Center for Health and Safety in the Workplace

Ambulatory Surgical Services Provided Under California Workers' Compensation

An Assessment of the Feasibility and Advisability of Expanding Coverage

Barbara O. Wynn, John P. Caloyeras, Nelson F. Soohoo

The research described in this report was sponsored by the California Department of Industrial Relations and was conducted in the RAND Center for Health and Safety in the Workplace within RAND Justice, Infrastructure, and Environment.

RAND OFFICES

SANTA MONICA, CA • WASHINGTON, DC

PITTSBURGH, PA • NEW ORLEANS, LA • JACKSON, MS • BOSTON, MA

CAMBRIDGE, UK • BRUSSELS, BE

www.rand.org

Preface

California's Official Medical Fee Schedule (OMFS) establishes the maximum allowable fee for medical services provided under the state's workers compensation program unless the payer and provider contract for a different payment amount. The OMFS allows facility fees for surgical services performed in an ambulatory surgical center. The allowances are based on the Medicare fee schedule for hospital outpatient services, which includes only services that the Centers for Medicare & Medicaid Services has determined can be safely performed in the outpatient setting on Medicare beneficiaries. It excludes services that Medicare has decided can only be performed on an inpatient basis, such as multi-level spinal fusions, and hip and knee replacements. California Senate Bill 863 requires that the Department of Industrial Relations study the feasibility of establishing facility fees for Medicare's "inpatient only" procedures when they are performed on workers' compensation patients in an ambulatory surgical center and report the study findings to the Senate Labor Committee and Assembly Insurance Committee. The Department asked RAND to examine the feasibility and appropriateness of including Medicare's "inpatient only" procedures on the OMFS.

RAND Center for Health and Safety in the Workplace

The RAND Center for Health and Safety in the Workplace is dedicated to reducing workplace injuries and illnesses. The center provides objective, innovative, cross-cutting research to improve understanding of the complex network of issues that affect occupational safety, health, and workers' compensation. Its vision is to become the nation's leader in improving workers' health and safety policy. Program research is supported by government agencies, foundations, and the private sector.

The center is housed in the RAND Safety and Justice Program, which addresses all aspects of public safety and the criminal justice system, including violence, policing, corrections, courts and criminal law, substance abuse, occupational safety, and public integrity. The center also draws on the expertise in RAND Health, one of the most trusted sources of objective health policy research in the world.

Questions or comments about this report should be sent to the project leader, Barbara Wynn (Barbara_Wynn@rand.org). For more information on the RAND Center for Health and Safety in the Workplace, see http://www.rand.org/jie/centers/workplace-health-safety.html or contact the director (chsw@rand.org).

Contents

Figures

Tables

Summary

Background

The Division of Workers' Compensation in the Department of Industrial Relations (DIR) maintains an Official Medical Fee Schedule (OMFS) for medical services provided under California's workers compensation (WC) program. The OMFS establishes the maximum allowable fee for services furnished to injured workers unless the payer and provider contract for a different payment amount. The OMFS allows facility fees for surgical procedures that are furnished in freestanding ambulatory surgical centers (ASCs). To receive an OMFS facility fee, an ASC must either be licensed by the California Department of Public Health, accredited by an accrediting body recognized by the Medical Board of California, or approved for participation in the Medicare program. ASC allowances are based on the Medicare fee schedule for hospital outpatient services.

The Medicare fee schedule does not include fees for "inpatient only" procedures that Medicare has determined cannot be safely performed on Medicare beneficiaries in an outpatient setting. The "inpatient only" list is reviewed annually as part of the annual rulemaking process that includes an opportunity for public comment. The list contains procedures that Medicare does not cover when they are furnished to a hospital outpatient. Procedures that are not on this list may be covered when they are furnished to hospital outpatients. Medicare also maintains a more restrictive listing of ASC approved procedures. This listing excludes not only the "inpatient only" procedures but other procedures that Medicare has determined cannot be safely performed in a non-hospital setting on Medicare beneficiaries. The OMFS does not utilize this more restrictive list. Instead, the OMFS rules apply the Medicare policies for hospital outpatient surgeries to surgeries performed in both hospital outpatient and ASC settings. The Medicare-designated "inpatient only" procedures include high volume WC procedures such as such as multi-level spinal fusions and hip and knee replacements. As a result, there is no OMFS allowance for these procedures when they are performed in an ambulatory setting. When an injured worker needs a Medicare "inpatient only" procedure, the procedure is typically performed and paid as an inpatient procedure. The OMFS rate for inpatient services is based on 120 percent of Medicare's payment for inpatient hospital services. Alternatively, when it is medically appropriate to perform the procedure in an ambulatory setting, the OMFS rules allow the payer to authorize payment as an outpatient procedure at a rate that the payer and facility (hospital or ASC) have agreed upon.

Section 74 of Senate Bill 863 requires DIR to study the feasibility of establishing a facility fee for Medicare's "inpatient only" procedures performed in ASCs and report its findings to the Senate Labor Committee and Assembly Insurance Committee. The provision states that DIR

should consider setting an ASC facility fee for an "inpatient only" procedure at 85 percent of the Medicare fee schedule amount for the procedure when it is performed as an inpatient procedure. If feasible and appropriate, shifting certain procedures from the more expensive inpatient setting to the less-expensive ASC setting would produce cost savings for employers and expand worker choice regarding where surgical procedures can be provided.

Study Purpose

DIR asked RAND to examine the feasibility and appropriateness of including "inpatient only" procedures on the OMFS for ASC facility fees and to consider what the appropriate ASC facility allowance would be for an "inpatient only" procedure. DIR asked RAND to consider the following questions:

- What policy considerations should be addressed in allowing certain "inpatient only" services to be performed in ASCs?
- Which "inpatient only" services can be safely performed in the ASC setting for WC patients?
- If an OMFS allowance were set for "inpatient only" services that are performed in an ASC, what multiplier to the Medicare inpatient rate or other fee schedule methodology should be considered? What are the projected cost savings with the use of this multiplier?
- How applicable are ASC findings to the hospital outpatient department setting? What are potential implications regarding services that would be allowed and the fee schedule that would be used?

Approach and Methods

We used a combination of interviews, literature review, and data analysis to address the study questions. We started our review with two underlying policy questions: Do the health and safety requirements for ASCs provide adequate patient safeguards for performing higher risk surgeries that are typically performed in an inpatient setting? What factors does Medicare consider in assessing whether a procedure can be safely performed in an outpatient setting? To answer these questions, we assembled information on the health and safety requirements applicable to ASCs from the Department of Public Health for licensed (non-physician owned) ASCs, from the Medical Board of California for physician-owned ASCs, from CMS for Medicare-certified ASCs, and from organizations that accredit ASCs. We reviewed the criteria that Medicare uses to assess whether procedures can be safely performed in an outpatient setting and adapted them for the WC patient population. We used this policy framework to guide our data analyses and the conclusions we drew from the results.

We focused our assessment of which Medicare "inpatient only" procedures could be safely performed in an ASC setting on 23 procedures that are high-volume WC inpatient procedures with relatively short average lengths of stay. Our framework included three considerations. The first was the extent to which one of the study procedures is currently being performed in an

ambulatory setting. A finding that a substantial proportion of the study procedures are performed in ambulatory settings on non-Medicare patients would be an indication that the study procedure might be safely performed on WC patients in ambulatory settings. The second consideration was whether a substantial proportion of WC patients receiving the study procedure on an inpatient basis were discharged after no more than a one-night night stay. By definition, a Medicare-certified or state-licensed ASC furnishes surgical services to patients who require less than a 24-hour stay. A finding that a substantial proportion of WC inpatients were discharged after no more than a one-night stay would be an indication that they might have been candidates for ambulatory surgery *assuming* that there are appropriate patient selection criteria to determine when the procedure can be safely performed in an ambulatory setting. We used utilization data from several sources to investigate these two considerations.

The third consideration was the extent to which there is evidence in the literature to support a conclusion that the study procedures can be safely performed in an outpatient setting. In this regard, we reviewed the literature concerning the provision of selected study procedures (multi-level spinal fusions with and without instrumentation, hip replacements, and knee replacements) in ambulatory settings. Under current OMFS policies, there is no distinction between the services that are covered in a hospital outpatient setting versus an ASC setting. Therefore, we searched for studies that examined outcomes for performing the procedures in either a hospital outpatient or ASC setting. We were particularly interested in ascertaining what evidence is available regarding patient selection criteria for ambulatory surgery and the outcomes when ambulatory surgery is performed.

To explore potential fee schedule options, we selected certain cervical spinal fusion codes that are Medicare "inpatient only" procedures. Single-level anterior cervical spinal fusions are already covered as an outpatient procedure, but those involving multi-level spinal fusions and/or instrumentation are not. For WC inpatients, we compared the hospital's estimated average cost for anterior cervical spinal fusions that might have been candidates for outpatient surgery (those involving no more than a one-night stay) to the estimated average cost for all cervical spinal fusions with no complications or comorbidities. The ratio provides an indication of what an appropriate multiplier to the Medicare inpatient rate might be. As another fee schedule option, we compared the hospital's cost to the OMFS ASC allowance for the single-level cervical spinal fusions with no instrumentation.

Finally, to inform our discussion of potential policies and recommendations, we reviewed policies of other states that have adopted Medicare's ASC and/or hospital outpatient fee schedule and conducted semi-structured interviews with several California stakeholders as well as WC officials in other states.

Findings

Procedures That Can Be Safely Performed in an Ambulatory Setting

As noted above, we established a framework to analyze which "inpatient only procedures" might be safely performed in an ASC setting. The criteria that we used to assess whether the study procedures might be safely performed on WC patients in an ambulatory setting and a summary of our findings for each criterion follow.

- *Most ASCs that are eligible for an OMFS facility fee, or a particular class of ASCs (e.g., Medicare-certified ASCs), are generally equipped to provide the services to the WC population.*
  Finding: ASCs that are currently eligible for an OMFS facility fee are likely to be equipped to provide services that do not require a one-night stay. However, Medicare has several requirements for patient protection that are not found in the minimum accreditation requirements for physician-owned facilities that are not Medicare certified. These include accepting only patients who are likely to require less than a 24-hour stay, assuring appropriate post-discharge arrangements are made, and providing the patient with written disclosure of any financial interests between the ASC and the physician. The latter is important because most ASCs are physician owned.
- *The procedure is similar to other surgical codes that are currently eligible for a facility fee.*
  Finding: There are several categories of codes that could be considered related to spinal surgery codes that are already covered as ambulatory surgery, including "add-on" codes related to a primary procedure that is already considered an ambulatory procedure,[1] separately reported codes that are often incidental to a primary code that is already considered an ambulatory procedure, and "inpatient only" procedures that are classified into the same Medicare DRG as procedures that are covered in an ambulatory setting.[2] No related procedures for total hip and knee replacements are already covered in the ambulatory setting.
- *The procedure is being performed by numerous providers (hospitals or ASCs) on the non-Medicare/Medicaid population ages 18–64 years.*
  Finding: With the exception of spinal instrumentation, we found that relatively few "inpatient only" procedures are being performed in an ambulatory setting on either the WC or privately insured patients ages 18–64 years.

