femoral nerve blocks via an indwelling pain catheter, with which they were discharged home, and single-shot sciatic nerve blocks. No complications were encountered in the outpatient UKA group. There were no patients readmitted in either the inpatient or outpatient groups.

DISCUSSION

To our knowledge, this is the first study evaluating the cost-effectiveness and cost-benefit of performing outpatient UKA in an outpatient surgical facility versus inpatient UKA. Other studies mentioned previously have looked at the cost savings of an accelerated discharge protocol for UKA but not a truly outpatient UKA surgery in which the patient is discharged home the same day. Lovald et al¹⁶ evaluated the costs associated with outpatient TKA versus inpatient TKA utilizing a Medicare patient database. They noted that the costs that can be attributed to knee osteoarthritis over a 2-year postoperative period were reduced by \$1967 per patient in the 1- to 2-day stay group and by \$8527 per patient in the outpatient group compared with the standard length of stay (3-4 days) group.¹⁶ A recent systematic review evaluating some of the more common orthopaedic procedures showed an average cost savings of 17.6% to 57.6% for outpatient procedures relative to similar procedures performed in a hospital.⁶

The outpatient charges in our study were found to be an average of \$20,573 less per patient than the inpatient average charge of \$46,845 (Table 4). The primary cost savings

were attributed to the outpatient surgical facility fee, which averaged \$3800 per patient, while the inpatient facility charge was 350% more expensive at \$13,200 per patient (approximately \$9500 savings). However, even the highest cost category (OR supplies) was an average 25% higher for an inpatient as opposed to an outpatient UKA. Furthermore, hospital price variability for inpatient surgery is much larger than that of outpatient surgery or ASCs. Our data demonstrated a maximum patient-to-patient difference in charges of approximately \$15,000 for UKA performed in an inpatient hospital setting as compared with a maximum patient-to-patient difference of only \$6200 for UKA performed at an outpatient surgical facility.

This striking difference in cost is a growing trend in the United States health care system. A study published in *Health Affairs* analyzed data from the National Survey of Ambulatory Surgery and discovered that procedures performed in ASCs are more efficient, taking 25% less time than those performed in hospitals.¹⁹ This efficiency and corresponding cost-effectiveness is due largely to the ASC's focus on a limited number of procedures, their owner/operator culture, and specialized nursing and support staff. Because ASCs specialize in providing outpatient surgery, they are able to deliver patient-care services efficiently and conveniently. For example, ORs are turned over quickly and are not interrupted by emergency cases. This enables physicians to commence their procedures in a timely manner and use their time more productively. Consequently, ASCs tend to be more convenient and cost-effective than hospital inpatient or outpatient departments while still providing excellent care. Furthermore, facility fees can vary greatly even within the same city based on service offerings and market power, which in turn can affect the negotiated rates and reimbursements with insurance companies. The rates can vary by as much as 500% to 600% for the same procedure at different facilities. The lower cost of care in ASCs relative to hospital outpatient departments saves employers and consumers tens of billions of dollars a year. For the commercially insured population in the United States, an estimated \$37.8 billion is saved annually by using ASCs.²¹ However, many patients are unaware of the lower costs that ASCs offer.

Correspondingly, there was also a difference in the percent of charges reimbursed by insurance carriers in our study. On the inpatient side, a total of 4 carriers were represented with an average reimbursement of 55% of charges (range, 20%-77%), or \$25,550. For outpatients, a total of 4 carriers were also represented with an average reimbursement of 47% (range, 30%-83%), or \$12,370. Thus, there is a roughly 50% cost savings when evaluating the actual reimbursement and dollars paid for the procedure by moving from an inpatient to an outpatient setting. With the movement of more procedures to an outpatient setting across all specialties, health plans will reduce their overall costs and are encouraging their customers to be more active and thus reduce their out-of-pocket expenses by identifying physicians who perform these surgical procedures on an outpatient basis. However, as mentioned previously, the long-term growth of ASCs is threatened by the widening disparity in reimbursement that ASCs and hospitals receive for the same procedures.

There was no difference between the inpatient and outpatient groups in terms of complications or readmissions; however, this was only a secondary measure of the study, and due to the small sample size, strong conclusions cannot be drawn. Fortunately, well-done studies discussed in the introduction have demonstrated the safety and feasibility of outpatient UKA. Other studies have also discussed their patient eligibility requirements for outpatient procedures, including total hip arthroplasty, reconstruction of the anterior cruciate ligament, and TKA. In order for patients to undergo outpatient surgery, they had to provide consent; have stable cardiovascular, respiratory, and renal systems; have a caregiver at home after surgery; and live within close proximity to the outpatient center.^{3,18} With an appropriate anesthetic and pain control protocol, patients are able to reliably be discharged home on the day of surgery.^{8,9} However, not all patients are appropriate outpatient surgical candidates, and those with significant medical comorbidities may require inpatient hospitalization postoperatively. One patient who underwent inpatient UKA was excluded from the cost comparison secondary to an extended hospital stay due to atrial fibrillation.

Our study has several limitations, many of which are in line with other retrospective reviews. Patients were identified with a chart and radiology database search, with all clinical and surgical information gathered from the notes. Because of this limitation, we were unable to identify any differences between surgeries in terms of complexity other than the recorded tourniquet times and analysis of the degree of deformity on preoperative radiographs. We also had small sample sizes in both cohorts, which causes a greater range and variability in all costs. Unfortunately, the hospital billing department does not maintain cost/expense/reimbursement data for greater than a 39-month postoperative period; thus, we were unable to include a large cohort of inpatient UKA patients. Furthermore, the ASA classification system is used to evaluate the degree of a patient's "physical state" or overall health prior to selecting the anesthetic or before performing surgery. It is used to describe a patient's preoperative physical status for communication between colleagues; however, the grading system is not intended for use as a measure to predict operative risk. Perhaps a different medical risk stratification score, such as the Outpatient Arthroplasty Risk Assessment Score (OARA score), is more appropriate in determining which patients are safe to undergo outpatient joint replacement surgery. The OARA tool is a 60-question document that risk stratifies patients as either "low risk/appropriate" or "high risk/not appropriate" for outpatient joint arthroplasty.¹⁸ As noted previously, not all patients are appropriate outpatient surgical candidates, and those with significant medical comorbidities may require inpatient hospitalization postoperatively. There can also be significant differences in reimbursement rates depending on the insurance status of the patient. While private payers vary in their reimbursement rates and policies, most are tied in some form to the Medicare system. There were a total of 4 different payers (both private and Medicare) identified in each patient cohort, and reimbursement rates averaged 54.5% (range, 20%-77%) for inpatient UKA versus

47.1% (range, 30%-83%) for outpatient UKA. Finally, evaluating consecutive patients for inpatient UKA versus outpatient UKA also introduces some bias into the study. Patients are not randomized, and thus, with the outpatient UKA protocol there may have been more stringent surgical inclusion criteria (ie, some patients not offered a UKA based on certain medical comorbidities or other factors). In addition, there may have been a more detailed preoperative discussion regarding expectations for discharge home after surgery.

Outpatient and ASCs can offer distinct advantages to patients when compared with hospital inpatient surgeries. They are not only less expensive (sometimes only 25% of the overall cost of an inpatient procedure) but can be easier for patients to navigate and result in overall improved patient satisfaction. Over the past 20 years, the average duration of hospital stay for a TKA has decreased from 9 to 4 days.¹² Several institutions are also experimenting with, and gradually adopting, outpatient TKA as their standard of care. UKA involves less surgical dissection and pain than a standard TKA, with the potential for an accelerated rehabilitation program. Therefore, not only is it feasible to perform outpatient UKA, but it can provide substantial cost savings and a reduction in bed occupancy and resource allocation for a busy hospital.

CONCLUSION

It is important to understand that while what the patient demands from us (their physicians) is changing, our responsibility for their safety and care has not. The current demographics, time pressure, patient mobility, consumerism, and cost pressures are trends that will continue to change.¹⁷ This work demonstrated that significant cost savings of roughly 50% can be achieved with an outpatient UKA protocol in an outpatient facility.

ACKNOWLEDGMENT

The authors would like to thank Eric Vess, University of Virginia medical student, for his help with data collection.

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Position Statement

Ambulatory Surgical Centers Position Statement

This Position Statement was developed as an educational tool based on the opinion of the authors. It is not a product of a systematic review. Readers are encouraged to consider the information presented and reach their own conclusions.

An Ambulatory Surgical Center (ASC) exclusively furnishes outpatient surgical and procedural services with the expectation that the patient will not need hospitalization nor exceed a twenty-four hour stay. There are currently more than 5,400 Medicare-certified ASCs in the United States (U.S.). Orthopaedic surgery has continued to advance, with less invasive techniques, in promoting lower operative morbidity for even major procedures such as total joint arthroplasty (TJA). Further, perioperative improvements including shorter-acting or regional anesthesia, improved post-operative pain management, and options to minimize blood loss have all made it possible to perform more procedures in an ambulatory setting.

In 2008, ASCs supported roughly 20 million surgical procedures and received \$3.1 billion in payments from Medicare. In 2013, 5,364 ASCs treated 3.4 million fee-for-service (FFS) Medicare beneficiaries, and Medicare program and beneficiary spending on ASC services was \$3.7 billion. However, ASCs account for less than one percent of total Medicare spending.¹

The American Association of Orthopaedic Surgeons (AAOS) believes that ASCs perform a vital role in the provision of patient-centered, cost effective, high- quality musculoskeletal care.

ASCs Represent an Evolving Innovation in Health Care Delivery

Convenience and Efficiency

The growth in ASCs is primarily attributable to the numerous benefits they provide for the patient. Technological advances increase the procedures that can be safely performed on an outpatient basis, a trend contributing to a shift of cases to the ASC setting. For patients, ASC advantages include more convenient locations, shorter wait times, and easier scheduling.² For orthopaedic surgeons, ASCs are often more convenient, more efficient, and customizable to their needs. Many musculoskeletal procedures are highly technical and specialized, and ASCs allow an orthopaedic surgeon the opportunity to perform these complex procedures more efficiently than in other settings. For example, the operating room in an ASC is often designed for a specific type of procedure, such as arthroscopy. The ASC often facilitates more physician input on scheduling and staffing, which improves efficient use of resources. The ability to perform higher volumes of a narrow range of procedures allows ASCs

to maximize operational efficiencies and harvest economies of scale which save money for patients and payers alike. With a narrower range of procedures performed, schedule disruptions to accommodate emergency cases are rare.³

Total perioperative time for all procedures was 39 percent shorter in freestanding versus hospital-based ASCs, saving patients and their families valuable time. Savings produced from the various efficiency gains allow ASCs to continue to provide many valuable services to all patients regardless of payer status and their ability to pay.

Patient and Provider Satisfaction

ASCs in general are rated highly by both patients and providers. Patients benefit from the convenience of on-time appointments, onsite parking, and complaint rates lower than two per thousand cases are not uncommon.⁵ Patient satisfaction with care and service at ASCs has been measured at 92 percent. Providers are similarly pleased with the ability to influence staff and scheduling to create organized processes to improve the quality and efficiency of care.⁵

Equipment and supplies are setup for these specific procedures by the same clinical staff who often work together on a daily basis. This makes it much easier to schedule and perform surgery in an ASC, which translates into improved efficiency, cost-effective use of resources, better outcomes for patients, and high levels of patient and provider satisfaction.

Value

Patient and total health care costs are often lower for care provided in ASCs when compared to other health care settings. In this era of increased transparency, patients will demand a "pay for performance" system. The cost to both Medicare and the patient are lower in ASCs than in hospital outpatient surgery departments.⁴ For example, a Medicare beneficiary will save over \$200 in co-pays if a meniscal repair is performed in an ASC rather than a hospital; the savings to Medicare are over \$800. Consumers of health care services should be provided with quality and cost information to facilitate informed decision making. A Government Accountability Office (GAO) study comparing ASC with Hospital Outpatient Department (HOPD) costs demonstrated that the cost of an ASC procedure was 84 percent of the cost of an HOPD procedure.⁷ The Medicare Payment Advisory Commission (MedPAC) states in their March 2015 report, "We believe it is desirable to maintain beneficiaries' access to ASCs because Medicare and beneficiaries pay less for services provided in ASCs than in HOPDs".

For the same unit of work, an ASC is paid \$44.07 and a hospital outpatient department \$74.14. This means the hospital is 75 percent more expensive for the same service. Moving half of all eligible services to ASCs would save Medicare \$2.4 billion in addition to the \$2.6 billion it already gains from ASCs savings. These savings can be even higher in less implant-intensive specialties. A recent study showed urologic procedures performed at ASCs cost less than a third of those done at hospitals. Given the relatively narrow focus of these facilities, it is expected that ASC outcomes and quality will continue to improve, but data comparing outcomes and quality in the different settings is currently not available.

The AAOS believes that as procedural technology continues to evolve, ASCs will serve as sites for continued innovation in the delivery of musculoskeletal care. Convenience, affordability, accessibility, and patient satisfaction provided by the ASCs will continue to be valued by patients and payers in our evolving health care system. The AAOS fully supports innovations that represent increased value delivered to our patients.

Surgeons Are Uniquely Positioned to Drive ASC Innovations

Management and Ownership

Physicians have traditionally been the primary investors in ASCs. Recent publications report that physicians maintain ownership stakes in approximately 83 percent of ASCs and fully own approximately 43 percent.⁹ Physicians maintain ownership stakes in 92 percent of ASCs and fully own 65 percent. This investment is driven by the belief that with concentration and specialization on a narrow range of procedures, higher levels of productivity and efficiency can be achieved.¹⁰ In assuming an active role in managing these facilities, physicians are able to direct all activities toward achieving maximum patient benefit while maximizing efficiency and minimizing cost. The linkage between clinical outcomes and cost containment is very desirable from a health care system perspective given the escalating costs of providing these services.

Application of New Procedural Technology

New technology is the main driver of the expanding list of procedures suitable for outpatient delivery. Surgeons and procedural physicians not only develop, but more importantly refine the applications and indications for new technology.¹¹ Orthopaedic surgeons should and will continue to play a central role in this process.

Focused Factories

ASCs, by design, focus on a limited scope of procedures. The concept that "simplicity and repetition breed competence"¹² is believed to be applicable in industry as well as medicine.¹³ This relatively narrow focus promotes higher levels of competence among care providers, increased quality, and improved efficiency.¹⁴ Orthopaedic surgeons are uniquely positioned to drive ASC innovation toward focused factories since many of the procedures currently performed in the ambulatory setting are orthopaedic interventions.

The AAOS believes that orthopaedic surgeons should play a leadership role in driving improvements in the quality and efficiency of care delivered in ASCs.

Policy: Areas of Focus and Concern

Patient Safety

It has been reported that ASCs treat lower acuity patients when compared to HOPD's.¹⁵ In the absence of standardized and widely reported quality measures with respect to patient safety, this is probably prudent. Preliminary patient safety data shows problem occurrence rates less than 0.1 percent on all four indicators. One study has demonstrated even high-risk Medicare patients are no more likely for re-admission after treatment in an ASC compared to a hospital (Munnich, *Health Affairs* 2014). As leading patient advocates, procedural physicians and surgeons must not push the application of technology that allows for expanding delivery of care in the ambulatory setting before firmly establishing trustworthy measures of safety.¹⁶

Conflicts of Interest

The AAOS believes that if a potential conflict of interest exists for a provider who manages or owns the ASC in which they are performing procedures, then it must be fully disclosed to all patients, payers, and providers involved. The relationship between ownership and facility utilization should be completely transparent to all stakeholders. Recent research findings relating increased utilization to ownership are of concern and warrant further study. However, the simplistic implication that physician ownership leads directly to increased utilization ignores the complexities involved in physician decision making that include multiple regulatory policies and clinical (non-financial) incentives.¹⁷ As noted above, site of service is often driven by the ability to offer a better surgical experience and

outcome at a lower price to the patient. Ultimately the patient, fully informed of any potential conflicts and in consultation with the treating physician, should decide the most appropriate venue for a given procedure.

Capacity, Utilization, and Payment Parity

The first decade of the millennium yielded significant growth in the number of new ASCs. This trend has slowed markedly, and from 2010 to 2013 net yearly growth of the number of ASCs was only 1.45 percent. This fact has given birth to concerns of too much capacity and over-utilization. A recent study showed adding an ASC to a service area only increased surgery rates by ten percent, much lower than previous studies and minimal overall given the efficiencies in ASCs. Additionally, these factors have likely influenced payment policy for services provided at ASCs. Current Centers for Medicare & Medicaid Services (CMS) payment policy reimburses ASCs, on average, 58 percent of the reimbursement for similar procedures performed in an HOPD setting.¹⁸ While it is recognized and established that ASCs can provide similar or higher quality services at a lower cost, the increasing divergence between the cost of procedures and reimbursements must be addressed. Payment parity for procedures, regardless of where the procedure is performed, would likely result in the migration of ambulatory procedures to the appropriate setting, potentially resulting in substantial cost savings to the health care system.

The AAOS believes that many orthopaedic surgical procedures can be safely and efficiently performed in ASCs. The ASC model can improve patient access to high-quality care and in some instances can lower the cost barrier for the patient.

We support the use of ASCs, regardless of ownership, as long as all potential conflicts of interest are fully disclosed to the patient, payers, and other providers. Several ownership models exist, and the AAOS supports physician and non-physician investment in facilities that deliver high quality and cost effective health care. The AAOS believes that ASCs should be equipped to provide care to all patients who are eligible to receive care in the ambulatory setting, regardless of payer status or ability to pay. The AAOS is committed to working closely with all stakeholders to insure the provision of high quality, cost-efficient, patient centered musculoskeletal care.

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Position Statement 1161

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Economic Advantages of Performing Orthopaedic Surgical Procedures in Ambulatory Surgical Centres Over Hospital Out-Patient Settings

Harjot Uppal

Abstract

A study was conducted to compare the relative efficacy of ambulatory surgery centres (ASCs) and hospital outpatient departments (HOPDs) across eight orthopaedic procedures. The research was motivated by the fact that ASCs are becoming of increasing importance, even vitality, in the performance of a wide array of ambulatory surgical procedures including arthroscopy, arthroplasty, fracture repair, and laminectomy. As HOPDs continue to be hamstrung by resource constraints, ASCs can be seen to be cultivating ever more focused surgical expertise. Moreover, the ASC becomes a steadily more attractive alternative as HOPDs continue to be overburdened by the growing rate of ambulatory surgeries being performed on the hand, foot, ankle, and spine.

HOPD procedures are taxonomized by the ambulatory payment classification (APC) system while ASC procedures are described using

Keywords: Hospital outpatient department, Orthopaedic procedures, Ambulatory Surgery Centre.

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current procedural terminology (CPT). A variety of quantitative and qualitative metrics were obtained that demonstrate that ASC procedures receive high marks. Indeed, ASC surgeries typically cost 25 to 50 percent less than their HOPD analogues and sport a 25 percent faster recovery time, partially as a result of dramatically decreased surgical site infections (SSI). Both patients and physicians further expressed a considerable degree of satisfaction with, and even preference for surgical procedures rendered at ASCs. One concern is that since many physicians hold ownership stakes in one or more ASC, this evident qualitative preference may, in fact, reflect personal bias. A follow-up study is postulated that is targeted at both assessing and reducing the effects of this perceived impartiality.

Introduction

Outpatient surgery has become an integral part of medical care across the globe. For instance, in the United States, the number of major and minor outpatient procedures undertaken in ambulatory surgical centers (ASCs) has risen dramatically over the past four decades. ASCs refer to health care facilities that play a central role in offering patients the much-needed convenience of having surgical procedures performed safely and in a timely manner outside hospital settings. Before the inception of ASCs, virtually all forms of surgeries were conducted in hospitals. Appointments characterized by long waiting periods were common during this time. Patients also spent several in-patient days in recovery. Additionally, medical practitioners faced different challenges, including working from limited operating rooms, difficulty in accessing new surgical equipment, and distractions of prolonged operating turnover times. The problems associated with hospital outpatient departments (HOPDs) compelled practitioners to look for change-driven strategies aimed at improving their performance. Though some countries still perform surgeries in these settings, the U.S. has made tremendous gains with regard to the development of ASCs. Individual physicians in the U.S. have assumed the leading role in promoting ASCs adoption as the cost-effective and a high-quality alternative to inpatient hospital surgical services. Since the inception of ASCs in the U.S., the facilities in question have resulted in high customer care, reduced healthcare costs, high quality, and excellent overall patient and physician satisfaction. ASCs complement managed care practitioners, whose primary objective revolves around delivering quality, timely care at a significantly reduced cost. ASCs align perfectly well with the U.S. government's efforts to reduce its healthcare budget. The existing and potential economic benefits directly associated with ASCs involve decreasing costs without compromising patient and physician satisfaction levels.

The recently released current procedural terminology (CPT) codes are outpatient codes that determine the number of billable units of reimbursement that are allowable for a given procedure. HOPDs utilize ambulatory payment classifications (APC) codes for the same purpose. This paper will utilize the available literature on patient clinical outcomes regarding infection and reoperation rates examined over a 90-day period and show that eight common orthopaedic surgical procedures performed in ASCs are more economical compared to them being performed in the hospital outpatient settings. The orthopaedic surgery procedures evaluated are: shoulder arthroscopy with subacromial decompression and distal clavicle resection, knee arthroscopy with anterior cruciate ligament repair, open reduction and internal fixation of bimalleolar ankle fracture, open reduction and internal fixation of distal radius fracture, knee arthroscopy with medial and lateral meniscectomy, total knee arthroplasty, and one level lumbar laminectomy.

Patient Clinical Outcomes

Patients increasingly prefer outpatient surgery performed in ASCs to similar procedures undertaken in hospitals. The trend remains inextricably linked to positive patient clinical outcomes, such as reduced surgical site infections (SSIs) and reoperations, and advantages in cost, quality, and time factors (1). Hospitals continue to face a variety of resource-related challenges, including financial constraints, which inhibit their ability to meet the ever-growing demand for arthroplasty, hand, spine, and foot and ankle surgeries. For example, the Ambulatory Surgery Center Association (ASCA) reported that more than 5,300 ASCs provided over 25 million procedures in the country in 2005 (2). From the economic theory perspective, the rapid growth witnessed in the number of ASCs

serves as a clear indication that the market can expand at an increased rate when there is alignment of incentives of patients, payers, and providers.

SSIs and Reoperation Rates

Reoperation and SSI rates play a pivotal role in determining whether surgical procedures taken in ASCs are cost-effective. In their recent study, Toy et al. (3) set out to investigate the hospital admission and complication rates for patients who have undergone total hip arthroplasty (THA) surgery in an ASC with same-day discharge. Following the recent focus on bundled payments involving a 90-day episode-of-care, the researchers chose the same period to determine possible patient outcomes. Equally important, they reviewed reliable records of patients from two separate ASCs. In addition, they divided the 145 procedures (in 125 patients) involved in two groups based on when they were performed: early or later in surgeon's experience. To achieve the intended results effectively, they recorded any complications, hospital admissions, blood loss, time spent by patients at the facilities, and length of surgery.

This study demonstrates that same-day discharge to the patient's following total hip arthroplasty (THA) can be safely done without increased complications, hospital admissions, reoperations, or emergency room visits. In essence, the researchers established that only one of the 145 procedures, representing 0.7%, required direct admission to the hospital from the ASC (3). At the same time, only three of the arthroplasties (2%) required additional procedures within the global period. It is evident from the study that same-day discharge following THA done in an ASC tends to have limited complications, emergency room transfers, hospital admissions, and reoperations. In addition, with a CPT code of 27447 and APC number of 5115, total knee arthroplasties (TKAs) only costs \$9,557.20 in ASCs, compared to \$10,122.92 in HOPDs (Table 1) (4) (Near here). As this is a new code for ASCs, this difference in reimbursement is subject to change. Ultimately, the procedure is cheaper and fought with low complication rates when performed in an ASC setting.

In addition to TKAs done in ASCs, medical professionals remain interested in outpatient total elbow arthroplasties (TEAs) and THAs because of the increasing emphasis on efficient and high-quality medical care. In their retrospective study, Stone et al (5) employed

a holistic approach to evaluating complications, hospital admissions, and reoperations in 28 patients with outpatient TEA discharged after the procedure for a 90-day period. In the follow-up, they not only recorded and examined postoperative complications but also the range of elbow movement measurements with the sole purpose of assessing the participants' outpatient experience at ASC. After performing univariate and multiple logistic regressions for each of the risk factors, they found that major complications occurred in approximately 7.1% of patients. Additionally, over the 90-day episode-of-care, 39.2% of patients had minor wound problems. Notably, their univariate regression analysis showed that the minor wounds in question had a strong correlation with smoking. Therefore, patient selection for this procedure in an ASC setting is critical.

Apart from reoperation and related complications, surgical site infections (SSIs) remain the most common surgical centre complication and serve as one of the main reasons for unplanned hospital admissions in the immediate aftermath of operations. SSIs account for more than 20 percent of healthcare-associated infections, particularly in hospitalized patients, leading to considerable morbidity, stays prolonged by up to 10 days, increased mortality rates, and cost between \$20,000 and \$27,600 per admission (6). Referring to the U.S. National Action Plan to Prevent Healthcare-Associated Infections (NAPPHAI), reducing SSIs remains one of the country's priorities. Initially focused on healthcare-associated infections experienced within acute care hospitals and related high-priority areas, the action plan now addresses additional healthcare settings, including ambulatory surgery. As much as there is little information regarding adverse events, such as SSIs, following operations undertaken in the ambulatory settings, the problems directly or indirectly linked to healthcare-associated infections from ASC procedures are minimal⁶. The researchers arrived at this conclusion based on the evaluation of improved data acquisition using CPT procedure codes for clinically significant site infections (CS-SSIs) associated with ASCs. In fact, at a Surgical Care Affiliate (SCA) surgicenter over a one-year period in Riverside, California, the post-operative infection was less than 1% for over 5,000 procedures⁷. In essence, the CPT codes enabled them to evaluate and establish the efficiency of performing surgeries in an ASC with the aim of reducing SSIs.

The ability to determine the incidence of CS-SSIs resulting from low-to-moderate-risks involved in Medicare-certified outpatient

Table 1 Medicare ASC and HOPD Reimbursement Rates for Eight Orthopaedic Procedures.

Procedure	Medicare ASC Reimbursement	Medicare HOPD Reimbursement
Shoulder Arthroscopy with RCH, SubAcromial Decompression & Distal Acromioclavicular Resection and Debridement	\$5,790.82	\$10,896.88
Knee ACL Repair	\$8,774.80	\$16,503.30
Total Hip Arthroplasty	N/A	\$10,122.92
Total Knee Arthroplasty	\$9,557.20	\$10,122.92
Open Reduction / Internal Fixation of Bimalleolar fracture with fluroscopy	\$3,027.01	\$5,838.73
Open Reduction / Internal Fixation of Distal Radial fracture with fluroscopy	\$1,446.45	\$5,838.73
Knee Arthroscopy with Medial and Lateral Meniscus Repair	\$1,403.42	\$2,645.23
Laminectomy with fluroscopy	\$3,027.01	\$5,838.73

*Total hip arthroplasty is not currently recognized as an outpatient procedure, and total knee arthroplasty has only recently been approved as an out-patient procedure.

surgical settings plays a fundamental role in revealing the effect of ASCs in health care costs. Owens et al. (2014) undertook a retrospective analysis of ASC procedures complicated by various CS-SSIs, which require reoperation. In the study, they employed the use of healthcare cost, state outpatient, and ambulatory surgery databases to examine the information about infectious outcomes in ASCs located in America's geographically dispersed states, including Nebraska, Tennessee, Florida, Georgia, New York, Hawaii, California, and Missouri. These states, which represent about one-third of the country's population, recorded low rates of postsurgical visits because of SSIs. In particular, postoperative acute care visits occurred only in less than three percent of the 1,000 surgical procedures done in ASCs. The insignificant rate of reoperation often translates to reduced clinical and economic burden given the already concerted effort toward minimizing overall health care cost in the U.S.

Other common ASC procedures that are more likely to produce more SSIs and potentially increase health care costs in the U.S. include anterior cruciate ligament reconstruction (ACL), hernia repair, cholecystectomy, and breast-conserving surgery (BCS). In a recent retrospective cohort study involving persons who had undergone these forms of ambulatory surgical operations, Olsen et al. (8) used commercial insurer claims and cost distribution to determine the impact of SSIs on health costs. Despite the sparse nature of data on SSIs costs following ambulatory surgeries, the researchers adhered to the recommended 90-day postoperative procedure to identify any infections requiring surgery or during the hospitalization period. Using quantile regression to control operative, patient, and postoperative factors, they found few cases involving severe infections, which either resulted in surgical treatment or hospitalization. The cases in question were directly linked to the increased costs of healthcare after the four procedures.

The most important aspect of the study conducted by Olsen revolves around the comparison of results obtained from in-patient surgery facilities and ASCs. In particular, the researchers report that HOPDs were characterized by higher costs for each of the four common procedures than freestanding ASCs, which contributed to lower costs (8). Drawing from patient satisfaction trends in Glenwood Surgery Center (SCA Facility 50138), the researchers attributed the difference in results to the ability of nursing staff in ASCs to address primary concerns, provide the much-needed explanations, and communicate delays in a timely manner [9]. Most importantly, the study has since acknowledged and appreciated the critical role played by medical staff during and after follow-up calls. Ambulatory outpatient surgery facilities serve as the best possible alternative to HOPDs, especially in minor and selective major surgeries involving low risks.

Time/Procedure Length

Time or procedure length remains one of the key aspects of outpatient surgeries. In essence, physicians need to examine four length-of-surgery measures, including 1) time in the operating room, 2) time in surgery (a subset of time in the operating room) 3) time in post-operative care, and 4) total procedure time (time in the operating room, time in postoperative care, and transport time between the operating room and the recovery room) (1). Although previous research has placed much emphasis on documenting differences witnessed in surgery time between HOPDs and ASCs, variations in procedure time tend to reflect only the underlying differences common in-patient characteristics, not those in efficiency between the facilities in question. To resolve this concern effectively, recent research has focused on comparing the relationship between procedure time and total time in the ASC setting, to that in the HOPD setting. In doing so, it becomes clear how health care cost

varies based on efficiency between hospital-based surgeries and ambulatory-centered surgical procedures. Estimates obtained from recently sampled and reviewed studies have revealed that time savings for ASCs are shorter than that of HOPDs. In other words, ASCs remain substantially faster at performing low-risk outpatient procedures than hospitals, particularly when observed patient characteristics and procedure type are controlled throughout a study. On average, patients operated in ASCs spent approximately 31.8 fewer minutes than those whose procedures were undertaken in hospitals (1). This represents a 25% difference relative to the operation activities' mean procedure time of about 125 minutes. In this regard, for an HOPD and an ASC that have similar equipment and the same number of recovery rooms and staff, the ASC will be performing more procedures on a daily basis and at a cheaper cost than the hospital outpatient facility. This may explain how more time-efficient ASCs can operate with lower Medicare reimbursed payments per procedure.

The estimated charges for operating a patient in ASCs are between \$29 and \$80 per minute (1). These charges exclude fees for the anesthesia providers and surgeon involved in the procedure. The researchers' calculation shows that even with the exclusion of time savings as well as physician payments outside a facility's operating room, an ASC could generate higher savings of between \$363 and \$1,000 per outpatient surgical case. In essence, these findings support the widely held claim that ASCs play a pivotal role in providing outpatient surgery at relatively lower costs than HOPDs.

In addition to their role in reducing procedure time, Medicare-approved ASCs rarely pose significant adverse medical risks to individual patients. Referring to the selection of a covered procedure, particularly those payable under ambulatory surgical center payment system (ASCPSPS), each of the stakeholders, including the secretary of Health and Human Services (HHS) involved must focus on selecting safe procedures for patients when performed in an ASC (10). Although, the Secretary of HHS remains tasked with the responsibility of choosing the right procedures, the ultimate decision regarding whether ASCs and HOPDs serve as the most appropriate settings for a surgical procedure is made by responsible physicians based on a patient's individual clinical needs. In the case of patients age 65 and above, the 2010 report released by the Agency for Healthcare Research and Quality (AHRQ) shows that about 32% of this patient population has a high-risk medical history of comorbidities. This is due to increased incidence of chronic illnesses and conditions, such as cancer, arthritis, and lung disease (11). Younger patients presented in operating rooms often have lower-risk medical profiles. With these conflicting clinical needs, a patient is operated either in an ASC or in an HOPD depending on the severity of their comorbidities.

ASCs typically record fewer adverse incidents than procedures performed in physician offices (12). For example, the incident rate of adverse incidents in ambulatory surgical settings and offices occurred 5.3 and 66 per 100,000 surgical procedures, respectively (12). At the same time, the rates witnessed in 100,000 operations were 0.78% and 9.2% in ASCs and physician offices, respectively. Additionally, the relative risks recorded for deaths and injuries for ASCs and offices differed significantly, leading to the conclusion that surgical procedures performed by stand-alone practitioners in their offices have 10-fold increased risks over those performed in an ASC. This fact supports that cost alone should not be the sole driving force for selecting the setting of surgical service. While ASC-based procedures reduce potential hospital admissions, mild to severe injuries, loss of life, and healthcare cost, office-centered surgeries show an increased incidence rate. If each of the office procedures could be done in ASCs, the researchers argue that about six deaths and over 43 procedures could be prevented every year (12).

ASCs remain focused on providing individual patients with the best possible surgical experience, while at the same time ensuring the delivery of cost-effective care. The facilities at hand achieve this by saving the government, patients, and third-party payers' money. When comparing health care charges in HOPDs vs ASC throughout the country, the Medicare program, its principal beneficiaries, and related stakeholders save over \$2.6 billion in benefits annually. This is because ASC reimbursement is significantly less for procedures (13). In addition, patient co-pays are concomitantly lower. Concisely, ASCs serve a significant role as the most suitable lower-cost alternative to outpatient surgical procedures.

Research on the efficiency of ASCs attributes their tremendous growth since the 1980s to the facilities' flexibility in meeting the rapidly growing demand for less-complicated outpatient surgery services. Despite their smaller footprint than HOPDs, ASCs remain less costly (10, 13). First, they are less expensive to build even in urban and related environments, where vital resources such as land may be difficult to acquire. ASCs occupy minimal space, which means that their construction and general maintenance incur lower overhead costs. If the government formulated and implemented a change-driven policy that requires half of all the available procedures to be executed in ASCs, Medicare would be well positioned to save over \$25 billion in the next one decade (13). In essence, all these are achievable following the benefit to insurers and Medicare from lower surgical prices in ASC settings.

Insurers, Medicare allowable rates, currently pay approximately half of the total amount paid in ASCs compared to HOPDs for performing the same surgical procedures. For instance, referring to CPT code 66982, extracapsular cataract extraction removal (ECER), Medicare pays a total of \$1,671 for the surgery in HOPD, while under ambulatory payment classifications, (APCs), the program pays only \$964 to ASCs for the same procedure (13). This high reimbursement gap in payment is one of the most recent discrepancies in the U.S. healthcare payment system. If the reimbursement gap of ASCs and HOPDs were only 16%, by 2017 the payment to HOPDs would have been approximately 82% more than ASCs (2).

Patients pay less for surgical procedure coinsurance done under ASCs than for those under HOPDs (percentage of payment rate). Therefore, Medicare beneficiaries end up paying \$496 in coinsurance when they go through an ECER in an HOPD versus the \$195 in ASCs (13). Without the introduction of ASCs, it is evident that healthcare expenditures in the U.S. would be amounting to hundreds of billions of dollars. As most private insurance companies use Medicare allowable reimbursement as a principle in reimbursement, the same rate of saving would apply. For this reason, employers benefit from reduced healthcare expense because employees embrace ASC services over HOPD services (14). Therefore, in theory, health care cost savings should be reflected by decreasing insurance premiums. This would financially benefit both the employee and the employers.

The wide gap between the reimbursement of ASCs and HOPDs plays a central role in threatening the various gains directly attributed to performing surgical procedures in an ASC setting. The payment differential plays a central role in creating an unsustainable market dynamic characterized by well-established hospitals strategically purchasing ASCs and converting them into HOPDs (15). This ploy of a hospital to convert an ASC into a HOPD that is located remotely, can result in higher medical costs. This occurs because once an ASC is acquired by a hospital, its ASC license can be terminated and converted into one of the hospital's units. This newly acquired unit will bill surgical procedures to the HOPD rates rather than ASC rates. As a result, the ASC will bill patients at higher rates.

Patient Satisfaction

Results obtained from recent surveys, studies, and systematic reviews show that patients are satisfied with the services and care they receive from ASCs. In particular, the majority of patients under ASC programs tend to cite reduced or lower costs, the ease involved in operation scheduling, the provision of safe and quality services, transparency, and increased personal attention as the main reasons for embracing ASCs (2). The ASC industry acknowledges and appreciates the important role played by disclosing pricing information in client satisfaction and overall loyalty (16). By making information about pricing available before surgery, ASCs promote transparency among all patients and Medicare beneficiaries. For the benefit of consumers, these disclosures set out the total price for the intended surgical procedures and specify the payment terms. By doing so, they empower healthcare consumers by providing the best opportunity to evaluate costs and compare prices among different healthcare providers. The U.S. ASC health care delivery model comprises of convenience, efficient care, and patient satisfaction. It revolves around enhancing patient care by enabling physicians and other practitioners to focus exclusively on small-scale processes in single settings rather than relying on hospital settings that typically have large-scale demands for the management's attention, space, and resources (16). With the limited number of surgical rooms and space, physicians can intensify quality control to ensure effectiveness in ASC processes. Additionally, the change-oriented and holistic model allows patients to gain quick access to their physicians, bringing concerns directly to responsible physician operators, particularly those that have direct knowledge about their cases. In essence, the three-dimensional framework adopted by ASCs improves customer satisfaction by reducing bureaucratic procedures usually encountered when dealing with various hospital administrators, who have less detailed knowledge about specific patients and their experiences.

ASCs can create and maintain physician ownership, which may help promote their presence in the health care market. As an extension of their practice, ASCs may allow physicians to increase the types of cases performed in these centers. This will ultimately reduce the patient wait-times for the procedures. In this way, ASCs encourage further specialization in the ambulatory setting. Unlike large-scale health institutions, such as hospitals, ASCs place greater emphasis on providing quicker, more responsive environments tailored to meet the changing individual needs of patients. With this lower bureaucratic system, ASCs enable physicians to exercise increased control over scheduling (17). As a result, the model decreases delays before or after performing given procedures. In hospital settings, physicians often delay or reschedule some surgical procedures following an institutional demand, including attending to emergencies. Unforeseen emergency room demands hinder practitioners' productivity and concomitant increase health care costs because patients are compelled to wait for many days before the operation or to leave the facility (17). Ultimately, physician ownership in ASCs allow surgeons to implement innovative strategies for leadership, governance, and quality improvement.

Patients identify ASCs and report improved satisfaction levels because the outpatient surgical facilities remain committed to quality. In fact, quality-care serves as one of the important hallmarks of ASC health care delivery model (5). The ASC community continues to show its commitment to offer quality collaboration through the ASC Quality Collaboration (AQC). The latter is an independent and transformation-driven initiative meant to promote safety and quality in ASCs. Tasked with the responsibility of developing meaningful and realistic quality measures for various ASC settings, AQC further oversees voluntary reporting by ASCs, ensuring accountability for the sake of the patients. A typical case in point involves the organization's

role in urging the Center for Medicaid Services (CMS) to focus on establishing standardized, comprehensive, and uniform quality and accountability reporting systems. Briefly speaking, the primary purpose of such systems would revolve around financial management, social responsibility, and performance. Accordingly, the already formulated quality measures aligned with the U.S. national plan goals, which revolve around transparency and healthcare cost reduction.