---

[1] For example, the use of spinal instrumentation is classified as a Medicare "inpatient only" procedure. It is reported as an add-on code to spinal fusions, including single-level anterior cervical fusions and posterior lumbar fusions (single or multi-level) that are considered ambulatory procedures.

[2] For example, the Medicare DRG for cervical spinal fusions includes single and multi-level fusions with and without instrumentation. The only recognized ambulatory procedures are single-level cervical spinal fusions without instrumentation. The other procedures are designated "inpatient only."

- *When the procedure is performed in the inpatient setting, at least 15 percent of patients ages 18–64 years are discharged after no more than a one-night stay.*
  Finding: More than 20 percent of WC patients receiving cervical spinal fusions with no complications or comorbidities are discharged after no more than a one-night stay. This includes patients with instrumentation and multi-level spinal fusions. More than 90 percent of WC patients receiving lumbar fusions, total knee replacements, and total hip replacements required at least a two-night stay.
- *The procedure can be appropriately and safely performed in an ASC.*
  Finding: We identified no studies that examined patient outcomes for hip and knee replacements conducted in either the hospital-outpatient setting or freestanding ASC setting. We found seven articles that involved spinal fusions performed in an ambulatory setting that suggest that two-level anterior cervical fusions and the use of instrumentation for one- or two-level fusions can be performed safely on an outpatient basis. We did not identify evidence-based selection criteria to suggest which patients are appropriate candidates for having anterior cervical procedures with the add-on procedures in an outpatient setting. We found no articles that examined lumbar spinal fusions performed in an outpatient setting.

Discussion

The differences between the Medicare health and safety standards and minimum accreditation requirements for non-Medicare certified ASCs suggest that DWC should establish additional conditions before an "inpatient only" procedure is performed in an ASC setting:

- The provider has determined that the patient is likely to require less than a 24-hour stay and has assured that the patient's post-discharge needs will be appropriately met.
- The request for prior authorization for the procedure should document the provider's assessment that the procedure can be safely performed in the ASC setting with less than a 24-hour stay, include post-discharge plans, and disclose any relevant financial interests.
- The patient should also be provided upon referral (in advance of the date of the procedure) written financial disclosure of any physician financial interest as required by Medicare standards. At the same time, the patient should also be given written notification that the procedure is typically performed in an inpatient setting.

Our data analyses and review of the literature do not provide strong support for removing any procedures from the "inpatient only" list with the possible exception of procedures related to anterior cervical spinal fusions. While the literature contains reports of procedures being safely performed on samples of patients in an outpatient setting, limited information is available with respect to patient selection criteria. The literature is also limited with respect to the ASC setting, where WC coverage policies are already more expansive than Medicare's. Unlike the OMFS, Medicare covers single-level spinal fusions as a hospital outpatient procedure but not as an ASC procedure. Moreover, our data analyses indicate that with the exception of instrumentation,

relatively few "inpatient only" procedures are currently being performed in an ASC on either WC or privately insured patients. Decisions on which procedures can be safely performed in an ASC setting should continue to be made on a case-by-case basis with payer approval required for both the medical necessity of the procedure and the setting in which it occurs.

Setting an OMFS Allowance for ASC Facility Fees

We did not identify readily available data that could be used to establish an appropriate methodology for pricing "inpatient only" procedures furnished in an ASC setting. We found that a single multiplier to the DRG rate is not suitable for the full range of WC high-volume "inpatient only" procedures because of the differences in the length of stay and resources required for the average patient assigned to the DRG relative to those patients most likely to be candidates for ambulatory surgery. Moreover, the most likely "inpatient only" procedures that might be performed as ambulatory surgery—add-on procedures to services that are already covered as an ambulatory procedure such as those for anterior cervical spinal fusions—have differing impacts on the incremental costs of providing them. For example, one- and two-level spinal fusions are unlikely to have significantly different ASC facility costs, while the use of instrumentation could add significantly to the cost, depending on surgeon preferences.

Discussion

Current OMFS policies require that the prior authorization process for performing an "inpatient only" procedure include an agreed-upon allowance for the procedure. This procedure allows individual consideration of the anticipated services, including any implanted device costs, other procedures that will be performed during the same encounter, and post-discharge services, *before* the services are provided. Generally, the flexibility of the current approach to establishing a reasonable allowance is preferable to developing an across-the-board pricing methodology. Rates could be established on a procedure-by-procedure basis, but additional research would be required to determine the appropriate allowance.

Policies Applicable to Hospitals

Our framework for assessing which "inpatient only" procedures could be safely performed in an ambulatory setting does not distinguish between hospital outpatient and ASC settings. This is because the current OMFS makes no distinction between the services that can be covered in the two settings. However, some "inpatient only" services may be more appropriately performed as a hospital outpatient procedure than as an ASC procedure. Our findings in this regard include the following:

- Hospitals have the ready availability of emergency services and observation services for overnight stays that go beyond the services available in an ASC.
- While relatively few "inpatient only" procedures are being performed in ambulatory settings, a higher proportion are performed in the hospital outpatient setting than in an ASC.

Discussion

Retaining the current OMFS policies allows payers and providers the flexibility to determine most appropriate setting for each patient and to agree upon a reasonable allowance when the service is performed in either a hospital outpatient or ASC setting. Assuming that the current policy is continued, we see no reason to apply different policies to hospital outpatient settings than ASCs. However, if a decision is made to revise the OMFS policy to allow certain procedures to be routinely performed in an ambulatory setting, different policies might be appropriate for the hospital outpatient and ASC settings. The coverage policy for hospital outpatient procedures should be no less restrictive than for ASCs but could be more expansive based on hospital capabilities to handle unanticipated situations. Similarly, allowances for hospital outpatient services should not be less than ASC allowances but could be higher in recognition that hospitals have higher infrastructure costs than ASCs.

Other Workers' Compensation Programs

With respect to other WC programs, we found a mix of policies. Several states (e.g., Washington, Texas) have policies that are similar to those used in California. Colorado's fee schedule covers the spinal fusion codes in an ambulatory setting but sets the allowance at the same rate as the ambulatory surgery facility fee for spinal procedures that Medicare already covers in an outpatient setting. The federal WC program expressly excludes "inpatient only" services from being provided in an ambulatory setting, while other states (e.g., Maryland, Michigan) have a general policy that services with no fee schedule amount shall be priced by the payer based on the physician's documentation regarding the services that were performed.

Recommendations

Our recommendations reflect the principle that the safety of the injured worker is of paramount concern and that any cost efficiencies are secondary. They are guided by the following considerations:

- Any expansion should be limited to procedures that are likely to require less than a 24-hour stay and should be based on evidence that Medicare's findings with regard to the procedures are not relevant for an injured worker.
- Only ASCs that have established prospective patient selection criteria designed to assure patient safety and that have appropriate informed consent procedures should be allowed to perform "inpatient only" procedures.
- Payment incentives must be carefully structured to discourage an ASC from taking a patient who might be at unnecessary risk if the procedure were performed in an ambulatory setting. Payment incentives must also be structured to discourage medically unnecessary procedures. An across-the-board pricing policy is unlikely to achieve this balance.

Our recommendations are to 1) retain current OMFS policies with regard to "inpatient only" procedures performed in an ambulatory setting, and 2) strengthen patient protections when procedures are performed in an ambulatory setting. The recommendations are made in the context of Medicare's annual review of the "inpatient only" listing. In its review process, Medicare considers not only the safety for its aged population but also whether the procedure might be safely performed in an outpatient setting on its younger disabled population. In restricting federal WC coverage of ASC procedures to Medicare's list of approved procedures, the federal Office of Workers' Compensation program (OWCP) acknowledges that some procedures might be appropriately performed in an ASC on a younger, healthier patient but notes that "for the larger number of OWCP program beneficiaries whose health is more likely to be compromised by disability and age, an ASC may be a questionable setting for those same procedures" (US Department of Labor, 2013). The current OMFS policy is already more expansive than the OWCP policy because it allows any procedure that may be covered as a hospital outpatient service to be covered in an ASC setting, and it provides for a case-by-case consideration of whether an "inpatient only" procedure might be appropriately performed in an ASC setting.

Acknowledgments

We are appreciative of the support that we received throughout this study from our project officers, Chris Bailey and Irina Nemirovsky at the Commission on Health and Safety and Workers' Compensation, and from Lachlan Taylor, Acting Director of the Commission. We are also grateful to Eric Creer, California Department of Public Health, and Susan Morrish, Medical Board of California, for sharing information about the medical licensing and accreditation status and requirements for ASCs. We also appreciate the willingness of representatives from the California Ambulatory Surgery Association to share their perspectives and clinical insights with us.

Finally, we extend our thanks to Shin-Yi Chou of Lehigh University and to our RAND colleague Teryl Nuckols for their constructive comments on an earlier version of the report.

Abbreviations

AAAASF	American Association for Accreditation of Ambulatory Surgery Facilities, Inc.
AAAHC	Accreditation Association for Ambulatory Health Care, Inc.
ASC	ambulatory surgical center
CASA	California Ambulatory Surgery Association
CDPH	California Department of Public Health
CfC	[Medicare] Conditions for Coverage
CMS	Centers for Medicare & Medicaid Services
DIR	Department of Industrial Relations
DWC	Division of Workers' Compensation
HOPD	Hospital Outpatient Department
IMQ	Institute for Medical Quality
MBC	Medical Board of California
OMFS	Official Medical Fee Schedule
OPPS	outpatient prospective payment system
OSHPD	Office of Statewide Health Planning and Development
TJC	The Joint Commission
WC	workers' compensation
WCIS	Workers' Compensation Information System

Chapter One. Introduction

Background

California's workers' compensation (WC) system provides medical care and wage-replacement benefits to workers suffering on-the-job injuries and illnesses. An injured worker is entitled to receive all medical care reasonably required to cure or relieve the effects of his or her injury. The term "payer" refers to the entity that is paying for medical care provided to an injured worker. It is usually a commercial insurer that provides WC coverage to an employer or a self-insured employer.

Ambulatory surgical centers (ASCs) are freestanding facilities where surgeries are performed on patients who are discharged within 24 hours, most often without a one-night stay. ASCs must meet health and safety standards established by the Medical Board of California (MBC) for physician-owned ASCs and by the California Department of Public Health (CDPH) for ASCs that are not physician owned. ASCs that are approved for participation in the Medicare program must meet additional standards. There are approximately 1,600 ASCs operating in California, the majority of which are physician owned.

The Division of Workers' Compensation (DWC) in the Department of Industrial Relations (DIR) is responsible for administration of the WC program. The Division maintains an Official Medical Fee Schedule (OMFS) for medical services provided under California's WC program. The OMFS establishes the maximum allowance for services furnished to injured workers unless the payer and provider contract for a different payment amount. The OMFS allows facility fees for surgical services performed in an ASC that is either licensed, accredited by an organization recognized by the MBC, or certified for participation in the Medicare program. Labor Code §5307.1 requires that the OMFS for ASC services be based on the Medicare fee schedule for hospital outpatient surgery. The Medicare fee schedule includes only services that the Centers for Medicare & Medicaid Services (CMS) has determined can be safely performed in the outpatient setting on Medicare beneficiaries. Medicare maintains a listing of "inpatient only" surgical procedures that are not covered in the outpatient setting. A procedure is classified as "inpatient only" either because of its invasive nature, the need for at least 24 hours of postoperative recovery time or monitoring before the patient can be safely discharged, or the underlying physical condition of the typical patient who requires the procedure.

The OMFS rules extend the "inpatient only" policy to surgical procedures performed on injured workers but also permit a payer to authorize payment for an "inpatient only" procedure in an ambulatory setting at an agreed-upon rate when medically appropriate. High-volume "inpatient only" procedures for the WC patient population include hip and knee replacements,

single-level spinal fusions involving insertion of instrumentation, an autograft, or multi-level cervical spinal fusions.

Senate Bill 863 (approved September 19, 2012) aimed to improve California's WC system by introducing new cost-saving efficiencies as well as increasing benefits to injured workers. Section 74 of Senate Bill 863 contained two provisions affecting OMFS ASC facility allowances. First, the Labor Code §5307.1(c) limitation on aggregate ASC facility allowances was reduced from 120 percent to 80 percent of the fee paid by Medicare for comparable services performed in a hospital outpatient department.[3] The revised allowance reflects the lower cost structure for ambulatory surgery performed in ASCs relative to hospitals. Second, DIR is required to study the feasibility of establishing an ASC facility allowance for an "inpatient only" procedure that would be set at 85 percent of the Medicare fee schedule amount for the procedure when it is performed on an inpatient basis. Medicare makes a predetermined per discharge payment for inpatient services based on the Medicare-severity-adjusted diagnosis-related group (MS-DRG) to which the patient is assigned. The MS-DRG payment covers the average cost of all services provided by the hospital during an inpatient stay. For surgical procedures, this would include the operating and recovery costs, room and board costs, and any ancillary costs for diagnostic tests, drugs, or medical supplies. If feasible and appropriate, shifting certain surgical procedures from the more expensive inpatient setting to the less expensive ASC setting would produce cost savings for employers and expand worker choice regarding where surgical services are provided.

Purpose

DIR asked RAND to examine the feasibility and appropriateness of including "inpatient only" procedures on the OMFS for ASC facility fees and to consider what the appropriate ASC facility allowance would be for an "inpatient only" procedure. DIR asked RAND to consider the following questions:

- What policy considerations should be addressed in allowing certain "inpatient only" services to be performed in ASCs?
- Which "inpatient only" services can be safely performed in the ASC setting for WC patients?
- If an OMFS rate were set for "inpatient only" services that are performed in an ASC, what multiplier to the Medicare inpatient rate or other fee schedule methodology should be considered? What are the projected cost savings with the use of this multiplier?

[3] Medicare maintains a separate fee schedule for ASCs. The Medicare ASC payment levels are approximately 56 percent of the payment rates for comparable hospital outpatient services (MedPAC, 2013). The SB 863 provision reduces the OMFS allowances for ASC facility services from the same level as hospital outpatient services (120 percent of Medicare rates) to 67 percent of the OMFS allowances for hospitals. However, the ASC allowances are still about 143 percent of the amounts payable under the Medicare fee schedule for ASC services.

- How applicable are ASC findings to the hospital outpatient department setting? What are potential implications regarding services to be allowed and the fee schedule to be used?

Approach and Methods

We used a combination of interviews, literature review, and data analysis to address the study questions. We started our review with two underlying policy questions: Do the health and safety requirements for ASCs provide adequate patient safeguards for performing higher risk surgeries that are typically performed in an inpatient setting? And what factors does Medicare consider in assessing whether a procedure can be safely performed in an outpatient setting?

- *Review of ASC health and safety standards.* We reviewed the health and safety requirements applicable to ASCs and assessed whether they provide adequate patient safeguards for performing higher risk procedures that are ordinarily performed as inpatient procedures. To do so, we assembled information from the CDPH on licensed ASCs, from the MBC on physician-owned ASCs, from CMS on Medicare-certified ASCs, and from the accrediting organizations on accredited physician-owned ASCs. We also gathered information on the number of ASCs by licensure, accreditation, and certification status. Finally, because so many California ASCs are physician owned, we reviewed the protections for patients under self-referral rules that apply when the surgeon has a financial interest in the ASC in which the procedure will be performed.
- *Review of Medicare criteria for "inpatient only" procedures.* We reviewed the criteria that Medicare uses to assess whether procedures can be safely performed in an ambulatory setting and adapted them for the WC patient population. We used this policy framework to guide our analyses of specific WC procedures and the conclusions we drew from the results.

We used the policy framework developed from our review of Medicare criteria for "inpatient only" criteria to guide our assessment of whether these procedures could be safely performed in an ambulatory setting on WC patients. We focused our assessment on a set of high-volume WC procedures that are Medicare "inpatient only" procedures that potentially could be performed in an outpatient setting. The data analyses included consideration of the extent to which the procedures are currently being performed in an ambulatory setting and the proportion of procedures performed on an inpatient basis that involve no more than a one-night stay. Following is an overview of how we approached each step in our assessment. A further explanation of our approach to analyzing each database is found in the relevant chapter of this report.

- *Identification of study procedures.* Medicare's 2013 "inpatient only" procedure list contains 1,734 procedures. To narrow the list to high-volume WC procedures that could potentially be performed safely in an ambulatory setting, we analyzed the 2011 medical administrative data from the California Workers' Compensation Information System

(WCIS). We identified high-volume WC inpatient procedures with a relatively short average length of stay as potential candidates for inclusion on the OMFS for ASC facility allowances. Most of these procedures had been identified as procedures of interest by the California Ambulatory Surgery Association.

- *Determining whether study procedures are performed in ambulatory settings.* We used ambulatory surgery utilization data from the Office of Statewide Health Planning and Development (OSHPD) to investigate the extent to which the study procedures are being performed in ambulatory settings on WC patients as well as non-Medicare/Medicaid patients ages 18–64. Because the OSHPD ambulatory surgery data do not include physician-owned ASCs, we supplemented the OSHPD data with two additional sources: the 2011 WCIS and 2011 all-payer data on physician services obtained from FAIR Health, Inc., a commercial database of healthcare claims contributed by health plans. The WCIS and FAIR Health physician data elements include the setting in which surgical procedures are being performed in California. The services reported as being performed in an ASC in these data include physician-owned ASCs as well as the licensed ASCs that are captured in the OSHPD data.

To inform our discussion of potential policies and recommendations, we reviewed pertinent literature on performing selected procedures in an ambulatory setting and the policies used by other payers.

- *Literature review on selected procedures.* We reviewed the literature regarding the performance of three high-volume "inpatient only" services (multi-level spinal fusions with and without instrumentation, hip replacements, and knee replacements) in ambulatory settings. We note that Medicare already covers most single-level cervical and lumbar spinal fusions that do not involve instrumentation in a hospital outpatient setting and does not include these procedures on its "inpatient only" list. We were particularly interested in patient outcomes when the procedures are performed in ambulatory settings and whether there is an evidence base for prospective patient selection criteria.
- *Review of other WC program policies for "inpatient only" procedures.* We reviewed the policies that the federal and other state WC programs have adopted for covering and paying for Medicare "inpatient only" procedures in ambulatory settings. We also conducted semi-structured interviews with WC officials in other states.

In our final set of analyses, we explored the payment issues that would need to be addressed in setting an OMFS facility fee for "inpatient only" procedures that are performed in an ambulatory setting. To gauge the reasonableness and appropriateness of applying a 0.85 multiplier to the Medicare fee schedule, we reviewed how the Medicare rates are set and compared the estimated hospital cost of performing cervical spinal fusions on WC inpatients who require no more than a one-night stay with the estimated average cost for all WC inpatients assigned to the same MS-DRG. Because we concluded that the current policy is preferable to setting an OMFS fee schedule amount, we did not generate any savings estimates.

Organization of This Report

The remainder of this report is organized as follows:

- Chapter Two discusses the pertinent requirements for state licensure, Medicare certification, and accreditation. Because most ASCs are physician owned, we also discuss the rules on physician self-referral. The underlying issue is whether there are sufficient safeguards against inappropriate referrals to an ASC for an "inpatient only" procedure. We also provide an overview of the ASC landscape in California by regulatory status.
- Chapter Three discusses Medicare's policies regarding "inpatient only" procedures and summarizes the policies adopted by a sample of other WC programs. These policies inform what criteria DIR might consider in deciding whether to remove certain procedures from the "inpatient only" list for WC patients.
- Chapter Four reports on our data analyses with respect to the "inpatient only" procedures. It identifies the high-volume WC procedures that are defined as "inpatient only". It presents the results from our investigation of the extent to which these procedures are already being performed in ambulatory settings and the proportion of WC patients who had the procedure on an inpatient basis who were discharged the same day or after a one-night stay.
- Chapter Five discusses the evidence from the medical literature regarding ambulatory surgery for hip and knee replacements and multi-level cervical fusions with instrumentation.
- Chapter Six discusses the issues that would need to be addressed in setting an OMFS facility allowance for "inpatient only" procedures performed in an ambulatory setting and potential OMFS fee schedule options.
- Chapter Seven discusses the study findings and provides our recommendations.

Chapter Two. Overview of ASC Regulatory Framework and Facilities

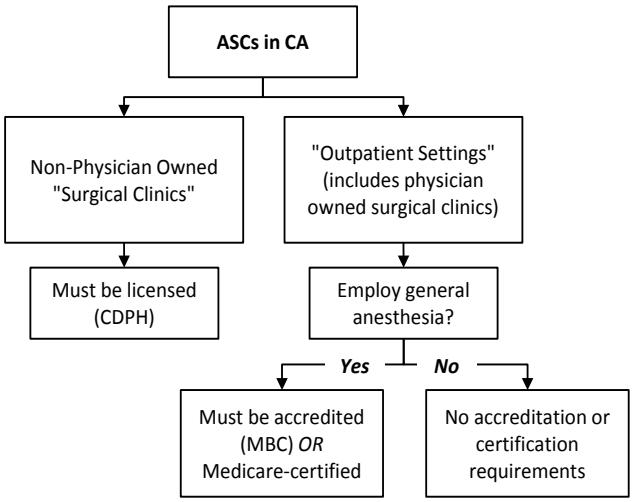
In this chapter, we first focus on the regulatory framework applicable to ASCs. The health and safety standards that ASCs must meet to provide services in California are of particular interest. The underlying issue is whether the standards are sufficient to assure that ASCs perform only procedures that can safely be performed in a non-hospital setting and that there are adequate processes in place if a medical emergency occurs. Because most ASCs are physician owned, the rules on physician self-referral are also a factor in determining whether there are sufficient safeguards against inappropriate referrals to an ASC for an "inpatient only" procedure. We follow the discussion of regulatory issues with an overview of the ASC landscape in California.