Apart from quality commitment, patients treated in ASCs tend to fare better than their counterparts who were operated in HOPDs. Using variations in ASC generated by the ongoing changes in APCs and Medicare reimbursements, Stone et al. (5) collected data on the safe surgery checklist and volume of procedures to determine patient satisfaction levels in selected HOPDs and ASCs. Considering the likelihood of patients who have undergone any of the highest-volume outpatient surgical procedures in an ASC or HOPD to visit EDs or have physicians operate them again, the researchers recorded patient outcomes. The highest-risk patients under Medicare program were less likely to visit EDs or be admitted to hospitals after having their surgeries performed in ASCs as compared to their high-risk Medicare counterparts treated in HOPDs. At the same time, the researchers' satisfaction survey with an 85.7% response rate showed that 91.7% of patients reported happiness for going home in the immediate aftermath of their operations (5). Approximately, 96% reported additional confidence because they could exercise more control over their lives and funds during and after treatment. Undoubtedly, these findings serve as a clear indication that ASCs provide the much-needed quality care, regardless of patient's vulnerability levels.

Physician Satisfaction

Physicians developed ASCs in response to a myriad of challenges in their traditional hospital workplace, where they could not achieve the desired satisfaction levels. Besides complaints from patients who could wait for several days before receiving the recommended surgical services, medical professionals tasked with the responsibility of executing surgeries encountered and had to deal with slow and cumbersome operating turnover times, the inability to obtain new equipment due to poor, ineffective hospital policies and budgets, and frustrations involving scheduling delays (13). Even though Medicare has proved less receptive of these ASCs, individual physicians are quick to adopt and integrate technological advances in their operations, mainly by starting joint ASCs (16). This way, their morale has since reached an all-time high, while at the same, helping patients, including Medicare beneficiaries.

The ability of physicians to utilize new technologies to perform a growing range of simple to complex range of procedures safely on an outpatient basis not only show that they enjoy their work but also utilize their skills and potential. For example, physicians in the present-day society are now well-positioned to accomplish their operations within the shortest possible time because they employ the use of effective and less invasive techniques. Some of these new and result-oriented technologies include advanced anesthetics and endoscopic procedures (13). Traditionally, complex and multifaceted procedures needed long hours to complete, required physician operators to use major incisions, long-lasting anesthetics, as well as extended convalescence. The new approach employs the use of short-acting anesthetics and involves shorter recovery times. In other words, physicians no longer spend protracted follow-ups to ensure complete recovery from surgical procedures. All these advantages have far-reaching economic value because surgeons can maximize their talents, the government spends relatively less on health reimbursements, and patients remain well positioned to develop a quicker recovery in ASC settings.

The efficiencies attributed to ASCs revolve around the facilities' role in creating high-level flexibility among physicians. The disparities witnessed in recovery and preoperative times determine the differences in satisfaction and motivation levels between ASC and HOPD surgeons (1). Compared to the prevailing situations in HOPDs, for instance, ASC physician operators are more likely to operate from a single and strategically located facility. Since this location serves as their working point for multiple cases, the surgeons are in the best possible position to minimize delays (15). The small size and strategic location of ASC facilities reduce travel time wastage and increase physician productivity; thus, minimizing overall overhead costs that could be incurred in a complex hospital setting with many buildings and departments.

The turn-over time in operating rooms in ASCs remain significantly shorter than in HOPDs because teams of staff typically have more consistent and clear roles. Though hospital surgery departments are often organized in a systematic and proper manner, the presence of many employees, activities, and patients with a variety of needs play a central role in making physicians less productive and satisfied in the workplace (12). In contrast to employees in HOPDs who tend to work in shifts, staff members in ASCs usually have incentives to accomplish their duties quickly, leading to higher teammate satisfaction. On the other hand, hospitals tend to re-operate as well as add-on cases, which directly compete with planned and potential outpatient procedures, causing fatigue and decreased employee morale. The economic theory provides that favorable work environment in an organization is inextricably linked to satisfied employees, who often align their objectives with the already established organizational goals (16). It means that physicians working in an ASC remain committed to the whole process of holistic benefit maximization, while at the same time contributing toward the concerted effort aimed at minimizing health care costs both at the national and facility levels.

In addition to conducive work environments and timely execution of surgical procedures, ASCs contribute to increased physician satisfaction because of the ownership principle. Essentially, physicians with ownership stakes in a given ASC usually enjoy greater profits when and after performing procedures in such facilities rather than HOPDs (9,15). Individual physician's professional reimbursement is not linked to site of technical service. Physicians may share profitability of an ASC with ownership opportunities. Although some critics argue that this practice may lead to demand inducement, with some providers recommending unnecessary and risk-laden procedures in their ASCs, the government has strict quality laws in place, governing the operation of physician-owned ASCs (17). ASCs must be linked to group practice models or be an extension of the surgeon's practice. In essence, reduced operation costs benefits patients and physicians alike.

Physicians draw their satisfaction from the freedom involved in the decision-making process. As stated earlier, ASCs differ from hospital-based outpatient surgery centers because a group of individual physicians owns the facilities; they are empowered with the opportunity to opine on crucial decisions (9). For example, physicians have to decide on which patients to treat at HOPDs versus an ASC. The decision to operate a given patient at their ASCs may be driven by convenience, fulfilling amenities, greater flexibility with regard to scheduling procedures, and setting's efficiencies.

Physician-owners often consider economic, social, and non-economic factors when making vital decisions regarding whether to operate and treat given patients at their ASCs. A physician may choose to maximize their profits by treating a patient whose profit margin surpasses that of other patients with planned surgeries (15). In as much as this decision may be perceived negatively by opponents of

ASCs, proponents strongly argue that profit maximization alongside desirable patient outcomes conform perfectly well to the welfare agenda of any health care system¹⁶. For example, the act of treating the most at-risk patients for life-threatening complications at HOPDs involves optimizing better resources found in hospitals. Ultimately, recent studies have concluded that the differences between HOPDs and ASCs suggest that hospitals can only maximize on their efficiencies and physician satisfaction by adopting highly specialized and unique organizational models.

Criticism

The profitability associated with ambulatory surgical procedures continues to place the image of ASCs in bad light. Critics argue that some physicians are neither driven by patient well-being nor overall healthcare reduction costs, but by their self-interests (17). In particular, this school of thought argues that the concept of physician ownership has since made ASC operations a business affair in which individual physicians place great emphasis on maximizing their income. Physicians receive the facility's fee share when their patients pay the ASCs. Since they typically receive nothing when such patients pay the HOPD, physicians may resort to hijacking patients that are more profitable, treating them in their own ASCs. This behavior could have adverse effects on the profitability of HOPDs and general hospital revenues. One of the Missouri-based hospitals, St. Louis, recently reported a significant drop in their annual revenue by more than 23% (17). The administrator cited an ASC near the hospital as the cause of the loss. The practice remains a major problem because many hospitals subsidize a number of healthcare services offered in their departments, such as uncompensated and charity care.

The incentive problems attributed to physician ownership of an ASC tend to have adverse effects on a healthcare facility's efficiency. For example, inefficiencies may be witnessed in health care delivery if physicians choose to assign patients to particular ASCs or HOPDs for profitability purposes, not patient needs (15). Anecdotal evidence suggests that ASCs have a negative impact on the financial performance of hospitals.

Conclusively, it is evident that patient clinical outcomes as well as patient and physician satisfactions justify the potential economic advantage of undertaking surgical procedures in ASCs rather than HOPDs. The expanded health insurance coverage in the U.S. has presented policymakers and related stakeholders with opportunities to identify and explore change-driven ways through which the country would accommodate the rapidly increasing demand for outpatient surgical services, compelling individual physicians to create ASCs. Serving as the immediate alternative to hospital-based outpatient surgeries, the ASCs were established with the sole purpose of improving health care quality and reducing health care costs by either eliminating or minimizing reoperation and infection rates. ASCs remain economically beneficial for many reasons. In particular, the facilities play a central role in creating high-level flexibility among physicians. Patients typically pay far less coinsurance for surgical procedures done in the ASC setting than for similar procedures undertaken in the HOPD. Additionally, insurers in collaboration with Medicare currently pay approximately half of the total amount paid

in HOPDs for performing the same surgical procedures. Referring to CPT code 66982, extracapsular cataract extraction removal (ECER), for instance, Medicare pays a total of \$1,671 for the surgery in HOPDs, while under APCs the program pays only \$964 to ASCs for the same outpatient procedure. In essence, the overall economic benefits in a free market system attributed to ASCs revolve around efficient and flexible physician practice, the cost savings, patient satisfaction, high-level quality care.

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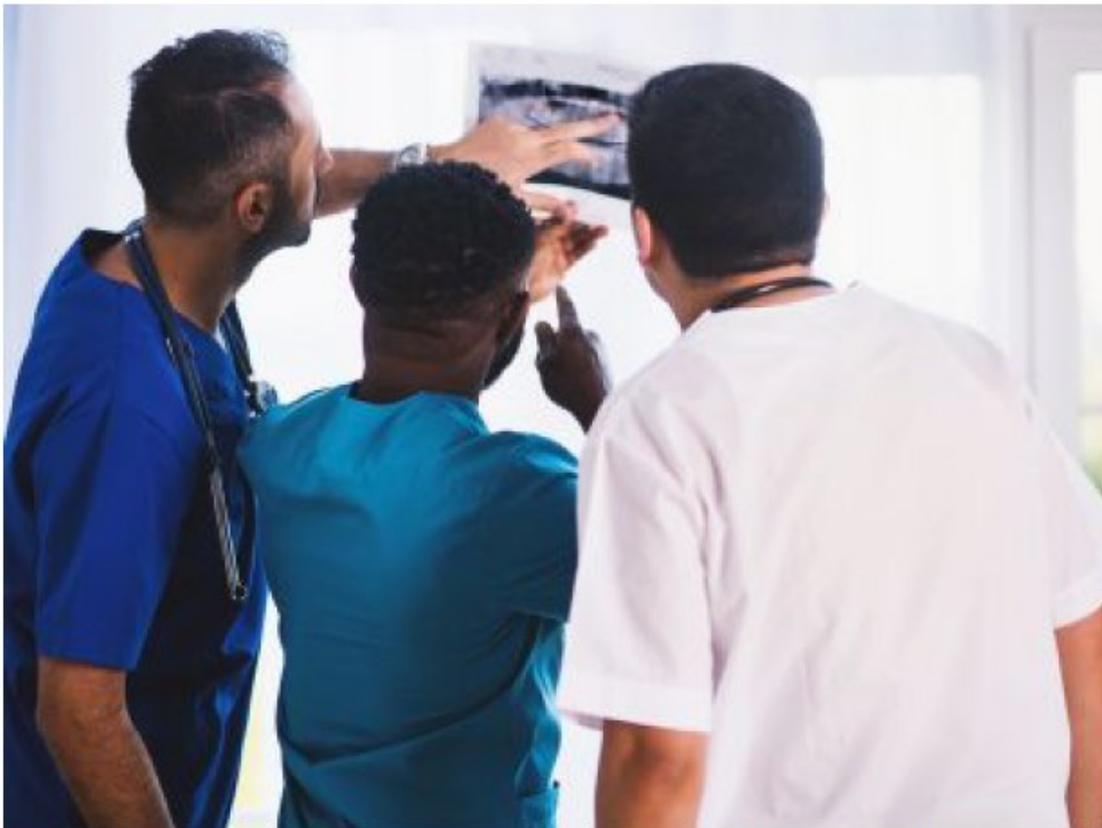
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As America's other epidemic, the opioid crisis, continues to inflict societal and economic damage on the U.S. healthcare industry, hospitals and clinicians are seeking new cost-effective and accurate ambulatory infusion pumps that can reduce and, in some cases eliminate, the need for postoperative opioids.

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The decentralization of healthcare has enabled a growing number of patients to recover from surgical procedures with home infusion therapy, a global market that is expected to reach \$41.6 billion by 2027, according to Research And Markets.

Home infusion when used with cGMP manufactured medicines, provides a safe, cost-effective approach to IV therapy that can contribute to improved quality of life for patients. Costs associated with outpatient surgery were shown to be consistently lower than services provided in a hospital setting, with savings ranging between \$1,928 and \$2,974 per course of treatment.

As healthcare providers work to reduce opioid prescriptions and succeed under value-based reimbursement models, leading organizations are leveraging a new infusion pump solution to deliver safer pain management, reduce costs and shorten length of stay, while improving outcomes and the patient experience.

Until now costs associated with outpatient ambulatory pain pumps in the ASC space have been considered a drain on supply budgets, having a negative impact on profitability and a low ROI. Finally the search has ended for a turnkey solution that is accessible, easy to use and affordable for any facility striving to deliver a more effective opioid avoidance strategy for the patients they serve.

A new era of postoperative pain management

Duke University Medical Center (DUMC) in Durham, N.C., has been using continuous catheters for home infusions for orthopedic patients, such as shoulder and knee replacement patients, for a couple of decades, said Jeff Gadsden, MD, anesthesiologist and division chief for orthopaedics, plastics and regional anesthesiology at the hospital.

Previously, the hospital utilized elastomeric pumps to deliver local anesthetic to patients postoperatively, but was limited by the technology in two key areas: "One of them is that the rate is difficult to control precisely, and the reservoir volume is also limited," Dr. Gadsden said.

DUMC sought a solution to these drawbacks and in 2020 implemented InFuTronix Solutions' Nimbus II PainPRO electronic ambulatory pain pump. The new technology enables clinicians to extend the duration of pain control by delaying the start of therapy for up to 24 hours, draws the local anesthetic from a medication bag with flexibility to program a larger infusion volume, and features a preprogrammed automatic bolus menu to customize pain management solutions.

"The Nimbus pain pump provided us with an increased reservoir capacity of up to one liter more volume, which gave a lot of our patients up to five days of relief with the catheter," Dr. Gadsden said. "And because it's an electronic pump, we can program it to run in different modes, in terms of a patient bolus or an automatic bolus, where the patient doesn't have to push a button or wait for the next hour for relief to carry on."

"Every day you can delay a patient from having to take their oxycodone after their operation is a victory," he added.

The ability of the Nimbus pain pump to provide relief for patients for up to five days is one of the device's most innovative features. It also enables patients to increase their amount of regional anesthetic if they experience discomfort, said Christian P. Christensen, MD, an orthopedic surgeon specializing in outpatient and rapid recovery hip and knee replacements at Bluegrass Specialty Surgery Center in Lexington, Ky.

Safeguards installed in the technology, that include Min-Max volume limits can be set based on patient specific information to prevent individuals from receiving more than the recommended amount of local anesthetic per hour.

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"It reduces the risks of a lot of complications associated with narcotics, such as nausea, constipation, confusion and respiratory depression," Dr. Christensen said. "But the most exciting part is that we're able to improve the patient's pain management by providing them with a button to elevate the dosing, so their first step when they're not comfortable is to reach for that button, rather than a narcotic."

"The addition of the patient bolus button is welcomed by patients and providers," said Gregory Hickman, MD, medical director and anesthesia director at the Andrews Institute Ambulatory Surgery Center in Gulf Breeze, Fla., who has been using outpatient continuous catheters in his practice since 2007.

Dr. Hickman adopted the electronic pump to give his patients the ability to bolus themselves and allow him to run a lower infusion rate. A lot of patients in his practice receive a 2 cc/hr interscalene catheter, which is enough anesthetic for most, but patients enjoy being able to boost their treatment if they need it. However, he has noticed that most patients choose not to.

Dr. Hickman is hoping to use an even smaller amount of anesthetic with InfuTronix's newer pump. "I can take that 2 cc/hr infusion to a 2 cc intermittent bolus every 3 to 4 hours and still give the patient the ability to give themselves a demand bolus dose if they need it," Dr. Hickman said. "I think we'll even use less (local anesthetic) over four days than we currently use, minimizing our opioid exposure and with even less exposure for the nerves that have been treated with local anesthetic."

Of the patients who undergo surgery, it's difficult to determine who could potentially become addicted to narcotics, Dr. Hickman said. "Our big thing is to get patients to use this pump for their pain management, and only take the narcotics if needed afterwards."

Bolstering care quality with patient-reported outcomes

"When patients are discharged, following up with a phone conversation goes a long way toward reassuring them that you understand what they're going through," Dr. Gadsden said. "It's important to offer support and encourage patients, so they continue physical therapy and achieve the positive outcome they desire."

The Nimbus II PainPRO pump is complemented with new software, the AfterOp™ Mobile App that tracks patient reported outcomes (PROs) throughout their treatment at no additional cost to the facility. Patients self-enroll in the software preoperatively, then answer five simple questions, so clinicians can gauge valuable information, including the patient's pain level, how many narcotics they are using, side effects they may be experiencing and how satisfied they are with their pain management.

Patients answer the same five questions each day creating the opportunity for practices to use that data as a benchmark to determine if patients are getting the quality care that they need. The AfterOp™ platform can even be used to track and compare patient outcomes using different analgesia techniques like single shot blocks.

"Nimbus automatically collects some of the data, in terms of how much local anesthetic is being used, how many times the patient is pushing the bolus button and correlates that with their reported pain scores," Dr. Gadsden said. "That offers us another different way to monitor how our patients are doing."

While using this technology to report data on their interscalene catheters, Dr. Hickman found that patients at Andrews Institute were complaining of being too numb and feeling more pain on the first day. However, the same patients were satisfied with their pain on the second day.

This new information led to the assumption that the initial block was causing patients to be very numb within the first 24 hours, and when they were transitioning to the catheter infusion using a more dilute local anesthetic concentration so not producing as intense of a block — they were noticing some pain until the infusion picked up.

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"After about two weeks of data with the AfterOp™ software, we realized this and changed our process then validated that the change was effective. We started doing the initial block with a less concentrated local anesthetic," Dr. Hickman said. "Therefore, the patients weren't quite as numb that first day, and their transition to the catheter infusion was a lot smoother. The patients actually reported less pain this way, even though it was less numb."

A cost-effective pain management solution

Boosting the reservoir capacity of the Nimbus II pain pump up to 1.5 liters, which can last up to five days, helps reduce the need for postoperative, oral opioid use and offers several economic benefits to healthcare organizations.

"The bottom line is it's really helped me lower my infusion rates," said Dr. Hickman, who uses the pump to increase the duration of his patients' infusions after knee replacements from three days to four days. "We really want to get the patient over the hump where their need for opioids is greatly reduced, and we feel like four days greatly reduces their need for opioids after surgery. And perhaps best of all is that we can confirm that by using the AfterOP™ software to see that a patients' pain doesn't spike after the pain pump is finished. We finally have a method to track pain scores and opioid use all the way out to POD 5 without having to burden our nurses. It gives a lot of meaningful visibility into our patients' recovery that we didn't have before."

If you can provide a pain-free experience with local anesthetic and avoid the use of opioids, it will naturally result in cost savings for the hospital, Dr. Gadsden said. Ultimately, that will prevent patients from having pain that causes readmissions and emergency room visits, which are a drain on the system — not to mention the societal and actual economic costs of the opioid crisis itself.

From a more granular financial standpoint, Duke saved "well into the six figures" over its annual projection of total catheter volume with InfuTronix's solution, compared to its previous elastomeric pump, while also adding the improved functionality, according to Dr. Gadsden.

"That was a huge cost-savings for our hospital," he said, "as well as getting that added patient satisfaction from the functionality."

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We think you might be interested in this webinar: [Understanding the hidden impact of utilization review on hospitals](#) which will take place on Wednesday, July 29th, 2020 at 11:00 AM CST

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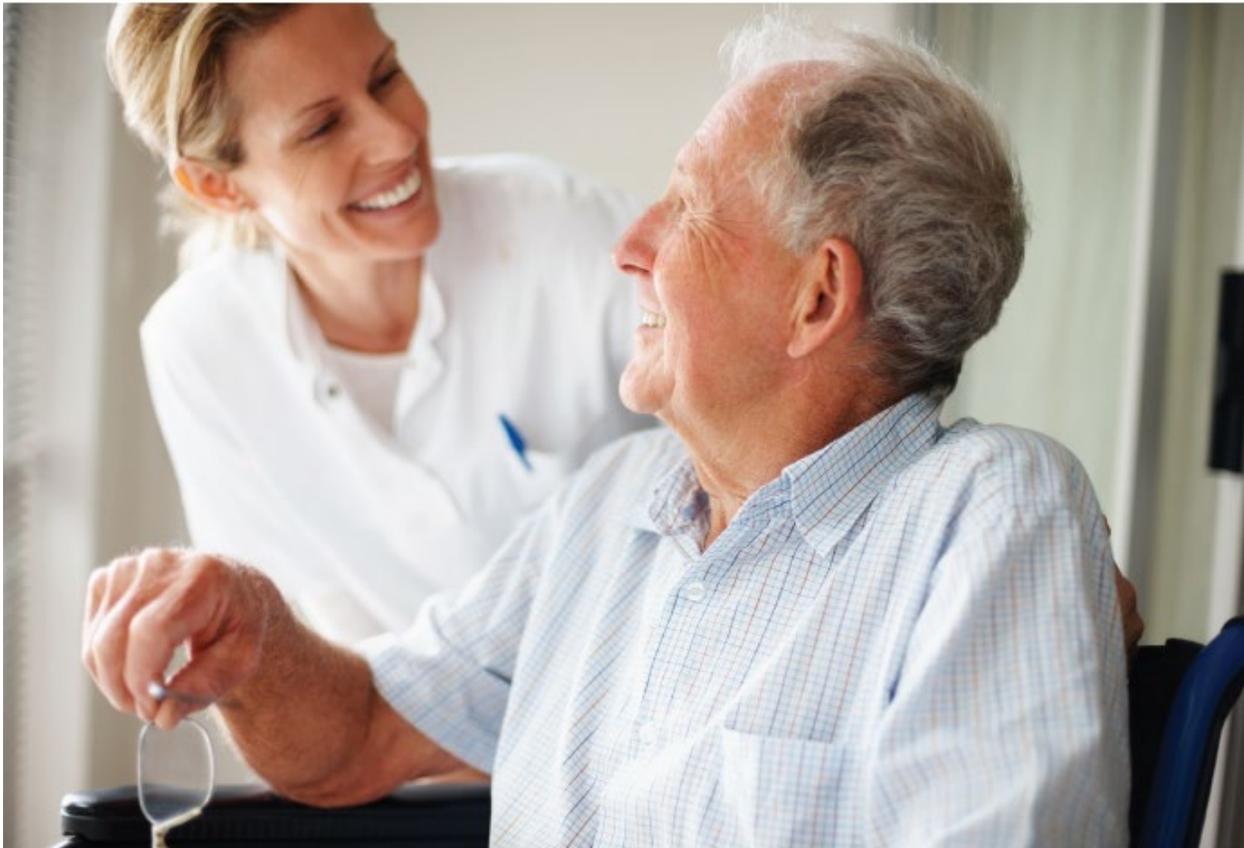
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Medicare Cost Savings Tied to Ambulatory Surgery Centers



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Acknowledgements

Dr. Brent Fulton, Assistant Adjunct Professor and Research Economist, and Dr. Sue Kim, Research Scientist, both from the Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, School of Public Health, University of California-Berkeley, conducted the cost savings analysis presented in this report.



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EXECUTIVE SUMMARY

Even in today's divisive political environment, there's at least one important area of consensus among policymakers: the threat posed by rising health care costs to both our national economy and the federal and state governments' balance sheets. This concern is particularly acute in the Medicare program, where costs are expected to rise dramatically as new treatments are developed and a generation of Baby Boomers enters retirement. Burgeoning health care costs, it seems certain, will be near the top of Washington, DC's agenda for years to come.

As they work to reduce health care costs and extend the solvency of programs like Medicare, policymakers will confront tough choices in the months and years ahead. Yet, they must also be alert for reforms that cut costs while maintaining quality services for beneficiaries. This analysis by Professor Brent Fulton and Dr. Sue Kim of the University of California at Berkeley explores one possible way for policymakers to generate substantial Medicare savings without reducing services or quality of care.

This study examines ambulatory surgery centers (ASCs). ASCs are technologically advanced medical facilities that provide same-day surgical procedures, including important diagnostic and preventive services like colonoscopies. Today, more than 5,300 Medicare-certified ASCs serve communities throughout our nation. These ASCs perform many of the same procedures as hospital outpatient departments (HOPDs). ASCs, however, are able to provide care much more efficiently and without the often costly overhead associated with hospitals. According to an industry calculation, the Medicare program currently reimburses ASCs at 58 percent of the HOPD rate, meaning that Medicare—and the taxpayers who fund it—realize savings every time a procedure is performed in an ASC instead of an HOPD.

When one considers the millions of same-day surgical procedures performed in ASCs through the Medicare program each year, the nationwide savings add up quickly. In this study, University of California at Berkeley's Professor Brent Fulton and Dr. Sue Kim analyze the numbers to determine how much ASCs save the Medicare program and its beneficiaries. They begin by analyzing government data to identify how much money ASCs saved Medicare in recent years, and then, forecast how much more ASCs will save Medicare in the future. The key findings are the following:

- During the four-year period from 2008 to 2011, ASCs saved the Medicare program and its beneficiaries \$7.5 billion. ASCs saved Medicare and its beneficiaries \$2.3 billion in 2011 alone.

- \$6 billion of these savings were realized by the federal Medicare program. The remaining \$1.5 billion went directly to Medicare beneficiaries. In other words, Medicare patients nationwide saved \$1.5 billion thanks to the less expensive care offered at ASCs.
- ASCs have the potential to save the Medicare program and its beneficiaries up to \$57.6 billion more over the next decade.
- Beneficiaries themselves also stand to save considerably in future years. Because Medicare reimburses ASCs at a lower rate than HOPDs, patients also pay a smaller coinsurance amount in an ASC. The authors use the example of cataract surgery, noting that a Medicare beneficiary will save \$148 on his or her coinsurance by electing to undergo surgery in an ASC instead of a hospital.

These findings have important implications for policymakers' ongoing discussion about how to most effectively reduce health care costs and the national budget deficit. The clearest implication is that, while public officials may indeed confront tough choices in the years ahead, the choice to encourage ASC use within the Medicare program is an easy decision. These findings suggest that ASCs offer a "win-win" for patients and the Medicare system, since they provide substantial savings without any corresponding reduction in quality or benefits.

While the future savings offered by ASCs are easily attainable, however, they are not inevitable. Indeed, a discrepancy in Medicare reimbursement policy could jeopardize the savings ASCs provide. Medicare uses two different factors to update ASC and HOPD payments—despite the fact that the two settings provide the same surgical services. ASC payments are updated based on the consumer price index for all urban consumers (CPI-U), which measures changes in the costs of all consumer goods; HOPD rates, meanwhile, are updated on the hospital market basket, which specifically measures changes in the costs of providing health care, and so, more accurately reflects the increased costs that outpatient facilities face.

Since consumer prices have inflated more slowly than medical costs, the gap in ASC and HOPD reimbursement



rates has widened over time. If the reimbursement rate for ASCs continues to fall relative to their HOPD counterparts, ASC owners and physicians will face increasing pressure to leave the Medicare system and allow their facilities to be acquired by nearby hospitals. When an ASC is acquired by a hospital, the Medicare reimbursement rate jumps roughly 75 percent. This threatens to turn the cost-saving advantage of ASCs into a perverse market incentive that drives ASCs from the Medicare program.

Already, the widening disparity in reimbursement has led more than 60 ASCs to terminate their participation in Medicare over the last three years. If the reimbursement gap continues to widen, more ASCs will leave the Medicare program. As a result, more Medicare cases will be driven to the HOPD, causing costs to both the Medicare program and its beneficiaries to rise.

Thus, realizing the full potential savings that ASCs offer will likely require policymakers to step in and halt this continuing "slide" in ASC reimbursement rates. Because Medicare saves money virtually every time a procedure is performed in an ASC instead of an HOPD, any policies that reduce the widening reimbursement gap between ASCs and HOPDs, and that otherwise encourage the migration of cases from the hospital setting into ASCs, will increase total savings for the Medicare program and its beneficiaries.

I. AN INTRODUCTION TO AMBULATORY SURGERY CENTERS

Only 40 years ago, virtually all surgeries and diagnostic procedures were performed in hospitals. Today, however, standalone facilities known as Ambulatory Surgery Centers (ASCs) provide outpatient surgical care in an atmosphere removed from the competing demands that are often encountered in an acute care hospital.

ASCs, as this report details, offer patients a cost-effective alternative to hospital outpatient departments (HOPDs). The first ASC opened in 1970, and today, there are more than 5,300 Medicare-certified ASCs in the United States. The overwhelming majority of these ASCs are at least partially owned by physicians, which allows for better control over scheduling, as procedures are not often delayed or rescheduled due to staffing issues or competing demands for operating room space from emergency cases.

ASC surgeons perform a diverse range of procedures, many of them diagnostic or preventive in nature. For example:

- ASCs perform more than 40 percent of all Medicare colonoscopies, contributing to a decade-long decline in colorectal cancer mortality.
- The ASC industry also led the development of minimally invasive procedures and the advancement of technology to replace the intraocular lens, a procedure that is now used nearly one million times each year to restore vision for Medicare patients with cataracts. Once an inpatient hospital procedure, it can now be performed safely at an ASC at a much lower cost.

What is an ASC?

Ambulatory Surgery Centers are modern health care facilities focused on providing a range of same-day surgical care, the same types of procedures that were once performed exclusively in hospitals. Today, as a result of medical advancements and new technologies—including minimally invasive surgical techniques and improved anesthesia—a range of procedures can be performed safely and effectively on an outpatient basis.

II. ASCS: SAVING THE SYSTEM

The more than 5,300 Medicare-certified ASCs in the United States today provide identical services to those performed at HOPDs throughout the country. ASCs are able to perform these surgeries much more efficiently than HOPDs. ASCs do not incur the often substantial administrative and overhead costs associated with a hospital. This enables ASCs to provide these services at substantially less cost to the Medicare program—and to its beneficiaries—than their hospital counterparts.

Today, Medicare reimburses ASCs at an average of 58 percent of the rate it reimburses HOPDs for the same procedures.

The savings that accrue over time, even for individual procedures, are significant. For example, in 2011, Medicare beneficiaries (excluding Medicare Advantage beneficiaries) had 1,709,175 cataract surgeries, of which, 1,120,388 were performed in ASCs and the other 588,787 in HOPDs. The parallel reimbursements per surgery were \$951 for an ASC and \$1,691 for an HOPD, meaning that every time a patient elected to receive treatment in an ASC, the Medicare program saved \$740. When applied across the 1,120,388 cataract surgeries performed in ASCs during 2011, the total savings for this single procedure reached \$829 million.



III. COST SAVINGS ANALYSIS

Data and Methodology

Professor Fulton and Dr. Kim conducted the following analysis, which looks at government data from the Centers for Medicare & Medicaid Services (CMS), to answer two fundamental questions. First, how much money did the Medicare program and its beneficiaries save from 2008 to 2011 because surgical and diagnostic procedures were performed at ASCs instead of HOPDs? Second, how much more could the Medicare program and its beneficiaries save over the next decade (2013–2022) if additional procedures move from HOPDs to the ASC setting during that timeframe?

Government data was used to ascertain the volume of procedures performed in ASCs, HOPDs and physician offices from 2008 through 2011, as well as the reimbursement rates for procedures done at ASCs and HOPDs. The volume data reports are from the Medicare Physician Supplier Procedure Specific file available from CMS. It excludes Medicare Advantage enrollees. The ASC reimbursement rates are from the ASC Addendum AA¹, and the HOPD reimbursement rates are from Hospital Outpatient Prospective Payment System Addendum.²

When forecasting future cost savings, the Berkeley analysts relied on CMS' predicted number of Medicare beneficiaries from 2013 to 2022. This data set also excludes Medicare Advantage enrollees.³

To ensure a realistic baseline for their analysis and predictions, the analysts limited the data set to the 120 procedures most commonly performed at ASCs in 2011, which represented 73 percent of the total volume of all procedures performed in ASCs in 2011.⁴

Past Savings

To estimate the savings generated by ASCs from 2008 to 2011, the analysts calculated the differences in reimbursement rates for each of the 120 procedures, then multiplied those differences by the number of procedures performed at ASCs. For example, the cataract surgery discussed in the previous section, when performed in an ASC, generated a total of \$829 million in savings in 2011. They applied the same method for all of the 120 procedures in each year from 2008 to 2011. They broke the numbers into savings that accrued to the Medicare program and savings that directly benefited beneficiaries. The beneficiary share of the total savings was 20 percent over the four-year period. Professor Fulton's and Dr. Kim's analysis found the following:

- During the four-year period from 2008 to 2011, the lower ASC reimbursement rate generated a total of \$7.5 billion in savings for the Medicare program and its beneficiaries.
- \$6 billion of these savings were realized by the federal Medicare program. The remaining \$1.5 billion was saved by Medicare beneficiaries themselves. In other words, Medicare patients nationwide saved \$1.5 billion thanks to the less expensive care offered at ASCs.
- These savings increased each year, rising from \$1.5 billion in 2008 to \$2.3 billion in 2011. The increase results from the total number of procedures growing from 20.4 million to 24.7 million (or 6.6 percent annually) between 2008 and 2011 as well as the reimbursement rate gap widening between HOPDs and ASCs. These savings were realized despite the share of total Medicare procedures performed in ASCs decreasing over this period, falling from 22.9 percent in 2008 to 21.7 percent in 2011.

¹ http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ASCPayment/11_Addenda_Updates.html

² <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Addendum-A-and-Addendum-B-Updates.html>

³ <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/downloads/tr2011.pdf> (p.51).

⁴ The data set was initially narrowed to 148 procedures, which represented about 90% of the total volume. Twenty-seven procedures were dropped because of missing data on the number of procedures or reimbursement rates. One additional procedure was dropped the ASC share was 100%, and it thus provided no basis for comparison with HOPDs.

These findings are illustrated in the following chart.

Descriptor	Annual Change	Total (2008—2011)	2008	2009	2010	2011
Number of procedures per 1,000 Medicare beneficiaries	5.6%		573.9	587.3	600.3	674.9
Procedures (million)						
ASC	4.7%	19.5	4.7	4.7	4.8	5.4
HOPD	5.9%	22.3	5.3	5.3	5.4	6.3
Physician office	7.7%	45.5	10.4	10.8	11.3	13.0
Total # of procedures	6.6%	87.3	20.4	20.8	21.5	24.7
ASC share*	1.5%	22.3%	22.9%	22.7%	22.3%	21.7%
Savings (\$billion) **						
Program	16.6%	\$6.0	\$1.2	\$1.4	\$1.5	\$1.9
Beneficiaries	14.8%	\$1.5	\$0.3	\$0.4	\$0.4	\$0.5
Total***	16.3%	\$7.5	\$1.5	\$1.8	\$1.9	\$2.3

Notes:

* The ASC share reported in the table is influenced by (or weighted for) high-volume procedures, such as cataracts. The analysts also calculated the ASC share based on a simple average across the 120 procedures. The ASC shares for 2008 to 2011 were 30.4%, 31.0%, 31.4% and 31.8%, respectively, each year, and averaged 31.1% over the four years.

**Savings are reported in nominal dollars.

***Totals may not sum and percentages may not total to 100% due to rounding.

Future Savings

The ASC industry is certain to continue generating savings to both the Medicare program and its beneficiaries over the next decade. The magnitude of these savings, however, will hinge on whether, and how much, the ASC share of surgeries grows within the Medicare program. That growth rate will, in turn, depend on market trends, demographic factors and how policymakers act—or decline to act—to encourage the use of ASCs within the Medicare program.

To estimate the savings Medicare would realize from having more procedures performed in ASCs from 2013 to 2022, Professor Fulton and Dr. Kim applied the methodology above to six scenarios. These six scenarios, which incorporate different assumptions about both the growth of ASC share and the overall growth of Medicare procedure rates, provide a range of possible savings offered by ASCs in the next decade.

The analysts divided the scenarios into two subsets. For subset A, they assumed that the number of procedures per 1,000 Medicare beneficiaries would remain constant at the 2010 rate. For subset B, they assumed that the 2011 rate would increase by 3 percent annually for each procedure.⁵ Within each subset, the analysts examined three scenarios:

1. The ASC share of each procedure in 2011 will remain constant between 2013 and 2022. *This is a baseline assumption that assumes ASC share does not grow at all in the coming decade.*
2. The ASC share of each procedure will increase by 2 percent per year from 2013 through 2022, equivalent to the average increase across procedures from 2008 through 2011.⁶ The analysts capped the share for any given procedure at 90 percent to avoid implausible assumptions.

3. The ASC share growth for each procedure will vary depending on that procedure's historical share growth rate. The analysts assumed three growth rates and, again, capped the share for any single procedure at 90 percent.

- The "low" group included procedures that had negative or no growth in the share of procedures performed at ASCs during 2008–2011. The analysts assumed that the ASC share of these procedures will increase 1 percent annually from 2013–2022. This group included approximately 30 percent of the procedures.
- The "middle" group included procedures that had up to 5 percent growth in share of procedures performed at ASCs during 2008–2011. It was assumed that the ASC share of these procedures will increase 5 percent annually from 2013–2022. This group included approximately 43 percent of the procedures.
- The "high" group included procedures that had greater than 5 percent growth in share of procedures performed at ASCs during 2008–2011. This group had a median ASC share growth rate of about 11 percent annually during 2008–2011. The analysts projected that the ASC share of these procedures will increase 10 percent annually from 2013–2022. This group included approximately 27 percent of the procedures.

The estimated savings are tabulated in the following table. The savings analysis and predictions for each individual procedure are tabulated in the appendix.

⁵ The number of procedures per 1,000 Medicare beneficiaries significantly increased between 2010 and 2011 (see table on page 9). For the lower-savings estimates (subset A), the lower 2010 rate was used as a baseline. For the higher-savings estimates (subset B), the 2011 rate was used as the baseline.

⁶ The 2% annual average increase is based on a simple average across the 120 procedures, meaning the average is not influenced by (or weighted for) for high-volume procedures, such as cataracts.

Projected Savings (\$Billion)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2013-2017	2018-2022	2013-2022
A. Volume of Procedures per 1,000 Medicare Beneficiaries Remains Constant and:													
A1. ASC share remains constant	\$2.3	\$2.5	\$2.8	\$3.0	\$3.2	\$3.3	\$3.5	\$3.7	\$4.0	\$4.2	\$13.7	\$18.7	\$32.5
A2. ASC share increases at 2% annually	\$2.4	\$2.7	\$3.0	\$3.3	\$3.6	\$3.8	\$4.1	\$4.4	\$4.8	\$5.2	\$14.9	\$22.5	\$37.3
A3. ASC share increases either 1%, 5% or 10% annually (depending on the procedure)	\$2.5	\$2.8	\$3.1	\$3.5	\$3.8	\$4.2	\$4.6	\$5.0	\$5.5	\$6.0	\$15.7	\$25.3	\$41.0
B. Volume of Procedures per 1,000 Medicare Beneficiaries Increases by 3% Annually and:													
B1. ASC share remains constant	\$2.8	\$3.1	\$3.5	\$3.9	\$4.3	\$4.7	\$5.1	\$5.5	\$6.0	\$6.6	\$17.6	\$27.9	\$45.5
B2. ASC share increases at 2% annually	\$2.9	\$3.3	\$3.8	\$4.3	\$4.8	\$5.4	\$5.9	\$6.6	\$7.4	\$8.2	\$19.1	\$33.4	\$52.6
B3. ASC share increases either 1%, 5% or 10% annually (depending on the procedure)	\$3.0	\$3.5	\$4.0	\$4.6	\$5.2	\$5.8	\$6.6	\$7.4	\$8.3	\$9.4	\$20.2	\$37.5	\$57.6

Note: Savings are reported in nominal dollars. In all scenarios, the Berkeley analysts inflated the reimbursement amounts over time using a forecasted Consumer Price Index for All Urban Consumers, which averaged 2.4% from 2013–2022.

Conclusions

ASCs saved the Medicare program and its beneficiaries \$7.5 billion over the four-year period from 2008 to 2011. Even under the most conservative assumptions, the future savings generated by ASCs are substantial.

- Under the baseline scenario, which assumes that neither ASC share nor Medicare procedure volume will grow over the next decade, ASCs will save the Medicare program an additional \$32.5 billion during that time.
- As the share of procedures performed in ASCs grows within the Medicare program, so do the savings. If ASC share within the Medicare system increases even slightly, as in scenarios B2 and B3, the savings could exceed \$57.6 billion over 10 years—an average savings of \$5.76 billion each year.
- Medicare beneficiaries also save money by choosing ASCs, since a lower Medicare reimbursement rate means that patients, in turn, pay a smaller coinsurance. While the forward-looking portion of this study does not examine coinsurance rates for each procedure, it is clear that the savings realized by the Medicare program imply additional savings for beneficiaries. Using the example of cataract surgeries: a Medicare beneficiary will pay coinsurance of \$338.20 for such a surgery to be performed in an HOPD, but only \$190.20 for that same surgery in an ASC—a \$148 savings that goes directly to the patient.

Further, the above estimates are quite conservative. Even the most "optimistic" scenario assumes that ASC share growth per procedure grows only modestly more quickly than historical averages, and that Medicare volume grows at a modest, and historically consistent, rate. If policy decisions or other factors cause either growth rate to accelerate further, the savings generated by ASCs within the Medicare system would certainly exceed the \$57.6 billion estimated here.



A final note: although this study examined only data from the Medicare program, ASCs typically also charge private payers, including those in the Medicare Advantage program, less than their HOPD counterparts. Thus, similar cost savings also exist in the commercial health insurance market and in the Medicare Advantage program. We believe it is important to quantify these private-side savings as well and encourage others to examine this subject in future studies.

IV. POLICY IMPLICATIONS AND CONSIDERATIONS

An aging population, along with inflation in health care costs, means that the federal government's expenditures through the Medicare program are projected to increase substantially in the coming years. Consequently, policymakers in Washington, DC, are exploring potential ways to reduce projected Medicare outlays and extend the program's solvency. We believe that this study offers an important contribution to that discussion. Two specific policy concerns stand out.

AVOIDING ASC TO HOPD CONVERSIONS

Our first and most important observation is that, while the future savings offered by ASCs are easily attainable, they are not inevitable. Because they provide identical services to HOPDs but do so at an average of 58 percent of the reimbursement rate that the Medicare program pays HOPDs for those services, ASCs represent a source of value to the program and the taxpayers who fund it. A discrepancy in the way Medicare reimbursement rates are updated, however, threatens to marginalize ASCs' role within the program.

CMS currently applies different measures of inflation to determine the adjustments it provides to its payment systems for ASCs and HOPDs each year. For ASCs, that measure is the CPI-U, which is tied to consumer prices. The index for HOPD reimbursements, on the other hand, remains tied to the hospital market basket, which measures inflation in actual medical costs. Since consumer prices have inflated more slowly than medical costs, the gap in ASC and HOPD reimbursement rates has widened over time. As the reimbursement rate for ASCs continues to fall relative to their HOPD counterparts, ASC owners and physicians will face increasing pressure to leave the Medicare system and allow their facilities to be acquired by nearby hospitals.

When an ASC is acquired by a hospital, in what is known as "an ASC to HOPD conversion," the Medicare reimbursement rate jumps roughly 75 percent and all savings to the Medicare program and its beneficiaries are promptly lost. The

continuing reduction in reimbursement led more than 60 ASCs to terminate their participation in Medicare over the last three years. If policymakers allow this gap in reimbursements to continue widening, the cost-saving advantage that ASCs offer could morph into a perverse market incentive that drives ASCs from the Medicare program.

Some in Congress have introduced legislation, which is titled the "Ambulatory Surgical Center Quality and Access Act," that aims to fix this problem. This bill would correct the imbalance in reimbursement indices and ensure that ASC reimbursements do not continue to fall relative to their HOPD counterparts. Additionally, it would establish an ASC value-based purchasing (VBP) program designed to foster collaboration between ASCs and the government and create additional savings for the Medicare system in the process.

ASCs AS PART OF BROADER COST-SAVINGS EFFORTS

Many of the policy options aimed at reducing Medicare costs that are being considered in Congress today involve important "trade-offs," where reduced outlays come at the expense of retirees' benefits. Often-discussed options such as raising the Medicare retirement age or increasing cost-sharing, for example, generate savings as a direct result of reducing the amount of benefits delivered by the Medicare program. The savings offered by ASCs, however, do not involve such trade-offs; they make it possible for the Medicare program, and its beneficiaries, to realize significant savings without any corresponding reduction in benefits.

There are more than 5,300 Medicare-certified ASCs throughout the country, all of which represent an important source of efficiency for the Medicare program and the taxpayers who fund it. We recommend that policymakers explore all potential options for encouraging further growth of ASC share within the Medicare system.

APPENDIX: METHODOLOGY AND CHART OF INDIVIDUAL PROCEDURE SAVINGS

The following table shows detailed statistics for the 120 procedures. In the table, the procedures are first sorted by the annual ASC share increase assumptions in Scenarios A3 and B3, which were 1, 5, and 10 percent annually (see Column "% ASC Share Growth Assumptions for A3 and B3"). Within the 1, 5, and 10 percent buckets, the procedures are then sorted based on the savings they generated in 2011 (see Column "Savings 2011").

The table shows the average annual change in the ASC share from 2008 through 2011, the 2011 ASC share of procedures and projected ASC share in 2022 if the share increases by 2 percent annually or in the range of 1 to 10 percent annually. In addition, it shows the 2011 and projected 2022 volume per 1,000 Medicare beneficiaries. Most importantly, those columns are followed by two sets of three columns that show the projected savings estimates in 2022 when the number of procedures per 1,000 Medicare beneficiaries remains constant and when the number of procedures per 1,000 Medicare beneficiaries increases by 3 percent per year. Within each set, the ASC share assumptions are based on the assumptions presented in the table on page 11.

The first row of the table illustrates that cataract surgeries (HCPCS 66984) alone generated a savings of \$829 million in 2011. In 2011, the ASC share of this procedure was 56 percent, and that share either increases to 62 or 69 percent depending on the scenario. Depending on whether the number of cataract surgeries per 1,000 Medicare beneficiaries increases and the share of procedures performed in ASCs, the projected savings for Medicare and its beneficiaries range from \$1.5 billion to \$2.95 billion in 2022.

The last row of the table shows column totals and averages (see page 9). In 2011, there were \$2.3 billion in savings for the 120 procedures, and the projected savings in 2022 range from \$4.2 billion to \$9.4 billion, depending on the scenario.

No.	HCPCS	HCPCS Description	Savings 2011 (\$/line)	Average Annual ACS Share Change 2005-2011	Projected ACS Share for 2022 (%)	2011 Values of Provisions per 1,000 Beneficiaries	2022 Values of Provisions per 1,000 Beneficiaries	Medicare 1,000 Medicare Beneficiaries Remain Constant		Medicare 1,000 Medicare Beneficiaries Increase by 5% per Year		% ACS Share Annual ACS Share for 2022 (4.B) 2111	
								A1. Baseline Savings for 2022 (ACS share constant) (\$/line)	A1. Savings for 2022 (ACS share increase 5% per year) (\$/line)	B1. Baseline Savings for 2022 (ACS share constant) (\$/line)	B1. Savings for 2022 (ACS share increase 5% per year) (\$/line)		
1	66814	Cataract surgery with IOL single	589	-3.56%	69%	54.9	76.0	\$15,000	\$1,200	\$16,200	\$1,600	1%	\$740
2	66812	Cataract surgery complex	561	-0.96%	52%	596	4.4	\$116	\$144	\$129	\$201	1%	\$740
3	64483	Inj foramen epidural/l5	500	-3.02%	35%	20.6	28.5	\$706	\$12	\$179	\$73	1%	\$729
4	62311	Inject spine/l5 (adj)	553	-13.67%	26%	26.1	31.4	\$73	\$91	\$82	\$188	1%	\$729
5	66821	After cataract laser surgery	540	-2.96%	43%	16.2	27.4	\$86	\$107	\$96	\$154	1%	\$769
6	29881	Knee arthroscopy surgery	525	-0.25%	39%	2.0	2.7	\$51	\$64	\$57	\$71	1%	\$983
7	28285	Repair of hamm toe	522	-0.22%	37%	2.4	3.3	\$38	\$47	\$43	\$64	1%	\$681
8	43235	Upper GI endoscopy diagnosis	521	-0.18%	34%	6.1	8.5	\$38	\$47	\$42	\$59	1%	\$288
9	64022	Debr paravertebral nerves l5	518	-4.98%	35%	4.4%	4.0%	3.6	5.0	\$28	\$34	1%	\$386
10	52000	Cystoscopy	516	-0.03%	8%	10%	9%	26.4	33.8	\$33	\$41	1%	\$244
11	62310	Inject spine/c4	514	-13.54%	30%	37%	33%	5.5	7.6	\$8	\$23	1%	\$229
12	29848	Wrist endoscopy/surgery	511	-0.10%	51%	63%	57%	0.7	0.9	\$20	\$25	1%	\$244
13	29823	Shoulder arthroscopy/surgery	510	-2.73%	28%	35%	31%	0.7	0.9	\$14	\$17	1%	\$1,460
14	63650	Implant neurostimulator	509	-20.07%	24%	29%	26%	1.2	1.7	\$10	\$12	1%	\$946
15	20810	Removal of support implant	507	-1.14%	26%	32%	29%	1.1	1.5	\$14	\$17	1%	\$720
16	28296	Connection of bunion	507	-0.91%	41%	50%	45%	0.5	0.7	\$15	\$18	1%	\$1,002
17	52015	Cystoscopy & ureter catheter	507	-0.11%	25%	31%	28%	0.9	1.3	\$12	\$15	1%	\$794
18	46381	Colonoscopy subincision bil	507	-4.10%	43%	54%	48%	1.5	2.0	\$7	\$9	1%	\$281
19	36361	Invert banded cv cath	506	-1.43%	7%	8%	7%	2.6	3.7	\$12	\$15	1%	\$927
20	29875	Knee arthroscopy/surgery	505	-1.21%	46%	57%	51%	0.3	0.4	\$8	\$10	1%	\$983
21	30520	Repair of nasal septum	505	-0.30%	30%	37%	34%	0.6	0.8	\$9	\$8	1%	\$773
22	52381	Cystoscopy and treatment	505	-0.75%	9%	11%	10%	2.7	3.7	\$11	\$13	1%	\$530
23	58558	Ilyoteroscopy biopsy	504	-2.25%	13%	17%	15%	1.1	1.5	\$7	\$9	1%	\$696
24	66406	Removal of eyelid	503	-0.03%	59%	73%	66%	0.2	0.2	\$5	\$6	1%	\$736
25	64626	Debr paravertebral nerve of l5	503	-7.96%	38%	48%	43%	0.8	1.2	\$4	\$5	1%	\$229
26	14041	Skin tissue reorganization	503	-2.49%	13%	16%	15%	1.0	1.4	\$5	\$6	1%	\$519
27	43251	Operative upper GI endoscopy	502	-0.85%	35%	44%	39%	0.6	0.9	\$4	\$5	1%	\$268
28	64627	Debr paravertebral in addition	502	-0.43%	30%	48%	43%	1.9	2.6	\$3	\$3	1%	\$80
29	44361	Small bowel endoscopy/biopsy	502	-1.36%	53%	66%	60%	0.3	0.5	\$4	\$5	1%	\$307
30	62264	Epilarynx on single day	502	-17.63%	29%	36%	32%	0.4	0.5	\$2	\$2	1%	\$386

No.	HCPCS	HCPCS Description	Savings 2011-2017 (\$million)	Average Annual Change in AS Case Charge 2010-2011	Baseline AS Case Charge 2011	Projected AS Case Charge for 2022	Projected AS Case Charge for 2022 (Share Increase)	2011 Value of AS Case Charge per 1,000 Medicare Beneficiaries	Projected Value of AS Case Charge per 1,000 Medicare Beneficiaries	Value per Medicare Beneficiary Savings Constant		Value per Medicare Beneficiary Savings 2019		Medicare-Adjusted AS Case Charge 2011
										(\$million)	(\$million)	(\$million)	(\$million)	
31	B3B2	Repair of wound or laceration	\$2	-4.69%	68	7%	6%	5.3	7.4	\$2	\$1	\$5	\$6	\$140
32	62219	Inj ect spine w/ cath (s) (d)	\$2	-18.47%	309	38%	34%	0.4	0.5	\$2	\$2	\$4	\$6	\$386
33	64520	N block lumbar/thoracic	\$1	-13.74%	23%	29%	26%	0.6	0.8	\$1	\$2	\$3	\$4	\$229
34	64650	N block other peripheral	\$1	-1.62%	196	2%	1%	10.2	14.1	\$1	\$1	\$3	\$4	\$226
35	11042	Deb subj tissue 20 sq cm <	\$1	-14.48%	1%	1%	1%	28.9	40.0	\$1	\$2	\$2	\$3	\$82
36	20552	Inj finger palm V2 mod	\$1	-7.74%	1%	2%	1%	8.3	11.5	\$1	\$1	\$2	\$2	\$163
37	43219	Upper GI endoscopy biopsy	\$143	0.38%	45%	5%	7.6%	32.8	45.5	\$143	\$103	\$416	\$509	\$700
38	45380	Colonoscopy and biopsy	\$187	1.11%	48%	59%	82%	21.8	30.2	\$187	\$245	\$336	\$380	\$523
39	45385	Lesion removal colonoscopy	\$82	2.10%	46%	58%	79%	17.2	23.9	\$162	\$102	\$278	\$293	\$403
40	45378	Diagnostic colonoscopy	\$66	0.27%	40%	49%	68%	16.2	22.4	\$157	\$195	\$268	\$300	\$324
41	29826	Shoulder arthroscopy/surgery	\$38	1.27%	33%	40%	56%	2.2	3.1	\$53	\$66	\$91	\$110	\$188
42	60105	Cohortical am/hl risk/ind	\$30	2.48%	52%	64%	88%	6.3	8.7	\$54	\$68	\$93	\$85	\$105
43	64721	Carpal tunnel surgery	\$25	1.01%	40%	50%	68%	3.0	4.2	\$50	\$62	\$85	\$72	\$90
44	64623	Distal pancreatectomy in adult	\$24	4.03%	36%	44%	61%	8.1	11.2	\$31	\$39	\$53	\$69	\$86
45	60121	Colon caecum not h/ck ind	\$24	2.22%	45%	56%	77%	5.8	8.0	\$42	\$52	\$72	\$68	\$84
46	29827	Arthroscop rotator cuff repr	\$23	3.71%	32%	39%	54%	1.4	1.9	\$44	\$55	\$75	\$66	\$82
47	29880	Knee arthroscopy surgery	\$21	1.64%	41%	51%	71%	1.5	2.1	\$44	\$55	\$76	\$59	\$73
48	46384	Lesion removal colonoscopy	\$19	0.93%	43%	52%	71%	4.5	6.3	\$40	\$49	\$68	\$56	\$69
49	67904	Repair eyelid defect	\$17	3.55%	63%	79%	90%	1.2	1.7	\$32	\$40	\$46	\$46	\$60
50	64484	Inj forearm epiflaxial add-on	\$16	3.71%	34%	42%	58%	11.2	15.6	\$23	\$29	\$40	\$46	\$58
51	26855	Incise finger tendon sheath	\$16	1.20%	44%	55%	76%	1.9	2.7	\$28	\$35	\$49	\$46	\$58
52	43248	Upper GI endoscopy/guide wire	\$14	0.86%	53%	67%	90%	2.6	3.6	\$25	\$31	\$42	\$39	\$49
53	29824	Shoulder arthroscopy/surgery	\$11	0.45%	33%	42%	57%	1.0	1.4	\$15	\$19	\$26	\$32	\$40
54	49305	Prop/chem inh redic >5 yr	\$11	2.77%	15%	19%	26%	1.9	2.7	\$23	\$28	\$39	\$30	\$38
55	67917	Repair eyelid defect	\$10	3.72%	60%	74%	90%	0.8	1.0	\$18	\$23	\$27	\$28	\$35
56	23412	Repair rotator cuff/chronic	\$10	3.46%	33%	41%	56%	0.6	0.8	\$20	\$25	\$34	\$27	\$34
57	14060	Skin tissue rearrangement	\$9	0.50%	18%	22%	30%	2.6	3.6	\$18	\$22	\$30	\$25	\$31
58	55700	Blepharoplasty	\$8	2.92%	12%	14%	20%	5.1	7.0	\$17	\$21	\$29	\$24	\$30
59	66180	Implant eye/shunt	\$8	3.44%	52%	65%	89%	0.3	0.4	\$16	\$20	\$27	\$22	\$27
60	43460	Diplate esophagus	\$8	1.82%	54%	67%	90%	1.9	2.7	\$8	\$11	\$14	\$14	\$18

MEDICARE COST SAVINGS TIED TO AMBULATORY SURGERY CENTERS

No.	HCPCS Description	Savings 2011-2011 (\$million)	Average Annual Change 2008-2011	Baseline: 2011ASC Share of Procedures	Projected ASC Share in 2022 (%)	Projected Increase (Share) (2022 vs 2011)	2011 Planned Increase for 1,000 Medicare Patients*	Projected Volume of Procedures 2022 vs 2011	Volume of 1,000 Medicare Patients in Hospital Contract		Volume of 1,000 Medicare Patients in ASCs		Indifference Point: Difference Between ASC Contract for 2022 & EB 2011
									ASC Share for 2022	2022 vs 2011 Increase (Million)	ASC Share for 2022	2022 vs 2011 Increase (Million)	
61	25447	\$7	1.12%	47%	58%	80%	0.4	0.5	\$14	\$17	\$23	\$26	\$1,184
62	43249	\$7	1.08%	30%	36%	52%	2.2	3.1	\$12	\$15	\$20	\$24	\$33
63	66170	\$6	4.40%	61%	76%	90%	0.4	0.5	\$13	\$16	\$19	\$23	\$26
64	29822	\$6	2.28%	36%	45%	61%	0.5	0.7	\$10	\$13	\$17	\$18	\$23
65	14040	\$6	1.83%	16%	20%	27%	2.1	2.9	\$13	\$16	\$22	\$18	\$23
66	28270	\$5	3.02%	28%	35%	46%	0.8	1.1	\$9	\$12	\$16	\$15	\$19
67	15260	\$5	4.70%	18%	22%	31%	1.5	2.0	\$10	\$12	\$17	\$14	\$18
68	45383	\$5	1.36%	36%	45%	62%	0.3	0.4	\$7	\$8	\$8	\$8	\$8
69	66711	\$5	1.70%	79%	90%	90%	0.3	0.4	\$7	\$8	\$8	\$8	\$8
70	67924	\$5	3.72%	61%	76%	90%	0.3	0.5	\$9	\$11	\$13	\$13	\$13
71	52353	\$4	4.90%	13%	16%	21%	0.8	1.2	\$8	\$10	\$13	\$12	\$15
72	67028	\$4	3.19%	1%	1%	2%	54.4	75.4	\$6	\$8	\$11	\$11	\$14
73	52344	\$4	1.27%	19%	24%	33%	0.7	0.9	\$7	\$9	\$13	\$11	\$13
74	64718	\$4	3.70%	36%	43%	62%	0.5	0.7	\$6	\$8	\$11	\$11	\$13
75	28308	\$3	1.92%	38%	48%	63%	0.4	0.5	\$5	\$7	\$9	\$10	\$12
76	26123	\$3	1.37%	47%	58%	80%	0.2	0.3	\$8	\$10	\$13	\$10	\$12
77	26160	\$3	0.77%	44%	53%	75%	0.4	0.6	\$6	\$8	\$11	\$10	\$12
78	67950	\$3	2.29%	64%	80%	90%	0.2	0.3	\$5	\$7	\$7	\$7	\$7
79	52224	\$3	4.55%	8%	11%	14%	1.3	1.9	\$7	\$9	\$12	\$9	\$12
80	52310	\$3	0.05%	9%	11%	16%	1.8	2.5	\$6	\$8	\$10	\$9	\$11
81	67961	\$3	1.27%	55%	69%	90%	0.2	0.3	\$5	\$6	\$9	\$11	\$14
82	52355	\$3	2.23%	14%	18%	24%	0.7	1.0	\$6	\$7	\$10	\$9	\$11
83	66906	\$3	0.17%	63%	78%	90%	0.2	0.2	\$5	\$6	\$7	\$8	\$10
84	64479	\$3	0.16%	31%	38%	53%	1.1	1.5	\$5	\$6	\$9	\$8	\$10
85	66250	\$2	1.01%	16%	19%	27%	0.7	0.9	\$4	\$5	\$7	\$6	\$7
86	14061	\$1	3.26%	1%	2%	2%	14.8	20.5	\$2	\$2	\$2	\$2	\$2
87	17311	\$1	0.48%	6%	7%	10%	2.8	3.8	\$1	\$1	\$1	\$1	\$1
88	13121	\$41	6.61%	68%	83%	90%	2.4	3.4	\$48	\$106	\$111	\$117	\$146
89	15823	\$13	10.88%	18%	23%	32%	1.5	2.1	\$25	\$31	\$31	\$31	\$36
90	50390	\$13	10.88%	18%	23%	32%	1.5	2.1	\$25	\$31	\$31	\$31	\$36

Medicare Cost Savings Tied to Ambulatory Surgery Centers



Produced with cost savings analysis from





REDUCING MEDICARE COSTS

*by Migrating Volume from
Hospital Outpatient Departments
to Ambulatory Surgery Centers*



Acknowledgments

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I. Executive Summary

Background:

More than 5,800 Medicare-certified ambulatory surgery centers (ASC) provide outpatient services to Medicare beneficiaries. On average, Medicare pays ASCs one-half of hospital outpatient department (HOPD) rates for the same procedures, meaning that every time a procedure for a Medicare beneficiary is performed in an ASC instead of an HOPD, the Medicare program saves money. This report seeks to update estimates of those savings to the Medicare program for the period 2011 to 2018 and project those savings for 2019 through 2028.

Methods:

We used Medicare claims and other publicly available data to examine the volume of procedures performed at ASCs, compare the payment rates of HOPDs and ASCs, and develop assumptions on future growth. We estimated historical and potential future savings by (1) estimating spending using HOPD payment rates instead of ASC payment rates and (2) comparing this “hypothetical” aggregate spending to actual ASC spending. We also estimated potential future savings for total knee arthroplasty (TKA) using outpatient migration of partial knee arthroplasty (PKA) as a model.

Results:

During the eight-year period from 2011 to 2018, the total Medicare savings generated by ASCs was \$28.7 billion. During the 10-year period from 2019 to 2028, projected total Medicare savings generated by ASCs is estimated to be \$73.4 billion. The ASC share of TKA and knee mosaicplasty is estimated to increase from 13.4 percent in 2020 to 18 percent in 2028, growing at 3.7 percent annually. If the growth rate of outpatient TKA matches growth previously seen in PKA, ASC savings would be \$2.95 billion from 2020 to 2028 for this one procedure alone.

Conclusion:

ASCs continue to offer substantial savings to the Medicare program. Much of the program savings since 2011 is attributable to a stable group of high-volume procedures, namely cataract surgery and colonoscopies. Policymakers should be wary of the growing payment disparity between ASCs and HOPDs that may discourage additional shifting of Medicare services to ASCs and should prioritize policies that incentivize safe migration of eligible procedures to the ASC setting to achieve maximum program savings.

II. Introduction & Background

This report examines ambulatory surgery centers (ASC) and their impact on Medicare spending. ASCs are medical facilities that provide same-day surgical, diagnostic and preventive services. The first ASC opened in 1970, and today more than 5,800 Medicare-certified ASCs provide care throughout the nation. Over time, medical advances and new technologies—including minimally invasive surgical techniques and improved anesthesia—have allowed a wide range of surgical procedures to be performed safely in ASCs. Today, ASCs perform many of the same procedures as hospital outpatient departments (HOPD) with greater efficiency and without the costly overhead expenses often associated with hospitals. Medicare currently reimburses HOPDs, on average, twice as much as ASCs performing the same procedures. This means that Medicare spends less every time a procedure is performed in an ASC instead of an HOPD.

As of 2018, ASCs perform roughly 6.8 million vital surgical, diagnostic and preventive procedures for Medicare beneficiaries each year. These include 75 percent of beneficiary cataract removals and 50 percent of colonoscopies. ASCs perform well over 100,000 colorectal cancer screenings per year, contributing to the decades-long decline in colorectal cancer incidence and mortality.¹

2013 Analysis of Medicare Cost Savings Tied to ASCs

In 2013, the Ambulatory Surgery Center Association (ASCA) and researchers at the University of California-Berkeley analyzed Medicare data to determine how much money ASCs had saved the program in recent years. They found that from 2008 to 2011, ASCs reduced costs to the Medicare program and its beneficiaries by \$7.5 billion, including \$2.3 billion in 2011 alone. The analysis also included six scenarios that projected future savings, with each scenario assuming different changes in outpatient volume and ASC share of outpatient procedure growth. The authors concluded that the future savings potential attributable to ASCs for the Medicare program was considerable, even under the most conservative assumptions. In the most generous scenario, in which both total volume and ASC share of Medicare procedures increased, ASCs were projected to save Medicare \$57.6 billion from 2013 to 2022.

The 2013 analysis made it clear that shifting Medicare patient cases to ASCs should be a priority for policymakers, as doing so provides savings to the program, and lower copays and deductibles to beneficiaries, without any reduction in care quality. At that time, the savings potential of ASCs was far from guaranteed as certain elements of Medicare payment policy were actively disincentivizing care in ASCs. For example, Medicare payments to ASCs were updated annually using an inflation factor separate than that used to update payments to hospitals. This discrepancy meant that the payment gap between ASCs and HOPDs widened over time, deterring the migration of care to the lower cost setting. While the Centers for Medicare & Medicaid Services (CMS) has temporarily addressed this inflation update discrepancy, the change has not been made permanent and other payment policy issues persist that continue to widen the gap between ASC and hospital reimbursement.

Trends in Outpatient Surgery

Despite the wide range of services available at ASCs, a small number of procedures have historically represented a large percentage of surgical volume performed on Medicare beneficiaries. For example, cataract removal with intraocular lens insertion (Healthcare Common Procedure Coding System [HCPCS] 66984) and upper gastrointestinal procedure with biopsy (HCPCS 43239) have been the top two most common codes performed at ASCs on Medicare beneficiaries since at least 2008.² According to the Medicare Payment Advisory Commission (MedPAC), just 28 procedures accounted for 75 percent of all Medicare volume at ASCs in 2018.³

Healthcare analysts project that 85 percent of all healthcare procedures will be performed outpatient by 2028, due in large part to advances in specialties like orthopedics, cardiology and spine, which are still overwhelmingly performed on an inpatient basis.

Recent advancements in surgical technique and technology have created opportunities for new medical specialties to move procedures to the outpatient setting. Healthcare intelligence firm Sg2 projects that 85 percent of all healthcare procedures will be performed outpatient by 2028,⁴ due in large part to advances in specialties like orthopedics, cardiology and spine, which are still overwhelmingly performed on an inpatient basis. CMS tends to be more conservative than private payers in approving procedures for outpatient reimbursement due to the higher-risk nature of its beneficiary pool. In 2019, however, the agency finalized proposals allowing new complex procedures, including coronary interventions and total knee replacements, to be reimbursed in ASCs. The extent to which these procedures, and others like them, shift to the ASC setting will strongly influence the amount of savings the Medicare program and its beneficiaries will realize in coming years.

Research Question

This analysis seeks to update the 2013 study *Medicare Cost Savings Tied to Ambulatory Surgery Centers*. By analyzing claims data in the period 2011 to 2018, we can determine real savings achieved by the Medicare program due to surgical and diagnostic procedures having been performed in ASCs rather than HOPDs. The report also seeks to project future savings that could be achieved from 2019 to 2028 by applying growth rates for surgical volume and ASC market share for major Current Procedural Terminology (CPT) code ranges. Finally, the report examines total knee arthroplasty (TKA) (HCPCS 27447) and knee mosaicplasty (HCPCS 29867) and offers projections of annual future savings attributable to these procedures migrating to the ASC space in the period 2020 to 2028.

III. Data & Methods

The complete list of data sources and full methodology can be found in Appendix A.

Data Sources

We used Medicare fee-for-service (FFS) claims files to identify procedure-level paid amounts, outpatient procedure volumes and the share of outpatient procedures performed at ASCs. Future growth in the Medicare population was estimated using census data, the Medicare Board of Trustees Annual Report and CMS-reported Medicare Advantage (MA) penetration rates. CMS Addendum B and ASC Addendum AA were used to determine baseline payment rates.

Past Savings

For each year from 2011 to 2018, we estimated ASC savings for each procedure by comparing the average HOPD claims paid amount with the average ASC payment. By using the real claims paid amount, rather than the reimbursement rates, we accounted for the complexity of the Medicare ASC and HOPD payment systems (particularly, their bundled payment structures).

Future Savings

The projection of future ASC savings incorporated assumptions regarding growth and composition of the Medicare enrollee population. Using 2011 to 2018 data, we calculated annual growth rates in the outpatient volume per enrollee and the ASC share for each HCPCS code range. Using 2018 outpatient volume as a baseline, we applied HCPCS-level annual growth rates to project future outpatient volume and ASC share. The baseline outpatient volume per enrollee was stratified by age, gender and race to match our population projections. Using 2018 Medicare payments as a baseline, we calculated payment rates for future years, taking into account recent changes in regulatory policy regarding inflationary update factors.⁵ For each procedure, the savings was estimated using the difference between the HOPD and ASC payments.

Future Savings for Orthopedic Surgery

We estimated potential future savings from increased ASC volume of total knee arthroplasty (TKA) (HCPCS 27447) and knee mosaicplasty (HCPCS 29867), which were added to the ASC Covered Procedures List (CPL) in CY 2020.⁶ Based on clinical similarities, we used growth of partial knee arthroplasty (PKA) (HCPCS 27446) in past years to develop assumptions regarding the growth of outpatient volume and ASC share for TKA and knee mosaicplasty.

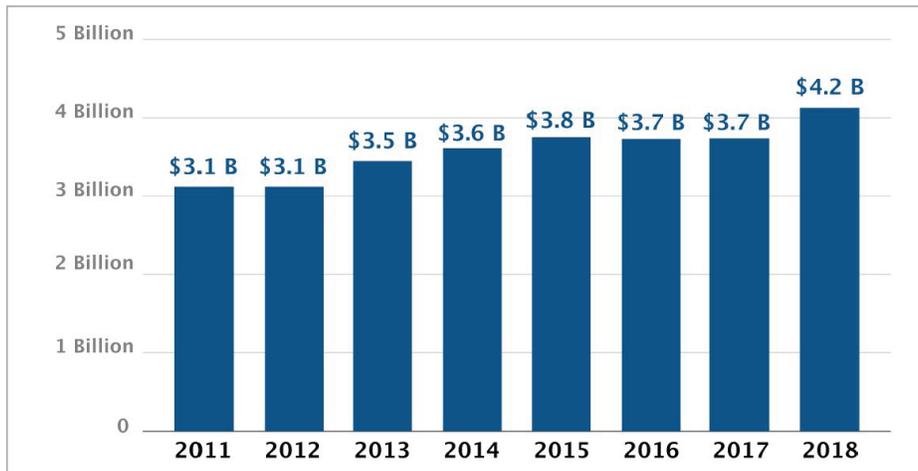
We projected TKA and knee mosaicplasty outpatient volume for future years by applying the annual growth rate of PKA volume from 2012 to 2018 (30 percent) to baseline 2018 TKA and knee mosaicplasty volume. We assumed a baseline ASC share for TKA and knee mosaicplasty equal to the ASC share for PKA in 2012 (13.4 percent) and applied an annual growth rate of 3.7 percent to estimate the ASC share for future years. Since TKA and knee mosaicplasty procedures in ASCs might have more restrictive clinical selection criteria than PKA, we modeled growth rates of outpatient volume at 100 percent, 75 percent, 50 percent and 25 percent of the PKA growth rate and calculated the ASC savings for each of these scenarios. We compared HOPD and ASC payment rates to project savings due to ASCs.

IV. Results

Past Savings (Appendix B - Table 1)

During the eight-year period from 2011 to 2018, the total FFS Medicare savings generated by ASCs was \$28.7 billion. The savings per year increased from \$3.1 billion in 2011 to \$4.2 billion in 2018. The increased savings resulted from the growth of the total number of ASC procedures, as well as the widening gap between HOPD and ASC payment rates. After seeing a slight decrease in annual savings attributable to ASCs in 2016 and 2017, savings increased considerably in 2018 likely due to high overall growth of outpatient Medicare volume.

GRAPH 1:
TOTAL PAST SAVINGS



The surgical category with the most Medicare savings was eye and ocular adnexa surgery, which accounted for approximately 40 percent of the ASC savings each year. Four specialties each accounted for more than \$3 billion in total savings in the period 2011 to 2018. Those specialties were eye and ocular adnexa, digestive system, nervous system and musculoskeletal surgeries.

Future Savings (Appendix B - Table 2)

During the 10-year period from 2019 to 2028, the total FFS Medicare savings generated by ASCs is projected to be \$73.4 billion. Much of the increase in savings relative to the 2011 to 2018 timeframe can be attributed to the sizeable projected growth in annual outpatient volumes and, therefore, larger Medicare spending on outpatient services in general. Savings due to ASCs is projected to increase each year, rising from \$4.3 billion in 2019 to \$12.2 billion in 2028, with an average growth rate of 10.9 percent annually.

GRAPH 2:
TOTAL FUTURE SAVINGS

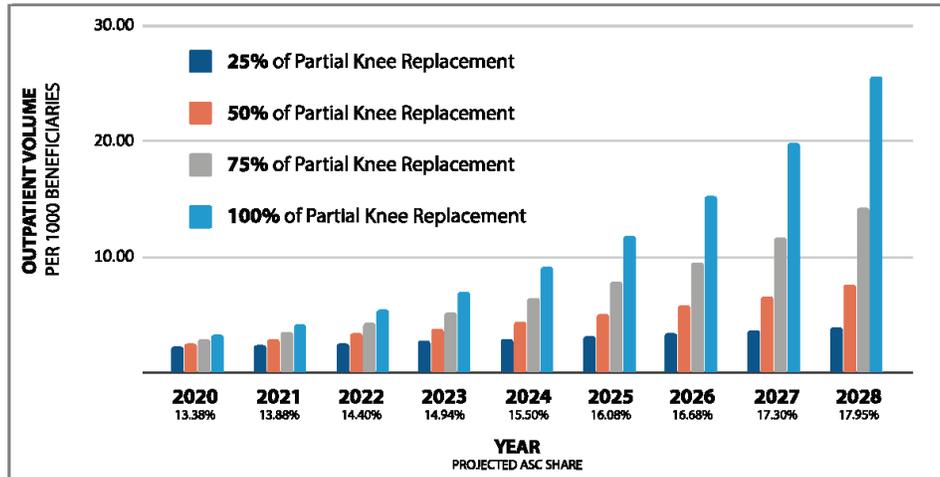


Savings generated by eye and ocular adnexa surgery would account for more than 30 percent of the total ASC savings each year. The surgical categories with the highest growth rates of ASC savings would be endocrine system and cardiovascular surgeries, with average annual growth rate in savings of 45.5 percent and 35.4 percent respectively. By 2028, five surgical specialties are each projected to save Medicare more than \$1 billion per year due to performance in ASCs. Those specialties are eye and ocular adnexa, cardiovascular, nervous system, digestive system and musculoskeletal surgeries.

Future Savings for Orthopedic Surgery (Appendix B - Table 3)

By assumption, the ASC share of TKA and knee mosaicplasty would increase from 13.4 percent in 2020 to 18.0 percent in 2028, growing at 3.7 percent annually. Assuming the outpatient volume of TKA and knee mosaicplasty would increase by 30 percent annually (the same growth rate of PKA from 2012 to 2018), the outpatient volume of TKA and knee mosaicplasty would increase from 3.2 per 1,000 beneficiaries in 2020 to 25.6 per 1,000 beneficiaries in 2028. The total FFS ASC savings from 2020 to 2028 would be \$2.95 billion. Under a more conservative assumption that the growth rate of the outpatient volume TKA and knee mosaicplasty would be 75 percent, 50 percent or 25 percent that of PKA, the total FFS savings attributable to ASCs from 2020 to 2028 would be \$1.8 billion, \$1.1 billion or \$0.7 billion, respectively. These savings are in addition to the \$73.4 billion projected above.

GRAPH 3:
PROJECTION OF SAVINGS BY TOTAL KNEE REPLACEMENT (HOPD VS. ASC)



V. Discussion

The Medicare program covered 61.2 million Americans in 2019, and policymakers will face difficult financial considerations if the program is to remain solvent in the decades to come. While the Supplementary Medical Insurance (SMI) Trust Fund, which covers Medicare Parts B and D, is expected to be adequately financed in the short term, Part B expenditures have significantly outpaced gross domestic product (GDP) growth and will continue to do so. Annual Part B payments to hospitals alone, which increased by \$29.5 billion from 2010 to 2019, are expected to grow by \$79.1 billion from 2020 to 2029.⁷

The findings of this analysis make it clear that ASCs provide considerable savings to the Medicare program, even as the types of procedures performed in ASCs have remained relatively stagnant over the past decade. Absent any major policy changes, ASCs are already expected to provide more than \$10 billion in annual savings to Medicare by 2027. Policymakers can further offset the expected growth in Part B payments to hospitals by prioritizing payment policies that encourage the migration of procedures to the lower-cost ASC setting.

Medicare Payment Policy Changes

The growing disparity between reimbursement rates for HOPDs and ASCs creates a financial disincentive to perform cases in the lower-cost setting at the expense of patients, taxpayers and the Medicare program. Whereas ASCs were once paid approximately 85 percent of the HOPD rate, they are currently paid on average one-half of what hospitals are paid for the same procedures.⁸ In recent years, CMS has signaled a willingness to address this issue and enact policies designed to encourage procedure migration to ASCs. The CY 2019 Hospital Outpatient Prospective Payment System (OPPS) and Ambulatory Surgical Center Payment System final rule contained two such policy changes.

Until 2019, annual inflationary updates to the ASC payment system were made using the Consumer Price Index for All Urban Consumers (CPI-U). The CPI-U tracks price changes in a sampling of consumer goods, of which only 9 percent have any relation to healthcare. In contrast, HOPD payments are updated using the hospital market basket index, which tracks prices for such surgery-related expenses as health worker wages and medical equipment and supplies. As consumer prices historically inflated more slowly than medical goods, ASCs received smaller annual updates despite having cost structures roughly aligned with HOPDs.