Regulatory Framework

State Health and Safety Standards

The California health and safety standards applicable to an ASC depend on whether the facility is physician owned, whether it is certified to participate in the Medicare program, as well as the type of anesthesia that is provided during procedures performed in the facility. Figure 2.1 provides a visual depiction of the regulatory framework for ASC health and safety standards. ASCs are not regulated directly as ASCs, but rather indirectly as either "surgical clinics" licensed by the CDPH or "outpatient settings" subject to requirements established by the MBC.

Figure 2.1. Overview of California ASC Regulatory Framework



The CDPH regulates non-physician-owned "surgical clinics" by requiring licensure. Section 1204(b)(1) of the Health and Safety code defines a "surgical clinic" as a clinic (or organized health facility) that provides ambulatory surgical care for patients who remain less than 24 hours and is not part of a hospital. This 24-hour limit on patient stays is consistent with the Medicare definition and has import for considering the appropriateness of furnishing "inpatient only" procedures in an ASC setting.

The MBC regulates physician-owned ASCs by requiring accreditation for "outpatient settings." Section 1248(b)(1) defines an "outpatient setting" as "any facility, clinic, unlicensed clinic, center, office, or other setting that is not part of a general acute care facility … where anesthesia … is used … in doses that, when administered have the probability of placing a patient at risk for loss of the patient's life-preserving protective reflexes."[4]

Section 1248.1 also specifies the outpatient settings that may operate in the state. The list includes ASCs that are Medicare certified, surgical clinics that are licensed under 1204(b) (i.e., non-physician-owned surgical clinics described above), facilities that are licensed as general acute care hospitals, and outpatient settings accredited by an accreditation agency approved by the MBC. Thus, accreditation is only one way a physician-owned outpatient setting may legally operate—if it is Medicare certified, accreditation is not required.

There is a potentially large group of physician-owned "outpatient settings" subject to minimal regulation because the settings do not employ anesthesia in doses that require accreditation. By law they cannot be licensed by CDPH, and by law they do not need accreditation. However, a physician-owned ASC is eligible for an OMFS facility fee only if it is Medicare certified or accredited by an organization recognized by the MBC. We focus on these physician-owned facilities and assume that only facilities that are accredited and/or certified would be affected by an expansion of the list of approved ASC procedures.[5]

Medicare Conditions for Coverage

The California requirements for ASCs are intertwined with the Medicare Conditions for Coverage (CfC), which contain the health and safety requirements for Medicare-certified ASCs.

---

[4] The Code expressly exempts outpatient settings from the accreditation requirements if only local anesthesia, peripheral nerves blocks, or anxiolytics and analgesics are used in compliance with the community standard or practice, in doses that do not place a patient at risk for loss of the patient's life-preserving protective reflexes. Further, accreditation is required for outpatient settings that offer in vitro fertilization (which is not a focus for this report).

[5] Although unlicensed, unaccredited, and uncertified outpatient settings have a large degree of autonomy in performing a wide range of procedures, some state laws concerning patient safety do place regulations on their operation. For example, the Donda West Law requires patients to receive an appropriate physician examination within 30 days prior to an elective cosmetic surgery procedure (AB 1116), and SB 100 requires additional physician oversight in "clinics or other settings using certain laser or intense pulse light devices for elective cosmetic procedures."

The CDPH uses Medicare's CfC as its requirements for state licensure and conducts certification surveys for CMS.[6] ASCs seeking Medicare certification may be surveyed by CDPH, or they may be accredited by an organization with deemed status, i.e., CMS has deemed that the organization's accreditation requirements meet Medicare's CfC. Five accrediting bodies have been approved by the MBC:

1. American Association for Accreditation of Ambulatory Surgery Facilities, Inc. (AAAASF)
2. The Joint Commission
3. Accreditation Association for Ambulatory Health Care (AAAHC)
4. American Osteopathic Association/Healthcare Facilities Accreditation
5. Institute for Medical Quality.

The first four organizations have deemed status under Medicare. The Institute for Medical Quality, which is a non-profit subsidiary of the California Medical Association, does not. However, the accrediting organizations with deemed status may have different levels of accreditation, so that an accredited ASC for purposes of meeting MBC requirements should not be automatically be assumed to meet Medicare's requirements for certification.

Self-Referral Rules

The purpose of the self-referral rule is to preserve patient choice and protect against provision of unnecessary services or inappropriate referrals which might occur when a physician has a financial interest in the entity providing the services. Under federal law, self-referrals to an ASC are exempt from the prohibitions on self-referral for federal patients (Medicare and Medicaid beneficiaries). However, the Medicare CfC "patient rights" standard requires that the patient be provided a written list of physicians who have a financial interest or ownership in the ASC facility (42 CFR 416.50). This standard is not limited to federal beneficiaries but applies to all patients receiving services in the facility.

Labor Code Section 139.3 sets out a broad prohibition against a physician referring a patient for services if the physician has a financial interest in the entity that receives the referral, including ambulatory surgery. However, the prohibition does not apply to an ambulatory surgical center if the referring physician obtains a service preauthorization from the payer after disclosure of the financial relationship. The financial interest must also be disclosed to the patient at the time of the referral.

Standards for Licensing, Accreditation, and Certification

This section contrasts the standards required for licensure, accreditation, and certification, broken into key survey components, or standards that we believe are particularly relevant when

[6] Phone conversation with CDPH staff.

considering whether a given "inpatient only" procedure can be appropriately performed in an ASC setting. The standards are summarized in Table 2.1. Standards for state licensure and Medicare certification are shown in a single column as CDPH policy is to adopt Medicare-certification standards for licensing ASCs. The standards shown for accreditation are the *minimum* standards established by the MBC. An accreditation organization may adopt higher standards or more than one set of standards. For example, the AAAASF has standards for four different classes of ASCs, which are defined by the type of anesthesia that may be used for all surgical, endoscopic, and/or pain management procedures performed in the facility, and a separate set of standards for Medicare certification.

Informed consent. Medicare's CfC require that informed consent be obtained before the surgery is performed and documented in the patient's record (see Figure 2.2 for the CMS interpretative guideline definition of a well-designed consent process). Informed consent may be obtained on the day of the procedure but must be obtained after there has been disclosure of any financial interests and before the patient enters the operating room. The accreditation standards do not explicitly require informed consent; however, California state law requires informed consent for all surgical procedures that are complex, invasive, or involve the risk of serious injury. This informed consent can be provided informally without written documentation except for certain specified procedures (none of which is a focus of this study).

Financial disclosure. As noted earlier, Medicare requires an ASC to disclose and provide in writing a list of physicians who have a financial interest or ownership in the facility. The disclosure must be provided in advance of the date of the procedure unless the surgery occurs for medical reasons on the same day as the referral to the ASC for surgery. By contrast, accreditation standards require only that physician ASC ownership information be listed on the MBC website, of which most patients may be unaware.

Figure 2.2. Characteristics of a Well-Designed Informed Consent Process

A well-designed informed consent process would most likely include a discussion of the following elements:

- A description of the proposed surgery, including the anesthesia to be used
- The indications for the proposed surgery
- Material risks and benefits for the patient related to the surgery and anesthesia, including the likelihood of each, based on the available clinical evidence, as informed by the responsible practitioner's clinical judgment. Material risks could include risks with a high degree of likelihood, but a low degree of severity, as well as those with a very low degree of likelihood, but a high degree of severity
- Treatment alternatives, including the attendant material risks and benefits
- Who will conduct the surgical intervention and administer the anesthesia
- Whether physicians other than the operating practitioner will be performing important tasks related to the surgery. Important surgical tasks include: opening and closing, dissecting tissue, removing tissue, harvesting grafts, transplanting tissue, administering anesthesia, implanting devices, and placing invasive lines, and
- Whether, as permitted by state law, qualified medical practitioners who are not physicians will perform important parts of the surgery or administer the anesthesia, and if so, the types of tasks each type of practitioner will carry out; and that such practitioners will be performing only tasks within their scope of practice for which they have been granted privileges by the hospital.

Source: CMS (2011).

Evaluation of risk. The CfC survey requires a physician to evaluate the risks of anesthesia and the procedure immediately before surgery. The patient assessment is of critical importance given the risk involved with these procedures, particularly when they are performed in a non-hospital setting where fewer resources are available in the case of emergencies or patient complications. The accreditation standards do not include specific requirements for anesthesia risk and evaluation; however, as noted earlier, our comparison uses minimum accreditation requirements, and the accrediting organizations may have standards that are comparable to the Medicare CfC.

Medical emergencies. The certification and accreditation requirements for equipment that must be available to address medical emergencies are similar. One difference is that the certification requirements expressly require that staff trained in each type of emergency equipment be present whenever patients are in the ASC. The accreditation standards require that at least two persons, one of whom is a physician or licensed health care professional with current certification in advanced cardiac life support, be on the premises as long as a patient is present who has not been discharged from supervised care. An ASC that retains patients overnight should meet these requirements when patients remain on the premises overnight.

Licensure and Medicare certification rules permit overnight stays, but the expected length of stay for procedures cannot be more than 24 hours. By Medicare's rule, ASCs are not to provide care requiring an expected length of stay greater than 24 hours. The rule is not limited to Medicare patients but applies to all patients. The maximum length of stay requirements could create scenarios where patients are discharged prematurely or are discharged to another care setting requiring clinical supervision; however, ASCs frequently doing this could lose Medicare certification because surveyors review all extended-stay cases to determine whether prior to the surgery it was reasonable to expect the patient would be discharged within 24 hours. In meeting

the 24-hour rule, an ASC is expected to evaluate both the procedures that it offers and each patient's likely need for hospitalization so that any stays exceeding 24 hours should occur rarely.[7,8]

The provisions of Section 1248 of the Health and Safety Code pertaining to accreditation of ambulatory settings do not contain an explicit 24-hour limitation on stays following surgical procedures. The MBC's website's "Frequently Asked Questions" imply that only surgical procedures that require less than 24 hours care can be performed in an ASC; however, we did not identify specific rules on this issue and any limitation may rest with the accrediting organization. For example, the AAAASF general accreditation standards do not contain a limitation but specify that if overnight stays are permitted, the facility must be in compliance with all applicable local and state laws and regulations. In contrast, the AAAASF accreditation standards that are deemed to meet Medicare certification standards define an ASC as providing surgical services not requiring hospitalization and with an expected duration of services not exceeding 24 hours following admission. A non-certified but accredited ASC could provide services that require 24 or more hours of care as long as any legal requirements are met.

[7] Title 24 California Building Standards code applies to ASCs. Licensed ASCs must meet "OSHPD 3" requirements for "business" occupancy. If stays extend beyond 24 hours, the ASC could need to meet the higher standards for a "healthcare" occupancy. OSHPD establishes the building standards for licensed ASCs, but local building codes apply to non-licensed ASCs under Title 24. If Medicare certified, the facility must also meet the National Fire Protection Association's Life Safety Code for ambulatory health care occupancies.

[8] The Medicare survey guidelines acknowledge that some states allow recovery centers that accept ASC post-surgical non-Medicare patients for extended recoveries. The recovery centers do not participate in Medicare and are not licensed as a hospital or considered part of the ASC. Recovery centers are not licensed in California, although there are non-medical facilities that offer elective post-operative services to patients who have been discharged from an ASC.

Table 2.1. Overview of ASC Survey Standards Relevant to Performing "Inpatient Only" Procedures in the ASC Setting

Standard	Medicare CfC (and Licensure)	Medical Board Minimum Accreditation Requirements
Procedures for transfer of emergency care to hospital	• Must have an effective procedure for the immediate transfer, to a hospital, of patients requiring emergency medical care beyond the capabilities of the ASC • Hospital must be local • Must have written transfer agreement with hospital • All physicians performing surgery in the ASC have admitting privileges at hospital	• Written transfer agreement with a local accredited or licensed acute care hospital • Permit surgery only by a licensee who has admitting privileges at a local accredited or licensed acute care hospital (licensees who may be precluded from having admitting privileges by their professional classification or other administrative limitations shall have a written transfer agreement with licensees who have admitting privileges) • Submit to accrediting agency a detailed procedural plan for handling medical emergencies for review (no reasonable plan shall be disapproved) • Must notify person designated by patient of emergency, ensure mode of transfer is consistent with patient's medical condition, ensure all relevant clinical information is documented and accompanies the patient, continue to provide appropriate care until transfer is effectuated • Must cooperate with medical staff peer review process on transferred case; if inappropriate care was delivered will be reported
Emergency equipment	• Specified list of emergency equipment must be available in each OR; ASC medical staff and governing body of the ASC may specify additional emergency equipment required for use in the ASC's operating room • Equipment must be (a) immediately available in all emergency situations, (b) appropriate for facility's patient population, (c) maintained • Whenever a patient is in the ASC staff must be available who are capable of using each type of emergency equipment	• Shall have a system for facility safety and emergency training requirements • Shall be onsite equipment, medication, and trained personnel to facilitate handling of any medical emergency that may arise in connection with services sought or provided • Submit to accrediting agency a detailed plan, standardized procedures, and protocols to be followed in the event of serious complications or side effects from surgery that would place a patient at high risk for injury or harm or to govern emergency and urgent care situations
Anesthetic risk and evaluation	• A physician must examine the patient immediately before surgery to evaluate the risk of anesthesia	• AB 1116 (Donda West Law) has some requirements but only for elective cosmetic procedures

Standard	Medicare CfC (and Licensure)	Medical Board Minimum Accreditation Requirements
Pre-surgical assessment	• A physician must examine the patient immediately before surgery to evaluate risk of the procedure to be performed	• AB 1116 (Donda West Law) has some requirements but only for elective cosmetic procedures
Administration of anesthesia	• Anesthetics administered by (1) a qualified anesthesiologist, OR (2) a physician qualified to administer anesthesia, a CRNA, or an anesthesiologist's assistant (410.69(b)), or a supervised trainee in an approved educational program • Physician supervision of CRNA's in not required in California	• Outpatient setting may, in its discretion, permit anesthesia service by a CRNA acting within his or her scope of practice
Patient rights (disclosure of financial interests)	• Must inform patient or patient's representative or surrogate of patient's rights and must protect and promote the exercise of these rights; must post rights; must inform patient of rights prior to start of surgical procedure • ASC must disclose and provide a list of physicians who have financial interest or ownership in the ASC facility in writing	• The MBC must have a list of ASCs on its website that include name, address, and telephone numbers of any owners, and their medical license numbers • Must notify the accreditation agency within 30 days of any significant change in ownership
Patient admission, assessment and discharge	• Comprehensive medical history and physician assessment by a physician or other qualified health practitioner in accordance with state laws, standards of practice, and ASC policy (not more than 30 days before date of scheduled surgery) • Pre-surgical assessment upon admission by physician or qualified practitioner • Physician, other qualified practitioner, or a registered nurse must conduct and document a post-surgical assessment • Before discharge from ASC, patient must be evaluated by a physician or by an anesthetist (410.69(b)—must be legally authorized by state to do these services) for proper anesthesia recovery • Provide patient with written discharge instructions and overnight supplies, and other planning information • Signed discharge order • Ensure patient discharged in company of responsible adult, unless exempted by attending physician	• Outpatient settings shall have written discharge criteria • Transfer to an unlicensed setting of a patient who does not meet the discharge criteria shall constitute unprofessional conduct

Standard	Medicare CfC (and Licensure)	Medical Board Minimum Accreditation Requirements
Survey announced / unannounced	All are unannounced	The MBC or accreditation agency may enter and inspect any outpatient setting that is accredited by an accreditation agency at any reasonable time to ensure compliance with, or investigate an alleged violation of, any standard of the accreditation agency or any provision of this chapter; however, unannounced surveys are not required.

*CDPH policy is to use Medicare-certification standards when licensing ASCs.

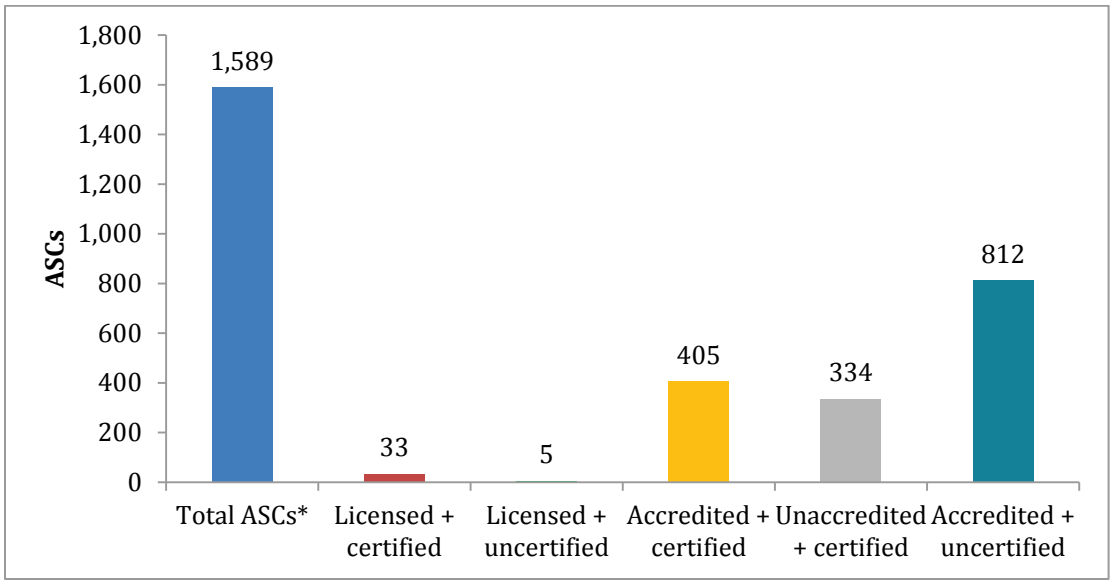
ASC Facilities: Number and Regulatory Status

With the above regulatory framework in mind, we gathered information on ASCs using several data sources. Our objective was to determine the number of licensed ASCs, accredited ASCs, Medicare-certified ASCs, as well as an unduplicated count of the total number of ASCs (because the categories are *not* mutually exclusive). The purpose was to provide context for how many ASCs operate in California under various regulations. We analyzed data from four sources:

1. CDPH list of ASCs that are either non-physician-owned licensed ASCs or ASCs surveyed by CDPH for Medicare-certification purposes (May 2013)
2. CMS Provider of Service file listing of ASCs that have applied for Medicare-certification (2011)
3. The MBC listing of physician-owned ASCs that have requested accreditation (May 2013)
4. OSHPD AS utilization data submitted by non-physician-owned ASCs (2011).

Overall we estimate there are 1,589 ASCs operating in California that either are licensed, accredited, Medicare certified, some combination of these, or none of these (Figure 2.2). Among the 1,551 physician-owned ASCs, 78 percent have chosen to become accredited. Of these, 33 percent are also Medicare certified. We estimate that 334 ASCs are Medicare certified but unaccredited. We were unable to determine from available data how many facilities performing surgery are unlicensed, unaccredited, and uncertified. Thus, our overall estimate of 1,589 ASCs falls short of the true number of ASCs operating in CA. However, it captures the potential universe of ASCs that may be affected by the inclusion of any "inpatient only" procedures in the OMFS for ASC facility fees.

Figure 2.3. Freestanding ASCs Operating in California by Regulatory Status



*Data sources used could not capture the number of unlicensed, unaccredited, and uncertified ASCs.

Discussion

The purpose of this chapter was to explore whether the standards and other requirements applicable to freestanding ASCs are sufficient to assure that ASCs perform only procedures that can safely be performed in a non-hospital setting and that there are adequate processes in place if a medical emergency occurs. There are some differences in the standards that apply to state licensed and/or Medicare-certified ASCs and physician-owned accredited but not Medicare-certified ASCs. These differences do not appear significant with respect to most ambulatory surgery procedures; however, they raise potential issues with respect to performing "inpatient only" procedures in an ASC setting. These issues pertain both to "inpatient only" procedures that are performed in an ambulatory setting when authorized by the payer on an exceptions basis under current policies as well as to any procedures that DIR might remove from the "inpatient only" list for WC patients. Generally, the "inpatient only" procedures should be provided in an ambulatory setting only if the following conditions are met:

- The provider has determined that the patient is likely to require less than a 24-hour stay and has assured that the patient's post-discharge needs will be appropriately met. This condition is met by the Medicare CfC, but the 24-hour requirement is not explicit for accredited ASCs that are not Medicare certified.
- Prior authorization is obtained for the procedure from the payer. The patient should also be provided upon referral (in advance of the date of the procedure) written financial disclosure of any physician financial interest as required by Medicare standards. Consideration should also be given to requiring that the patient be notified at the same time that the procedure is typically performed in a hospital setting. Including this as part

of the informed consent on the day of a procedure does not allow sufficient patient choice regarding where the procedure is performed.