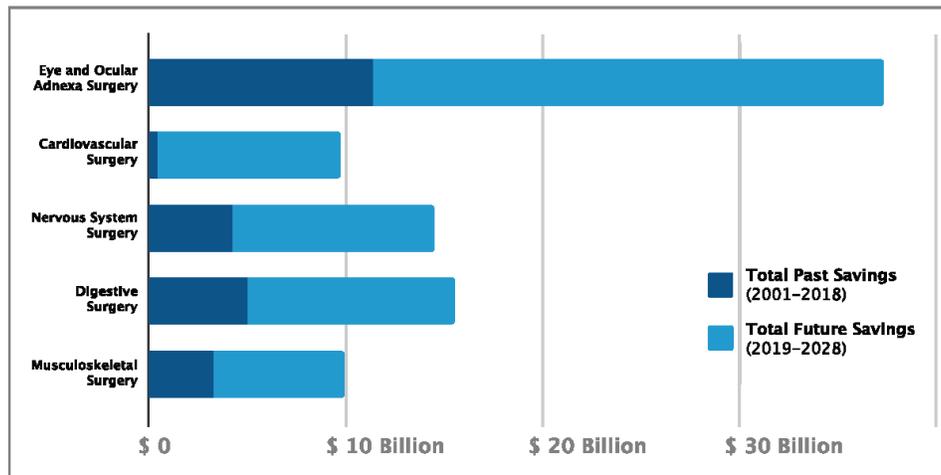
The 2019 OPPS/ASC final rule instituted a five-year trial period (2019–2023) during which ASC payments will be updated using the hospital market basket while CMS gathers data to make a permanent policy determination. Our analysis assumes that ASC payments move back to updates based on the CPI-U after the trial period ends. However, any policy that further widens the disparity between ASC and HOPD payments will cause the Medicare program to incur costs by disincentivizing procedures to migrate to the lower-cost setting. CMS could permanently align the update indices to ensure that ASC reimbursements do not continue to fall relative to HOPDs.

The 2019 OPPS/ASC final rule also made changes to Medicare payments for surgical devices used at ASCs. Until 2015, CMS fully contemplated the device cost in the ASC reimbursement rate only if the device cost was at least 50 percent of the total cost of the procedure when performed in the HOPD setting. Such procedures were deemed “device-intensive.” However, the 50 percent threshold meant that only a handful of procedures (75 procedures in 2014) qualified for device-intensive status. This made procedures with high device costs impractical to perform in the ASC setting as the facility would be forced to incorporate the device cost into its already reduced payment relative to the HOPD. In 2015, CMS reduced the threshold for device-intensive status to 40 percent, resulting in 61 additional codes receiving device-intensive status. CMS further dropped the threshold to 30 percent in 2019, qualifying an additional 128 procedures for device-intensive status. Ensuring adequate payment for surgical devices is necessary for incentivizing procedure migration to the ASC, especially for those specialties primed for future growth. Of the 128 newly added device-intensive procedures in 2019, 85 were musculoskeletal and 14 were cardiovascular—two specialties projected to provide more than \$1 billion each in annual savings to the Medicare program by 2028.

Looking Ahead: Migration of New Specialties

Other than total knee arthroplasty and knee mosaicplasty, this analysis does not contemplate savings for procedures that were approved for ASC payment after 2018 or which may be approved by CMS in future years. However, it does project which specialties will meaningfully increase program savings in future years. Endocrine and cardiovascular procedures, in particular, are expected to experience greater than 1,000 percent growth in savings over the next 10 years.

GRAPH 4:
COMPARISON OF TOTAL PAST AND FUTURE MEDICARE SAVINGS BY CPT GROUP



A good example of an endocrine surgical procedure that could provide substantial savings in the next 10 years is parathyroidectomy (HCPCS 60500). Although Medicare approved the procedure for ASC payment in 2014, HOPDs still perform more than 96 percent of the Medicare volume annually. Having the procedure performed in an ASC instead of a hospital offers significant savings to beneficiaries since the beneficiary copayment for a

parathyroidectomy in an ASC is currently \$521 less than the HOPD copayment.⁹ Migration of this procedure to ASCs also offers substantial savings for the Medicare program, but the current payment disparity—ASCs receive 46 percent of the HOPD rate—currently discourages movement. Bolstering the ASC payment rate, as well as approving additional endocrine surgical procedures such as thyroidectomies (HCPCS 60252) for ASC payment, would likely encourage cases migrating to the ASC setting and increase program savings.

The high projected savings tied to the performance of cardiovascular procedures in ASCs aligns with recent payment policy changes. In 2018, CMS finalized a change to allow certain “surgery-like” procedures outside of the surgical CPT code range (10000 through 69999) to be added to the ASC Covered Procedures List (CPL). Most commenters, including major specialty organizations such as the American College of Cardiology (ACC) and the Society for Cardiovascular Angiography & Intervention (SCAI), supported the change.¹⁰ The result was 17 cardiac catheterization procedures added to the CPL in 2019, followed by six codes related to percutaneous coronary intervention (PCI) added in 2020. In the CY 2020 OPPI/ASC final rule, CMS estimated that moving just 5 percent of coronary interventions from HOPDs to ASCs would save \$20 million in program payments and \$5 million in beneficiary copayments.¹¹ In comments supporting the proposal to allow PCIs in ASCs, ACC noted that many cardiovascular interventions involve the use of devices and expressed concern that “the ASC payment rate for these procedures may be insufficient to cover the costs of these procedures.”¹² In a position statement outlining protocols for PCIs in ASCs, SCAI also noted that low ASC reimbursement rates might not allow facilities to participate in registries that would offer important quality feedback.¹³ Neither the cardiac catheterization nor PCI procedures were contemplated in the savings projections of this report, but they clearly have the potential to increase the already considerable savings projected for cardiovascular procedures. HOPDs currently perform roughly 130,000 PCIs per year on Medicare beneficiaries at a payment rate 75 percent higher than the ASC rate.¹⁴

Even excluding orthopedic procedures like TKA, THA and other orthopedic procedures that might be approved in the future, musculoskeletal surgeries performed in ASCs are expected to save Medicare more than \$1 billion per year by 2028.

While endocrine and cardiovascular surgeries may be the specialties with the largest increases in projected savings, orthopedic surgery has undoubtedly been the most discussed specialty for future migration to ASCs. CMS’ addition of TKA to the ASC CPL in 2020 was met with some contention, and the savings projection reflects conservative estimates based on the migration pattern of PKA. CMS has proposed to add total hip arthroplasty (THA) to the ASC CPL in 2021, and research suggests that, with careful patient selection, THA can be performed at ASCs with no increased risk of complications compared to HOPDs.¹⁵ Even excluding TKA, THA and other orthopedic procedures that might be approved for payment in future years, musculoskeletal surgeries performed in ASCs are expected to save Medicare more than \$1 billion per year by 2028. This number could likely be magnitudes higher if even a small portion of procedures migrate to the ASC setting. HOPDs performed more than 53,000 TKAs in 2018 (the first year of eligibility for payment), which CMS reports was roughly 25 percent of all Medicare TKAs.¹⁶

Strengths and Limitations

This analysis has several strengths. Whereas the previous analysis calculated savings using average reimbursement rates as identified in Addendum B (for HOPDs) or the ASC Addenda, our analysis calculated average payments at the HCPCS level based on claims paid amounts. This approach is more accurate and accounts for differences in the two payment systems. Future projections incorporated HCPCS-specific assumptions on the growth of outpatient volume and ASC share for increased accuracy. We stratified the baseline volume for each HCPCS code by age, gender and race to more accurately match variations in the population groups as projected by census data and the Medicare Board of Trustees. Finally, we consider PKA to be a strong proxy as part of the TKA growth projection. The decision to use PKA was made after consulting a group of clinical subject matter experts, and we offer conservative savings scenarios in the event that TKA and knee mosaicplasty volume growth is lower than has been seen for PKA.

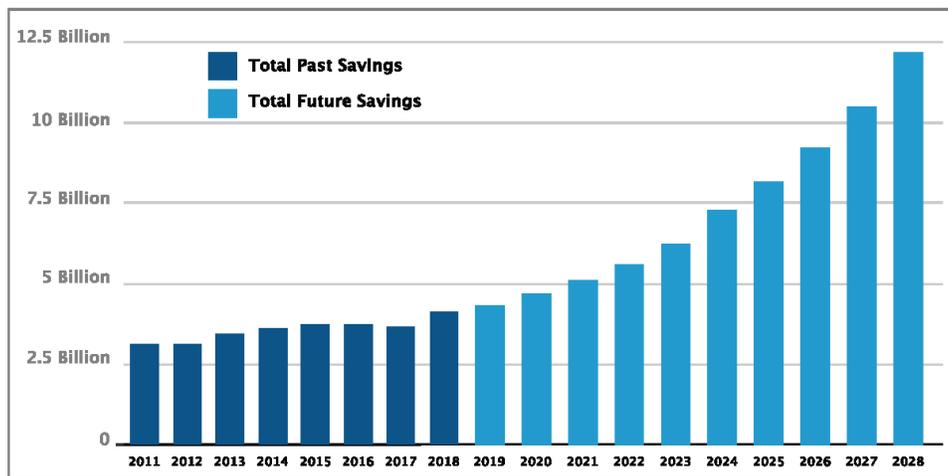
This analysis is not without limitations. From a broad perspective, we define savings by considering any procedure done in an ASC rather than an HOPD as having saved the Medicare program money via the reduced reimbursement rates in ASCs. We did not examine inpatient Medicare services and attempt to separate out savings due to procedure volume that is shifting from inpatient to outpatient sites of service.

The future savings projections are calculated by extending the HCPCS-level average annual exponential growth rate seen in the period 2011 to 2018. Reliance on a historical growth rate may overstate savings potential, particularly in codes that have experienced high recent growth in volume. The analysis also projects savings through 2028 for several category III CPT codes. These codes could have a substantially different savings impact once they are converted to category I status. Finally, the analysis also does not take into account codes that have been approved for ASC payment after 2018, other than TKA and knee mosaicplasty. This excludes some cardiovascular codes in particular that will likely contribute significantly to program savings attributable to ASCs in the coming decade.

Conclusions

ASCs continue to offer substantial savings to the Medicare program. Annual savings due to procedures performed in ASCs rather than HOPDs are estimated at more than \$3 billion per year since 2011. This finding confirms the projections of the 2013 study *Medicare Cost Savings Tied to Ambulatory Surgery Centers*. Much of the program savings since 2011 is attributable to a stable group of high-volume procedures, namely cataract surgery and colonoscopies.

GRAPH 5:
TOTAL MEDICARE SAVINGS AND PROJECTED SAVINGS (BY YEAR)



Medicare savings due to ASCs in the period 2019 to 2028 is projected at \$73.4 billion, driven by growing specialties such as endocrine, cardiovascular and orthopedic surgery. Even absent additional payment policies targeted at moving eligible cases in these specialties to the ASC setting, the general movement of procedures away from inpatient hospitals should provide considerable program savings. Policymakers should be wary of the growing payment disparity between ASCs and HOPDs and prioritize policies that incentivize safe migration of eligible procedures to the ASC setting.

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Appendix A: Full Methodology

Data Sources

We used Medicare claims and other publicly available data to examine the volume of procedures performed at ASCs, compare the payment rates of HOPDs and ASCs, and develop assumptions on future growth. Specifically, we used the following data sources to complete the study:

- 2011–2018 5 percent Carrier Standard Analytic Files (SAF)
- 2011–2018 5 percent Outpatient SAFs
- 2011–2018 Denominator Files
- 2018 100 percent Inpatient SAF
- 2017 U.S. Census Bureau National Population Projections Datasets¹
- 2018 American Community Survey²
- 2019 Medicare Board of Trustees Annual Report³
- Medicare Advantage Penetration Rate from the Centers for Medicare & Medicaid Services (CMS)⁴
- 2008–2018 Physician/Supplier Procedure Summary (PSPS)⁵
- ASC Payment Rates – Addenda⁶
- OPPS Payment Addendum B⁷

Past Savings

For each year from 2011 to 2018, we estimate ASC savings for each procedure among fee-for-service (FFS) enrollees as:

$$ASC\ Savings_{year} = ASC\ Vol\ per\ Procedure_{year} * Average\ ASC\ Savings\ per\ Procedure_{year}$$

We limited the analysis to FFS beneficiaries that received one of the Medicare-approved ASC Healthcare Common Procedure Coding System (HCPCS) codes. For each year from 2011 to 2018, total ASC volume was calculated using identified ASC procedures from the Carrier SAF. We used the 2011–2018 Outpatient SAFs to identify HOPD claims. We took Medicare payments for each HCPCS procedure at the line/revenue level and obtained the average payment for each HCPCS code for ASCs and HOPDs. By using the claims paid amount, we accounted for the complexity of the Medicare ASC and HOPD prospective payment systems (particularly, their bundled payment structures). For each procedure, we estimated the savings using the year-specific difference between the average HOPD payment and the average ASC payment. In addition to HCPCS-level analysis, we aggregated the savings to broader CPT categories.⁸

Future Savings

In general, we projected future ASC savings for each procedure as:

$$ASC\ Savings_{year} = FFS\ Enrollees_{year} * ASC\ Vol\ per\ FFS\ Enrollee_{year} * Average\ ASC\ Savings\ per\ Procedure_{year}$$

Where:

$$FFS\ Enrollees_{year} = Medicare\ Enrollees_{year} * (1 - Medicare\ Advantage\ Penetration\ Rate_{year})$$

$$ASC\ Vol\ per\ FFS\ Enrollee_{year} = (Outpatient\ Vol_{year} / FFS\ Enrollees_{year}) * ASC\ Share_{year}$$

The projection of ASC savings required assumptions regarding Medicare Advantage (MA) penetration rates, the growth of outpatient surgical volume per enrollee and the growth of the ASC share of outpatient surgeries. For MA penetration rates, we calculated county-level five-year moving averages of MA penetration growth rates using data from CMS. We also projected the number of Medicare beneficiaries by age, gender and race by linking census projections and the American Community Survey. The estimation was adjusted to match the number of Medicare beneficiaries predicted by the Medicare Board of Trustees Annual Report at the national level for 2019–2028.

To inform the assumptions regarding the growth of outpatient surgical volume per enrollee and the ASC share of outpatient surgeries, we obtained the volume of services performed at ASCs and HOPDs (collectively referred to as outpatient volume) and the number of FFS enrollees for 2011 to 2018. We examined the outpatient volume per enrollee and the ASC share for each HCPCS category. We calculated the yearly growth rate as an average annual exponential growth rate using 2011 to 2018 data. We used 2018 outpatient volume per enrollee and the ASC share for each HCPCS code as a baseline and applied the HCPCS-level annual growth rate to project for future years. We stratified baseline outpatient volume per enrollee by age, gender and race to match our population projections. For HCPCS codes without data in 2011, we applied CPT category-level annual growth rate to obtain the projections. We limited the future ASC share for each HCPCS category to between 0.5 percent and 87.5 percent.⁹

As in the analysis of estimating past savings, we obtained the average Medicare payments for each HCPCS procedure at the line/revenue level for ASCs and HOPDs. We used the Medicare payments in 2018 as the baseline. To address the recent change in regulatory policy,¹⁰ we updated both ASC and HOPD payments using the hospital market basket index from 2019 through 2023. After 2023, we updated ASC payments by the Consumer Price Index for All Urban Consumers (CPI-U)¹¹ and HOPD payments by the hospital market basket.¹² For each procedure, the savings was estimated using the difference between the HOPD and ASC payments.

Future Savings for Orthopedic Surgery

In CY 2020, CMS added a series of procedures to the list of Medicare-covered surgical procedures in ASCs, including total knee arthroplasty (TKA) (HCPCS 27447) and knee mosaicplasty (HCPCS 29867).¹³ We estimated potential future savings from increased ASC volume of TKA and knee mosaicplasty as:

$$ASC\ Savings_{year} = FFS\ Enrollees_{year} * (Outpatient\ Vol_{year} / FFS\ Enrollees_{year}) * ASC\ Share_{year} * Average\ ASC\ Savings\ per\ Procedure_{year}$$

Based on clinical similarities, we used growth of partial knee arthroplasty (PKA) (HCPCS 27446) in past years to aid in the development of assumptions regarding the growth of outpatient volume and ASC share for TKA and mosaicplasty. PKA was first approved for Medicare beneficiaries in the ASC setting in 2008. After examining the PKA outpatient volume and ASC share from 2008 to 2018 in PSPS files, we found that the ASC share of PKA fluctuated between 2008 and 2012 and the growth of the ASC share stabilized after 2012. From 2012 to 2018, the annual growth rate of the ASC share was about 3.7 percent. The annual growth rate of outpatient volume per enrollee was about 30 percent.

For TKA and knee mosaicplasty, we used 2018 outpatient volume as a baseline (1.82 per 1,000 enrollees) and used the annual growth rate of PKA volume from 2012 to 2018 (30 percent) to project TKA and knee mosaicplasty outpatient volume for future years. Since TKA and knee mosaicplasty procedures in ASCs might have more restrictive clinical selection criteria than PKA, we modeled growth rates of TKA and knee mosaicplasty outpatient volume at 100 percent, 75 percent, 50 percent and 25 percent of the PKA growth rate and calculated the ASC savings for each of these scenarios. We assumed the baseline ASC share in 2020 for TKA and knee mosaicplasty was 13.4 percent, which was the same as the ASC share for PKA in 2012, and applied an annual growth rate of 3.7 percent to estimate the ASC share for future years.

We compared HOPD and ASC payment rates to estimate savings due to ASCs. The average savings per procedure was calculated using the HOPD reimbursement rate from Addendum B and the ASC reimbursement rate in ASC Addendum AA. As for other procedures in ASCs, we updated the payments for future years using the hospital market basket index and the CPI-U.

Sources

1. US Census Bureau National Population Projections 2017-2060: <https://census.gov/data/datasets/2017/demo/popproj/2017-popproj.html>
2. American Community Survey: <https://www.census.gov/programs-surveys/acs>
3. Medicare Trustees Reports: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/TrusteesReports>
4. Medicare Advantage State/County Penetration: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MCRAdvPartDEnrolData/MA-State-County-Penetration>
5. Physician/Supplier Procedure Summary: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Physician-Supplier-Procedure-Summary>
6. ASC Payment Rates – Addenda: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ASCPayment/11_Addenda_Updates
7. OPSS Payment Rates – Addendum B: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Addendum-A-and-Addendum-B-Updates>
8. CPT Codes: <https://center.napc.com/cpt-codes>
9. The range was developed based on the lowest and highest 1 percentile of ASC share among all the HCPCS codes in 2018.
10. MLN Booklet: ASC Payment System: <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/AmbSurgCtrFeeppymtfcsh1508-09TextOnly.pdf>
11. CMS National Health Expenditure Projections: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected>
12. CMS Market Basket Data: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareProgramRatesStats/MarketBasketData>
13. 2020 OPSS/ASC Final Rule Fact Sheet: <https://www.cms.gov/newsroom/fact-sheets/cy-2020-medicare-hospital-outpatient-prospective-payment-system-and-ambulatory-surgical-center-0>

Appendix B: Tables

TABLE 1:
TOTAL PAST SAVINGS BY CPT* GROUP

CPT Group	HCPSC Range	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL SAVINGS 2011-2018
Eye and Ocular Adnexa Surgery	65091-68899	\$1,253,182,382	\$1,259,699,995	\$1,379,659,071	\$1,424,647,283	\$1,445,342,097	\$1,415,069,890	\$1,512,788,258	\$1,645,052,466	\$11,335,441,442
Digestive Surgery	40490-49999	\$526,712,015	\$520,429,643	\$573,639,445	\$606,376,407	\$649,594,061	\$626,323,533	\$659,086,188	\$737,352,860	\$4,899,514,152
Nervous System Surgery	61000-64999	\$410,009,509	\$426,624,544	\$493,514,424	\$534,785,576	\$560,298,322	\$595,803,876	\$553,121,067	\$583,941,071	\$4,158,098,390
Musculoskeletal Surgery	20100-29999	\$404,632,463	\$393,618,777	\$431,914,477	\$432,385,609	\$439,719,042	\$397,065,100	\$355,701,513	\$408,692,726	\$3,263,729,706
Integumentary Surgery	10030-19499	\$194,436,881	\$199,094,735	\$190,169,512	\$188,019,231	\$195,424,663	\$212,541,646	\$158,883,797	\$160,444,553	\$1,499,015,017
Urinary Surgery	50010-53899	\$104,742,833	\$104,829,062	\$112,002,408	\$124,313,618	\$130,480,345	\$129,895,395	\$136,144,097	\$152,549,833	\$994,957,591
Cardiovascular Surgery	33016-37799	\$24,189,339	\$22,946,665	\$26,057,455	\$29,730,854	\$32,951,875	\$32,205,988	\$59,486,412	\$143,317,511	\$370,886,100
Other CPT	Other	\$72,299,789	\$78,178,387	\$92,294,456	\$102,333,249	\$106,566,169	\$116,570,741	\$106,537,621	\$126,187,015	\$800,967,426
Respiratory Surgery	30000-32999	\$82,769,496	\$83,343,929	\$97,330,532	\$109,974,930	\$111,588,616	\$103,411,731	\$38,569,504	\$62,608,976	\$689,597,715
Category III Codes	0042T-0593T	\$5,925,144	\$6,058,713	\$19,633,311	\$20,184,450	\$36,406,819	\$55,525,468	\$35,542,103	\$59,196,917	\$238,472,925
Male Genital Surgery	54000-55899	\$20,781,466	\$17,723,117	\$19,196,119	\$19,127,583	\$23,757,039	\$24,244,362	\$29,358,187	\$32,434,979	\$186,622,853
Hemic and Lymphatic Surgery	38100-38999	\$3,454,156	\$3,424,308	\$4,336,867	\$4,476,874	\$6,519,399	\$3,496,759	\$14,286,666	\$13,640,842	\$53,635,871
Female Genital Surgery	56405-58999	\$14,095,624	\$11,239,451	\$12,373,317	\$11,770,394	\$11,047,765	\$8,251,300	\$10,096,796	\$11,111,836	\$89,986,483
Auditory Surgery	69000-69979	\$10,865,102	\$10,731,478	\$10,579,818	\$13,269,254	\$13,446,864	\$12,525,179	\$7,647,921	\$10,375,748	\$89,441,364
Endocrine System Surgery	60000-60699	\$276,511	\$529,236	\$597,015	\$1,290,707	\$1,628,701	\$2,398,455	\$2,377,660	\$2,867,463	\$11,965,748
Other Surgery	10004-69990	\$87,952	\$88,550	\$41,453	\$91,680	\$136,730	\$176,388	\$259,136	\$141,802	\$1,023,691
Maternity Care and Delivery Surgery	59000-59899	\$34,207	\$124,701	\$116,968	\$97,365	\$32,216	\$162,590	\$0	\$127,695	\$695,741
Fine Needle Aspiration Biopsy Surgery	10004-10021	\$6,293	\$5,212	\$10,995	\$7,953	\$17,745	\$21,520	\$8,507	\$24,218	\$102,443
TOTAL SAVINGS:		\$3,128,501,162	\$3,138,690,503	\$3,463,467,644	\$3,622,883,018	\$3,764,958,465	\$3,735,689,923	\$3,679,895,434	\$4,150,068,509	\$28,684,154,658

*Current Procedural Terminology

TABLE 2:
TOTAL FUTURE SAVINGS BY CPT* GROUP

CPT Group	HCPCS Range	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL SAVINGS 2019-2028
Eye and Ocular Adnexa Surgery	65091-68899	\$1,765,073,005	\$1,874,318,404	\$2,015,005,088	\$2,172,047,119	\$2,340,526,466	\$2,601,878,074	\$2,837,095,316	\$3,111,038,529	\$3,438,595,312	\$3,844,938,226	\$26,000,515,539
Cardiovascular Surgery	33016-37799	\$162,515,200	\$215,252,028	\$291,922,176	\$400,968,300	\$552,195,982	\$828,151,559	\$1,086,917,738	\$1,421,113,678	\$1,871,799,411	\$2,474,836,357	\$9,305,672,429
Nervous System Surgery	61000-64999	\$609,084,961	\$653,284,652	\$713,271,675	\$784,505,262	\$869,252,920	\$1,070,089,528	\$1,192,122,407	\$1,304,146,652	\$1,431,825,546	\$1,630,795,740	\$10,258,379,344
Digestive Surgery	40490-49999	\$754,129,254	\$795,636,027	\$850,302,996	\$906,789,447	\$967,909,133	\$1,067,324,514	\$1,150,109,067	\$1,242,898,949	\$1,349,586,533	\$1,475,865,210	\$10,560,551,128
Musculoskeletal Surgery	20100-29999	\$401,752,116	\$434,509,939	\$477,106,083	\$522,884,759	\$575,423,186	\$663,385,948	\$740,566,138	\$828,225,422	\$927,599,434	\$1,037,939,961	\$6,609,392,987
Category III Codes	0042T-0593T	\$79,270,691	\$99,177,171	\$125,168,056	\$157,518,405	\$197,420,318	\$262,752,429	\$331,870,194	\$418,073,630	\$525,476,755	\$658,968,462	\$2,855,696,111
Other CPT	Other	\$132,769,836	\$142,403,805	\$154,513,295	\$166,793,830	\$180,040,749	\$201,155,068	\$218,258,519	\$236,487,759	\$255,813,386	\$276,139,473	\$1,964,375,719
Urinary Surgery	50010-53899	\$155,044,145	\$160,911,261	\$169,199,594	\$178,541,635	\$188,250,281	\$204,237,837	\$216,783,871	\$230,208,722	\$244,594,585	\$259,907,542	\$2,007,679,473
Integumentary Surgery	10030-19499	\$162,999,493	\$168,190,671	\$175,803,428	\$183,837,614	\$192,301,436	\$206,500,275	\$217,583,995	\$229,269,095	\$241,623,553	\$254,831,203	\$2,032,940,763
Endocrine System Surgery	60000-60699	\$3,425,804	\$4,821,886	\$6,919,839	\$9,951,463	\$14,395,661	\$21,470,837	\$31,467,916	\$46,247,671	\$68,053,858	\$99,812,490	\$306,567,425
Respiratory Surgery	30000-32999	\$55,990,996	\$55,854,862	\$56,524,205	\$56,991,930	\$57,661,144	\$60,583,667	\$62,093,570	\$63,788,473	\$65,654,583	\$67,673,785	\$602,817,215
Male Genital Surgery	54000-55899	\$32,097,781	\$33,524,935	\$35,427,646	\$37,257,407	\$39,191,004	\$42,447,322	\$44,943,305	\$47,525,239	\$50,192,288	\$52,913,918	\$415,520,846
Hemic and Lymphatic Surgery	38100-38999	\$14,235,906	\$15,182,945	\$16,390,310	\$17,652,278	\$18,999,887	\$20,698,539	\$22,327,230	\$24,068,373	\$25,909,376	\$27,832,810	\$203,297,654
Auditory Surgery	69000-69979	\$8,787,470	\$9,328,131	\$10,057,160	\$10,878,972	\$11,785,741	\$13,732,115	\$15,118,251	\$16,666,332	\$18,399,351	\$20,337,694	\$135,091,216
Female Genital Surgery	56405-58999	\$10,027,697	\$10,157,640	\$10,432,734	\$10,647,695	\$10,893,303	\$11,601,449	\$11,971,897	\$12,333,514	\$12,702,627	\$13,069,012	\$113,837,570
Other Surgery	10004-69990	\$167,874	\$173,732	\$182,352	\$191,652	\$201,533	\$213,185	\$224,986	\$237,543	\$250,690	\$264,059	\$2,107,606
Maternity Care and Delivery Surgery	59000-59899	\$102,928	\$111,262	\$121,930	\$133,438	\$146,317	\$164,929	\$181,494	\$200,125	\$221,122	\$244,604	\$1,628,150
Fine Needle Aspiration Biopsy Surgery	10004-10021	\$10,092	\$10,533	\$11,112	\$11,438	\$11,843	\$12,312	\$12,773	\$13,226	\$13,649	\$14,040	\$121,018
TOTAL SAVINGS:		\$4,347,485,249	\$4,672,849,885	\$5,108,359,681	\$5,617,602,643	\$6,216,606,906	\$7,276,399,585	\$8,179,648,669	\$9,232,542,931	\$10,528,512,058	\$12,196,384,585	\$73,376,192,192

*Current Procedural Terminology

TABLE 3:
PROJECTION OF SAVINGS BY TOTAL KNEE REPLACEMENT (HOPD vs. ASC)
Assumed growth rate for outpatient volume per 1,000 beneficiaries compared to partial knee replacement

	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total Savings 2020-2028
Projected ASC Share	13.38%	13.88%	14.40%	14.94%	15.50%	16.08%	16.68%	17.30%	17.95%	
<i>The same as partial knee replacement</i>										
Outpatient Volume per 1,000 Beneficiaries	3.19	4.16	5.40	7.01	9.09	11.80	15.30	19.81	25.61	
TOTAL SAVINGS:	\$55,007,355	\$78,565,642	\$111,580,138	\$158,313,381	\$204,152,936	\$282,382,941	\$389,428,604	\$690,665,543	\$981,531,388	\$2,951,627,929
<i>75% that of partial knee replacement</i>										
Outpatient Volume per 1,000 Beneficiaries	2.84	3.48	4.26	5.21	6.37	7.80	9.53	11.63	14.17	
TOTAL SAVINGS:	\$48,864,894	\$65,780,468	\$88,052,013	\$117,749,242	\$143,114,693	\$186,575,730	\$242,511,669	\$405,378,471	\$542,981,686	\$1,841,008,866
<i>50% that of partial knee replacement</i>										
Outpatient Volume per 1,000 Beneficiaries	2.50	2.88	3.31	3.80	4.37	5.02	5.76	6.60	7.55	
TOTAL SAVINGS:	\$43,085,984	\$54,463,500	\$68,456,927	\$85,961,851	\$98,107,315	\$120,099,678	\$146,584,774	\$230,084,005	\$289,387,959	\$1,136,231,992
<i>25% that of partial knee replacement</i>										
Outpatient Volume per 1,000 Beneficiaries	2.19	2.36	2.53	2.72	2.92	3.14	3.37	3.61	3.86	
TOTAL SAVINGS:	\$37,670,625	\$44,525,188	\$52,330,035	\$61,443,053	\$65,569,493	\$75,054,318	\$85,655,668	\$125,714,994	\$147,847,680	\$695,811,054

ATTACHMENT 13- ALTERNATIVES

Alternative #1: Maintain the Status Quo

This alternative has no capital costs associate with it. However, it also does nothing to address the identified patient access issues that are motivating the pursuit of the project. Orthollinois are established providers already serving this community and already familiar with this patient population. Therefore, its evaluation that the current status quo is yielding unnecessary obstacles to the meaningful access to care should be afforded a degree of deference. Maintaining the status quo would continue to force patients into a more restrictive and more costly setting for the provision of care that also includes a greater likelihood of resulting in prolonged chronic pain. For these reasons, this alternative was not selected.

Alternative #2: Propose a Project of Greater or Lesser Scope

The capital expenditure associated with a larger-scope project would be, understandably, increased. The costs associated with a smaller project would be somewhat reduced, but not sufficiently to meaningfully reduce the expense, given the structures that are needed to complete and license a project of this nature. Adding additional specialties or surgical suites would allow for the generation of increased revenue, but would not be reflective of the current need assessed by the physician owners and, thus, would be wasteful and likely produce an unnecessary duplication of services. Redesigning the project to a smaller scope or removing one of the specialties sought to be provided would leave an unmet need. Neither option appears to offer sufficient financial benefit or sufficiently address access to care issues and, for these reasons, this alternative was not selected.

Alternative #3: Utilize Available Capacity at Existing Facilities

We fully embrace the principle of fully utilizing existing facilities, but there are several reasons this would not be a viable option for the proposed project. First and foremost, the identified volume of services required to serve an existing patient population will already fully utilize this facility, as proposed. That volume of care would be virtually impossible to serve in a single existing facility. Therefore, to provide care to this patient population would require fracturing the patient population and requiring both patients and physicians to seek care at multiple varying locations. Additionally, existing facilities have refused to provide the applicants with access to additional time in operating rooms, resulting in the aforementioned fracturing of the applicant's patient population. This adds to the burden to both physician and patient, required additional cost and travel, both of which are particularly inappropriate burdens to place on patients experiencing chronic pain. Given the increased cost, inefficiency, and administrative burden, this alternative was not selected.

Alternative #4: Acquire an Existing ASTC

Given the current marketplace, the uncertainty caused by the unprecedented suspension of elective surgical procedures, the existing backlog of required procedures, and the capacity of this practice, there did not appear to be an economical option available. Since the likelihood is that this would result in increased expense and reduced access, this alternative was not selected.

Alternative #5: Project as Proposed

The core issue driving this project is for the Applicants to pursue the best way to offer the surgical specialties of pain management, podiatry, and orthopedics to their patient population in the most efficient and cost-effective manner. Significant time and energy has been spent evaluating the above outlined options and the conclusion is that this project presents the most balanced and beneficial option, considering controlling expense, increasing access to care, and avoiding the pitfalls identified above. For those reasons, and given the deficiencies identified above, this is the alternative that was selected and is being presented to the Board for consideration and approval.

ATTACHMENT 14- SIZE OF PROJECT

The square footage identified in this application for the proposed projects, includes four operating rooms, 4 Stage 1 recovery stations and 12 Stage 2 recovery stations, is necessary, not excessive, and consistent with the standards identified in Appendix B of 77 Illinois Admin. Code Section 1110, as documented below.

SIZE OF PROJECT				
DEPARTMENT/SERVICE	PROPOSED BGSF/DGSF	STATE STANDARD	DIFFERENCE	MET STANDARD?
ASTC	10,980	11,000	N/A	Yes

ATTACHMENT 15- Project Services Utilization

The annual utilization expected of an ASTC is 1,500 hours per surgical or procedure room. The proposal for this facility is to establish four surgical rooms, making the objective for demonstrating utilization in excess of 4,500 hours. Based upon historical utilization and proposed patient volume, the facility should meet the state standard by its first year of operation.

UTILIZATION					
	DEPT./ SERVICE	HISTORICAL UTILIZATION (PATIENT DAYS) (TREATMENTS) ETC.	PROJECTED UTILIZATION	STATE STANDARD	MEET STANDARD?
YEAR 1	ASTC	2744	81%	> 4500 hours	Yes
YEAR 2	ASTC	2881	86%	> 4500 hours	Yes

The number of 2744 predicted procedures are derived from patients and procedures envisioned emanating directly from current patients and from multiple referral letters included in this application. The referral letters reflect proposed referrals to this facility over the first two years of its operation. The average procedure time of 107 minutes was derived from evaluating maintained documentation tracking patient procedures. With an envisioned 2729 procedures, the result would be 4867 hours of the available hours the surgical room could be utilized. In year 2, with a modest increase of 5% or a total of 137 procedures the result would be 5109 hours of the available hours the surgical room could be utilized.

Year 1

State Standard for Four Surgical Rooms	>4500 hours
Average Procedure Time in Minutes	107
Proposed Facility Utilization in Hours	4893
Proposed Facility Utilization in Minutes	293608
Total Projected Referrals in Year 1	2744
Total Facility Projected Use in Minutes	293608
Percentage of Utilization	81%

Year 2

State Standard for Four Surgical Rooms	>4500 hours
Average Procedure Time in Minutes	107
Proposed Facility Utilization in Hours	5109
Proposed Facility Utilization in Minutes	308267
Total Projected Referrals in Year 2 (5% Increase)	2865
Total Facility Projected Use in Minutes	308267
Percentage of Utilization	85%

Utilization Calculation	
Operational Days	231
Average Hours of Operation	6.5
Procedure Hours Per Operating Room	1501.5
Number of Operating Rooms	4
Total Procedure Hours	6006
Average Procedure Time (hours)	1.78
First Year Predicted Procedures	2744
First Year Utilization	81%
Second Year Predicted Procedures	2881
Second Year Utilization	86%

ATTACHMENT 24- 1110.235(c)(2)(B) – Service to GSA Residents

The proposed project is necessary to meet the needs of the residents of the planning area.

As noted in this application, the physician investors of OrthoIllinois Surgery Center of Elgin, LLC intend to cease referring patient to other area facilities, and service their caseload at the proposed facility. With four operating rooms, the ASTC will have ample capacity to meet the needs of OrthoIllinois and demand of the physician group's patients, while at the same time offering operating rooms to area providers under their open staff policy.

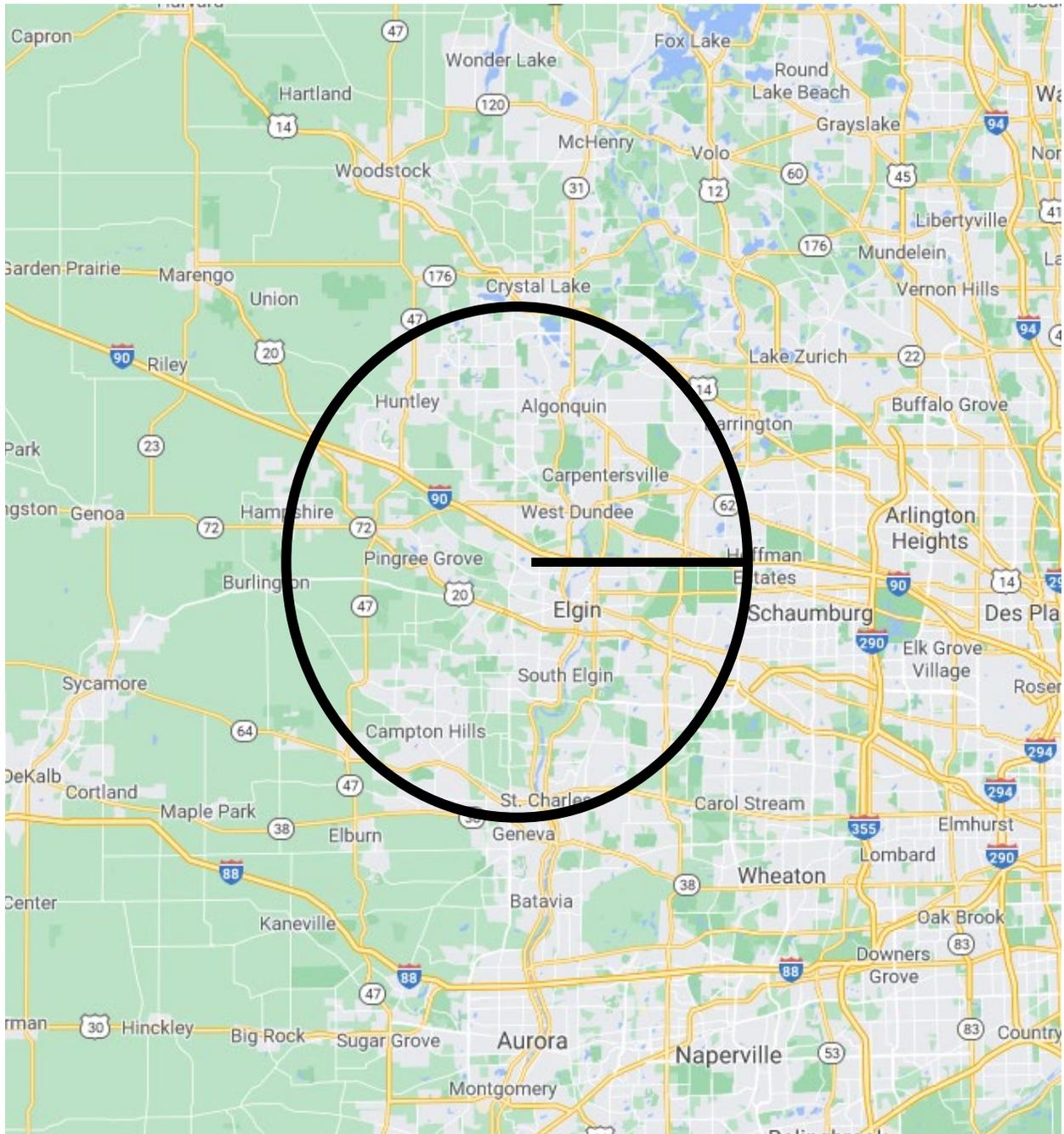
While both of the area hospitals have surgical capacity, as shown by the multiple studies, articles, and actions of the Centers of Medicare and Medicaid Services (CMS) there is an industry wide shift in moving orthopedic, pain, and podiatric survey services to the less costly ASTC setting when medically feasible. Over the last ten years the trends has only increased and will likely continue and expand into additional procedures that can be performed outside of the hospital surgical suite.