Chapter Three. Coverage Policies for Surgeries Performed in ASCs

Background

The OMFS sets the maximum allowable amounts for medical services furnished under WC. For ambulatory services, the OMFS is linked to the Medicare hospital outpatient prospective payment system (OPPS), which does not include fees for an "inpatient only" list of procedures that are not covered as outpatient surgery. Under California's WC program, there is no standard policy by which providers are paid for "inpatient only" procedures conducted in either the HOPD or ASC setting. The OMFS incorporates Medicare's "inpatient only" procedures list but also allows the procedures to be performed in ambulatory settings if the physician and payer reach an agreement in advance on the allowed amount.[9]

SB 863 could potentially lead to an expansion of the OMFS to include "inpatient only" services provided by ASCs by specifically requiring DIR to examine Medicare "inpatient only" procedures to determine if any can be safely performed in the ASC setting.

Overview of Coverage Policies for ASC Services

CMS policies rank surgical procedures along a risk continuum. The Medicare "inpatient only" list sets procedures that the agency has determined would not be safe, appropriate, or consistent with accepted medical practice if they were performed outside of a hospital inpatient setting for Medicare beneficiaries. These procedures require inpatient care either because of their invasive nature, the need for at least 24 hours of postoperative recovery time or monitoring before the patient can be safely discharged, or the underlying physical condition of the typical patient who requires the surgical procedure.

Procedures that have been determined to be safely performed in a hospital outpatient setting must undergo further screening before CMS includes them on a list of approved ASC procedures. An ASC-approved procedure must not be expected to pose a significant risk to patient safety. Significant risk procedures are those that generally result in extensive blood loss, require major or prolonged invasion of body cavities, or directly involve major blood vessels.

[9] Some physicians perform the procedures without an advanced agreement and then file a lien against the payer in question to receive payment. Under SB 863 changes in the dispute resolution process, issues regarding medical necessity are subject to independent medical review, and issues regarding where a service is provided (e.g., inpatient or ASC) are to be handled through an expedited hearing rather than through the lien process, and independent bill review is to be used to resolve fee schedule issues. With these changes in the dispute resolution process and new lien filing fees, it is not clear whether the practice of providing the service without prior authorization will continue.

They also include procedures that are emergent or life threatening in nature, or commonly require systemic thrombolytic therapy. Further, procedures must not be expected to require active medical monitoring and care at midnight following the procedure if the patient is retained overnight.

Medicare's list of ASC-approved procedures excludes services that are commonly performed in an office setting. These are typically minor low-risk procedures that do not require a sterile procedure room. Medicare does not pay an ASC facility fee for these services when they are furnished in an ASC; rather, the ASC receives a payment based on the Medicare resource-based relative value scale fee schedule for physician services. In contrast, Medicare pays a separate facility fee to hospitals when these "office-based" procedures are furnished to an outpatient.

The current OMFS policy does not have separate coverage policies for ambulatory surgery performed in hospital outpatient settings and in ASCs. For WC patients, ASCs are not restricted to the list of Medicare ASC-approved procedures but may furnish any procedure that is approved for the hospital outpatient setting (assuming the procedure can be safely and effectively performed as an ASC procedure for an individual patient). The main reason for no distinction is that the Medicare list of ASC-approved procedures was outdated when the OMFS for ASC facility fees was adopted in 2004. Since that time, the Medicare list has been expanded and updated through an annual review process. While the criteria for ASC-approved procedures above are not directly applicable to California's WC system under current OMFS policies, these criteria are relevant when thinking about whether procedures should migrate for WC patients from the "inpatient only" list to the list of procedures reimbursed in the ASC setting.

Medicare's "Inpatient Only" Policy

Medicare has a set of criteria that are used for determining whether a surgical procedure can be removed from the "inpatient only" list (Box 3.1). While multiple criteria exist, not all have to be met for a procedure to be removed, and any number of criteria may be used when reviewing the potential removal of a procedure code from the list. CMS reviews the "inpatient only" list annually to see if any procedures should be removed as part of the rulemaking process for the Medicare outpatient prospective payment system. For example, CMS removed CPT 22856 (Total disc arthroplasty, single interspace, cervical) from the "inpatient only" list effective January 1, 2013. As part of that rule, CMS also reviewed but retained on the "inpatient only" list other spinal procedures that are high-volume WC procedures discussed in Chapter 4.

Box 3.1. Medicare's Criteria for Removing a Procedure from the "Inpatient Only" List

Criteria for Removal

Most outpatient departments are equipped to provide the services to the Medicare population.

The simplest procedure described by the code may be performed in most outpatient departments.

The procedure is related to codes that are already removed from the list.

The procedure is being performed in numerous hospitals on an outpatient basis.

The procedure can be appropriately and safely performed in as ASC and is on the list of approved ASC procedures or is proposed by CMS for addition to the list.

Source: CMS (2013).

To learn more about Medicare's "inpatient only" list, we interviewed a Medicare official involved with maintaining the list. We were advised that the decision to remove a procedure from the "inpatient only" list relies upon both quantitative evidence and public comments received during the rulemaking process. The decision is most heavily influenced by whether evidence exists to support that it is safe to perform the procedure in an outpatient setting. A variety of evidence may be considered including operative reports, peer-reviewed literature, and/or Medicare Part B data in weighing the criteria. The evidence could range from claims data demonstrating short length of stays to new procedural techniques that dramatically reduce the complexity and invasiveness of a given procedure, which in turn reduce the time needed between the start of the procedure and when it is safe for the patient to return home. While not "formalized" as a criterion, Medicare also appears to use decreasing average length of stay (LOS) as a signal that a procedure is appropriate for consideration, as well as procedures that routinely show no more than a one-night inpatient stay. Patient selection criteria for identifying patients for whom the outpatient setting is appropriate for a given procedure are not considered. Put differently, a procedure is either on or off the "inpatient only" list, and a procedure is never removed on the basis that select patients may be appropriate candidates for a procedure in a non-inpatient setting.

Policies on ASC Procedures Adopted by Other WC Programs

We investigated the procedures that selected states use to determine what surgical procedures are covered in an ASC setting (Table 3.1). We used a convenience sample of states, some of which use a Medicare-based fee schedule to pay for surgical procedures furnished in ASCs and others that use a different fee schedule mechanism, because we were interested in finding out whether any restrictions are directly related to the Medicare fee schedule for ASC services or stem from other concerns. For example, the federal Office of Workers' Compensation Program (OWCP) uses its own methodology to establish ASC facility fee allowances but restricts

coverage to the procedures on the Medicare ASC covered list of procedures. OWCP acknowledges that some procedures might be appropriately performed in an ASC on a younger, healthier patient but notes that "for the larger number of OWCP program beneficiaries whose health is more likely to be compromised by disability and age, an ASC may be a questionable setting for those same procedures" (U.S. Department of Labor, 2013). Colorado has established a separate ambulatory payment classification (APC) for spinal procedures on the Medicare "inpatient only" list. This is an all-inclusive list of the "inpatient only" codes that were added without selection criteria other than being common WC spinal procedures. The procedures are payable at the same rate as APC 208: Laminectomies and Laminotomies. Texas and Washington have adopted policies that are similar to the OMFS policy but are more prescriptive regarding the information required in the request for prior authorization. For example, Texas requires a signed agreement between the payer, health care provider and ASC. Illinois "recommends" that the "inpatient only" procedures be reimbursed at 53.2 percent of customary charges, which assumes that the ASC's charges reflect a reasonable markup over costs and provide no incentives for efficiency.

Table 3.1. Summary of Selected Policies Used by Other WC Programs for "Inpatient Only" Procedures

WC program	Is a Medicare-based fee schedule used?	General coverage policy for ASC facility fees	Policies for procedures that are not covered by the general coverage policy
Federal	No	Uses the Medicare list of approved ASC procedures.	None specified.
Colorado	OPPS	Uses the OPPS list with an additional grouping for spinal fusions (Code 210) from the Medicare "inpatient only" list. The payment rate for the APC 210 for spinal surgeries is the same as APC 208: Laminectomies and Laminotomies.	For other services without a Medicare rate, a negotiated payment amount is to be determined based on reasonable method that identifies a similar existing code with established RVUs and that justifies the difference in values. If there are no reasonably similar codes, the payer and provider may agree to the payment amount. If they are unable to reach agreement, the billed amount will be paid.
Maryland	ASC	Uses the Medicare list of approved ASC procedures.	None specified, but the general policy is that procedures without fee schedule amounts are payable by report.
Michigan	ASC	An ASC shall bill only for outpatient procedures which, in the opinion of the attending physician, can be performed safely without requiring inpatient overnight hospital care and are exclusive of such surgical and related care as licensed physicians ordinarily elect to perform in their private offices.	When a surgery procedure is appropriately performed in the ASC and CMS has not assigned a payment code for that procedure, the procedure shall be considered by report.
Texas	ASC	Uses the Medicare list of approved ASC procedures.	The carrier, health care provider, and ASC may agree, on a voluntary basis, to an ASC setting before or during preauthorization. There must be a signed and dated written agreement that includes the payment amount and any other terms of the agreement.
Florida	No	No specific policies	

WC program	Is a Medicare-based fee schedule used?	General coverage policy for ASC facility fees	Policies for procedures that are not covered by the general coverage policy
Illinois	No	Defines ambulatory procedures using the OPPS more inclusive list (which does not include “inpatient only” procedures). Agency recommends that “inpatient only” procedures be reimbursed at 53.2 percent of customary charges.	
Pennsylvania	No (old Medicare fee schedule)		
Washington	ASC	Medicare list of approved ASC procedures with some expansions (none of which are “inpatient only” procedures)	Prior authorization required for procedures not on ASC list. At their discretion, the Labor and Industry director or designee or self-insured may determine that a procedure may be authorized in an ASC. For example, this may occur when a procedure could be harmful to a particular patient unless performed in an ASC. The written request for prior authorization must contain: a description of the proposed procedure with associated CPT® or HCPCS procedure codes, the reason for the request, the potential risks and expected benefits, and the estimated cost of the procedure.

Potential Criteria for Determining Whether a Procedure Can Be Safely Performed in an ASC for WC Patients

We established a framework for our analysis of whether certain "inpatient only" procedures should be routinely covered in an ASC setting by adapting the Medicare criteria in Box 3.1 for determining whether a procedure should be removed from the "inpatient only" list. We used the criteria in the framework to guide our assessment in Chapters 3 and 4 and the conclusions that we drew from the results. The criteria were:

1. Most ASCs that are eligible for an OMFS facility fee or, alternatively, a particular class of ASCs (e.g., Medicare certified and/or state licensed) are generally equipped to provide the services to the WC population.
2. The procedure is similar to other surgical codes that are currently eligible for a facility fee.
3. The procedure is being performed as an ambulatory procedure by numerous providers (hospitals or ASCs) on the non-Medicare/Medicaid population ages 18–64 years.
4. When the procedure is performed in the inpatient setting, at least 15 percent of WC patients are discharged after no more than a one-night stay.
5. The procedure can be appropriately and safely performed in an ASC.