There are huge cost incentives, and ASTCs offer more patients better access to care a state of the art facility. The primary purpose of this project is to provide necessary health care to resident of the geographic service area ("SA") in which the ASTC will be located.

Listed on the following pages, in accordance with 77 Illinois Admin Code Section 1110.235(c)(2)(8) is the GSA consisting of all zip codes areas that are located within a 10 mile radius of the proposed site of the ASTC.

The zip codes and area within a 10 mile radius of the proposed facility is listed below. We have included a map of the multi-directional travel radiis of the proposed ASTC site.

10 Mile Radius of NE Corner of Aft Lane and Westfield Drive, Elgin Illinois



Zip Code	Population*	Community Name
60102	30,046	Algonquin
60010	41,208	Bartlett
60012	11,120	Crystal Lake
60014	48,550	Crystal Lake
60110	37,691	Carpentersville
60118	7,331	West Dundee
60120 60123 60124	110,849	Elgin
60136	6,879	Gilberts
60142	24,291	Huntley
60156	28,965	Lake in the Hills
60175	32,974	St. Charles
60177	21,985	South Elgin
60184	2,431	Wayne
60192	51,895	Hoffman Estates

*Per US Census Bureau

ATTACHMENT 24- 1110.235(c)(3) – Service Demand Establishment of an ASTC

We are submitting referral letters from ten Orthollinois physicians that include zip code specific patient origin analysis of the group's historical caseload and the patient origin to be serviced at the proposed facility is identical to that identified in the letter. These letters were prepared for the applicant's original application when the proposed facility was to be located at another site in Elgin, Illinois. That application was withdrawn and thus the following referral letters have not been used to support any other applications. All information contained in the letters remains accurate and the proposed referral would be directed to the Orthollionis Surgery Center of Elgin.



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Rolando Izquierdo, MD and I am a sports surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 500 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	250	
Amita St. Joseph Elgin	0	
Northwestern Huntley	10	
Algonquin Road Surgery Center	263	
		Total: 263

Based on my historical referrals, I anticipate referring 263 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Rolando Izquierdo, MD

Physician's Signature

Date

6/23/20

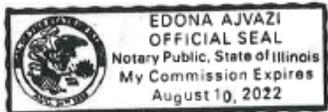
13457668 v1



(Please Print/Type Name) Edona Ajvazi
Signature of Notary:

Subscribed and sworn to before me

this 23rd day of June



Seal

13457668 v1



Rolando Izquierdo, MD
Geographic Location of Patients for 2019

Zip Code Number of patients

Advocate Sherman Hospital

53120	1
53128	1
53181	1
53546	1
60002	3
60005	1
60010	2
60012	7
60013	10
60014	29
60033	5
60034	2
60041	2
60042	3
60050	17
60051	13
60067	1
60071	1
60072	1
60081	2
60084	1
60097	6
60098	24
60102	19
60103	3
60110	3
60118	2
60120	1
60123	4
60124	1
60134	2
60135	1
60140	5
60142	25
60152	15
60156	16
60175	2
60177	1
60192	2
60510	1
60556	1

13457668 v1



61008	2
61020	2
61030	1
61032	1
61060	1
61065	1
61068	1
61071	1
61114	1
87506	1

Northwestern Huntley

60034	1
60039	1
60050	1
60098	2
60102	2
60142	1
60152	2

Algonquin Road Surgery Center

53115	1
53128	1
53181	1
53182	1
60010	1
60012	9
60013	17
60014	41
60021	2
60033	4
60034	2
60042	2
60047	1
60050	23
60051	12
60067	2
60071	2
60074	2
60081	5
60084	2
60097	10
60098	19
60102	12
60103	1
60110	6
60115	1
60118	1



60120	3
60123	2
60124	1
60140	4
60142	21
60152	3
60156	15
60169	1
60177	2
60178	2
60180	2
60195	1
61065	1
87506	1

13457668 v1



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Shawn Palmer, DO and I am a total joint surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 170 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	190	
Amita St. Joseph Elgin	400	
Northwestern Huntley		
Valley Ambulatory Surgery Center	170	
		Total: 420

Based on my historical referrals, I anticipate referring 420 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Shawn Palmer, DO

Physician's Signature _____

Date 7-7-2020

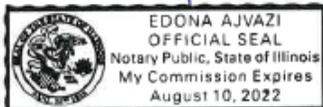
13457668 v1



(Please Print/Type Name) Edona Ajvazi
Signature of Notary:

Subscribed and sworn to before me

this 7th day of July, 2020



Seal



Shawn Palmer, DO
Geographic Location of Patients for 2019

Zip Code	Number of patients
61114	1
60101	1
60139	1
60146	1
60538	1
60060	1
60068	1
60081	1
60089	1
60070	1
60564	1
61108	1
60109	1
60121	1
61107	1
60008	1
60046	1
60073	1
60097	1
60108	1
60005	1
60194	1
60007	1
60056	1
60151	1
60506	1
60180	1
60185	1
60042	2
60188	2
60074	2
60119	2
60033	2
60115	2
60172	2
60169	2
61008	2
60133	2
60084	2
60193	2
60510	2
60135	3
60192	3
60004	3
60021	3
60178	3
60051	3
60012	3
60050	3

13457668 v1



60134	3
60067	4
60152	4
60107	4
60098	5
60174	5
60175	5
60047	5
60136	6
60103	6
60012	7
60013	8
60156	14
60014	16
60177	16
60140	17
60010	17
60102	19
60110	19
60118	22
60124	26
60120	28
60142	36
60123	50

13457668 v1



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Tom Stanley, MD, MPH and I am a spine surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 469 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	206	
AMITA St. Joseph Elgin	79	
Northwestern Huntley	44	
Algonquin Road Surgery Center	140	
		Total: 320

Based on my historical referrals, I anticipate referring 320 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Tom Stanley, MD, MPH

Physician's Signature 

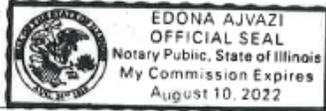
Date 6/23/2020

13457668 v1



(Please Print/Type Name) _____
Signature of Notary: Edona Ajvazi

Subscribed and sworn to before me
this 23rd day of JUNE



Seal

13457668 v1



Tom Stanley, MD, MPH
Geographic Location of Patients for 2019

Zip Code Number of patients

Algonquin Road Surgery Center

60010	1
60014	7
60033	1
60047	1
60050	1
60051	1
60070	1
60098	1
60102	10
60107	3
60110	9
60118	3
60119	1
60120	4
60121	2
60123	12
60124	14
60134	1
60135	1
60136	4
60137	3
60140	12
60142	19
60151	1
60152	2
60156	5
60174	1
60175	6
60177	7
60178	2
60194	1
60510	1
60563	1
61065	1

Northwestern Huntley

60002	1
60012	1
60013	1
60014	6
60033	1

13457668 v1



60048	1
60050	3
60098	6
60102	1
60123	2
60124	1
60140	3
60142	7
60152	1
60156	7
60563	1
61065	1

AMITA St. Joseph Elgin

60014	2
60030	1
60050	2
60072	1
60073	1
60081	1
60098	3
60102	6
60106	1
60109	1
60110	3
60118	1
60120	5
60123	18
60124	4
60136	1
60140	4
60142	7
60146	1
60148	1
60152	2
60156	3
60175	3
60177	3
60178	1
60184	1
60542	1
61265	1

Advocate Sherman Hospital

53147	1
60007	1
60010	2
60013	1
60014	13

13457668 v1



60047	1
60050	4
60061	1
60072	1
60074	1
60081	1
60084	3
60097	1
60098	6
60102	12
60103	1
60107	1
60110	9
60112	1
60118	15
60120	13
60123	25
60124	15
60135	3
60136	3
60140	16
60142	21
60143	1
60150	1
60152	5
60156	13
60175	2
60177	7
60194	1
60554	1
61008	1
61068	2

13457668 v1



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Geoffrey Van Thiel, MD and I am a sports surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 136 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	24	
Amita St. Joseph Elgin	0	
Northwestern Huntley	16	
Algonquin Road Surgery Center	96	
		Total: 111

Based on my historical referrals, I anticipate referring 111 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Geoffrey Van Thiel, MD

Physician's Signature  Date 6/23/20

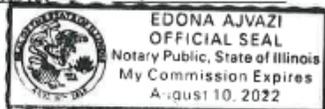
13457668 v1



(Please Print/Type Name) _____
Signature of Notary: Edona Ajvazi

Subscribed and sworn to before me

this 23 day of June



Seal



Geoffrey Van Thiel, MD
Geographic Location of Patients for 2019

Zip Code Number of patients

Sherman Hospital Elgin

60013	1
60020	1
60050	1
60051	2
60071	1
60073	2
60081	1
60098	1
60102	1
60110	2
60120	1
60123	1
60140	2
60142	2
60169	2
60510	1
61104	1
61107	1

Northwestern Huntley

60012	1
60014	5
60050	4
60097	2
60098	2
60142	1
60156	1

Algonquin Road Surgery Center

30308	1
53128	1
60012	9
60013	6
60014	16
60033	2
60041	1
60042	2
60047	1
60050	1

13457668 v1



60051	1
60067	1
60074	2
60081	1
60089	1
60098	8
60102	6
60110	4
60118	2
60123	2
60135	2
60136	1
60140	3
60142	7
60146	1
60152	1
60156	5
60178	1
60503	1
61020	1
61061	1
61063	1
61065	1
61111	1
61132	1



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is John Daniels, MD and I am a total joint surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 502 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	0	
Amita St. Joseph Elgin	0	
Northwestern Huntley	419	
Algonquin Road Surgery Center	84	
		Total: 150

Based on my historical referrals, I anticipate referring 150 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

John Daniels, MD

Physician's Signature

Date

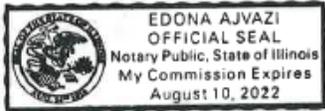
6/23/20

13457668 v1



(Please Print/Type Name) Edona Ajvazi
Signature of Notary:

Subscribed and sworn to before me
this 23rd day of June



Seal

13457668 v1



John Daniels, MD
Geographic Location of Patients for 2019

Zip Code Number of patients

Algonquin Road Surgery Center

60012	5
60013	2
60014	13
60033	1
60034	1
60042	3
60050	7
60051	5
60056	1
60081	4
60097	2
60098	7
60102	2
60110	2
60120	1
60140	5
60142	12
60152	1
60156	4
60552	1
61030	1
61038	1
85120	1
89141	1

Northwestern Huntley

34207	1
53120	1
53121	1
53147	3
53181	2
60002	1
60010	1
60012	13
60013	11
60014	63
60020	3
60021	3
60031	1

13457668 v1



60033	13
60034	1
60039	1
60041	3
60042	1
60046	1
60047	3
60050	40
60051	23
60070	1
60071	3
60072	2
60073	2
60081	8
60083	1
60084	3
60097	12
60098	45
60102	18
60103	1
60107	1
60110	3
60118	4
60120	1
60123	2
60124	2
60136	1
60140	4
60142	71
60152	18
60156	12
60169	1
60177	1
60180	2
60423	1
60510	1
60525	1
61008	1
61012	2
61036	2
61065	1
61327	1



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Kelly Holtkamp, MD and I am a hand surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 660 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	34	
Amita St. Joseph Elgin	0	
Northwestern Huntley	29	
Algonquin Road Surgery Center	597	
		Total: 597

Based on my historical referrals, I anticipate referring 597 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Kelly Holtkamp, MD

Physician's Signature Kelly A Holtkamp

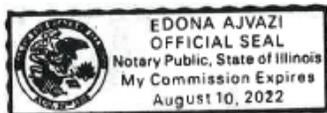
Date 6/24/2020

13457668 v1



(Please Print/Type Name) Edona Ajvazi
Signature of Notary:

Subscribed and sworn to before me
this 24th day of JUNE



Seal

13457668 v1



Kelly Holtkamp
Geographic Location of Patients for 2019

Zip Code Number of patients

Algonquin Road Surgery Center

34234	1
53128	2
53140	1
56470	1
60002	3
60010	8
60012	17
60013	19
60014	88
60020	3
60021	1
60033	12
60034	1
60041	10
60042	7
60046	2
60050	35
60051	27
60056	2
60067	2
60071	2
60072	1
60073	3
60074	1
60081	4
60084	5
60097	12
60098	59
60102	35
60110	20
60118	12
60120	8
60123	8
60124	10
60135	2
60136	1
60140	13
60142	71
60146	1
60152	17
60156	51

13457668 v1



60174	1
60177	7
60180	6
60187	1
60554	2
60651	1
61065	1

Northwestern Huntley

60012	1
60014	3
60034	1
60041	1
60050	3
60051	3
60097	3
60098	2
60102	1
60118	3
60123	1
60140	1
60142	2
60152	1
60156	3

Advocate Sherman Hospital

60005	1
60010	2
60012	2
60014	4
60020	1
60034	1
60041	2
60050	1
60098	7
60102	2
60115	1
60123	1
60124	1
60133	1
60142	5
60160	2



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Jeffrey Kazaglis, MD and I am a sports surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 425 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	366	
Amita St. Joseph Elgin	35	
Northwestern Huntley	24	
Algonquin Road Surgery Center	0	
		Total: 297

Based on my historical referrals, I anticipate referring 297 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Jeffrey Kazaglis, MD

Physician's Signature

Date

6/24/2020

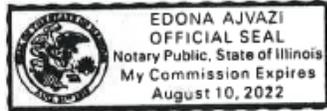
13457668 v1



(Please Print/Type Name) _____
Signature of Notary: Edona Ajvazi

Subscribed and sworn to before me

this 24th day of June



Seal _____



Jeffrey Kazaglis, MD
Geographic Location of Patients for 2019

Zip Code Number of patients

Northwestern Huntley

60014	5
60033	2
60042	1
60098	1
60102	2
60110	1
60123	1
60136	1
60142	5
60152	1
60156	2
60605	1
76063	1

AMITA St. Joseph Elgin

45711	1
60098	2
60103	1
60107	3
60110	3
60118	2
60120	3
60123	7
60124	1
60140	2
60142	1
60156	2
60175	1
60177	4
60538	1
60555	1

Advocate Sherman Hospital

34114	1
45342	1
52240	1
53125	1
53403	3
60004	1

13457668 v1



60005	1
60010	7
60012	3
60013	2
60014	13
60016	1
60033	1
60041	1
60047	1
60050	6
60072	1
60073	2
60097	2
60098	4
60102	12
60103	6
60107	2
60109	0
60110	25
60115	1
60118	15
60119	3
60120	38
60123	34
60124	34
60133	2
60134	1
60135	4
60136	13
60140	21
60142	16
60145	1
60152	10
60156	20
60169	3
60173	1
60174	2
60175	5
60177	20
60178	5
60180	1
60188	2
60192	1
60193	1
60195	2
60446	1
60451	2
60506	1
60526	1
60560	1



60601	1
60707	1
78230	1
80304	1
80831	1
85635	1

13457668 v1



June 23, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Frank Bohnenkamp, MD and I am a total joint surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 612 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	64	
Amita St. Joseph Elgin	0	
Northwestern Huntley	514	
Algonquin Road Surgery Center	34	
		Total: 292

Based on my historical referrals, I anticipate referring 292 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Frank Bohnenkamp, MD

Physician's Signature

Date

6/23/2020

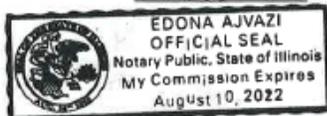
13457668 v1



(Please Print/Type Name) _____
Signature of Notary: Edona Ajvazi

Subscribed and sworn to before me

this 23rd day of June



Seal

13457668 v1



Frank Bohnenkamp
Geographic Location of Patients for 2019

Zip Code **Number of patients**

Algonquin Road Surgery Center

53179	1
60012	1
60013	2
60014	1
60047	1
60050	5
60081	1
60098	8
60102	2
60110	1
60123	1
60142	3
60152	1
60156	4
60177	1
60180	1

Northwestern Huntley

(Blank)	1
30097	1
33931	1
40059	1
46052	1
53147	1
54981	1
60002	1
60010	3
60012	20
60013	23
60014	80
60016	1
60020	2
60031	1
60033	16
60034	5
60039	1
60041	2
60042	4
60046	2
60048	1

13457668 v1



60050	40
60051	23
60060	1
60067	1
60069	1
60071	4
60072	3
60073	2
60081	5
60084	2
60085	1
60089	1
60097	16
60098	47
60102	26
60110	9
60115	1
60118	5
60120	9
60123	3
60124	6
60136	1
60140	8
60142	69
60148	1
60152	10
60156	25
60169	2
60192	1
60194	1
60554	2
60555	1
61008	3
61012	1
61018	2
61032	2
61070	3
61081	1
61109	1
61114	1
61115	2
61378	1
85268	1

Sherman Hospital Elgin

46368	1
60004	1
60007	1
60012	2

13457668 v1



60013	1
60014	1
60047	2
60050	1
60081	1
60084	2
60097	2
60098	1
60102	2
60103	1
60110	10
60118	4
60120	3
60123	6
60124	1
60134	2
60140	2
60142	8
60152	1
60156	5
60177	2
61021	1

13457668 v1



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Kevin Carlile, MD and I am a trauma surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 253 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	52	
Amita St. Joseph Elgin	0	
Northwestern Huntley	201	
Algonquin Road Surgery Center	0	
		Total: 30

Based on my historical referrals, I anticipate referring 30 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Kevin Carlile, MD

Physician's Signature

Date

6/23/2020

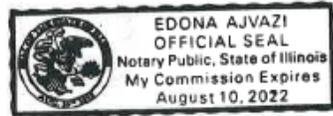
13457668 v1



(Please Print/Type Name) _____
Signature of Notary: Edna Ajvazi

Subscribed and sworn to before me

this 23rd day of June



Seal

13457668 v1



Kevin Carlile, MD
Geographic Location of Patients for 2019

Zip Code Number of patients

Northwestern Huntley

49107	3
53128	3
53143	1
53147	1
53181	4
53190	1
53954	1
60010	1
60012	7
60013	6
60014	23
60020	4
60033	4
60034	1
60041	2
60042	1
60050	16
60051	4
60071	4
60081	5
60097	11
60098	18
60102	15
60103	1
60110	1
60120	1
60124	1
60134	1
60140	3
60142	33
60152	7
60156	5
60180	4
60432	3
60510	1
60555	1
60634	1
60657	1
63755	1

Advocate Sherman Hospital

38008	1
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13457668 v1



54487	1
60014	1
60102	3
60110	4
60118	10
60120	2
60123	7
60124	3
60136	0
60140	2
60142	3
60143	1
60151	1
60156	5
60174	1
60175	1
60177	4
60510	1
60538	1



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Scott Mox, MD and I am a total joint surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 356 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	330	
Amita St. Joseph Elgin	8	
Northwestern Huntley	18	
Algonquin Road Surgery Center	0	
		Total: 170

Based on my historical referrals, I anticipate referring 170 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Scott Mox, MD

Physician's Signature  Date 

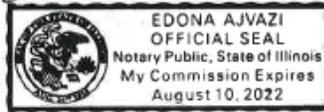
13457668 v1



(Please Print/Type Name) _____
Signature of Notary: Edona Ajvazi

Subscribed and sworn to before me

this 24th day of June



Seal _____

13457668 v1



Scott Mox, MD
Geographic Location of Patients for 2019

Zip Code Number of patients

Northwestern Huntley

60050	1
60097	1
60098	2
60136	1
60142	4
60152	3
60156	3
60432	1
61038	2

AMITA St. Joseph Elgin

60118	1
60120	2
60123	2
60140	2
60177	1

Advocate Sherman Hospital

53125	1
53128	1
53181	1
53403	1
60010	4
60012	1
60013	3
60014	16
60033	1
60039	1
60042	1
60050	1
60051	1
60073	1
60097	2
60098	2
60102	23
60103	2
60107	2
60109	2
60110	17

13457668 v1



May 27, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, Floor 2
Springfield, IL 62761

Re: Referral Letter- OrthoIllinois Surgery Center Elgin

Dear Ms. Avery,

My name is Nicholas Brissey, DPM and I am a podiatry surgeon with the OrthoIllinois Group. This letter contains the referral documentation required per Ill. Admin. Code Section 1110.235(c)(3)(A)-(B). In the calendar year of 2019, I performed a total of 158 orthopedic procedures as identified below:

Name of Healthcare Facility	Number of cases in 2019	Referrals to proposed ASTC
Sherman Hospital Elgin	26	
Amita St. Joseph Elgin	0	
Northwestern Huntley	123	
Algonquin Road Surgery Center	9	
		Total: 94

Based on my historical referrals, I anticipate referring 94 surgical cases each year to the proposed ASTC. Enclosed with this letter is a list of patient origin by zip code of residence.

I certify that the patients I propose to refer reside within the applicant's proposed geographic service area.

I further certify that the aforementioned referrals have not been used to support another pending or approved certificate of need permit application. The information provided in this letter is true and accurate to the best of my knowledge.

Thank you,

Nicholas Brissey, DPM

Physician's Signature

Date

6/26/2020

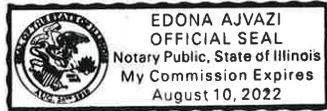
13457668 v1

OrthoIllinois*

(Please Print/Type Name) _____
Signature of Notary: Edona Ajvazi

Subscribed and sworn to before me

this 20th day of June



Seal



Nick Brissey, DPM
Geographic Location of Patients for 2019

Zip Code **Number of patients**

Algonquin Road Surgery Center

60014	2
60071	1
60098	1
60140	1
60142	2
60152	2

Northwestern Huntley

46052	2
53143	2
53181	1
60002	2
60010	2
60012	4
60013	7
60014	13
60020	1
60034	1
60041	2
60042	1
60050	8
60051	4
60067	1
60073	1
60097	3
60098	13
60102	8
60110	3
60118	1
60124	2
60135	1
60140	5
60142	15
60152	4
60156	14
61008	1
61270	1

Advocate Sherman Hospital

60013	2
60014	2
60098	1

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OrthoIllinois[®]

60110	5
60120	2
60140	3
60142	5
60156	4
60178	1
60538	1

13457668 v1



60115	1
60118	26
60119	1
60120	47
60123	52
60124	13
60134	1
60135	2
60136	4
60140	17
60142	23
60151	1
60152	11
60156	11
60172	1
60174	1
60175	1
60177	12
60178	5
60180	1
60185	1
60192	1
60194	1
60441	2
60505	1
60506	1
60548	1
60656	1
61008	2
61265	1
77406	1
80304	1
87508	1

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ATTACHMENT 24- 1110.235(c)(5) Treatment Room Need Assessment

UTILIZATION					
	DEPT./ SERVICE	HISTORICAL UTILIZATION (PATIENT DAYS) (TREATMENTS) ETC.	PROJECTED UTILIZATION	STATE STANDARD	MEET STANDARD?
YEAR 1	ASTC	2744	81%	> 4500 hours	Yes
YEAR 2	ASTC	2881	86%	> 4500 hours	Yes

The number of 2729 predicated procedures are derived from patients and procedures envisioned emanating directly from current patients and from multiple referral letters included in this application. The referral letters reflect proposed referrals to this facility over the first two years of its operation. The average procedure time of 107 minutes was derived from evaluating maintained documentation tracking patient procedures. With an envisioned 2729 procedures would result in 4867 hours of the available hours the surgical room could be utilized. In year 2, with a modest increase of 5% or a total of 136 procedures the result would

Year 1

State Standard for Four Surgical Rooms	>4500 hours
Average Procedure Time in Minutes	107
Proposed Facility Utilization in Hours	4867
Proposed Facility Utilization in Minutes	293608
Total Projected Referrals in Year 1	2744
Total Facility Projected Use in Minutes	293608
Percentage of Utilization	81%

Year 2

State Standard for Four Surgical Rooms	>4500 hours
Average Procedure Time in Minutes	107
Proposed Facility Utilization in Hours	5137
Proposed Facility Utilization in Minutes	308267
Total Projected Referrals in Year 2 (5% Increase)	2881
Total Facility Projected Use in Minutes	308267
Percentage of Utilization	86%

Utilization Calculation	
Operational Days	231
Average Hours of Operation	6.5
Procedure Hours Per Operating Room	1501.5
Number of Operating Rooms	4
Total Procedure Hours	6006
Average Procedure Time (hours)	1.78
First Year Predicted Procedures	2744
First Year Utilization	81%
Second Year Predicted Procedures	2881
Second Year Utilization	86%

ATTACHMENT 24- 1110.235(c)(6) – Service Accessibility

Name	Address	City	State	Zip	# of Operating/ Procedure Rooms	Distance from Proposed facility (in miles)
Advocate Sherman ASTC*	1445 North Randall Road	Elgin	IL	60123	4	8
Algonquin Road Surgery Center	2550 ALGONQUIN ROAD	Lake in the Hills	IL	60156	4	1
Ashton Center for Day Surgery	1800 McDonough Road	Hoffman Estates	IL	60192	4	10
Elgin Gastroenterology Endoscopy Center	745 Fletcher Drive	Elgin	IL	60123	2	2

There are three licensed ASTCs operational (Advocate Sherman ASTC Project 16-038 has been approved but is not licensed nor completed at this time and Agaphy Surgery Center Project 18-027 has been approved but is not licensed nor completed at this time), in the identified geographic service area. Upon completion the Advocated Sherman ASTC will be serve to relieve Sherman Hospital patient overflow and will offer a wide variety of procedures out side of the categories proposed by this project. The Agaphy Surgicial Center will focus exclusviley on providing gastroenterology services in it's two procedure rooms.

This proposed facility is necessary to provide access for area residents to obtain orthopedic, podiatric, and pain management services in an ASTC setting. Ten Orthollinois physicians have historically performed 4,495 procedures in the last calendar year, and with a growing practice are not able to meet the needs of their patient's at existing area healthcare facilities.

The Algonquin Road Surgery Center is a multi-specialty ASTC that is approved for numerous categories of service including OB/Gynecology, Ophthalmology, Orthopedic, Otolaryngology, Pain Management, and Plastic Surgery, Podiatry, and GI procedures. The facility has three operating rooms and based on reporting provided to the Board in 2018 the facility is operating at or near target utilization. The facility has also declined to provide the surgeons affiliated with this application additional time in their operating rooms and have declined to allow the surgeons to perform certain procedures at the facility.

Ashton Center for Day Surgery is a multi-specialty ASTC that is approved for Orthopedic, Otolaryngology, Pain Management, and Podiatry. The facility employes restrictive admission policies

that effectively has limited the number of patients seen at the facility to only those with private pay insurance. An overwhelming 93.9% of the patients seen at this facility are private pay. They have provided no charity care services and no services to Medicaid patients and only 2.4% of their payor mix has Medicare.

The Elgin Gastroenterology Endoscopy Center, LLC is an ASTC that is solely dedicated to Gastroenterology procedures and has two operating rooms. They offer no other categories of services at the facility.

ATTACHMENT 24- 1110.235(c)(7)(A) – Unnecessary Duplication/Maldistribution

The fundamental changes in reimbursement models for the types of procedures that will be offered at the proposed facility has compelled a restricting of this aspect of care. As a longtime leader in providing bone and joint care, OrthoIllinois has concluded that a dedicated ASTC is the far more cost effective option when compared to a hospital surgical suite. We believe that to meaningfully assess this issue requires going beyond the number to determine whether or not these services are truly needed within the community and whether those needs can practically and principally be met by existing facilities.

As noted in previous sections, the licensed ASTCs in the geographic service area are either operating at or near target utilization, or do not offer the same services that are proposed by this project. None of the surgery centers are designed for or dedicated to serving this patient population, nor do they have the expertise that OrthoIllinois does. This makes the likelihood of maldistribution minimal, nor is it going to lower the utilization of other area providers below the established standard. As a result the impact on other ASTCs should be minimal.

ATTACHMENT 24- 1110.235(c)(8) – Staffing

The facility will appoint, Dr. Tom Stanley, who is a Fellow of the American Academy of Orthopedic Surgeons to act as Medical Director for the facility. The applicant have not traditionally had any difficulties in staffing their existing offices nor do they anticipate difficult in staffing the proposed ASTC.

As needed additional staff will be identified and employed utilizing existing job search sites and professional placement services.

Tom Stanley, M.D., M.P.H.

Employment

2018 - Current OrthoIllinois
650 S. Randall Rd
Algonquin, IL 60102

2010 – 2018 Midwest Bone and Joint
2350 Royal Blvd, Suite 200
Elgin, IL 60123

Hospital/Surgery Center Privileges

Full Medical Staff

Advocate Sherman Hospital
Elgin, IL

Presence St. Joseph Hospital
Elgin, IL

Algonquin Road Surgery Center
Algonquin, IL

Northwestern Huntley Hospital
Huntley, IL

Guest Medical Staff

Rockford Memorial Hospital
Rockford, IL

OSF Saint Anthony Medical Center
Rockford, IL

Swedish American Hospital
Rockford, IL

Education

- 2009 – 2010 Hospital for Joint Diseases
New York University Medical Center
New York, NY
Fellowship in Orthopedic Spine Surgery
- 2004 – 2009 Rush University Medical Center
Chicago, IL
Residency in Orthopedic Surgery
- 2000 – 2004 Tulane University, School of Medicine
New Orleans, LA
M.D.
- 2000 – 2004 Tulane University, School of Medicine
New Orleans, LA
M.P.H. in Health Systems Management
- 1996 – 2000 Tulane University, School of Engineering
B.S.E. in Biomedical Engineering
Honors in Biomedical Engineering

Certifications

Fellow of the American Academy of Orthopedic Surgeons – 2013, current
American Board of Orthopedic Surgery Part I – Passed in July, 2009
American Board of Orthopedic Surgery Part II – Passed in July, 2012
American Academy of Disability Evaluating Physicians CEDIR (Certification in the Evaluation of Disability and Impairment Rating) – Passed January 2013

Publications

Singh K, Dumonski M, Stanley T, Phillips F. Repeat use of rhBMP-2 at an Adjacent Lumbar Level: An Assessment of Efficacy and Immunologic Response. *Spine*. 2011 Feb 1;36(3): 192-196.

Lee MJ, Dumonski M, Cahill P, Stanley T, Park D, Singh K. Percutaneous treatment of vertebral compression fractures: a meta-analysis of complications. *Spine*. 2009 May

15;34(11):1228-32.

DeWald CJ, Stanley T. Instrumentation-related complications of multilevel fusions for adult spinal deformity patients over age 65: surgical considerations and treatment options in patients with poor bone quality. *Spine*. 2006 Sep 1;31(19 Suppl):S144-51.

Barrack RL, Stanley T, Burt M, Hopkins S. The effect of stem design on end-of-stem pain in revision total knee arthroplasty. *J Arthroplasty*. 2004 Oct;19(7 Suppl 2):119-24.

Cook SD, Salkeld SL, Stanley T, Faciane A, Miller SD. Biomechanical study of pedicle screw fixation in severely osteoporotic bone. *Spine J*. 2004 Jul-Aug;4(4):402-8.

Barrack RL, Stanley T, Butler AR. Treating extensor mechanism disruption after total knee arthroplasty. *Clin Orthop Relat Res*. 2003 Nov;(416):98-104.

Book Chapters

Stanley T, Lee M, Dumonski M, Singh K. Posterior Thoracic and Lumbar Approaches. *Operative Techniques in Spine Surgery*. Edited by Rhee J, Boden S, Flynn J. LWW 2013.

Dumonski M, Stanley T, Lee M, Wojewnik B, Singh K. Posterolateral Thoracolumbar Fusion with Instrumentation. *Operative Techniques in Spine Surgery*. Edited by Rhee J, Boden S, Flynn J. LWW 2013.

Spivak J, Stanley T, Balderston R. Lumbar Total Disc Replacement. *Rothman-Simeone The Spine*, 6th Edition. Edited by Herkowitz H, Garfin S, Eismont F, Bell G, Balderston R. Elsevier. 2011.

Stanley T, Wojewnik B, Vaccaro A, Singh K. Spinal Cord Injury: Rehabilitation and Recovery. *Neurotrauma and Critical Care of the Spine*. Edited by Jack Jallo, MD, and Alexander R. Vaccaro, MD. Thieme, New York, September 2008.

Stanley T, Dumonski M, Lee M, Singh K. Basic Approaches: Posterior Thoracic and Lumbar. *Operative Techniques in Orthopedics*. Lippincott Williams & Wilkins. Edited by John Rhee, MD, Scott Boden, MD. Lippincott Williams & Wilkins. 2007.

Lee M, Dumonski M, Stanley T, Singh K. Iliac Crest Bone Graft Harvest. In Weisel S (Ed.), *Operative Techniques in Orthopaedic*. Lippincott Williams & Wilkins. 2007.

Dumonski M, Stanley T, Lee M, Wojewnik B, Singh K. Posterolateral Thoracolumbar Fusion with Instrumentation. *Operative Techniques in Orthopedics*. Lippincott Williams & Wilkins. Edited by John Rhee, MD, Scott Boden, MD. Lippincott Williams & Wilkins. 2007.

Presentations

Stanley T, Singh K, Dumonski M, Phillips F. Repeat use of rhBMP-2 at an Adjacent Lumbar Level: An Assessment of Efficacy and Immunologic Response. Presented at the North American Spine Society Meeting. Toronto, Canada, October 2008.

Awards/ Honors

Advocate Patient Engagement Award 2018
Advocate Physician Quality of Care Award 2015
Advocate Physician Communications Award 2014
Sherman Hospital Patient Care Award 2013
NYU/HJD Fellow Research Award 2010
Rush University Senior Research Award 2009
Caldwell Society Award for Excellence in Orthopedics 2004
Tulane Medical School Merit Scholarship 2000-2004
Tulane School of Public Health Merit Scholarship 2000-2004
National Institutes of Health Research Fellow 1999

ATTACHMENT 24-1110.235(c)(9) – Charge Commitment**OrthoIllinois Surgery Center Elgin, LLC**

October 5, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Service Review Board
525 West Jefferson Street, 2nd Floor
Springfield, Illinois 62761

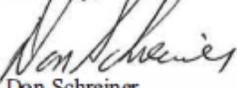
Re: Peer Review and Charge Commitment

Dear Ms. Avery,

As representative of OrthoIllinois Surgery Center Elgin, LLC, I, Don Schreiner, hereby attest that a peer review program exists or will be implemented that evaluates whether patient outcomes are consistent with quality standards established by professional organizations for the ASTC services, and if outcomes do not meet or exceed those standards, that a quality improvement plan will be initiated.

Furthermore, I hereby attest that in order to meet the objectives of the Act, which are to improve the financial ability of the public to obtain necessary health services; and to establish an orderly and comprehensive health care delivery system that will guarantee the availability of quality health care to the general public; and cost containment and support for safety net services that we have enclosed a list of CPT codes and a proposed fee schedule. We hereby commit that these charges will not increase, at a minimum, for the first 2 years of operation unless a permit is first obtained pursuant to 77 Ill. Adm. Code 1130.310(a)

Sincerely,



Don Schreiner
CEO of the Managing Member
OrthoIllinois Surgery Center Elgin, LLC

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ATTACHMENT 24-1110.235(c)(9) – Charge Commitment

A list of the relevant CPT codes, procedures and charge for the proposed ASTC is outlined below. In submitting this information, the applicant verifies that it will not increase these charges (excluding changes in the Medicare Fee Schedule) for a minimum of 24 months.

CPT Code	CPT Description	Proposed Elgin Fee Schedule
10060	INCISION & DRAINAGE ABSCESS SIMPLE/SINGLE	1,000
10061	INCISION & DRAINAGE ABSCESS COMPLICATED/MULTIPLE	1,000
10120	INCISION & REMOVAL FOREIGN BODY SUBQ TISS SIMPLE	1,000
10121	INCISION & REMOVAL FOREIGN BODY SUBQ TISS COMPL	3,395
10140	I&D HEMATOMA SEROMA/FLUID COLLECTION	2,508
10160	PUNCTURE ASPIRATION ABSCESS HEMATOMA BULLA/CYST	1,000
10180	INCISION & DRAINAGE COMPLEX PO WOUND INFECTION	3,936
11000	DBRDMT EXTENSV ECZEMA/INFECT SKN UP 10% BDY SURF	1,000
11010	DBRDMT W/RMVL FM FX&/DISLC SKIN&SUBQ TISSUS	1,088
11011	DBRDMT W/RMVL FM FX&/DISLC SKN SUBQ T/M/F MUSC	1,361
11012	DBRDMT FX&/DISLC SUBQ T/M/F BONE	3,382
11040	DEBRIDEMENT; SKIN, PARTIAL THICKNESS	1,000
11041	Debridement, skin, full thickness	1,000
11042	DEBRIDEMENT SUBCUTANEOUS TISSUE 20 SQ CM/<	2,124
11043	DEBRIDEMENT MUSCLE & FASCIA 20 SQ CM/<	2,832
11044	DEBRIDEMENT BONE MUSCLE &/FASCIA 20 SQ CM/<	3,540
11046	DEBRIDEMENT MUSCLE &/FASCIA EA ADDL 20 SQ CM	1,000
11100	BPSY OF SKIN, SUBCUT TISS &/OR MUC MEMB, UNLESS OTHERWISE LISTED; SINGLE LESION	1,000
11200	REMOVAL SKN TAGS MLT FIBRQ TAGS ANY AREA UPW/15	1,000
11305	SHAVING SKIN LESION 1 S/N/H/F/G DIAM 0.5 CM/<	1,000
11400	EXC B9 LESION MRGN XCP SK TG T/A/L 0.5 CM/<	1,000
11401	EXC B9 LESION MRGN XCP SK TG T/A/L 0.6-1.0 CM	1,000
11402	EXC B9 LESION MRGN XCP SK TG T/A/L 1.1-2.0 CM	1,000
11403	EXC B9 LESION MRGN XCP SK TG T/A/L 2.1-3.0 CM	1,531
11404	EXC B9 LESION MRGN XCP SK TG T/A/L 3.1-4.0 CM	3,395
11406	EXC B9 LESION MRGN XCP SK TG T/A/L >4.0 CM	3,395
11420	EXC B9 LESION MRGN XCP SK TG S/N/H/F/G 0.5 CM/<	1,532
11421	EXC B9 LESION MRGN XCP SK TG S/N/H/F/G 0.6-1.0CM	1,531
11422	EXC B9 LESION MRGN XCP SK TG S/N/H/F/G 1.1-2.0CM	1,532
11423	EXC B9 LESION MRGN XCP SK TG S/N/H/F/G 2.1-3.0CM	3,395
11424	EXC B9 LESION MRGN XCP SK TG S/N/H/F/G 3.1-4.0CM	3,429
11426	EXC B9 LESION MRGN XCP SK TG S/N/H/F/G > 4.0CM	4,511
11440	EXC B9 LESION MRGN XCP SK TG F/E/E/N/L/M 0.5CM/<	1,000
11441	EXC B9 LES MRGN XCP SK TG F/E/E/N/L/M 0.6-1.0CM	1,000
11442	EXC B9 LES MRGN XCP SK TG F/E/E/N/L/M 1.1-2.0CM	1,531
11443	EXC B9 LES MRGN XCP SK TG F/E/E/N/L/M 2.1-3.0CM	1,531

11444	EXC B9 LES MRGN XCP SK TG F/E/E/N/L/M 3.1-4.0CM	1,961
11446	EXC B9 LESION MRGN XCP SK TG F/E/E/N/L/M > 4.0CM	4,511
11600	EXCISION MAL LESION TRUNK/ARM/LEG 0.5 CM/<	1,000
11601	EXCISION MAL LESION TRUNK/ARM/LEG 0.6-1.0 CM	1,000
11602	EXCISION MAL LESION TRUNK/ARM/LEG 1.1-2.0 CM	1,000
11603	EXCISION MAL LESION TRUNK/ARM/LEG 2.1-3.0 CM	1,531
11604	EXCISION MAL LESION TRUNK/ARM/LEG 3.1-4.0 CM	1,531
11606	EXCISION MALIGNANT LESION TRUNK/ARM/LEG > 4.0 CM	3,395
11620	EXCISION MALIGNANT LESION S/N/H/F/G 0.5 CM/<	1,531
11621	EXCISION MALIGNANT LESION S/N/H/F/G 0.6-1.0 CM	1,000
11622	EXCISION MALIGNANT LESION S/N/H/F/G 1.1-2.0 CM	1,532
11623	EXCISION MALIGNANT LESION S/N/H/F/G 2.1-3.0 CM	3,395
11624	EXCISION MALIGNANT LESION S/N/H/F/G 3.1-4.0 CM	3,395
11626	EXCISION MALIGNANT LESION S/N/H/F/G >4.0 CM	4,511
11640	EXCISION MALIGNANT LESION F/E/E/N/L 0.5 CM/<	1,531
11641	EXCISION MALIGNANT LESION F/E/E/N/L 0.6-1.0 CM	1,531
11642	EXCISION MALIGNANT LESION F/E/E/N/L 1.1-2.0 CM	1,531
11643	EXCISION MALIGNANT LESION F/E/E/N/L 2.1-3.0 CM	1,531
11644	EXCISION MALIGNANT LESION F/E/E/N/L 3.1-4.0 CM	3,395
11646	EXCISION MALIGNANT LESION F/E/E/N/L >4.0 CM	4,511
11720	DEBRIDEMENT NAIL ANY METHOD 1-5	1,000
11730	AVULSION NAIL PLATE PARTIAL/COMPLETE SIMPLE 1	1,000
11732	AVULSION NAIL PLATE PARTIAL/COMP SIMPLE EA ADDL	1,000
11740	EVACUATION SUBUNGUAL HEMATOMA	2,653
11750	EXCISION NAIL MATRIX PERMANENT REMOVAL	1,878
11752	EXCIS OF NAIL & NAIL MATRIX, PRTL OR CMLPT, FOR PERM RMVL; W/ AMPUT OF TUFT OF DISTAL PHALANX	4,511
11755	BIOPSY NAIL UNIT SEPARATE PROCEDURE	1,822
11760	REPAIR NAIL BED	1,878
11762	RECONSTRUCTION NAIL BED W/GRAFT	1,000
11981	INSJ NON-BIODEGRADABLE DRUG DELIVERY IMPLANT	2,351
11982	REMOVAL NON-BIODEGRADABLE DRUG DELIVERY IMPLANT	1,000
12001	SIMPLE REPAIR SCALP/NECK/AX/GENIT/TRUNK 2.5CM/<	1,000
12002	SMPL REPAIR SCALP/NECK/AX/GENIT/TRUNK 2.6-7.5CM	1,000
12020	TX SUPERFICIAL WOUND DEHISCENCE SIMPLE CLOSURE	1,000
12032	REPAIR INTERMEDIATE S/A/T/E 2.6-7.5 CM	1,000
12035	REPAIR INTERMEDIATE S/A/T/E 12.6-20.0CM	1,000
12041	REPAIR INTERMEDIATE N/H/F/XTRNL GENT 2.5CM/<	1,000
12042	REPAIR INTERMEDIATE N/H/F/XTRNL GENT 2.6-7.5 CM	1,000
12052	REPAIR INTERMEDIATE F/E/E/N/L&MUC 2.6-5.0 CM	1,000
13101	REPAIR COMPLEX TRUNK 2.6-7.5 CM	1,183
13120	REPAIR COMPLEX SCALP/ARM/LEG 1.1-2.5 CM	1,000
13121	REPAIR COMPLEX SCALP/ARM/LEG 2.6-7.5 CM	4,526
13122	REPAIR COMPLEX SCALP/ARM/LEG EA ADDL 5 CM/<	1,824
13131	REPAIR COMPLEX F/C/C/M/N/AX/G/H/F 1.1-2.5 CM	4,528
13132	REPAIR COMPLEX F/C/C/M/N/AX/G/H/F 2.6-7.5 CM	1,000

13133	REPAIR COMPLEX F/C/C/M/N/AX/G/H/F EA ADDL 5 CM/<	1,000
13160	SECONDARY CLOSURE SURG WOUND/DEHSN EXTSV/COMPLIC	4,818
14001	ADJNT TIS TRANSFR/REARRANGE TRUNK 10.1-30.0 SQCM	4,818
14020	ADJT TIS TRNSFR/REARGMT SCALP/ARM/LEG 10 SQ CM/<	6,036
14021	ADJT/REARRGMT SCALP/ARM/LEG 10.1-30.0 SQ CM	9,776
14040	ADJT TIS TRNS/REARGMT F/C/C/M/N/A/G/H/F 10SQCM/<	3,176
14041	ADJT/REARGMT F/C/C/M/N/AX/G/H/F 10.1-30.0 SQ CM	11,315
14060	ADJT TIS TRNSFR/REARRGMT E/N/E/L DFCT 10 SQ CM/<	3,176
14061	ADJT TIS REARGMT EYE/NOSE/EAR/LIP 10.1-30.0 SQCM	3,176
14301	ADJNT TIS TRNSFR/REARGMT ANY AREA 30.1-60 SQ CM	5,117
14302	ADJT TIS TRNSFR/REARGMT DEFEC EA ADDL 30 SQCM	3,493
15002	PREP SITE TRUNK/ARM/LEG 1ST 100 SQ CM/1PCT	3,272
15004	PREP SITE F/S/N/H/F/G/M/D GT 1ST 100 SQ CM/1PCT	1,183
15040	HARVEST SKIN TISSUE CLTR SKIN AGRFT 100 CM/<	2,789
15050	PINCH GRAFT 1/MLT SM ULCER TIP/OTH AREA 2CM	3,019
15100	SPLIT AGRFT T/A/L 1ST 100 CM/&1% BDY INFT/CHLD	4,818
15120	SPLIT AGRFT F/S/N/H/F/G/M/D GT 1ST 100 CM/<1 %	5,117
15200	FTH/GFT FREE W/DIRECT CLOSURE TRUNK 20 CM/<	3,725
15201	FTH/GFT FR W/DIR CLSR TRNK EA ADDL 20 CM/<	1,863
15220	FTH/GFT FREE W/DIRECT CLOSURE S/A/L 20 CM/<	3,725
15221	FTH/GFT FR W/DIR CLSR S/A/L EA ADDL 20 CM/<	1,863
15240	FTH/GFT FR W/DIR CLSR F/C/C/M/N/AX/G/H/F 20 CM/<	3,725
15241	FTH/GT FR W/DIR CLSR F/C/C/M/N/AX/G/H/F EA20CM/<	1,863
15260	FTH/GFT FREE W/DIRECT CLOSURE N/E/E/L 20 SQ CM/<	3,725
15261	FTH/GFT FREE W/DIR CLSR N/E/E/L EA 20 SQ CM/<	1,863
15273	APP SKN SUBGRFT T/A/L AREA/100SQ CM 1ST 100SQ CM	5,117
15274	APP SKN SUB GRFT T/A/L AREA>=100SCM ADL 100SQCM	2,524
15275	SUB GRFT F/S/N/H/F/G/M/D <100SQ CM 1ST 25 SQ CM	2,789
15276	SUB GRFT F/S/N/H/F/G/M/D<100SQ CM EA ADDL25SQ CM	1,269
15277	SUB GRFT F/S/N/H/F/G/M/D >= 100SCM 1ST 100SQ CM	2,789
15572	FRMJ DIRECT/TUBE PEDICLE W/WO TR SCALP ARMS/LEGS	10,562
15574	FRMJ DIR/TUBE PEDCL W/WOTR FH/CH/CH/M/N/AX/G/H/F	12,071
15620	DELAY FLAP/SECTIONING FLAP F/C/C/N/AX/G/H/F	4,818
15769	GRAFTING of autologous soft tissue, other, harvested by direct excision (e.g. FAT, dermis, fascia)	5,847
15836	EXCISION EXCESSIVE SKIN & SUBQ TISSUE ARM	3,507
15837	EXC EXCESSIVE SKIN &SUBQ TISSUE FOREARM/HAND	3,395
15850	REMOVAL SUTURES UNDER ANESTHESIA SAME SURGEON	1,000
15851	REMOVAL SUTURES UNDER ANESTHESIA OTHER SURGEON	1,000
15852	DRESSING CHANGE UNDER ANESTHESIA	1,000
17000	DESTRUCTION PREMALIGNANT LESION 1ST	1,000
20005	INCISION OF SOFT TISSUE ABSCESS (EG, SECONDARY TO OSTEOMYELITIS); DEEP OR COMPLICATED	4,691
20103	EXPLORATION PENETRATING WOUND SPX EXTREMITY	2,161
20205	BIOPSY MUSCLE DEEP	3,395
20220	BIOPSY BONE TROCAR/NEEDLE SUPERFICIAL	1,961
20225	BIOPSY BONE TROCAR/NEEDLE DEEP	1,961

20240	BIOPSY BONE OPEN SUPERFICIAL	4,511
20245	BIOPSY BONE OPEN DEEP	4,511
20520	REMOVAL FOREIGN BODY MUSCLE/TENDON SHEATH SIMPLE	1,000
20525	RMVL FOREIGN BODY MUSCLE/TENDON SHEATH DEEP/COMP	6,399
20526	INJECTION THERAPEUTIC CARPAL TUNNEL	1,000
20550	INJECTION 1 TENDON SHEATH/LIGAMENT APONEUROSIS	2,653
20551	INJECTION SINGLE TENDON ORIGIN/INSERTION	1,000
20552	INJECTION SINGLE/MLT TRIGGER POINT 1/2 MUSCLES	1,000
20600	ARTHROCENTESIS ASPIR&/INJ SMALL JT/BURSA W/O US	1,000
20605	ARTHROCENTESIS ASPIR&/INJ INTERM JT/BURS W/O US	1,000
20610	ARTHROCENTESIS ASPIR&/INJ MAJOR JT/BURSA W/O US	1,000
20612	ASPIRATION&/INJECTION GANGLION CYST ANY LOCATJ	1,000
20650	INSERTION WIRE/PIN W/APPL SKELETAL TRACTION SPX	4,692
20670	REMOVAL IMPLANT SUPERFICIAL SEPARATE PROCEDURE	3,446
20680	REMOVAL IMPLANT DEEP	4,578
20690	APPLICATION UNIPLANE EXTERNAL FIXATION SYSTEM	12,775
20692	APPLICATION MULTIPLANE EXTERNAL FIXATION SYSTEM	27,677
20693	ADJUSTMENT/REVJ XTRNL FIXATION SYSTEM REQ ANES	9,534
20694	REMOVAL EXTERNAL FIXATION SYSTEM UNDER ANES	6,399
20696	XTRNL FIXJ W/STEREOTACTIC ADJUSTMENT 1ST & SUBQ	40,371
20697	XTRNL FIXJ W/STRTCTC ADJUSTMENT EXCHANGE STRUT	5,690
20900	BONE GRAFT ANY DONOR AREA MINOR/SMALL	9,534
20902	BONE GRAFT ANY DONOR AREA MAJOR/LARGE	9,534
20924	TENDON GRAFT FROM A DISTANCE	9,534
20926	TISSUE GRAFTS OTHER	5,234
20931	ALLOGRAFT FOR SPINE SURGERY ONLY STRUCTURAL	2,166
20999	UNLISTED PROCEDURE MUSCSKELETAL SYSTEM GENERAL	4,692
22513	PERQ VERT AGMNTJ CAVITY CRTJ UNI/BI CANNULATION	11,250
22514	PERQ VERT AGMNTJ CAVITY CRTJ UNI/BI CANNULJ LMBR	11,250
22515	PERQ VERT AGMNTJ CAVITY CRTJ UNI/BI CANNULJ EACH	5,626
22521	PERCUTANEOUS VERTEBROPLASTY, ONE VERTEBRAL BODY, UNILATERAL OR BILATERAL INJECTION; LUMBAR	5,965
22551	ARTHRD ANT INTERBODY DECOMPRESS CERVICAL BELW C2	28,634
22552	ARTHRD ANT INTERDY CERVCL BELW C2 EA ADDL NTRSPC	7,774
22554	ARTHRD ANT MIN DISCECT INTERBODY CERV BELOW C2	28,659
22612	ARTHRODESIS POSTERIOR/POSTEROLATERAL LUMBAR	29,273
22845	ANTERIOR INSTRUMENTATION 2-3 VERTEBRAL SEGMENTS	14,353
22856	TOT DISC ARTHRP ART DISC ANT APPRO 1 NTRSPC CRV	46,194
22858	TOT DISC ARTHRP ANT APPR DISC 2ND LEVEL CERVICAL	14,630
23066	BIOPSY SOFT TISSUE SHOULDER DEEP	6,211
23071	EXCISION TUMOR SOFT TISSUE SHOULDER SUBQ 3 CM/>	4,003
23073	EXC TUMOR SOFT TISSUE SHOULDER SUBFASCIAL 5 CM/>	4,022
23075	EXCISION TUMOR SOFT TISSUE SHOULDER SUBQ <3CM	5,290
23076	EXC TUMOR SOFT TISS SHOULDER SUBFASC <5CM	7,405
23120	CLAVICULECTOMY PARTIAL	11,386
23125	CLAVICULECTOMY TOTAL	12,421

23130	PARTIAL REPAIR OR REMOVAL OF SHOULDER BONE	12,421
23182	PARTIAL EXCISION BONE SCAPULA	9,534
23350	INJECTION SHOULDER ARTHROGRAPHY/ CT/MRI ARTHG	1,000
23395	MUSCLE TRANSFER SHOULDER/UPPER ARM SINGLE	14,916
23405	TENOTOMY SHOULDER AREA 1 TENDON	9,534
23410	OPEN REPAIR OF ROTATOR CUFF ACUTE	9,534
23412	OPEN REPAIR OF ROTATOR CUFF CHRONIC	10,351
23415	CORACOACROMIAL LIGAMENT RELEAS W/WOACROMIOPLASTY	9,534
23420	RECONSTRUCTION ROTATOR CUFF AVULSION CHRONIC	12,421
23430	TENODESIS LONG TENDON BICEPS	9,534
23450	CAPSULORRHAPHY ANTERIOR PUTTI-PLATT/MAGNUSON	14,966
23455	CAPSULORRHAPHY ANTERIOR W/LABRAL REPAIR	14,966
23460	CAPSULORRHAPHY ANTERIOR WITH BONE BLOCK	15,065
23462	CAPSULORRHAPHY ANTERIOR W/CORACOID PROCESS TR	9,534
23465	CAPSULORRHAPHY GLENOHUMERAL JT PST W/WO BONE BLK	14,966
23466	CAPSULORRHAPHY GLENOHUMRL JT MULTI-DIRIONAL INS	9,534
23470	ARTHROPLASTY GLENOHUMRL JT HEMIARTHROPLASTY	24,096
23472	ARTHROPLASTY GLENOHUMERAL JOINT TOTAL SHOULDER	29,692
23473	REVIS SHOULDER ARTHRPLSTY HUMERAL/GLENOID COMPNT	33,542
23474	REVIS SHOULDER ARTHRPLSTY HUMERAL&GLENOID COMPNT	36,508
23480	OSTEOTOMY CLAVICLE W/WO INTERNAL FIXATION	9,534
23515	OPEN TX CLAVICULAR FRACTURE INTERNAL FIXATION	13,083
23550	OPEN TX ACROMIOCLAVICULAR DISLC ACUTE/CHRONIC	9,534
23552	OPTX ACROMCLAV DISLC ACUTE/CHRONIC W/FASCIAL GRF	12,999
23585	OPEN TX SCAPULAR FX W/INTERNAL FIXATION IF PFRMD	12,989
23615	OPEN TREATMENT PROXIMAL HUMERAL FRACTURE	28,192
23630	OPEN TREATMENT GRTER HUMERAL TUBEROSITY FRACTURE	12,862
23655	CLSD TX SHOULDER DISLC W/MANIPULATION REQ ANES	3,281
23670	OPEN TX SHOULDER DISLC W/HUMERAL TUBEROSITY FX	12,862
23675	CLTX SHOULDER DISLC W/SURG/ANTMCL NECK FX W/MANJ	4,232
23700	MANJ W/ANES SHOULDER JOINT W/FIXATION APPARATUS	4,142
23929	UNLISTED PROCEDURE SHOULDER	4,244
23930	I&D UPPER ARM/ELBOW DEEP ABSCESS/HEMATOMA	4,313
23931	INCISION&DRAINAGE UPPER ARM/ELBOW BURSA	3,936
24000	ARTHRT ELBOW W/EXPLORATION DRAINAGE/REMOVAL FB	7,246
24006	ARTHRT ELBOW CAPSULAR EXCISION CAPSULAR RLS SPX	5,649
24065	BIOPSY SOFT TISSUE UPPER ARM/ELBOW SUPERFICIAL	3,395
24066	BIOPSY SOFT TISSUE UPPER ARM/ELBOW AREA DEEP	6,211
24071	EXC TUMOR SOFT TISSUE UPPER ARM/ELBOW SUBQ 3CM/>	4,008
24073	EXC TUMOR SOFT TISS UPPER ARM/ELBW SUBFASC 5CM/>	3,451
24075	EXC TUMOR SOFT TISS UPPER ARM/ELBOW SUBQ <3CM	5,290
24076	EXC TUMOR SOFT TISS UPR ARM/ELBOW SUBFASC <5CM	7,246
24077	RAD RESECT TUMOR SOFT TISS UPPER ARM/ELBOW <5CM	8,282
24100	ARTHROTOMY ELBOW W/SYNOVIAL BIOPSY ONLY	6,211
24101	ARTHRT ELBOW W/JNT EXPL W/WOBX W/WORMVL LOOSE/FB	8,282
24102	ARTHROTOMY ELBOW W/SYNOVECTOMY	8,282

24105	EXCISION OLECRANON BURSA	7,246
24110	EXCISION/CURTG BONE CYST/BENIGN TUMOR HUMERUS	4,692
24120	EXC/CURTG BONE CYST/BENIGN TUMOR H/N RDS/OLECRN	4,692
24130	EXCISION RADIAL HEAD	9,316
24140	PARTIAL EXCISION BONE HUMERUS	10,351
24145	PARTIAL EXCISION BONE RADIAL HEAD/NECK	10,351
24147	PARTIAL EXCISION BONE OLECRANON PROCESS	10,351
24149	RAD RESCJ CAPSL TISS&HTRTPC BONE ELBW CONTRCT	10,351
24155	RESECTION ELBOW JOINT ARTHRECTOMY	9,316
24200	RMVL FOREIGN BODY UPPER ARM/ELBOW SUBCUTANEOUS	1,000
24201	REMOVAL FOREIGN BODY UPPER ARM/ELBOW DEEP	6,211
24300	MANIPULATION ELBOW UNDER ANESTHESIA	4,142
24301	MUSCLE/TENDON TRANSFER UPPER ARM/ELBOW SINGLE	9,534
24305	TENDON LENGTHENING UPPER ARM/ELBOW EA TENDON	8,282
24310	TENOTOMY OPEN ELBOW TO SHOULDER EACH TENDON	8,282
24332	TENOLYSIS TRICEPS	4,692
24340	TENODESIS BICEPS TENDON ELBOW SEPARATE PROCEDURE	9,534
24341	REPAIR TENDON/MUSCLE UPPER ARM/ELBOW EA	10,351
24342	RINSJ RPTD BICEPS/TRICEPS TDN DSTL W/WO TDN GRF	10,351
24343	REPAIR LATERAL COLLATERAL LIGAMENT ELBOW	10,351
24344	RCNSTJ LAT COLTRL LIGM ELBOW W/TENDON GRAFT	15,187
24345	REPAIR MEDIAL COLLATERAL LIGAMENT ELBOW	10,351
24346	RCNSTJ MEDIAL COLTRL LIGM ELBW W/TDN GRF	19,477
24350	FASCIOTOMY, LATERAL OR MEDIAL (EG, TENNIS ELBOW OR EPICONDYLITIS);	6,211
24351	FASCIOTOMY, LATERAL OR MEDIAL (EG, TENNIS ELBOW OR EPICONDYLITIS); WITH EXTENSOR ORIGIN DETACHMENT	7,246
24352	FASCIOTOMY, LATERAL OR MEDIAL (EG, TENNIS ELBOW OR EPICONDYLITIS); WITH ANNULAR LIGAMENT RESECTION	7,246
24354	FASCIOTOMY, LATERAL OR MEDIAL (EG, TENNIS ELBOW OR EPICONDYLITIS); WITH STRIPPING	7,246
24356	FASCIOTOMY, LATERAL OR MEDIAL (EG, TENNIS ELBOW OR EPICONDYLITIS); WITH PARTIAL OSTECTOMY	8,282
24357	TENOTOMY ELBOW LATERAL/MEDIAL PERCUTANEOUS	6,211
24358	TNOT ELBOW LATERAL/MEDIAL DEBRIDE OPEN	7,405
24359	TNOT ELBOW LATERAL/MEDIAL DEBRIDE OPEN TDN RPR	8,463
24360	ARTHROPLASTY ELBOW W/MEMBRANE	9,534
24361	ARTHROPLASTY ELBOW W/DISTAL HUMRL PROSTC RPLCMT	41,538
24363	ARTHROPLASTY ELBOW W/DISTAL HUM&PROX UR PROSTC RPLCM	51,437
24365	ARTHROPLASTY RADIAL HEAD	29,202
24366	ARTHROPLASTY RADIAL HEAD W/IMPLANT	31,046
24430	REPAIR NON/MALUNION HUMERUS W/O GRAFT	27,290
24435	REPAIR NON/MALUNION HUMERUS W/ILIAC/OTH AGRFT	29,019
24538	PRQ SKEL FIXJ SPRCONDYLAR/TRANSCNDYLAR HUMERAL FX	9,534
24545	OPEN TX HUMERAL SUPRACONDYLAR FRACTURE W/O XTN	27,906
24546	OPEN TX HUMERAL SUPRACONDYLAR FRACTURE W/XTN	46,223
24575	OPEN TX HUMERAL EPICONDYLAR FRACTURE	25,209
24576	CLTX HUMERAL CONDYLAR FX MEDIAL/LAT W/O MANJ	1,000
24579	OPEN TREATMENT HUMERAL CONDYLAR FRACTURE	25,640

24586	OPTX PERIARTICULAR FRACTURE &/DISLOCATION ELBO	20,887
24605	TREATMENT CLOSED ELBOW DISLOCATION REQ ANES	3,281
24615	OPEN TX ACUTE/CHRONIC ELBOW DISLOCATION	12,862
24635	OPEN TX MONTEGGIA FRACTURE DISLOCATION ELBOW	13,306
24655	CLOSED TX RADIAL HEAD/NECK FX W/MANIPULATION	4,142
24665	OPEN TX RADIAL HEAD/NECK FRACTURE	9,534
24666	OPEN TX RADIAL HEAD/NECK FRACTURE PROSTHETIC	30,888
24670	CLOSED TX ULNAR FRACTURE PROXIMAL END W/O MANJ	1,150
24675	CLOSED TX ULNAR FRACTURE PROXIMAL END W/MANJ	2,755
24685	OPEN TREATMENT ULNAR FRACTURE PROXIMAL END	12,527
25000	INCISION EXTENSOR TENDON SHEATH WRIST	5,331
25001	INCISION FLEXOR TENDON SHEATH WRIST	6,554
25028	I&D FOREARM&/WRIST DEEP ABSCESS/HEMATOMA	5,176
25035	INCISION DEEP BONE CORTEX FOREARM&/WRIST	9,534
25040	ARTHRT RDCRPL/MIDCARPL JT W/EXPL DRG/RMVL FB	10,923
25065	BIOPSY SOFT TISSUE FOREARM&/WRIST SUPERFICIAL	1,531
25066	BIOPSY SOFT TISSUE FOREARM&/WRIST DEEP	5,331
25071	EXC TUMOR SOFT TISS FOREARM AND/WRIST SUBQ 3CM/>	4,008
25073	EXC TUMOR SFT TISS FOREARM&/WRIST SUBFASC 3CM/>	4,008
25075	EXC TUMOR SOFT TISSUE FOREARM &/WRIST SUBQ <3CM	5,331
25076	EXC TUMOR SOFT TISS FOREARM&/WRIST SUBFASC <3CM	7,106
25077	RAD RESECT TUMOR SOFT TISS FOREARM&/WRIST <3 CM	7,996
25078	RAD RESCJ TUM SOFT TISSUE FOREARM&/WRIST 3 CM/>	3,451
25085	CAPSULOTOMY WRIST	7,996
25100	ARTHROTOMY WRIST JOINT WITH BIOPSY	5,331
25101	ARTHRT WRST W/JT EXPL W/VO BX W/VO RMVL LOOSE/FB	7,996
25105	ARTHROTOMY WRIST JOINT WITH SYNOVECTOMY	8,884
25107	ARTHROTOMY DSTL RADIOULNAR JOINT RPR CARTILAGE	7,996
25109	EXC TENDON FOREARM&/WRIST FLEXOR/EXTENSOR EA	5,331
25110	EXCISION LESION TENDON SHEATH FOREARM&/WRIST	7,106
25111	EXCISION GANGLION WRIST DORSAL/VOLAR PRIMARY	7,106
25112	EXCISION GANGLION WRIST DORSAL/VOLAR RECURRENT	8,884
25115	RAD EXC BURSA SYNVA WRST/F/ARM TDN SHTHS FLXRS	7,996
25116	RAD EXC BURSA SYNVA WRST/F/ARM TDN SHTHS XTNSRS	7,996
25118	SYNOVECTOMY EXTENSOR TENDON SHTH WRIST 1 CMPRT	5,733
25119	SYNVCT XTNSR TDN SHTH WRST 1 RESCJ DSTL ULNA	5,649
25120	EXCISION/CURETTAGE CYST/TUMOR RADIUS/ULNA	5,649
25126	EXC/CURTG CYST/TUMOR RADIUS/ULNA W/ALLOGRAFT	8,884
25130	EXCISION/CURETTAGE CYST/TUMOR CARPAL BONES	5,649
25135	EXC/CURTG CYST/TUMOR CARPAL BONES W/AUTOGRAFT	9,534
25136	EXC/CURTG CYST/TUMOR CARPAL BONES W/ALLOGRAFT	12,631
25150	PARTIAL EXCISION BONE ULNA	8,739
25151	PARTIAL EXCISION BONE RADIUS	8,739
25210	CARPECTOMY 1 BONE	7,106
25215	CARPECTOMY ALL BONES PROXIMAL ROW	8,884
25230	RADICAL STYLOIDECTOMY SEPARATE PROCEDURE	7,996

25240	EXCISION DISTAL ULNA PARTIAL/COMPLETE	7,996
25246	INJECTION WRIST ARTHROGRAPHY	1,000
25248	EXPL W/REMOVAL DEEP FOREIGN BODY FOREARM/WRIST	7,107
25250	REMOVAL WRIST PROSTHESIS SEPARATE PROCEDURE	5,648
25251	REMOVAL WRIST PROSTH COMPLICATED W/TOTAL WRIST	5,648
25259	MANIPULATION WRIST UNDER ANESTHESIA	3,554
25260	RPR TDN/MUSC FLXR F/ARM&/WRST PRIM 1 EA TDN/MU	7,996
25263	RPR TDN/MUSC FLXR F/ARM&/WRIST SEC 1 EA TDN/MUS	9,534
25265	RPR TDN/MUSC FLXR F/ARM&/WRISTSEC FR GRF EA	7,106
25270	RPR TDN/MUSC XTNSR F/ARM&/WRIST PRIM 1 EA TDN	7,996
25272	RPR TDN/MUSC XTNSR F/ARM&/WRIST SEC 1 EA TDN/MU	7,106
25274	RPR TDN/MUSC XTNSR F/ARM&/WRST SEC FR GRF EA TDN	7,996
25275	RPR TENDON SHEATH EXTENSOR F/ARM&/WRIST W/GRAFT	7,996
25280	LNGTH/SHRT FLXR/XTNSR TDN F/ARM&/WRIST 1 EA TDN	7,996
25290	TNOT FLXR/XTNSR TENDON FOREARM&/WRIST 1 EA	7,106
25295	TNOLS FLXR/XTNSR TENDON FOREARM&/WRIST 1 EA	7,106
25300	TENODESIS WRIST FLEXORS FINGERS	7,106
25301	TENODESIS WRIST EXTENSORS FINGERS	7,106
25310	TDN TRNSPLJ/TR FLXR/XTNSR F/ARM&/WRST 1 EA TDN	9,237
25312	TDN TRNSPLJ/TR FLXR/XTNSR F/ARM&/WRST 1/TDN GR	9,237
25320	CAPSL-RHPHY/RCNSTJ WRST OPN CARPL INS	9,534
25332	ARTHRP WRST W/WO INTERPOS W/WO XTRNL/INT FIXJ	10,923
25337	RCNSTJ STABLJ DSTL U/DSTL JT 2 SOFT TISS STABLJ	9,534
25350	OSTEOTOMY RADIUS DISTAL THIRD	15,187
25360	OSTEOTOMY ULNA	9,831
25390	OSTEOPLASTY RADIUS/ULNA SHORTENING	13,424
25394	OSTEOPLASTY CARPAL BONE SHORTENING	7,662
25400	RPR NONUNION/MALUNION RADIUS/ULNA W/O AUTOGRAFT	13,449
25405	RPR NONUNION/MALUNION RADIUS/ULNA W/AUTOGRAFT	13,299
25420	RPR NONUNION/MALUNION RADIUS&ULNA W/AUTOGRAFT	14,966
25430	INSERTION VASCULAR PEDICLE CARPAL BONE	10,923
25431	REPAIR NONUNION CARPAL BONE EACH BONE	10,923
25440	RPR NONUNION SCAPHOID CARPAL BNE W/WO RDL STYLEC	15,187
25443	ARTHROPLASTY W/PROSTHETIC RPLCMT SCAPHOID CARPAL	13,293
25446	ARTHRP W/PROSTC RPLCMT DSTL RDS&PRTL/CARPUS	43,711
25447	ARTHRP INTERPOS INTERCARPAL/METACARPAL JOINTS	8,884
25449	REVJ ARTHRP W/REMOVAL IMPLANT WRIST JOINT	9,534
25450	EPIPHYSL ARRST EPIPHYSIOD/STAPLING DSTL RDS/U	9,237
25455	EPIPHYSL ARRST EPIPHYSIOD/STAPLING DSTL RDS&ULNA	9,237
25505	CLOSED TX RADIAL SHAFT FRACTURE W/MANIPULATION	4,370
25515	OPEN TREATMENT RADIAL SHAFT FRACTURE	12,797
25520	CLTX RDL SHFT FX&CLTX DISLC DSTL RAD/ULN JT	3,554
25525	OPEN RDL SHAFT FX CLOSED RAD/ULN JT DISLOCATE	9,534
25526	OPEN RDL SHAFT FX OPEN RAD/ULN JT DISLOCATE	12,673
25530	CLOSED TX ULNAR SHAFT FRACTURE W/O MANIPULATION	1,000
25535	CLOSED TX ULNAR SHAFT FRACTURE W/MANIPULATION	3,554

25545	OPEN TREATMENT OF ULNAR SHAFT FRACTURE	12,553
25565	CLOSED TX RADIAL&ULNAR SHAFT FRACTURES W/MANJ	3,554
25574	OPEN TX RADIAL&ULNAR SHAFT FX W/FIXJ RADIUS/ULNA	13,501
25575	OPEN TX RADIAL&ULNAR SHAFT FX W/FIXJ RADIUS&ULNA	13,127
25600	CLTX DSTL RADIAL FX/EPIPHYSL SEP W/O MANJ	1,000
25605	CLTX DSTL RDL FX/EPIPHYSL SEP W/MANJ WHEN PERF	3,554
25606	PERQ SKEL FIXJ DISTAL RADIAL FX/EPIPHYSL SEP	7,106
25607	OPTX DSTL RADL X-ARTIC FX/EPIPHYSL SEP	13,730
25608	OPTX DSTL RADL I-ARTIC FX/EPIPHYSL SEP 2 FRAG	13,671
25609	OPTX DSTL RADL I-ARTIC FX/EPIPHYSL SEP 3 FRAG	13,727
25611	PERCUT SKEL FIX OF DIS RAD FX OR EPIPHYS SEP, W/ OR W/O FX OF ULN STYL, REQ MANIP, W/ OR W/O EXT FIX	4,443
25620	OP TRTMT OF DIS RAD FX OR EPIPHYS SEP, W/ OR W/O FX OF ULN STYL, W/ OR W/O INT OR EXT FIX	7,106
25622	CLOSED TX CARPAL SCAPHOID FRACTURE W/O MANJ	1,778
25624	CLOSED TX CARPAL SCAPHOID FRACTURE W/MANJ	3,554
25628	OPEN TX CARPAL SCAPHOID NAVICULAR FRACTURE	9,534
25630	CLTX CARPAL BONE FX W/O MANJ EACH BONE	1,000
25635	CLTX CARPAL BONE FX W/MANJ EACH BONE	3,554
25645	OPEN TX CARPAL BONE FRACTURE OTH/THN SCAPHOID EA	8,438
25650	CLOSED TREATMENT ULNAR STYLOID FRACTURE	1,350
25651	PRQ SKELETAL FIXATION ULNAR STYLOID FRACTURE	5,738
25652	OPEN TREATMENT ULNAR STYLOID FRACTURE	9,534
25660	CLTX RDCRPL/INTERCARPL DISLC 1/> BONES W/MANJ	3,554
25670	OPEN TX RADIOCARPAL/INTERCARPAL DISLC 1/> BONES	9,534
25671	PRQ SKELETAL FIXJ DISTAL RADIOULNAR DISLOCATION	5,738
25675	CLOSED TX DISTAL RADIOULNAR DISLOCATION W/MANJ	3,554
25676	OPEN TX DISTAL RADIOULNAR DISLC ACUTE/CHRONIC	9,534
25680	CLTX TRANS-SCAPHOPERILUNAR TYP FX DISLC W/MANJ	3,554
25685	OPEN TX TRANS-SCAPHOPERILUNAR FRACTURE DISLC	9,534
25690	CLOSED TX LUNATE DISLOCATION W/MANIPULATION	3,554
25695	OPEN TREATMENT LUNATE DISLOCATION	9,534
25800	ARTHRODESIS WRIST COMPLETE W/O BONE GRAFT	15,187
25805	ARTHRODESIS WRIST W/SLIDING GRAFT	14,916
25810	ARTHRODESIS WRIST W/ILIAC/OTHER AUTOGRAFT	27,048
25820	ARTHRODESIS WRIST LIMITED W/O BONE GRAFT	12,960
25825	ARTHRODESIS WRIST LIMITED W/AUTOGRAFT	12,885
25830	ARTHRO DSTL RAD/ULN JT SGM TL RSCJ ULNA W/WO BONE	14,966
26010	DRAINAGE FINGER ABSCESS SIMPLE	1,000
26011	DRAINAGE FINGER ABSCESS COMPLICATED	3,554
26020	DRAINAGE TENDON SHEATH DIGIT&/PALM EACH	5,331
26025	DRAINAGE OF PALMAR BURSA SINGLE BURSA	4,375
26030	DRAINAGE OF PALMAR BURSA MULTIPLE BURSA	5,331
26034	INCISION BONE CORTEX HAND/FINGER	7,106
26040	FASCIOTOMY PALMAR PERCUTANEOUS	7,996
26045	FASCIOTOMY PALMAR OPEN PARTIAL	7,996
26055	TENDON SHEATH INCISION	7,106

26060	TENOTOMY PERCUTANEOUS SINGLE EACH DIGIT	6,219
26070	ARTHRT EXPL DRG/RMVL LOOSE/FB CARP/MTCRPL JT	5,331
26075	ARTHRT EXPL DRG/RMVL LOOSE/FB MTCARPHLNGL JT EA	5,331
26080	ARTHRT EXPL DRG/RMVL LOOSE/FB IPHAL JT EA	5,331
26100	ARTHROTOMY BIOPSY CARP/MTCRPL JOINT EACH	5,331
26105	ARTHROTOMY BIOPSY MTCARPHLNGL JOINT EACH	4,443
26110	ARTHROTOMY BIOPSY INTERPHALANGEAL JOINT EACH	4,443
26111	EX TUM/VASC MALF SFT TISS HAND/FNGR SUBQ 1.5CM/>	3,005
26113	EX TUM/VASC MAL SFT TIS HAND/FNGR SUBFSC 1.5CM/>	4,008
26115	EXC TUM/VASC MAL SFT TISS HAND/FNGR SUBQ <1.5CM	4,578
26116	EXC TUM/VAS MAL SFT TIS HAND/FNGR SUBFASC<1.5CM	5,331
26117	RAD RESECT TUMOR SOFT TISSUE HAND/FINGER <3CM	7,106
26121	FASCT PALM W/WO Z-PLASTY TISSUE REARGMT/SKN GRFT	7,996
26123	FASCT PRTL PALMAR 1 DGT PROX IPHAL JT W/WO RPR	8,884
26125	FASCT PRTL PALMR ADDL DGT PROX IPHAL JT W/WO RPR	4,443
26130	SYNOVECTOMY CARPOMETACARPAL JOINT	7,996
26135	SYNVCT MTCARPHLNGL JT W/INTRNSC RLS&XTNSR HOOD	7,106
26140	SYNVCT PROX IPHAL JT W/XTNSR RCNSTJ EA IPHAL JT	7,106
26145	SYNVCT TDN SHTH RAD FLXR TDN PALM&/FNGR EA TDN	7,106
26160	EXC LESION TDN SHTH/JT CAPSL HAND/FNGR	5,331
26170	EXCISION TENDON PALM FLEXOR/EXTENSOR SINGLE EACH	7,106
26180	EXCISION TENDON FINGER FLEXOR/EXTENSOR EACH	7,106
26185	SESAMOIDECTOMY THUMB/FINGER SEPARATE PROCEDURE	6,219
26200	EXCISION/CURETTAGE CYST/TUMOR METACARPAL	5,331
26205	EXC/CURETTAGE CYST/TUMOR METACARPAL W/AUTOGRAFT	9,534
26210	EXCISION/CURETTAGE CYST/TUMOR PHALANX FINGER	5,331
26215	EXC/CURETTAGE CYST/TUMOR PHALANX FINGER W/AGRAFT	7,106
26230	PARTIAL EXCISION BONE METACARPAL	8,884
26235	PARTIAL EXCISION PROXIMAL/MIDDLE PHALANX FINGER	7,996
26236	PARTIAL EXCISION DISTAL PHALANX FINGER	7,996
26250	RADICAL RESECTION TUMOR METACARPAL	7,996
26255	RADICAL RESECTION, METACARPAL (EG, TUMOR); WITH AUTOGRAFT (INCLUDES OBTAINING GRAFT)	8,884
26260	RAD RESECTION TUMOR PROX/MIDDLE PHALANX FINGER	7,996
26261	RADICAL RESECTION, PROXIMAL OR MIDDLE PHALANX OF FINGER; WITH AUTOGRAFT (INCLUDES OBTAINING GRAFT)	8,884
26262	RADICAL RESECTION TUMOR DISTAL PHALANX FINGER	7,106
26320	REMOVAL IMPLANT FROM FINGER/HAND	4,443
26340	MANIPULATION FINGER JOINT UNDER ANES EACH JOINT	2,425
26350	RPR/ADMNT FLXR TDN N/Z/2 W/O FR GRAFT EA TENDON	6,219
26352	RPR/ADMNT FLXR TDN N/Z/2 W/FR GRAFT EA TENDON	9,534
26356	RPR/ADMNT FLXR TDN ZONE 2 W/O FR GRFT EA TENDON	7,996
26357	RPR/ADMNT FLXR TDN ZONE 2 W/O FR GRFT EA TENDON	7,996
26358	RPR/ADMNT FLXR TDN ZONE 2 W/FR GRAFT EA TENDON	9,534
26370	RPR/ADMNT TDN W/NTC SUPFCIS TDN PRIM EA TDN	7,996
26372	RPR/ADMNT TDN W/NTC SUPFCIS TDN W/FREE GRAFT EA	9,534
26373	RPR/ADMNT TDN W/NTC SUPFCIS TDN W/O FREE GRF EA	7,106