We note that Medicare does not have a specific criterion related to length of stay. We use the 15 percent as a minimum threshold in Criterion 4 to retrospectively determine whether at least some WC patients receiving the procedure as inpatients might have been candidates for an outpatient procedure. Arguably, anything less than 15 percent would signal that patients routinely require more than a one-night stay.

Chapter Four. Analyses Using Administrative Data

Approach

We examined several medical administrative data sources to inform the issues related to expanding the list of procedures that might be provided in an ASC setting (see Table 4.1). Our analyses focused on a) the workers' compensation population and b) commercially insured patients of working age.

Table 4.1. Overview of Administrative Data Sources

Data Source, Year(s)	Total Records	Description
Office of Statewide Health Planning and Development (OSHPD) ambulatory surgery data, 2011	31,383 WC and 749,462 private insurance encounters	Reflects data from 346 hospital-based ambulatory surgical centers, plus 91 surgical clinics and ASCs. Physician-owned ASCs do not report data to OSHPD. Data elements include payer, CPT procedure codes, age, and type of facility.
OSHPD inpatient data, 2011	50,693 WC inpatient discharges	Captures all inpatient care for patients seen in licensed California hospitals. Includes ICD-9-CM diagnosis and procedure codes, length of stay, total charges, payer, demographic information, source of admission, and discharge destination.
FAIR Health, 2011	1.3 million surgical procedures for non-Medicare/Medicaid patients age 16–84	All payer administrative data for physician services provided in California. Encounter-level data Include CPT procedure codes and other clinical information, place of service, payer and demographic information.
CA Workers' Compensation Information System (WCIS), 2011	24 million line item records	Medical administrative data for services furnished to WC patients in 2011. Includes all sites of services. Inpatient bills include ICD-9-CM procedure codes, LOS, charges, and payments. Physician and practitioner bills include site of service (which can be used to identify setting). Includes ASC facility services furnished by both licensed and accredited ASCs.

Our first objective was to identify high-volume WC procedures that are "inpatient only" but might be potential candidates for being performed in an ambulatory setting. We used Addendum B of the Medicare hospital outpatient prospective payment rule to determine which CPT codes are defined by Medicare as "inpatient only" (see Appendix Table A.1 for the classification of spinal procedures). We used the Workers' Compensation Information System (WCIS) to identify the high-volume "inpatient only" procedures for WC patients by CPT code and to determine the percentage of WC patients discharged within one day of admission (with no more than a one-

night stay).[10] We used this set of analyses to select the study procedures for the remainder of the data analyses.

Another objective was to determine the extent to which the study procedures (the high-volume WC "inpatient only" procedures) are being performed as ambulatory surgery in either the HOPD or ASC setting. To answer this question, we examined the WCIS data to determine the proportion of the study procedures performed on WC patients in an ambulatory setting. Because the OMFS incorporates the Medicare "inpatient only" list, we also wanted to determine if other payers cover these procedures in ambulatory settings. We used the OSHPD ambulatory surgery database for licensed hospitals and ASCs because it is a comprehensive database for ambulatory surgery performed in these facilities. However, most California ASCs are physician owned and are not included in the OSHPD database. We supplemented the OSHPD data with an extract of California data on physician services compiled by FAIR Health, Inc. Our analysis of the OSHPD and FAIR Health data was restricted to the study procedures across settings. We were unable to obtain payment data for the facility fee component of "inpatient only" procedures provided in ambulatory settings.

A third objective was to determine the average length of stay and the percentage of hospital WC discharges occurring on the same day or with no more than a one-night stay for cases involving the study procedures. We used the OSHPD inpatient hospital data to analyze this question.

WC "Inpatient Only" Procedures by Volume and Site of Service

We used 2011 WCIS medical data for physician surgical services to identify our study procedures (i.e., high-volume WC procedures on the "inpatient only" list) and to determine the settings in which the procedures are currently being performed on WC patients. The database included 4,803 injured workers who received at least one procedure on the "inpatient only" list in 2011 during one or more encounters. A total of 11,955 "inpatient only" procedures were reported in the WCIS data. Of these, 98.8 percent were performed in a hospital inpatient setting, and 1.2 percent were performed in an ambulatory setting. Table 4.2 lists the 23 procedures that were performed at least 100 times in the WCIS data. We focus our remaining analyses on this set of procedures. The study procedures account for 83 percent of the "inpatient only" procedures in the WCIS data. Most study procedures are related to spinal surgery, including the use of bone grafts and instrumentation, but also include hip and knee replacements. Many of the procedures

[10] The use of the CPT coding system to describe ambulatory procedures and the ICD-9-CM coding system to describe inpatient procedures means that we are unable to directly identify the relevant stays in the Office of Statewide Health Planning and Development inpatient (OSHPD IP) data and needed to rely on the WCIS data for our analyses.

on this list were also on the list of procedures of interest to the California Ambulatory Surgery Association (CASA) (Appendix Table A.2 has the complete listing of procedures of interest to CASA).

Table 4.2. High-Volume "Inpatient Only" Procedures Identified as Study Procedures as Reported in 2011 WCIS Data

CPT Code	Description	Number of Procedures by Setting			Percent of Total Procedures Performed in Ambulatory Settings
		All Settings	ASC	Hospital Outpatient	(Hospital + ASC)
+20936	Autograft for spinal surgery – local	1,107	4	8	1.1
+20937	Autograft for spinal surgery – morselized	288	0	0	0.0
+20938	Autograft for spinal surgery – structural	125	1	3	3.2
22214	Osteotomy of spine, 1 vertebral segment, lumbar	108	0	2	1.9
22558	Anterior lumbar spine fusion – single interspace	771	1	5	0.8
+22585	Additional spinal fusion interspace	764	2	3	0.7
22600	Neck spine fusion, 1 level, posterior or posterolateral technique	107	0	1	0.9
22630	Lumbar spine fusion including laminectomy and/or disectomy, posterior interbody technique, 1 level	608	2	4	1.0
+22632	Spine fusion extra segment	231	0	1	0.4
22830	Exploration of spinal fusion	350	3	4	2.0
+22840	Insert posterior non-segmental instrumentation, 1 interspace	503	2	5	1.4
+22842	Insert posterior segmental instrumentation, 3–6 vertebrae	921	2	7	1.0
+22845	Insert anterior instrumentation, 2-3 vertebral segments	1,178	0	10	0.8
+22846	Insert anterior instrumentation, 4–7 vertebral segments	148	0	0	0.0
22852	Removal of posterior segmental instrumentation	247	1	4	2.0
22855	Removal of anterior instrumentation	113	0	1	0.9
27130	Total hip arthroplasty	145	0	1	0.7
27447	Total knee arthroplasty	874	1	7	0.9
27487	Revision of total knee arthroplasty, with or without allograft, femoral and entire tibial component	113	0	0	0.0

CPT Code	Description	Number of Procedures by Setting			Percent of Total Procedures Performed in Ambulatory Settings
		All Settings	ASC	CPT Code	Description
63081	Remove vertebral body, anterior approach with decompression of spinal cord and/or nerve root, cervical, single segment	363	2	4	1.7
63082	Cervical, each additional cervical segment	298	1	1	0.7
63090	Remove vertebral body, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equine and/or nerve root	307	1	3	1.3
63091	Each additional segment	221	1	2	1.4
	Total for WCIS High-Volume Procedures	9,890	24	76	1.0

NOTE: High-volume defined as procedures that were reported at least 100 times in the WCIS data. "Inpatient Only" status determined from Addendum B of Medicare's 2013 OPPS rulemaking documents.

Several study procedures are add-on codes that are reported in addition to the primary procedure code. These codes are shown with a + before the procedure code. The add-on codes of interest fall into three categories:

1. Spinal surgery bone grafts (CPT codes 20936-20938).
2. Additional spinal segments in spinal fusions (CPT codes 22585 and 22632).
3. Insertion of spinal instrumentation (CPT codes 22840-22846).

Because one consideration in evaluating the "inpatient only" list is whether related procedures may be performed on an outpatient basis, Appendix Table A.1 provides a crosswalk between the add-on codes and the related primary procedures. An issue is whether the nature of the add-on code should change the designation for a given procedure. Under current policy, for example, codes reporting the insertion of spinal instrumentation (CPT codes 22840-22846) are "inpatient only." One-level cervical spinal fusions, anterior interbody technique with discectomy (CPT 22551), and lumbar spinal fusions, posterior or posterolateral technique (CPT 22612), are not "inpatient only" procedures when performed without instrumentation but are considered "inpatient only" when instrumentation is inserted.

The WCIS data indicate that only 1.0 percent of the study procedures are being performed in an ambulatory setting for WC patients, with hospital outpatient and ASC settings accounting for 0.8 percent and 0.2 percent of the procedures, respectively. With few exceptions, the ASC services did not involve a one-night stay. In contrast, nearly half of the procedures performed on a hospital outpatient involved a one-night stay (Table 4.3).

Table 4.3. Length of Stay for Study Procedures Performed in an Ambulatory Setting on WC Patients in WCIS 2011 Data

CPT Code	CPT Procedure	ASC					Hospital Outpatient				
		Total	Length of Stay				Total	Length of Stay			
			No overnight stay		LOS ≥ 1			No overnight stay		LOS ≥ 1	
		N	N	%	N	%	N	N	%	N	%
+ 20936	Autograft for spinal surgery – local	4	3	75	1	25	8	5	62.5	3	37.5
+20938	Autograft for spinal surgery – structural	1	1	100	–	–	3	2	66.7	1	33.3
22214	Osteotomy of spine, 1 vertebral segment, lumbar				–	–	2	2	100	–	–
22558	Anterior lumbar spine fusion – single interspace	1	1	100	–	–	5	2	40	3	60
+22585	Additional spinal fusion interspace	2	2	100	–	–	3	–	–	3	100
22600	Neck spine fusion, 1 level, posterior or posterolateral technique				–	–	1	1	100	–	–
22630	Lumbar spine fusion including laminectormy and/or disectomy, posterior interbody technique, 1 level	2	2	100	–	–	4	2	50	2	50
+22632	Spine fusion extra segment				–	–	1	–	–	1	100
22830	Exploration of spinal fusion	3	3	100	–	–	4	2	50	2	50
+22840	Insert posterior non-segmental instrumentation, 1 interspace	2	2	100	–	–	5	3	60	2	40
+22842	Insert posterior segmental instrumentation, 3–6 vertebrae	2	2	100	–	–	7	4	57.1	3	42.9
+22845	Insert anterior instrumentation, 2–3 vertebral segments; 22845 – Insert spine fixation device	4	3	75	1	25	10	4	40	6	60
22852	Removal of posterior segmental instrumentation	1	1	100	–	–	4	2	50	2	50
22855	Removal of anterior instrumentation	–	–	–	–	–	1	1	100	–	–
27130	Total hip arthroplasty	–	–	–	–	–	1	–	–	–	100
27447	Total knee arthroplasty	1	1	100	–	–	7	2	28.6	1 5	71.4
63081	Remove vertebral body, anterior approach with decompression of spinal cord and/or nerve root, cervical, single segment	2	2	100	–	–	4	3	75	1	25
63082	Cervical, each additional cervical segment	1	1	100	–	–	1	1	100	–	–
63090	Remove vertebral body, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equine and/or nerve root	1	1	100	–	–	3	1	33.3	2	66.7
63091	Each additional segment	1	1	100	–	–	2	1	50	1	50