26390	EXC FLXR TDN W/IMPLTJ SYNTH ROD DLYD TDN GRF H/F	12,651
26392	RMVL SYNTH ROD & INSJ FLXR TDN GRF H/F EA ROD	9,534
26410	REPAIR EXTENSOR TENDON HAND W/O GRAFT EACH	5,331
26412	REPAIR EXTENSOR TENDON HAND W/GRAFT EACH	7,106
26415	EXC XTNSR TDN W/IMPLTJ SYNTH ROD DLYD GRF H/F EA	8,884
26416	RMVL SYNTH ROD & INSJ XTNSR TDN GRF H/F EA ROD	7,106
26418	REPAIR EXTENSOR TENDON FINGER W/O GRAFT EACH	5,331
26420	REPAIR EXTENSOR TENDON FINGER W/GRAFT EACH	7,106
26426	RPR XTNSR TDN CNTRL SLIP TISS W/LAT BAND EA FNGR	6,219
26428	RPR XTNSR TDN CNTRL SLIP SEC W/FR GRFT EA FINGER	7,996
26432	CLTX DSTL XTNSR TDN INSJ W/WO PERCUTAN PINNING	5,331
26433	REPAIR EXTENSOR TENDON DISTAL INSERTION W/O GRF	5,331
26434	REPAIR EXTENSOR TENDON DISTAL INSERTION W/GRAFT	7,996
26437	REALIGNMENT EXTENSOR TENDON HAND EACH TENDON	6,664
26440	TENOLYSIS FLEXOR TENDON PALM/FINGER EACH TENDON	5,776
26445	TENOLYSIS EXTENSOR TENDON HAND/FINGER EACH	4,375
26449	TENOLYSIS CPLX XTNSR TENDON FINGER W/FOREARM EA	7,647
26455	TENOTOMY FLEXOR FINGER OPEN EACH TENDON	3,632
26460	TENOTOMY EXTENSOR HAND/FINGER OPEN EACH TENDON	5,331
26471	TENODESIS PROXIMAL INTERPHALANGEAL JOINT EACH	5,169
26474	TENODESIS DISTAL JOINT EACH	3,668
26478	LENGTHENING TENDON FLEXOR HAND/FINGER EACH	5,776
26479	SHORTENING TENDON FLEXOR HAND/FINGER EACH	5,776
26480	TR/TRNSPL TDN CARP/MTCRPL HAND W/O FR GRF EA TDN	7,996
26483	TENDON TRANSFER TRANSPLANT CARP/MTCRPL GRAFT	8,884
26485	TRANSFER/TRANSPLANT TENDON PALMAR W/O GRAFT EACH	7,996
26500	RCNSTJ TENDON PULLEY EACH W/LOCAL TISSUES SPX	9,534
26502	RCNSTJ TDN PULLEY EA TDN W/TDN/FSCAL GRF SPX	7,106
26504	RECONSTRUCTION OF TENDON PULLEY, EACH TENDON; WITH TENDON PROSTHESIS (SEPARATE PROCEDURE)	8,884
26508	RELEASE THENAR MUSCLE	7,106
26510	CROSS INTRINSIC TRANSFER EACH TENDON	7,106
26516	CAPSULODESIS MTCARPHLNGL JOINT SINGLE DIGIT	5,817
26517	CAPSULODESIS MTCARPHLNGL JOINT 2 DIGITS	7,996
26518	CAPSULODESIS MTCARPHLNGL JOINT 3/4 DIGITS	9,534
26520	CAPSULECTOMY/CAPSULOTOMY MTCARPHLNGL JOINT EACH	7,106
26525	CAPSULECTOMY/CAPSULOTOMY IPHAL JOINT EACH	7,106
26530	ARTHROPLASTY METACARPOPHALANGEAL JOINT EACH	9,534
26531	ARTHROPLASTY MTCARPHLNGL JT W/PROSTC IMPLT EA JT	13,676
26535	ARTHROPLASTY INTERPHALANGEAL JOINT EACH	7,520
26536	ARTHROPLASTY INTERPHALANGEAL JT W/PROSTHETIC EA	12,654
26540	RPR COLTRL LIGM MTCARPHLNGL/IPHAL JT	7,996
26541	RCNSTJ COLTRL LIGM MTCARPHLNGL 1 W/TDN/FSCAL GRF	9,772
26542	RCNSTJ COLTRL LIGM MTCARPHLNGL 1 W/LOCAL TISS	9,772
26545	RCNSTJ COLTRL LIGM IPHAL JT 1 W/GRF EA JT	8,884
26546	RPR NON-UNION MTCRPL/PHALANX	9,534

26548	RPR & RCNSTJ FINGER VOLAR PLATE INTERPHALANGEAL	7,996
26560	REPAIR SYNDACTYLY EACH SPACE W/SKIN FLAPS	7,106
26561	REPAIR SYNDACTYLY EACH SPACE W/SKIN FLAPS&GRAFT	8,884
26562	REPAIR SYNDACTYLY EACH SPACE COMPLEX	9,772
26565	OSTEOTOMY METACARPAL EACH	8,884
26567	OSTEOTOMY PHALANX FINGER EACH	8,884
26591	REPAIR INTRINSIC MUSCLES HAND EACH MUSCLE	5,817
26593	RELEASE INTRINSIC MUSCLES HAND EACH MUSCLE	7,996
26600	CLTX METACARPAL FX W/O MANIPULATION EACH BONE	1,000
26605	CLTX METACARPAL FX W/MANIPULATION EACH BONE	1,000
26608	PRQ SKELETAL FIXJ METACARPAL FX EACH BONE	5,823
26615	OPEN TX METACARPAL FRACTURE SINGLE EA BONE	8,563
26641	CLTX CARPO/METACARPAL DISLOCATION THUMB W/MANJ	1,778
26645	CLTX CARPO/METACARPAL FX DISLC THUMB W/MANJ	2,666
26650	PRQ SKELETAL FIX CARPO/METACARPAL FX DISLC THUMB	5,738
26665	OPEN TX CARPOMETACARPAL FRACTURE DISLOCATE THUMB	8,438
26670	CLTX CARPO/METACARPL DISLC THMB MANJ EA W/O ANES	1,000
26675	CLTX CARPO/MTCRPL DISLC THUMB MANJ EA JT W/ANES	3,554
26676	PRQ SKEL FIXJ CARPO/MTCRPL DISLC THMB MANJ EA JT	5,823
26685	OPEN TX CARPOMETACARPAL DISLOCATE NOT THUMB	8,438
26686	OPTX CARP/MTCRPL DISLC THMB CPLX MLT/DLYD RDCTJ	12,862
26705	CLTX METACARPOPHALANGEAL DISLC W/MANJ W/ANES	3,554
26706	PRQ SKEL FIXJ METACARPOPHALANGEAL DISLC W/MANJ	4,375
26715	OPEN TREATMENT METACARPOPHALANGEAL DISLOCATION	8,438
26720	CLTX PHLNGL FX PROX/MIDDLE PX/F/T W/O MANJ EA	1,000
26725	CLTX PHLNGL FX PROX/MIDDLE PX/F/T W/MANJ EA	2,666
26727	PRQ SKEL FIXJ PHLNGL SHFT FX PROX/MIDDLE PX/F/T	5,823
26735	OPEN TX PHALANGEAL SHAFT FRACTURE PROX/MIDDLE EA	8,563
26740	CLTX ARTCLR FX INVG MTCRPHLNGL/IPHAL JT W/O MANJ	1,000
26742	CLTX ARTCLR FX INVG MTCARPHLNGL/IPHAL JT W/MANJ	2,425
26746	OPEN TX ARTICULAR FRACTURE MCP/IP JOINT EA	8,438
26750	CLTX DSTL PHLNGL FX FNGR/THMB W/O MANJ EA	1,000
26755	CLTX DSTL PHLNGL FX FNGR/THMB W/MANJ EA	1,000
26756	PRQ SKEL FIXJ DSTL PHLNGL FX FNGR/THMB EA	5,823
26765	OPEN TX DISTAL PHALANGEAL FRACTURE EACH	8,563
26770	CLTX IPHAL JT DISLC W/MANJ W/O ANES	1,000
26775	CLTX IPHAL JT DISLC W/MANJ REQ ANES	3,281
26776	PRQ SKEL FIXJ IPHAL JT DISLC W/MANJ	5,738
26785	OPEN TX INTERPHALANGEAL JOINT DISLOCATION	6,219
26820	FUSION OPPOSITION THUMB W/AUTOGENOUS GRAFT	13,075
26841	ARTHRD CARPO/METACARPAL JT THUMB W/WO INT FIXJ	9,534
26842	ARTHRD CRP/MTACRPL JT THMB W/WO INT FIXJ W/AGRFT	9,534
26843	ARTHRD CARP/MTCRPL JT DGT OTHER THAN THUMB EACH	9,534
26844	ARTHRD CARP/MTCRPL JT DGT OTH/THN THMB W/AGRFT	9,534
26850	ARTHRODESIS METACARPOPHALANGEAL JT W/WO INT FIXJ	9,534
26852	ARTHRODESIS MTCRPL JT W/WO INT FIXJ W/AUTOGRAFT	9,534

26860	ARTHRODESIS INTERPHALANGEAL JT W/WO INT FIXJ	7,996
26861	ARTHRODESIS IPHAL JT W/WO INT FIXJ EA IPHAL JT	5,816
26862	ARTHRODESIS IPHAL JT W/WO INT FIXJ W/AUTOGRAFT	8,884
26863	ARTHRODESIS IPHAL JT W/WO INT FIXJ W/AGRFT EA JT	5,816
26910	AMP MTCRPL W/FINGER/THUMB W/WO INTEROSS TRANSFER	5,817
26951	AMP F/TH 1/2 JT/PHALANX W/NEURECT W/DIR CLSR	5,331
26952	AMP F/TH 1/2 JT/PHALANX W/NEURECT LOCAL FLAP	6,219
27006	TENOTOMY ABDUCTORS&/EXTENSOR HIP OPEN SPX	7,243
27025	FASCIOTOMY HIP/THIGH ANY TYPE	5,169
27043	EXCISION TUMOR SOFT TISSUE PELVIS&HIP SUBQ 3CM/>	4,374
27048	EXC TUMOR SOFT TISSUE PELVIS & HIP SUBFASC <5CM	4,511
27060	EXCISION ISCHIAL BURSA	9,534
27062	EXCISION TROCHANTERIC BURSA/CALCIFICATION	4,692
27066	EXCISION BONE CYST/BENIGN TUMOR DEEP	5,656
27093	INJECTION HIP ARTHROGRAPHY W/O ANESTHESIA	1,000
27095	INJECTION HIP ARTHROGRAPHY W/ANESTHESIA	1,000
27096	INJECT SI JOINT ARTHRGRPHY&/ANES/STEROID W/IMA	1,000
27125	HEMIARTHROPLASTY HIP PARTIAL	24,004
27130	ARTHRP ACETBLR/PROX FEM PROSTC AGRFT/ALGRFT	31,615
27132	CONV PREV HIP TOT HIP ARTHRP W/WO AGRFT/ALGRFT	34,468
27176	TX SLP FEM EPIPHYSIS SINGLE/MULTIPL PINNING SITU	7,662
27218	OPTX POST PEL BONE FX&/DISLC INT FIXJ IF PFRMD	15,389
27235	PRQ SKEL FIXJ FEMORAL FX PROX END NECK	5,649
27275	MANIPULATION HIP JOINT GENERAL ANESTHESIA	3,281
27279	ARTHRODESIS SACROILIAC JOINT PERCUTANEOUS	53,263
27301	I&D DEEP ABSC BURSA/HEMATOMA THIGH/KNEE REGION	3,936
27305	FASCIOTOMY ILIOTIBIAL OPEN	4,692
27306	TENOTOMY PRQ ADDUCTOR/HAMSTRING 1 TENDON SPX	4,692
27307	TENOTOMY PRQ ADDUCTOR/HAMSTRING MULTIPLE TENDON	5,965
27310	ARTHRT KNE W/EXPL DRG/RMVL FB	9,218
27324	BIOPSY SOFT TISSUE THIGH/KNEE AREA DEEP	4,742
27327	EXCISION TUMOR SOFT TISSUE THIGH/KNEE SUBQ <3CM	4,511
27328	EXC TUMOR SOFT TISSUE THIGH/KNEE SUBFASC <5CM	5,532
27331	ARTHRT KNE W/JT EXPL BX/RMVL LOOSE/FB	7,112
27337	EXCISION TUMOR SOFT TISSUE THIGH/KNEE SUBQ 3 CM/>	3,451
27339	EXC TUMOR SOFT TISSUE THIGH/KNEE SUBFASC 5 CM/>	3,702
27340	EXCISION PREPATELLAR BURSA	5,532
27345	EXCISION SYNOVIAL CYST POPLITEAL SPACE	6,321
27347	EXCISION LESION MENISCUS/CAPSULE KNEE	6,321
27350	PATELLECTOMY/HEMIPATELLECTOMY	9,534
27355	EXCISION/CURETTAGE CYST/TUMOR FEMUR	5,733
27360	PRTL EXC BONE FEMUR PROX TIBIA&/FIBULA	5,649
27372	REMOVAL FOREIGN BODY DEEP THIGH/KNEE	6,321
27380	SUTURE INFRAPATELLAR TENDON PRIMARY	9,534
27381	SUTR INFRAPATELLAR TDN 2 RCNSTJ W/FSCAL/TDN GRF	9,534
27385	SUTURE QUADRICEPS/HAMSTRING RUPTURE PRIMARY	9,534

27386	SUTR QUADRICEPS/HAMSTRING MUSC RPT RCNSTJ	9,534
27403	ARTHROTOMY W/MENISCUS REPAIR KNEE	12,596
27405	RPR PRIMARY TORN LIGM&/CAPSULE KNEE COLLATERAL	13,167
27407	REPAIR PRIMARY TORN LIGM&/CAPSULE KNEE CRUCIAT	14,966
27409	RPR 1 TORN LIGM&/CAPSL KNE COLTRL&CRUCIATE	9,534
27412	AUTOLOGOUS CHONDROCYTE IMPLANTATION KNEE	10,229
27415	OSTEOCHONDRAL ALLOGRAFT KNEE OPEN	32,004
27416	OSTEOCHONDRAL AUTOGRAFT KNEE OPEN MOSAICPLASTY	9,534
27418	ANTERIOR TIBIAL TUBERCLEPLASTY	11,250
27420	RCNSTJ DISLOCATING PATELLA	9,534
27422	RCNSTJ DISLC PATELLA W/XTNSR RELIGNMT&/MUSC RL	9,534
27425	LATERAL RETINACULAR RELEASE OPEN	7,902
27427	LIGAMENOUS RECONSTRUCTION KNEE EXTRA-ARTICULAR	12,348
27428	LIGAMENOUS RECONSTRUCTION KNEE INTRA-ARTICULAR	26,245
27430	QUADRICEPSPLASTY	14,484
27438	ARTHROPLASTY PATELLA W/PROSTHESIS	26,752
27442	ARTHROPLASTY FEM CONDYLES/TIBIAL PLATEAU KNEE	28,823
27446	ARTHROPLASTY KNEE CONDYLE&PLATEAU MEDIAL/LAT CMPRT	46,234
27447	ARTHROPLASTY KNEE CONDYLE&PLATEAU MEDIAL&LAT COMPARTMENTS	29,281
27455	OSTEOT PROX TIBIA FIB EXC/OSTEOT BEFORE EPIPHYSL	22,847
27457	OSTEOT PROX TIBIA FIB EXC/OSTEOT AFTER EPIPHYSL	22,847
27470	RPR NON/MAL FEMUR DSTL H/N W/O GRF	6,802
27475	ARREST EPIPHYSEAL DISTAL FEMUR	9,534
27477	ARREST EPIPHYSEAL TIBIA & FIBULA PROXIMAL	5,648
27479	ARRST EPIPHYSL CMBN DSTL FEMUR PROX TIBFIB	9,534
27485	ARRST HEMIEPIPHYSL DSTL FEMUR/PROX TIBIA/FIBULA	4,690
27487	REVJ TOT KNEE ARTHROPLASTY FEM&ENTIRE TIBIAL COMPONE	37,734
27511	OPEN TX FEMORAL SUPRACONDYLAR FRACTURE W/O XTN	4,231
27514	OPEN TX FEMORAL FRACTURE DISTAL MED/LAT CONDYLE	15,389
27524	OPTX PATLLR FX W/INT FIXJ/PATLLC&SOFT TISS RPR	13,167
27540	OPEN TX INTERCONDYLAR SPINE/TUBRST FRACTURE KNEE	11,234
27556	OPEN TX KNEE DISLOCATION W/O LIGAMENOUS REPAIR	8,357
27566	OPTX PATELLAR DISLC W/WO PRTL/TOT PATELLECTOMY	9,534
27570	MANIPULATION KNEE JOINT UNDER GENERAL ANESTHESIA	3,330
27600	DCMPRN FASCT LEG ANT&/LAT COMPARTMENTS ONLY	4,692
27602	DCMPRN FASCT LEG ANT&/LAT&PST CMPRT	4,738
27603	INCISION & DRAINAGE LEG/ANKLE ABSCESS/HEMATOMA	3,936
27605	TENOTOMY PRQ ACHILLES TENDON SPX LOCAL ANES	4,592
27606	TENOTOMY PRQ ACHILLES TENDON SPX GENERAL ANES	4,692
27610	ARTHROTOMY ANKLE W/EXPL DRAINAGE/REMOVAL FB	5,824
27612	ARTHROPLASTY ANKLE W/EXPL DRAINAGE/REMOVAL FB	7,489
27613	BIOPSY SOFT TISSUE LEG/ANKLE AREA SUPERFICIAL	1,532
27614	BIOPSY SOFT TISSUE LEG/ANKLE AREA DEEP	4,993
27615	RAD RESECTION TUMOR SOFT TISSUE LEG/ANKLE <5CM	6,657
27618	EXC TUMOR SOFT TISSUE LEG/ANKLE SUBQ <3CM	4,161
27619	EXC TUMOR SOFT TISSUE LEG/ANKLE SUBFASCIAL <5CM	6,657

27620	ARTHRT ANKLE W/EXPL W/WO BX W/WO RMVL LOOSE/FB	6,657
27625	ARTHROTOMY W/SYNOVECTOMY ANKLE	5,649
27626	ARTHROTOMY W/SYNOVECTOMY ANKLE TENOSYNOVECTOMY	6,657
27630	EXCISION LESION TENDON SHEATH/CAPSULE LEG&/ANK	4,993
27632	EXCISION TUMOR SOFT TISSUE LEG/ANKLE SUBQ 3 CM/>	4,003
27634	EXC TUMOR SOFT TISSUE LEG/ANKLE SUBFASC 5 CM/>	3,937
27635	EXCISION/CURETTAGE BONE CYST/TUMOR TIBIA/FIBULA	6,657
27637	EXC/CURETTAGE CYST/TUMOR TIBIA/FIBULA W/AGRAFT	9,534
27638	EXC/CURETTAGE CYST/TUMOR TIBIA/FIBULA W/ALGRAFT	9,534
27640	PARTIAL EXCISION BONE TIBIA	9,373
27641	PARTIAL EXCISION BONE FIBULA	5,824
27648	INJECTION ANKLE ARTHROGRAPHY	1,000
27650	REPAIR PRIMARY OPEN/PRQ RUPTURED ACHILLES TENDON	9,534
27652	RPR PRIMARY OPEN/PRQ RUPTURED ACHILLES W/GRAFT	15,187
27654	REPAIR SECONDARY ACHILLES TENDON W/WO GRAFT	9,534
27656	REPAIR FASCIAL DEFECT LEG	6,657
27658	REPAIR FLEXOR TENDON LEG PRIMARY W/O GRAFT EACH	4,692
27659	RPR FLEXOR TENDON LEG SECONDARY W/O GRAFT EACH	9,534
27664	RPR EXTENSOR TENDON LEG PRIMARY W/O GRAFT EACH	9,534
27665	RPR EXTENSOR TENDON LEG SECONDRY W/WO GRAFT EACH	9,534
27675	RPR DISLOC PERONEAL TENDON W/O FIBULAR OSTEOTOMY	6,657
27676	REPAIR DISLOCATING PERONEAL TENDON W/FIB OSTEOT	9,534
27680	TENOLYSIS FLXR/XTNSR TENDON LEG&/ANKLE 1 EACH	5,650
27681	TNOLS FLXR/XTNSR TDN LEG&/ANKLE MLT TDN	7,489
27685	LNGTH/SHRT TENDON LEG/ANKLE 1 TENDON SPX	5,733
27686	LNGTH/SHRT TDN LEG/ANKLE MLT TDN SAME INC EA	7,489
27687	GASTROCNEMIUS RECESSION	7,489
27690	TR/TRNSPL 1 TDN W/MUSC REDIRION/REROUTING SUPFC	9,534
27691	TR/TRNSPL 1 TDN W/MUSC REDIRION/REROUTING DP	9,534
27692	TR/TRNSPL 1 TDN W/MUSC REDIRION/REROUTING EA TDN	9,235
27695	RPR PRIMARY DISRUPTED LIGAMENT ANKLE COLLATERAL	9,534
27696	RPR PRIM DISRUPTED LIGM ANKLE BTH COLTRL LIGMS	9,534
27698	REPAIR SECONDARY DISRUPTED LIGAMENT ANKLE COLTRL	9,534
27705	OSTEOTOMY TIBIA	13,732
27707	OSTEOTOMY FIBULA	6,657
27709	OSTEOTOMY TIBIA & FIBULA	19,477
27720	REPAIR NONUNION/MALUNION TIBIA W/O GRAFT	13,086
27724	RPR NON/MAL TIBIA W/ILIAC/OTH AGRFT	11,250
27726	REPAIR FIBULA NONUNION/MALUNION W/INT FIXATION	13,330
27730	ARREST EPIPHYSEAL OPEN DISTAL TIBIA	5,649
27732	ARREST EPIPHYSEAL OPEN DISTAL FIBULA	5,649
27734	ARREST EPIPHYSEAL OPEN DISTAL TIBIA&FIBULA	5,649
27752	CLTX TIBIAL SHAFT FX W/MANJ W/WO SKEL TRACJ	3,329
27756	PRQ SKELETAL FIXATION TIBIAL SHAFT FRACTURE	13,930
27758	OPTX TIBIAL SHFT FX W/PLATE/SCREWS W/WO CERCLAGE	27,522
27759	TX TIBL SHFT FX IMED IMPLT W/WO SCREWS&/CERCLA	27,173

27760	CLTX MEDIAL MALLEOLUS FX W/O MANIPULATION	1,666
27762	CLTX MEDIAL MALLS FX W/MANJ W/WO SKN/SKEL TRACJ	3,329
27766	OPEN TREATMENT MEDIAL MALLEOLUS FRACTURE	9,534
27780	CLTX PROX FIBULA/SHFT FX W/O MANJ	1,666
27781	CLTX PROX FIBULA/SHFT FX W/MANJ	3,329
27784	OPEN TREATMENT PROXIMAL FIBULA/SHAFT FRACTURE	9,534
27786	CLTX DSTL FIBULAR FX LAT MALLS W/O MANJ	1,666
27788	CLTX DSTL FIBULAR FX LAT MALLS W/MANJ	3,329
27792	OPEN TX DISTAL FIBULAR FRACTURE LAT MALLEOLUS	12,600
27808	CLOSED TX BIMALLEOLAR ANKLE FRACTURE W/O MANJ	1,666
27810	CLOSED TX BIMALLEOLAR ANKLE FRACTURE W/MANJ	3,329
27814	OPEN TREATMENT BIMALLEOLAR ANKLE FRACTURE	12,800
27816	CLTX TRIMALLEOLAR ANKLE FX W/O MANIPULATION	1,666
27818	CLTX TRIMALLEOLAR ANKLE FX W/MANIPULATION	3,329
27822	OPEN TX TRIMALLEOLAR ANKLE FX W/O FIXJ PST LIP	12,746
27823	OPEN TX TRIMALLEOLAR ANKLE FX W/FIXJ PST LIP	12,862
27824	CLTX FX W8 BRG ARTCLR PRTN DSTL TIBIA W/O MANJ	1,666
27825	CLTX FX W8 BRG ARTCLR PRTN DSTL TIB W/SKEL TRACJ	3,329
27826	OPEN TREATMENT FRACTURE DISTAL TIBIA FIBULA	13,317
27827	OPEN TREATMENT FRACTURE DISTAL TIBIA ONLY	27,265
27828	OPEN TREATMENT FRACTURE DISTAL TIBIA & FIBULA	27,742
27829	OPEN TX DISTAL TIBIOFIBULAR JOINT DISRUPTION	9,534
27830	CLTX PROX TIBFIB JT DISLC W/O ANES	1,666
27831	CLTX PROX TIBFIB JT DISLC REQ ANES	4,375
27832	OPEN TX PROX TIBFIB JOINT DISLOCATE EXC PROX FIB	9,534
27840	CLOSED TX ANKLE DISLOCATION W/O ANESTHESIA	1,666
27842	CLTX ANKLE DISLC REQ ANES W/WO PRQ SKEL FIXJ	3,329
27846	OPTX ANKLE DISLOCATION W/O REPAIR/INTERNAL FIXJ	9,534
27848	OPTX ANKLE DISLOCATION W/REPAIR/INT/XTRNL FIXJ	14,045
27860	MANIPULATION ANKLE UNDER GENERAL ANESTHESIA	4,375
27892	DCMPRN FASCT LEG ANT&/LAT W/DBRDMT MUSC&/NERVE	4,792
28002	I&D BELOW FASCIA FOOT 1 BURSAL SPACE	5,824
28003	I&D BELOW FASCIA FOOT MULTIPLE AREAS	6,657
28005	INCISION BONE CORTEX FOOT	6,657
28008	FASCIOTOMY FOOT&/TOE	4,993
28011	TENOTOMY PERCUTANEOUS TOE MULTIPLE TENDON	4,592
28020	ARTHRT W/EXPL DRG/RMVL LOOSE/FB NTRTRSL/TARS JT	5,824
28022	ARTHRT W/EXPL DRG/RMVL LOOSE/FB MTTARPHLNGL JT	5,824
28024	ARTHRT W/EXPL DRG/RMVL LOOSE/FB IPHAL JT	5,824
28030	NEURECTOMY, INTRINSIC MUSCULATURE OF FOOT	5,824
28035	RELEASE TARSAL TUNNEL	6,657
28039	EXCISION TUMOR SOFT TIS FOOT/TOE SUBQ 1.5 CM/>	3,451
28041	EXC TUMOR SOFT TISSUE FOOT/TOE SUBFASC 1.5 CM/>	3,382
28043	EXCISION TUMOR SOFT TISSUE FOOT/TOE SUBQ <1.5CM	4,511
28045	EXC TUMOR SOFT TISSUE FOOT/TOE SUBFASC <1.5CM	5,824
28046	RAD RESECTION TUMOR SOFT TISSUE FOOT/TOE <3CM	6,657

28047	RAD RESECTION TUMOR SOFT TISSUE FOOT/TOE 3 CM/>	3,451
28050	ARTHRT W/BX INTERTARSAL/TARSOMETATARSAL JOINT	5,824
28052	ARTHRTOMY W/BX METATARSOPHALANGEAL JOINT	5,824
28054	ARTHRTOMY W/BX INTERPHALANGEAL JOINT	5,824
28055	NEURECTOMY INTRINSIC MUSCULATURE OF FOOT	4,013
28060	FASCIECTOMY PLANTAR FASCIA PARTIAL SPX	6,657
28062	FASCIOTOMY PLANTAR FASCIA RADICAL SPX	7,489
28070	SYNVCT INTERTARSAL/TARSOMETATARSAL JT EA SPX	9,534
28072	SYNOVECTOMY METATARSOPHALANGEAL JOINT EACH	5,169
28080	EXCISION INTERDIGITAL MORTON NEUROMA SINGLE EACH	4,993
28090	EXC LESION TENDON SHEATH/CAPSULE W/SYNVCT FOOT	4,993
28092	EXC LESION TENDON SHEATH/CAPSULE W/SYNVCT TOE EA	4,993
28100	EXCISION/CURETTAGE CYST/TUMOR TALUS/CALCANEUS	4,592
28103	EXC/CURETTAGE CYST/TUMOR TALUS/CALCANEUS ALGRFT	9,534
28104	EXC/CURGTG BONE CYST/B9 TUMORTARSAL/METATARSAL	4,668
28106	EXC/CURGTG CST/B9 TUM TARSAL/METAR W/ILIAC/AGRFT	9,534
28107	EXC/CURGTG CST/B9 TUM TARSAL/METAR W/ALGRFT	9,534
28108	EXC/CURGTG CST/B9 TUM PHALANGES FOOT	5,824
28110	OSTECTOMY PRTL 5TH METAR HEAD SPX	5,824
28111	OSTECTOMY COMPLETE 1ST METATARSAL HEAD	5,824
28112	OSTECTOMY COMPLETE OTHER METATARSAL HEAD 2/3/4	5,824
28113	OSTECTOMY COMPLETE 5TH METATARSAL HEAD	4,993
28114	OSTC COMPL ALL METAR HEADS W/PRTL PROX PHALANGC	8,321
28116	OSTECTOMY TARSAL COALITION	6,657
28118	OSTECTOMY CALCANEUS	6,885
28119	OSTECTOMY CALCANEUS SPUR W/WO PLNTAR FASCIAL RLS	6,657
28120	PARTIAL EXCISION BONE TALUS/CALCANEUS	7,489
28122	PRTL EXC B1 TARSAL/METAR B1 XCP TALUS/CALCANEUS	5,824
28124	PARTICAL EXCISION BONE PHALANX TOE	4,993
28126	RESECTION PARTIAL/COMPLETE PHALANGEAL BASE EACH	4,592
28153	RESECTION CONDYLE DISTAL END PHALANX EACH TOE	4,592
28160	HEMIPHALANGECTOMY/INTERPHALANGEAL JOINT EXC TOE	6,005
28190	REMOVAL FOREIGN BODY FOOT SUBCUTANEOUS	1,666
28192	REMOVAL FOREIGN BODY FOOT DEEP	3,446
28193	REMOVAL FOREIGN BODY FOOT COMPLICATED	4,993
28200	RPR TDN FLXR FOOT 1/2 W/O FREE GRAFG EACH TENDON	6,657
28202	RPR TENDON FLXR FOOT SEC W/FREE GRAFT EA TENDON	9,534
28208	REPAIR TENDON EXTENSOR FOOT 1/2 EACH TENDON	6,657
28210	RPR TENDON XTNSR FOOT SEC W/FREE GRAFT EA TENDON	11,274
28220	TENOLYSIS FLEXOR FOOT SINGLE TENDON	4,592
28230	TX OPN TENDON FLEXOR FOOT SINGLE/MULT TENDON SPX	4,592
28232	TX OPEN TENDON FLEXOR TOE 1 TENDON SPX	4,592
28234	TENOTOMY OPEN EXTENSOR FOOT/TOE EACH TENDON	4,592
28238	RCNSTJ PST TIBL TDN W/EXC ACCESSORY TARSL NAVCLR	9,534
28240	TENOTOMY LENGTHENING/RLS ABDUCTOR HALLUCIS MUSC	6,657
28250	DIVISION PLANTAR FASCIA & MUSCLE SPX	6,657

28264	CAPSULOTOMY MIDTARSAL	9,184
28270	CAPSUL MTTARPHLNGL JT W/WO TENORRHAPHY EA JT SPX	4,993
28280	SYNDACTYLIZATION TOES	6,657
28285	CORRECTION HAMMERTOES	9,438
28286	CORRECTION COCK-UP 5TH TOE W/PLASTIC CLOSURE	5,824
28288	OSTC PRTL EXOSTC/CONDYLC METAR HEAD	5,824
28289	HALLUX RIGIDUS W/CHEILECTOMY 1ST MP JT W/O IMPLT	5,824
28290	CORRECTION, HALLUX VALGUS (BUNION), WITH OR WITHOUT SESAMOIDECTOMY; SIMPLE EXOSTECTOMY	6,657
28292	CORRJ HALLUX VALGUS W/SESMDC W/RESCJ PROX PHAL	6,657
28293	CORRECTION, HALLUX VALGUS (BUNION), WITH OR WITHOUT SESAMOIDECTOMY; RESECTION OF JOINT WITH IMPLANT	7,489
28294	CORRECTION, HALLUX VALGUS (BUNION), WITH OR WITHOUT SESAMOIDECTOMY W/ TNDN TRNSPLNT	7,489
28295	CORRJ HALLUX VALGUS W/SESMDC W/PROX METAR OSTEOT	6,657
28296	CORRJ HALLUX VALGUS W/SESMDC W/DIST METAR OSTEOT	6,657
28297	CORRJ HALLUX VALGUS W/SESMDC W/1METAR MEDIAL CNF	13,675
28298	CORRJ HALLUX VALGUS W/SESMDC W/PROX PHLNX OSTEOT	9,534
28299	CORRJ HALLUX VALGUS W/SESMDC W/2 OSTEOT	9,534
28300	OSTEOTOMY CALCANEUS W/WO INTERNAL FIXATION	12,752
28302	OSTEOTOMY TALUS	9,534
28304	OSTEOTOMY TARSAL BONES OTH/THN CALCANEUS/TALUS	9,534
28305	OSTEOT TARSAL OTH/THN CALCANEUS/TALUS W/AGRFT	13,730
28306	OSTEOT W/WO LNGTH SHRT/CORRJ 1ST METAR	9,534
28307	OSTEOT W/WO LNGTH SHRT/CORRJ METAR XCP 1ST TOE	9,534
28308	OSTEOT W/WO LNGTH SHRT/CORRJ METAR XCP 1ST EA	5,824
28309	OSTEOT W/WO LNGTH SHRT/ANGULAR CORRJ METAR MLT	9,534
28310	OSTEOT SHRT CORRJ PROX PHALANX 1ST TOE	9,534
28312	OSTEOT SHRT CORRJ OTH PHALANGES ANY TOE	5,824
28313	RCNSTJ ANGULAR DFRM TOE SOFT TISS PX ONLY	5,824
28315	SESAMOIDECTOMY FIRST TOE SPX	5,824
28320	REPAIR NONUNION/MALUNION TARSAL BONES	30,192
28322	RPR NON/MALUNION METARSAL W/WO BONE GRAFT	13,004
28340	RCNSTJ TOE MACRODACTYLY SOFT TISSUE RESECTION	6,657
28341	RCNSTJ TOE MACRODACTYLY REQUIRING BONE RESECTION	7,489
28344	RECONSTRUCTION TOE POLYDACTYLY	7,489
28345	RCNSTJ TOE SYNDACTYLY W/WO SKIN GRAFT EACH WEB	7,489
28400	CLOSED TX CALCANEAL FRACTURE W/O MANIPULATION	1,666
28405	CLOSED TX CALCANEAL FRACTURE W/MANIPULATION	3,329
28406	PRQ SKELETAL FIXJ CALCANEAL FRACTURE W/MANJ	9,534
28415	OPEN TREATMENT CALCANEAL FRACTURE	13,178
28420	OPEN TREATMENT CALCANEAL FRACTURE W BONE GRAFT	28,058
28435	CLOSED TX TALUS FRACTURE W/MANIPULATION	3,329
28436	PRQ SKELETAL FIXATION TALUS FRACTURE W/MANJ	9,534
28445	OPEN TREATMENT TALUS FRACTURE	12,372
28450	TX TARSAL BONE FX XCP TALUS&CALCN W/O MANJ	1,000
28456	PRQ SKEL FIXJ TARSL FX XCP TALUS&CALCNS W/MANJ	9,534

28465	OPEN TX TARSAL FRACTURE XCP TALUS & CALCANEUS EA	13,030
28470	CLOSED TX METATARSAL FRACTURE W/O MANIPULATION	1,000
28475	CLTX METAR FX W/MANJ	3,329
28476	PRQ SKEL FIXJ METAR FX W/MANJ	5,738
28485	OPEN TREATMENT METATARSAL FRACTURE EACH	12,692
28496	PRQ SKEL FIXJ FX GRT TOE PHLX/PHLG W/MANJ	5,738
28505	OPEN TX FRACTURE GREAT TOE/PHALANX/PHALANGES	8,563
28510	CLTX FX PHLX/PHLG OTH/THN GRT TOE W/O MANJ	1,030
28515	CLTX FX PHLX/PHLG OTH/THN GRT TOE W/MANJ	1,000
28525	OPEN TX FRACTURE PHALANX/PHALANGES NOT GREAT TOE	8,563
28531	OPEN TX SESAMOID FRACTURE W/WO INTERNAL FIXATION	9,534
28545	CLTX TARSAL DISLC OTH/THN TALOTARSAL W/ANES	5,738
28546	PRQ SKEL FIXJ TARSL DISLC XCP TALOTARSAL W/MANJ	5,738
28555	OPEN TREATMENT TARSAL BONE DISLOCATION	9,534
28575	CLOSED TX TALOTARSAL JOINT DISLOCATION W/ANES	4,375
28576	PRQ SKEL FIXJ TALOTARSAL JT DISLC W/MANJ	9,534
28585	OPEN TREATMENT TALOTARSAL JOINT DISLOCATION	14,061
28605	CLOSED TX TARSOMETATARSAL DISLOCATION W/ANES	3,329
28606	PRQ SKEL FIXJ TARS JT DISLC W/MANJ	5,738
28615	OPEN TREATMENT TARSOMETATARSAL JOINT DISLOCATION	12,432
28635	CLTX METATARSOPHLNGL JT DISLC REQ ANES	3,329
28636	PRQ SKEL FIXJ METATARSOPHLNGL JT DISLC W/MANJ	5,738
28645	OPEN TX METATARSOPHALANGEAL JOINT DISLOCATION	8,438
28665	CLTX INTERPHALANGEAL JOINT DISLOCATION REQ ANES	3,281
28666	PRQ SKEL FIXJ INTERPHALANGEAL JOINT DISLC W/MANJ	5,738
28675	OPEN TREATMENT INTERPHALANGEAL JOINT DISLOCATION	8,438
28705	ARTHRODESIS PANTALAR	39,377
28715	ARTHRODESIS TRIPLE	30,059
28725	ARTHRODESIS SUBTALAR	27,610
28730	ARTHROD MIDTARSL/TARSOMETATARSAL MULT/TRANSVRS	29,706
28735	ARTHROD MIDTARSL/TARS MLT/TRANSVRS W/OSTEOT	30,003
28737	ARTHROD W/TDN LNGTH&ADVMNT TARSL NVCLR-CUNEIFOR	28,522
28740	ARTHRODESIS MIDTARSOMETATARSAL SINGLE JOINT	14,096
28750	ARTHRODESIS GREAT TOE METATARSOPHALANGEAL JOINT	13,837
28755	ARTHRODESIS GREAT TOE INTERPHALANGEAL JOINT	9,534
28760	ARTHROD W/XTNSR HALLUCIS LONGUS TR 1ST METAR NCK	9,534
28805	AMPUTATION FOOT TRANSMETARSAL	3,723
28810	AMPUTATION METATARSAL W/TOE SINGLE	4,993
28820	AMPUTATION TOE METATARSOPHALANGEAL JOINT	4,993
28825	AMPUTATION TOE INTERPHALANGEAL JOINT	4,993
28899	UNLISTED PROCEDURE FOOT/TOES	7,489
29065	APPLICATION CAST SHOULDER HAND LONG ARM	1,000
29075	APPLICATION CAST ELBOW FINGER SHORT ARM	1,000
29085	APPLICATION CAST HAND & LOWER FOREARM GAUNTLET	1,000
29105	APPLICATION LONG ARM SPLINT SHOULDER HAND	1,000
29125	APPLICATION SHORT ARM SPLINT FOREARM-HAND STATIC	1,000

29325	APPL HIP SPICA CAST ONE&ONE-HALF SPICA/BOTH LEGS	1,000
29425	APPLICATION SHORT LEG CAST WALKING/AMBULATORY	1,000
29515	APPLICATION SHORT LEG SPLINT CALF FOOT	1,000
29710	RMVL/BIVALV SHO/HIP SPICA MINERVA/RISSER JACKET	1,000
29805	ARTHROSCOPY SHOULDER DX W/WO SYNOVIAL BIOPSY SPX	7,400
29806	ARTHROSCOPY SHOULDER SURGICAL CAPSULORRHAPHY	11,845
29807	ARTHROSCOPY SHOULDER SURGICAL REPAIR SLAP LESION	11,845
29819	ARTHROSCOPY SHOULDER SURGICAL REMOVAL LOOSE/FB	9,866
29820	ARTHROSCOPY SHOULDER SURG SYNOVECTOMY PARTIAL	9,866
29821	ARTHROSCOPY SHOULDER SURG SYNOVECTOMY COMPLETE	9,866
29822	ARTHROSCOPY SHOULDER SURG DEBRIDEMENT LIMITED	9,866
29823	ARTHROSCOPY SHOULDER SURG DEBRIDEMENT EXTENSIVE	17,510
29824	ARTHROSCOPY SHOULDER DISTAL CLAVICULECTOMY	9,866
29825	ARTHROSCOPY SHOULDER AHESIOLYSIS W/WO MANIPJ	9,866
29826	ARTHROSCOPY SHOULDER W/CORACOACRM LIGMNT RELEASE	7,292
29827	ARTHROSCOPY SHOULDER ROTATOR CUFF REPAIR	10,380
29828	ARTHROSCOPY SHOULDER BICEPS TENODESIS	9,534
29830	ARTHROSCOPY ELBOW DIAG W/WO SYNOVIAL BIOPSY SPX	7,400
29834	ARTHROSCOPY ELBOW SURGICAL W/REMOVAL LOOSE/FB	9,044
29835	ARTHROSCOPY ELBOW SURGICAL SYNOVECTOMY PARTIAL	9,044
29836	ARTHROSCOPY ELBOW SURGICAL SYNOVECTOMY COMPLETE	9,534
29837	ARTHROSCOPY ELBOW SURGICAL DEBRIDEMENT LIMITED	9,044
29838	ARTHROSCOPY ELBOW SURGICAL DEBRIDEMENT EXTENSIVE	9,044
29840	ARTHROSCOPY WRIST DIAG W/WO SYNOVIAL BIOPSY SPX	6,530
29843	ARTHROSCOPY WRIST INFECTION LAVAGE&DRAINAGE	8,222
29844	ARTHROSCOPY WRIST SURGICAL SYNOVECTOMY PARTIAL	8,222
29845	ARTHROSCOPY WRIST SURGICAL SYNOVECTOMY COMPLETE	8,222
29846	ARTHRS WRST EXC&/RPR TRIANG FIBROCART&/JOINT	9,044
29847	ARTHROSCOPY WRIST SURG INT FIXJ FX/INSTABILITY	9,534
29848	NDSC WRST SURG W/RLS TRANSVRS CARPL LIGM	8,343
29850	ARTHROSCOPY AID TX SPINE&/FX KNEE W/O FIXJ	6,435
29851	ARTHROSCOPY AID TX SPINE&/FX KNEE W/FIXJ	10,229
29855	ARTHRS AID TIBIAL FRACTURE PROXIMAL UNICONDYLAR	14,633
29860	ARTHROSCOPY HIP DIAGNOSTIC W/WO SYNOVIAL BYP SPX	9,534
29861	ARTHROSCOPY HIP SURGICAL W/REMOVAL LOOSE/FB	9,534
29862	ARTHRS HIP DEBRIDEMENT/SHAVING ARTICULAR CRTLG	10,229
29863	ARTHROSCOPY HIP SURGICAL W/SYNOVECTOMY	10,229
29866	ARTHROSCOPY KNEE OSTEOCHONDRAL AGRFT MOSAICPLAST	10,229
29867	ARTHROSCOPY KNEE OSTEOCHONDRAL ALLOGRAFT	28,857
29868	ARTHROSCOPY KNEE MENISCAL TRNSPLJ MED/LAT	34,468
29870	ARTHROSCOPY KNEE DIAGNOSTIC W/WO SYNOVIAL BX SPX	7,400
29871	ARTHROSCOPY KNEE INFECTION LAVAGE & DRAINAGE	9,044
29873	ARTHROSCOPY KNEE LATERAL RELEASE	9,044
29874	ARTHROSCOPY KNEE REMOVAL LOOSE/FOREIGN BODY	9,044
29875	ARTHROSCOPY KNEE SYNOVECTOMY LIMITED SPX	9,044
29876	ARTHROSCOPY KNEE SYNOVECTOMY 2/>COMPARTMENTS	9,044

29877	ARTHRS KNEE DEBRIDEMENT/SHAVING ARTCLR CRTLG	9,044
29879	ARTHRS KNEE ABRASION ARTHRP/MLT DRLG/MICROFX	9,044
29880	ARTHRS KNEE W/MENISCECTOMY MED&LAT W/SHAVING	9,044
29881	ARTHRS KNE SURG W/MENISCECTOMY MED/LAT W/SHVG	9,044
29882	ARTHROSCOPY KNEE W/MENISCUS RPR MEDIAL/LATERAL	9,044
29883	ARTHROSCOPY KNEE W/MENISCUS RPR MEDIAL&LATERAL	9,044
29884	ARTHROSCOPY KNEE W/LYSIS ADHESIONS W/WO MANJ SPX	9,044
29885	ARTHRS KNEE DRILL OSTEOCHONDRITIS DISSECANS GRFG	10,229
29886	ARTHRS KNEE DRILLING OSTEOCHOND DISSECANS LESION	9,044
29887	ARTHRS KNEE DRLG OSTEOCHOND DISSECANS INT FIXJ	9,534
29888	ARTHRS AIDED ANT CRUCIATE LIGM RPR/AGMNTJ/RCNSTJ	13,173
29889	ARTHRS AIDED PST CRUCIATE LIGM RPR/AGMNTJ/RCNSTJ	26,056
29891	ARTHRS ANKLE EXC OSTCHNDRL DFCT W/DRLG DFCT	7,400
29892	ARTHRS AID RPR LES/TALAR DOME FX/TIBL PLAFOND FX	9,534
29893	ENDOSCOPIC PLANTAR FASCIOTOMY	5,976
29894	ARTHROSCOPY ANKLE W/REMOVAL LOOSE/FOREIGN BODY	7,400
29895	ARTHROSCOPY ANKLE SURGICAL SYNOVECTOMY PARTIAL	7,400
29897	ARTHROSCOPY ANKLE SURGICAL DEBRIDEMENT LIMITED	8,222
29898	ARTHROSCOPY ANKLE SURGICAL DEBRIDEMENT EXTENSIVE	8,222
29899	ARTHROSCOPY ANKLE SURGICAL W/ANKLE ARTHRODESIS	12,361
29900	ARTHROSCOPY METACARPOPHALANGEAL SYNOVIAL BIOPSY	4,375
29914	ARTHROSCOPY HIP W/FEMOROPLASTY	9,534
29915	ARTHROSCOPY HIP W/ACETABULOPLASTY	9,534
29916	ARTHROSCOPY HIP W/LABRAL REPAIR	9,534
35206	REPAIR BLOOD VESSEL DIRECT UPPER EXTREMITY	5,140
35207	REPAIR BLOOD VESSEL DIRECT HAND FINGER	8,609
37618	LIGATION MAJOR ARTERY EXTREMITY	5,308
38220	DIAGNOSTIC BONE MARROW ASPIRATIONS	1,000
62287	DCMPRN PERQ NUCLEUS PULPOSUS 1/> LEVELS LUMBAR	8,377
62310	INJ, SNGL, NOT INCL NEURO SUBST, W/ OR W/O CONTRAST, OF DIAGNOSTIC OR THERAPEUTIC SUBSTANCE(S)	1,971
62311	INJ, SNGL, NOT INCL NEURO SUBST, W/ OR W/O CONTRAST, OF DIAGNOSTIC OR THERAPEUTIC SUBSTANCE(S)	1,971
62321	NJX DX/THER SBST INTRLMNR CRV/THRC W/IMG GDN	1,163
62323	NJX DX/THER SBST INTRLMNR LMBR/SAC W/IMG GDN	1,163
62350	IMPLTJ REVJ/RPSG ITHCL/EDRL CATH PMP W/O LAM	9,856
62355	RMVL PREVIOUSLY IMPLTED ITHCL/EDRL CATH	3,132
62362	IMPLTJ/RPLCMT ITHCL/EDRL DRUG NFS PRGRBL PUMP	49,204
62365	RMVL SUBQ RSVR/PUMP INTRATHECAL/EPIDURAL INFUS	7,381
62368	ELECT ANALYS IMPLT ITHCL/EDRL PUMP W/REPRGRMG	1,000
62370	ELEC ANALYS IMPLT ITHCL/EDRL PMP W/REPR PHYS/QHP	2,421
63020	LAMNOTMY INCL W/DCMPRSN NRV ROOT 1 INTRSPC CERVIC	10,498
63030	LAMNOTMY INCL W/DCMPRSN NRV ROOT 1 INTRSPC LUMBR	9,924
63035	LAMNOTMY W/DCMPRSN NRV EACH ADDL CRVCL/LMBR	7,541
63042	LAMOT PRTL FFD EXC DISC REEXPL 1 NTRSPC LUMBAR	9,924
63045	LAM FACETECTOMY & FORAMOTOMY 1 SEGMENT CERVICAL	9,924
63047	LAM FACETECTOMY & FORAMOTOMY 1 SEGMENT LUMBAR	9,924

63048	LAM FACETECTOMY&FORAMTOMY 1 SGM EA CRV THRC/LMBR	2,685
63056	TRANSPEDICULAR DCMPRN SPINAL CORD 1 SEG LUMBAR	9,924
63267	LAM EXC/EVAC ISPI LESION OTH/THN NEO XDRL LUMBAR	11,212
63650	PRQ IMPLTJ NSTIM ELECTRODE ARRAY EPIDURAL	15,355
63661	RMVL SPINAL NSTIM ELTRD PRQ ARRAY INCL FLUOR	2,807
63663	REVJ INCL RPLCMT NSTIM ELTRD PRQ RA INCL FLUOR	19,044
63685	INSJ/RPLCMT SPI NPGR DIR/INDUXIVE COUPLING	79,811
63688	REVJ/RMVL IMPLANTED SPINAL NEUROSTIM GENERATOR	6,278
64405	INJECTION ANESTHETIC AGENT GREATER OCCIPITAL NRV	1,000
64418	INJECTION ANESTHETIC AGENT SUPRASCAPULAR NERVE	2,051
64421	MULTIPLE NERVE BLOCK INJECTIONS RIB NERVES	1,396
64445	INJECTION ANESTHETIC AGENT SCIATIC NRV SINGLE	2,051
64450	INJECTION ANES OTHER PERIPHERAL NERVE/BRANCH	1,000
64455	NJX ANES&STEROID PLANTAR COMMON DIGITAL NERVE	1,997
64470	INJ, ANES AGENT &/OR STRD, PRVRTBL FCT JNT OR FCT JNT NRV; CRVCL OR THOR, SINGLE LVL	1,971
64472	INJ, ANES AGENT &/OR STRD, PRVRTBL FCT JNT OR FCT JNT NRV; CRVCL OR THOR, EA ADDTL LVL	1,971
64475	INJ, ANES AGENT &/OR STRD, PRVRTBL FCT JNT OR FCT JNT NRV; LUMBAR OR SACRAL, SINGLE LVL	1,971
64476	INJ, ANES AGENT &/OR STRD, PRVRTBL FCT JNT OR FCT JNT NRV; LUMBAR OR SACRAL, EA ADDTL LVL	1,971
64479	NJX ANES&STRD W/IMG TFRML EDRL CRV/THRC 1 LVL	2,051
64483	NJX ANES&STRD W/IMG TFRML EDRL LMBR/SAC 1 LVL	1,971
64484	NJX ANES&STRD W/IMG TFRML EDRL LMBR/SAC EA LV	1,971
64490	NJX DX/THER AGT PVRT FACET JT CRV/THRC 1 LEVEL	1,396
64491	NJX DX/THER AGT PVRT FACET JT CRV/THRC 2ND LEVEL	1,000
64492	NJX DX/THER AGT PVRT FACET JT CRV/THRC 3+ LEVEL	1,000
64493	NJX DX/THER AGT PVRT FACET JT LMBR/SAC 1 LEVEL	1,396
64494	NJX DX/THER AGT PVRT FACET JT LMBR/SAC 2ND LEVEL	1,000
64495	NJX DX/THER AGT PVRT FACET JT LMBR/SAC 3+ LEVEL	1,000
64510	NJX ANES STELLATE GANGLION CRV SYMPATHETIC	1,465
64520	INJECTION ANES LMBR/THRC PARAVERTEBRAL SYMPATHETIC	1,465
64622	DESTRUCTION BY NEUROLYTIC AGENT, PARAVERTEBRAL FACET JOINT NERVE; LUMBAR OR SACRAL, SINGLE LEVEL	2,736
64623	DESTRUCTION BY NEUROLYTIC AGENT, PARAVERTEBRAL FACET JOINT NERVE; LUMB OR SACR, EACH ADDTL LVL	1,000
64640	DSTRJ NEUROLYTIC AGENT OTHER PERIPHERAL NERVE	1,288
64702	NEUROPLASTY DIGITAL 1/BOTH SAME DIGIT	5,564
64704	NEUROPLASTY NERVE HAND/FOOT	5,564
64708	NEURP MAJOR PRPH NRV ARM/LEG OPN OTH/THN SPEC	11,126
64712	NEURP MAJOR PRPH NRV OPN ARM/LEG SCIATIC NRV	4,013
64718	NEUROPLASTY &/TRANSPOSITION ULNAR NERVE ELBOW	11,126
64719	NEUROPLASTY &/TRANSPOSITION ULNAR NERVE WRIST	11,126
64721	NEUROPLASTY &/TRANSPOS MEDIAN NRV CARPAL TUNNE	8,343
64722	DECOMPRESSION UNSPECIFIED NERVE	5,789
64726	DECOMPRESSION PLANTAR DIGITAL NERVE	4,013
64727	INTERNAL NEUROLYSIS REQ OPERATING MICROSCOPE	1,000
64772	TRANSECTION/AVULSION OTH SPINAL NRV XDRL	4,013

64774	EXC NEUROMA CUTAN NRV SURGLY IDENTIFIABLE	8,343
64776	EXC NEUROMA DIGITAL NERVE 1 OR BOTH SAME DIGIT	9,735
64778	EXCISION NEUROMA DIGITAL NRV EA ADDL DIGIT	4,012
64782	EXC NEUROMA HAND/FOOT XCP DIGITAL NERVE	9,735
64783	EXC NEUROMA HAND/FOOT EA NRV XCP SM DGT	5,564
64784	EXC NEUROMA MAJOR PERIPHERAL NRV XCP SCIATIC	10,134
64787	IMPLANTATION NERVE END BONE/MUSCLE	8,343
64788	EXC NEUROFIBROMA/NEUROLEMMOMA CUTAN NRV	4,013
64790	EXC NEUROFIBROMA/NEUROLEMMOMA MAJOR PRPH NRV	4,013
64820	SYMPATHECTOMY DIGITAL ARTERIES EACH DIGIT	4,053
64821	SYMPATHECTOMY RADIAL ARTERY	5,817
64831	SUTURE DIGITAL NERVE HAND/FOOT 1 NERVE	11,126
64832	SUTR DIGITAL NRV HAND/FOOT EA DGTAL NRV	7,450
64834	SUTURE 1 NERVE HAND/FOOT COMMON SENSORY NERVE	8,686
64835	SUTURE 1 NERVE MEDIAN MOTOR THENAR	10,134
64836	SUTURE 1 NERVE ULNAR MOTOR	7,452
64837	SUTURE EACH ADDITIONAL NERVE HAND/FOOT	5,578
64856	SUTR PRPH NRV ARM/LEG XCP SCIATIC W/TRPOS	7,452
64857	SUTR PRPH NRV ARM/LEG XCP SCIATIC W/O TRPOS	11,582
64890	NERVE GRAFT 1 STRAND HAND/FOOT <1/4 CM	7,452
64892	NERVE GRAFT 1 STRAND ARM/LEG <4 CM	7,452
64895	NERVE GRAFT MLT STRANDS HAND/FOOT <1/4 CM	7,452
64910	NERVE REPAIR W/CONDUIT EACH NERVE	11,582
73115	RADEX WRIST ARTHROGRAPHY RS&I	1,000
76000	FLUOROSCOPY UP TO 1 HOUR PHYSICIAN/QHP TIME	1,000
76003	FLUOROSCOPIC GUIDANCE FOR NEEDLE PLACEMENT ASPIRATION,INJECTION	1,000
77002	FLUOROSCOPIC GUIDANCE NEEDLE PLACEMENT ADD ON	1,000
77003	FLUOR NEEDLE/CATH SPINE/PARASPINAL DX/THER ADDON	1,000
95861	NDL EMG 2 XTR W/WO RELATED PARASPINAL AREAS	1,000
95938	SHORT-LATENCY SOMATOSENS EP STD UPR & LOW LIMB	1,365
95939	CTR MOTR EP STD TRANSCRNL MOTR STIM UPR&LOW LI	2,027
95940	IONM 1 ON 1 IN OR W/ATTENDANCE EACH 15 MINUTES	1,000
G026	INJ PROC FOR SACRO JNT; PROV OF ANES, STROID AND/OR OTH THERAP AGNT &	
0	ARTHRO SPCL CVRG INSTR	1,000
G028	ARTHROSCOPY, KNEE, SURGICAL CHONDROPLASTY	
9		9,044

ATTACHMENT 24-1110.235(c)(10) – ASSURANCES**OrthoIllinois Surgery Center Elgin, LLC**

October 5, 2020

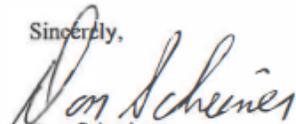
Courtney Avery
Board Administrator
Illinois Health Facilities and Service Review Board
525 West Jefferson Street, 2nd Floor
Springfield, Illinois 62761

Re: Assurances

Dear Ms. Avery,

As representative of OrthoIllinois Surgery Center Elgin, LLC, I, Don Schreiner, hereby attest to the applicant's full anticipation that, by the end of the second year following the proposed ambulatory surgical treatment center's opening, the propose facility will operate at or in excess of the utilization standards identified in 77 Illinois Admin. Code Section 1110 Appendix B.

Sincerely,



Don Schreiner
CEO of the Managing Member
OrthoIllinois Surgery Center Elgin, LLC

ATTACHMENT 33- AVAILABILITY OF FUNDS

June 22, 2020

Mr. Donald A. Schreiner
 CEO – Rockford Orthopedic Associates d/b/a Orthollinois
 5875 E. Riverside Blvd.
 Rockford, IL 61114

Re: Orthollinois Surgery Center Elgin, LLC

Dear Don:

For close to ten years now we have enjoyed representing Orthollinois as its primary financial institution. Your organization is a pillar in our community, recruiting and retaining top talent, contributing to organizations in need and consistently showing up as a good corporate citizen. We have much respect for the highly skilled and experienced administrative and financial teams you employ as well. We value the relationship that Illinois Bank & Trust has with Orthollinois, both corporately as well as working closely with 75% or more of your shareholders and their personal banking/finance needs.

At your request, we have reviewed the preliminary information presented by you with the intention of arranging for you construction and permanent first mortgage debt financing, equipment financing and an operating line for purposes of a new surgery center in Elgin, IL. These figures are preliminary and subject to further due diligence; however, we have capacity for this project and anticipate being able to support this new project. We are comfortable quoting the following terms based on the current credit market conditions:

Building:

Maximum Loan Amount:	\$14,000,000
Loan to Cost Limitation:	85%
Loan to Value Limitation:	75%
Origination Fee:	1%

Construction Loan:

Term:	18 months
Interest Rate Spread:	50 basis points
Interest Rate Index:	WSJ Prime
Indicative Floating Rate:	3.75%

6855 East Riverside Boulevard | Rockford, IL 61114 | 815.637.7000 www.illinoisbank.com



Permanent Loan:

Term:	7 years
Amortization:	25 years
Estimated Fixed Interest Rate:	4.50%

Equipment:

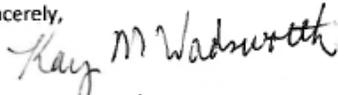
Maximum Loan Amount:	\$6,000,000
Origination Fee:	.50%
Term:	10 years
Amortization:	10 years
Estimated Fixed Interest Rate:	4.50%

Operating Line for start-up costs:

Loan Amount:	\$2,500,000
Term:	24 months
Interest Rate Spread:	50 basis points
Interest Rate Index:	WSJ Prime
Indicative Floating Rate:	3.75%

This is an outline of a proposed structuring of your funding needs and is not a commitment to lend. Should the State Board approve this project, we will approve a structure for the project that is subject to formal credit underwriting and final terms and conditions to be approved by our loan committee. That structure will include additional standard terms and conditions including, but not limited to, floors on floating rates, prepayment fees, covenants, guarantees, and more similar. We expect these to be consistent with or similar to those already in place today with our existing relationship and these will be discussed as part of the final financing package.

Sincerely,



Kay M. Wadsworth
 VP – Commercial Banking
 Illinois Bank & Trust
 4571 Guildford Road Rockford, IL 61107
 815-979-4004, cell
kwadsworth@illinoisbank.com



October 5, 2020

Tom Stanley, MD
Rockford Orthopedic Associates d/b/a Orthollinois
324 Roxbury Rd, Rockford IL 61107
5875 E Riverside Blvd, Rockford IL 61114
650 S Randall Rd, Algonquin IL 60102
1435 N Randall Rd STE 103, Elgin IL 60123

RE: Orthollinois Surgery Center Elgin, LLC

Dear Dr. Stanley,

At your request, we have reviewed the preliminary information presented by you with the intention of arranging for you an operating line for purposes of a new surgery center in Elgin, IL. These figures are preliminary and subject to further due diligence; however, we have capacity for this project and anticipate being able to support this new project. We are comfortable quoting the following terms based on the current credit market conditions:

Operating Line for start-up costs:

Amount:	\$1,500,050
Term:	24 months
Interest Rate Index:	WSJ Prime
Indicative Floating Rate today:	3.25%

Sincerely,

Don Schreiner, CEO
Orthollinois

ROCKFORD
324 Roxbury Road, 61107
5875 E Riverside Blvd., 61114

ALGONQUIN
650 S. Randall Rd., 60102

ELGIN
Medical Bldg., Advocate Hospital
1435 N. Randall Rd., STE 103

ATTACHMENT 35- FINANCIAL VIABILITY

OrthoIllinois Surgery Center Elgin, LLC Projected Viability Financial Ratios

	Year 1	Year 2	Year 3
<u>Current Ratio (a)/(b):</u>			
(a) Current Assets	6,236,313	6,651,390	7,041,409
(b) Current Liabilities	3,236,433	1,085,805	1,138,395
Ratio	1.93	6.13	6.19
State Target	> 1.5	> 1.5	> 1.5
<u>Net Margin Percentage (d)/(c):</u>			
(c) Net Operating Revenues	14,000,000	14,700,000	15,435,000
(d) Net Income	3,292,351	3,628,176	3,896,900
Ratio	23.52%	24.68%	25.25%
State Target	> 3.5%	> 3.5%	> 3.5%
<u>Long Term Debt to Capitalization (f)/[(f)+(g)]*100:</u>			
(f) Long Term Debt	14,515,000	13,941,000	13,340,000
(g) Net Assets	6,492,351	9,120,527	9,517,428
Ratio	69.09	60.45	58.36
State Target	< 80	< 80	< 80
<u>Projected Debt Service Coverage [(e)+(h)+(i)]/[(i)+(j)]:</u>			
(e) Net Income	3,292,351	3,628,176	3,896,900
(h) Depreciation	781,529	811,529	841,529
(i) Interest Expense	773,500	667,000	641,000
(j) Principal Payments	525,000	549,000	574,000
Ratio	3.73	4.20	4.43
State Target	> 1.75	> 1.75	> 1.75
<u>Days Cash on Hand (k)/[(l)-(h)]/365:</u>			
(k) Cash	4,066,313	4,372,890	4,648,984
(l) Operating Expenses	9,934,149	10,404,824	10,897,100
(h) Depreciation	781,529	811,529	841,529
Ratio	162.16	166.38	168.75
State Target	> 45	> 45	> 45
<u>Cushion Ratio (k)/[(i)+(j)]:</u>			
(k) Cash	4,066,313	4,372,890	4,648,984
(i) Interest Expense	773,500	667,000	641,000
(j) Principal Payments	525,000	549,000	574,000
Ratio	3.13	3.60	3.83
State Target	> 3	> 3	> 3

ATTACHMENT 36- ECONOMIC FEASIBILITY

OrthoIllinois Surgery Center Elgin, LLC

June 23, 2020

Courtney Avery
Board Administrator
Illinois Health Facilities and Services Review Board
525 W. Jefferson Street, 2nd Floor
Springfield, IL 62761

RE: Reasonableness of Financing Letter

Dear Ms. Avery:

I hereby attest that the terms and conditions of the proposed debt financing associated with the establishment of OrthoIllinois Surgery Center Elgin, LLC are reasonable. The applicant is a newly formed entity, without liquid assets that could be used to fund the project. The project will be funded through a combination of cash resources acquired through the purchase of units in OrthoIllinois Surgery Center Elgin, LLC and debt financing through Illinois Bank & Trust.

Furthermore, I certify that, as this project will require debt financing, the selected form of debt financing will be at the lowest net cost available. The project does not involve the leasing of equipment.

Sincerely,


Don Schreiner
CEO of Managing Member
OrthoIllinois Surgery Center Elgin, LLC

Notarization: Kathleen M. Shukis
Subscribed and sworn to before me this 23 day of JUNE, 2020.



13559544 v1

ATTACHMENT 36- ECONOMIC FEASIBILITY**PROJECT OPERATING COSTS AND
TOTAL EFFECT OF THE PROJECT ON CAPITAL COSTS****OrthoIllinois Surgery Center Elgin, LLC
Projected Statements of Income**

	Year 1	Year 2	Year 3
Revenues, net of allowances	14,000,000	14,700,000	15,435,000
<u>Operating expenses:</u>			
Wages	1,190,000	1,249,500	1,311,975
Payroll taxes	95,200	99,960	104,958
Retirement plan contributions	53,550	56,228	59,039
Employee benefits	202,300	212,415	223,036
Total employment expenses	1,541,050	1,618,103	1,699,008
Clinical supplies	4,200,000	4,410,000	4,630,500
Repairs and maintenance	140,000	147,000	154,350
Real estate taxes	250,520	255,530	260,641
Computer and IT expenses	72,000	74,160	76,385
Telephone expense	12,000	12,360	12,731
Office expense	30,000	30,900	31,827
Professional services	40,000	41,200	42,436
Meetings, recruitment, meals and dues	12,000	12,360	12,731
Directorship	25,000	25,750	26,523
Utilities	180,000	185,400	190,962
Malpractice and business insurance	48,000	49,440	50,923
Marketing	5,000	5,150	5,305
Bank and credit card charges	28,000	29,400	30,870
Bad debts	210,000	220,500	231,525
Depreciation	781,529	811,529	841,529
Management fees	770,000	808,500	848,925
Miscellaneous expenses	48,000	49,440	50,923
Total operating expenses	9,934,149	10,404,824	10,897,100
Operating income	4,065,851	4,295,176	4,537,900
<u>Other expense:</u>			
Interest expense	773,500	667,000	641,000
Net income	3,292,351	3,628,176	3,896,900

ATTACHMENT 36- ECONOMIC FEASIBILITY**Orthollinois Surgery Center Elgin, LLC
Projected Statements of Cash Flow**

	Year 1	Year 2	Year 3
Cash Flows From Operating Activities			
Net income	3,292,351	3,628,176	3,896,900
Adjustments to reconcile net income to cash provided by operating activities:			
Depreciation	781,529	811,529	841,529
Net changes in assets and liabilities:			
Accounts receivable	(1,750,000)	(87,500)	(91,875)
Inventory	(420,000)	(21,000)	(22,050)
Accounts payable and accrued expense	420,000	21,000	22,050
Self insured liabilities	67,433	3,372	3,540
Net cash provided by operating activities	<u>2,391,313</u>	<u>4,355,576</u>	<u>4,650,094</u>
Cash Flows From Investing activities			
Purchase Property and Equipment	(18,789,000)	(300,000)	(300,000)
Net cash applied to investing activities	<u>(18,789,000)</u>	<u>(300,000)</u>	<u>(300,000)</u>
Cash Flows From Financing Activities			
Bank line of credit	1,600,000	(1,600,000)	-
Orthollinois line of credit	600,000	(600,000)	-
Proceeds from long term debt	15,589,000	-	-
Payments of long term debt	(525,000)	(549,000)	(574,000)
Proceeds from members' capital contribution	3,200,000	-	-
Members' distributions	-	(1,000,000)	(3,500,000)
Net cash provided by (applied to) financing activities	<u>20,464,000</u>	<u>(3,749,000)</u>	<u>(4,074,000)</u>
Increase (decrease) in cash and cash equivalents	4,066,313	306,576	276,094
Cash and cash equivalents			
Beginning	-	4,066,313	4,372,890
Ending	<u>4,066,313</u>	<u>4,372,890</u>	<u>4,648,984</u>

ATTACHMENT 36- ECONOMIC FEASIBILITY**OrthoIllinois Surgery Center Elgin, LLC
Projected Balance Sheets**

	Year 1	Year 2	Year 3
<u>ASSETS</u>			
Current Assets			
Cash and Cash Equivalents	4,066,313	4,372,890	4,648,984
Accounts Receivable, Net	1,750,000	1,837,500	1,929,375
Inventory	420,000	441,000	463,050
Total Current Assets	6,236,313	6,651,390	7,041,409
Property and Equipment			
Land	1,025,000	1,025,000	1,025,000
Land Improvements	947,000	947,000	947,000
Building	12,981,200	12,981,200	12,981,200
Furniture and Equipment	3,835,800	4,135,800	4,435,800
Total Property and Equipment	18,789,000	19,089,000	19,389,000
Less Accumulated Depreciation	781,529	1,593,057	2,434,586
Property and Equipment, Net	18,007,471	17,495,943	16,954,414
Total Assets	24,243,785	24,147,332	23,995,823
<u>LIABILITIES AND EQUITY</u>			
<u>Liabilities</u>			
Current Liabilities			
Bank Line of Credit	1,600,000	-	-
OrthoIllinois Line of Credit	600,000	-	-
Current Maturities of Long Term Debt	549,000	574,000	601,000
Accounts Payable and Accrued Expenses	420,000	441,000	463,050
Self-Insured Liabilities	67,433	70,805	74,345
Total Current Liabilities	3,236,433	1,085,805	1,138,395
Long Term Debt, less current maturities	14,515,000	13,941,000	13,340,000
Total Liabilities	17,751,433	15,026,805	14,478,395
<u>Members' Equity</u>			
Members' Capital Contribution	3,200,000	3,200,000	3,200,000
Accumulated retained income	-	3,292,351	5,920,527
Current year income	3,292,351	3,628,176	3,896,900
Member Distributions	-	(1,000,000)	(3,500,000)
Members' Equity	6,492,351	9,120,527	9,517,428
Total Liabilities and Members' Equity	24,243,785	24,147,332	23,995,823

ATTACHMENT 36- ECONOMIC FEASIBILITY

COST AND GROSS SQUARE FEET BY DEPARTMENT OR SERVICE									
Department (list below)	A	B	C	D	E	F	G	H	Total Cost (G + H)
	Cost/Square Foot New	Mod.	Gross Sq. Ft. New	Circ.*	Gross Sq. Ft. Mod.	Circ.*	Const. \$ (A x C)	Mod. \$ (B x E)	
ASTC	\$417.96		10980				\$4,589,255		\$4,589,255
Contingency	\$21.40		0				\$235,000		\$235,000
TOTALS	\$439.37		10980				\$4,824,255		\$4,824,255
* Include the percentage (%) of space for circulation									

Pursuant to Illinois Admin. Code Section 1120.Appendix A (a)(3) an projects cost must be at or below the RS means for the new construction of an ASTC. At the time of this application the RS Means is \$414.90 GSF. With a 3% annual increase for 2021 that standard rate increases to \$427.35, and with an additional 3% increase for 2022 the standard rate increases to \$440.17. This project is slated to be completed in the 1st quarter of 2022 and the applicable RS Means standard is \$440.17 per GSF. This proposed cost per GSF for this project is \$439.37, and thus this project meets the Board's criteria.



October 5, 2020

Tom Stanley, MD
Rockford Orthopedic Associates d/b/a Orthollinois
324 Roxbury Rd, Rockford IL 61107
5875 E Riverside Blvd, Rockford IL 61114
650 S Randall Rd, Algonquin IL 60102
1435 N Randall Rd STE 103, Elgin IL 60123

RE: Orthollinois Surgery Center Elgin, LLC

Dear Dr. Stanley,

At your request, we have reviewed the preliminary information presented by you with the intention of arranging for you an operating line for purposes of a new surgery center in Elgin, IL. These figures are preliminary and subject to further due diligence; however, we have capacity for this project and anticipate being able to support this new project. We are comfortable quoting the following terms based on the current credit market conditions:

Operating Line for start-up costs:

Amount:	\$1,500,050
Term:	24 months
Interest Rate Index:	WSJ Prime
Indicative Floating Rate today:	3.25%

Sincerely,

Don Schreiner, CEO
Orthollinois

ROCKFORD
324 Roxbury Road, 61107
5875 E. Riverside Blvd., 61114

ALGONQUIN
650 S. Randall Rd., 60102

ELGIN
Medical Bldg., Advocate Hospital
1435 N. Randall Rd., STE 103

ATTACHMENT 37- SAFETY NET INFORMATION

Ambulatory Surgical Treatment Centers are not providers of safety net services, with all procedures scheduled on an elective basis. The applicants, however, are directly affiliated with Orthollinois, and physicians investing in this project are employed by Orthollinois. The practice has served the bone and joint needs of northern Illinois for over 70 years, since 1967.

Orthollinois has a long history of civic engagement and commitment to the communities it serves. Since 2004, they have raised over \$450, 000 for the programs at Northern Illinois Food Bank's after school and weekend meal programs, enabling tens of thousands of children to be served. They also have a tradition of charitable giving and capital campaign pledges to hospital foundations, United Way programs, and University of Illinois School of Medicine and other not for profit agencies in the area.

The applicant is a new entity; thus has no history of services. However, the Safety Net Impact of Orthollinois practice is provided below.

Safety Net Information per PA 96-0031			
CHARITY CARE			
Charity (# of patients)	2017	2018	2019
Inpatient	0	0	0
Outpatient	0	0	0
Total	0	0	0
Charity (cost in dollars)			
Inpatient	0	0	0
Outpatient	0	0	0
Total			
MEDICAID			
Medicaid (# of patients)	2017	2018	2019
Inpatient	0	0	0
Outpatient	77	98	86
Total	77	98	86
Medicaid (revenue)			
Inpatient	0	0	0
Outpatient	\$712,670	\$956,728	\$772,005
Total	\$712,670	\$956,728	\$772,005

ATTACHMENT 38- CHARITY CARE INFORMATION

Please note: The applicant is a new entity; thus has no history of services.

Safety Net Information per PA 96-0031			
CHARITY CARE			
Charity (# of patients)	2017	2018	2019
Inpatient	0	0	0
Outpatient	0	0	0
Total	0	0	0
Charity (cost In dollars)			
Inpatient	0	0	0
Outpatient	0	0	0
Total			

After paginating the entire completed application indicate, in the chart below, the page numbers for the included attachments:

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4	Organizational Relationships (Organizational Chart) Certificate of Good Standing Etc.	52
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16	Unfinished or Shell Space	N/A
17	Assurances for Unfinished/Shell Space	N/A
Service Specific:		
18	Medical Surgical Pediatrics, Obstetrics, ICU	N/A
19	Comprehensive Physical Rehabilitation	N/A
20	Acute Mental Illness	N/A
21	Open Heart Surgery	N/A
22	Cardiac Catheterization	N/A
23	In-Center Hemodialysis	N/A
24	Non-Hospital Based Ambulatory Surgery	178-264
25	Selected Organ Transplantation	N/A
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27	Subacute Care Hospital Model	N/A
28	Community-Based Residential Rehabilitation Center	N/A
29	Long Term Acute Care Hospital	N/A
30	Clinical Service Areas Other than Categories of Service	N/A
31	Freestanding Emergency Center Medical Services	N/A
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Financial and Economic Feasibility:		
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