"Inpatient Only" Procedures Performed in the Ambulatory Setting on Patients Covered by Private Payers

In this section, we investigate the extent to which patients covered by private health plans are receiving "inpatient only" procedures in ambulatory settings. Because the current WC rules cover the "inpatient only" procedures as ambulatory surgery only on an exception basis, the WC usage rates for ambulatory surgery may be low relative to patients ages 18–64 years who are insured by private health plans. We used the OSHPD ambulatory surgery data (which does not include physician-owned ASCs) and the FAIR Health data to assess whether a substantial number of services are being provided for this non-WC population in ambulatory settings. Overall, 0.3 percent of the procedures in OSHPD ambulatory surgery data and 1.0 percent in the FAIR Health data were "inpatient only" procedures (Table 4.4). The OSHPD data are consistent with the distribution pattern seen in the WCIS data: the "inpatient only" procedures make up a small percentage of ambulatory surgical procedures, and a higher percentage of these are performed as hospital outpatient procedures compared to ASC procedures. The proportion of procedures that are "inpatient only" in the FAIR Health data is higher but is still relatively small. With the inclusion of the physician-owned ASCs in the FAIR Health data, the number of procedures performed in ASCs approaches the hospital outpatient volume, but the proportion of "inpatient only" procedures performed in ASCs (0.8 percent) remains lower than in hospital outpatient settings (1.0 percent).

Table 4.4. Proportion of Ambulatory Surgical Procedures with "Inpatient Only" Status in 2011 OSHPD and FAIR Health Data for Privately Insured Patients Ages 18–64 by Setting

Data Source	ASC			Hospital Outpatient			Overall		
	Total	"Inpatient Only" Status		Total	"Inpatient Only" Status		Total	"Inpatient Only" Status	
	N	N	%	N	N	%	N	N	%
OSHPD	147,383	62	0	1,505,565	4,158	0.3	1,652,948	4,220	0.3
FAIR Health	137,082	1,131	0.8	140,138	1,594	1.1	277,220	2,725	1.0

With respect to the individual study procedures, the volumes for patients covered by private health plans are relatively low in the OSHPD ambulatory surgery data (Table 4.5). With the exception of several add-on procedures, the procedures were performed fewer than 20 times in the OSHPD data. CPT 22845 "Insert anterior instrumentation, 2–3 vertebral segments" was reported for 104 surgical encounters, all but two of which occurred in a hospital outpatient setting.

Table 4.5. Frequency of Study Procedures for Privately Insured Patients Ages 18–64 in OSHPD 2011 Ambulatory Surgery Data by Setting

CPT Code	*Description*	*Number of Procedures by Setting*		
		ASC	*Hospital Outpatient*	*Total*
+ 20936	Autograft for spinal surgery – local	0	38	38
+20937	Autograft for spinal surgery – morselized	0	12	12
+20938	Autograft for spinal surgery – structural	0	3	3
22214	Osteotomy of spine, 1 vertebral segment, lumbar	0	10	10
22558	Anterior lumbar spine fusion – single interspace	0	5	5
+22585	Additional spinal fusion interspace	0	13	13
22600	Neck spine fusion, 1 level, posterior or posterolateral technique	0	3	3
22630	Lumbar spine fusion including laminectomy and/or disectomy, posterior interbody technique, 1 level	0	6	6
+22632	Spine fusion extra segment	0	1	1
22830	Exploration of spinal fusion	0	7	7
+22840	Insert posterior non-segmental instrumentation, 1 interspace	0	15	15
+22842	Insert posterior segmental instrumentation, 3–6 vertebrae	0	0	0
+22845	Insert anterior instrumentation, 2–3 vertebral segments	1	106	107
22852	Removal of posterior segmental instrumentation	0	20	20
22855	Removal of anterior instrumentation	0	8	8
27130	Total hip arthroplasty	0	4	4
27447	Total knee arthroplasty	1	7	8
27487	Revision of total knee arthroplasty, with or without allograft, femoral and entire tibial component	0	1	1
63081	Remove vertebral body, anterior approach with decompression of spinal cord and/or nerve root, cervical, single segment	0	9	9
+63082	Cervical, each additional cervical segment	0	5	5
63090	Remove vertebral body, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equine and/or nerve root	0	0	0
+63091	Each additional segment	0	0	0

We used the place of service reported in the FAIR Health physician data to estimate the relative proportions of study procedures that are performed in the three settings of interest:

inpatient hospital, hospital outpatient, and ASC (Table 4.6).[11] Only one procedure (CPT 63082) was reported as being done in ambulatory settings more than 10 percent of the time. Several procedures were reported as being done in ambulatory settings between 5 and 10 percent of the time. Many of these were relatively low volume, but three add-on procedures (CPT 20936, 22845, and 63082) and total knee arthroplasty (CPT 27447) were performed more than 50 times in the ambulatory setting.

Table 4.6. Distribution of Study Procedures across Settings for Privately Insured Patients in FAIR Health 2011 Data

CPT Code	Description	Number of Procedures				Percent Ambulatory (Outpatient + ASC)
		Total	Inpatient	Hospital Outpatient	ASC	
+ 20936	Autograft for spinal surgery – local	1,112	1,053	9	50	5.3
+20937	Autograft for spinal surgery – morselized	301	299	1	1	0.7
+20938	Autograft for spinal surgery – structural	129	123	4	2	4.7
22214	Osteotomy of spine, 1 vertebral segment, lumbar	206	190	4	12	7.8
22558	Anterior lumbar spine fusion – single interspace	1,003	974	14	15	2.9
+22585	Additional spinal fusion interspace	903	862	24	17	4.5
22600	Neck spine fusion, 1 level, posterior or posterolateral technique	251	246	0	5	2.0
22630	Lumbar spine fusion including laminectormy and/or disectomy, posterior interbody technique, 1 level	786	778	6	2	1.0
+22632	Spine fusion extra segment	247	246	0	1	0.4
22830	Exploration of spinal fusion	372	353	8	11	5.1
+22840	Insert posterior non-segmental instrumentation, 1 interspace	742	724	7	11	2.4
+22842	Insert posterior segmental instrumentation, 3–6 vertebrae	1,097	1,086	2	9	1.0
+22845	Insert anterior instrumentation, 2–3 vertebral segments	1,722	1,592	54	76	7.5
+22846	Insert anterior instrumentation, 4–7 vertebral segments	232	220	6	6	5.2

[11] Some procedures were reported as being performed in a physician office. We assumed that this is incorrect coding of the place of service variable and did not include these procedures in the Table 4.4 analysis.

CPT Code	Description	Number of Procedures				Percent Ambulatory (Outpatient + ASC)
		Total	Inpatient	Hospital Outpatient	ASC	
22852	Removal of posterior segmental instrumentation	248	242	2	4	2.4
22855	Removal of anterior instrumentation	145	137	5	3	5.5
27130	Total hip arthroplasty	1,915	1,874	30	11	2.1
27447	Total knee arthroplasty	2,694	2,625	44	25	2.6
27487	Revision of total knee arthroplasty, with or without allograft, femoral and entire tibial component	163	152	5	6	6.7
63081	Remove vertebral body, anterior approach with decompression of spinal cord and/or nerve root, cervical, single segment	492	460	12	20	6.5
+63082	Cervical, each additional cervical segment	483	427	10	46	11.6
63090	Remove vertebral body, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equine and/or nerve root	289	286	2	1	1.0
+63091	Each additional segment	235	232	2	1	1.3

"Inpatient Only" Procedures Performed in the Inpatient Setting on WC Patients

To explore the characteristics of "inpatient only" procedures performed in the inpatient setting on WC patients, we analyzed the OSHPD inpatient data for 2011. We focused on the study procedures identified through our analysis of the WCIS data. Because hospitals use ICD-9-CM codes rather than CPT codes to describe inpatient services, we are not able to directly identify the high-volume CPT codes in the OHSPD data. We "crosswalked" the CPT codes to ICD-9-CM codes to the "best" ICD-9 code using input from CASA as well as our clinical consultant (Table 4.7). The structure of the spinal fusion codes in CPT and ICD-9-CM is different. ICD-9-CM distinguishes between fusions and refusions while CPT does not. CPT uses an add-on code for additional spinal fusion levels while ICD-9-CM uses separate codes to describe the number of vertebrae that were fused or refused. Instrumentation is reported separately under CPT but is included in the ICD-9-CM codes with the exception of interbody cages. Several spinal fusion codes are not on the inpatient only list: CPT 22551 (Cervical fusion, anterior approach with discectomy) and CPT 22554 (Cervical fusion, anterior approach with minor discectomy) (which crosswalk to 8101 and 8102), and CPT 22612 (Lumbar fusion, posterior technique, single level) and CPT 22614 (Extra segments) (which crosswalk to ICD

8105, 8107, and 8108). We were not able to examine these codes separately from the other codes that crosswalk to the same ICD codes.

Inpatient stays are paid based on the Medicare-severity-adjusted diagnosis-related group (MS-DRG) to which a discharge is assigned. The MS-DRGs assign patients to clinically coherent groups with similar costs. Most assignments are based on the patient's diagnosis, secondary diagnoses (complications and/or comorbidities (CC)), and surgical procedures. The surgical procedure groupings related to the principal diagnoses for a given Major Diagnostic Category (MDC) are ranked in a hierarchical order based on average costs. For surgical stays involving multiple procedures, the MS-DRG assignment is based on the surgical class highest in the hierarchy. Most WC patients are assigned to MS-DRGs in MDC 8, *Diseases and Disorders of the Musculoskeletal System and Connective Tissue*. Table 4.7 includes the MS-DRG assignments for the study procedures.

Table 4.7. RAND Crosswalk between CPT "Inpatient Only" Codes and ICD-9-CM Codes and DRG Assignments

CPT Code and Description	ICD-9-CM Principal Procedure Code and Description	Comments and MDC 8 MS-DRG Assignment if Principal Procedure
+ 20936 – Autograft for spinal surgery – local +20937 – Autograft for spinal surgery – morselized +20938 – Autograft for spinal surgery – structural	77.7x Excision of bone for graft	MDC 8 MS-DRGs 498–499 if femur; otherwise, MS-DRGs 495-497.
22214 – Osteotomy of spine, 1 vertebral segment, lumbar	7769 Local excision of bone lesion NEC	ICD code excludes laminectomy, arthrodesis, and arthroplasty. MS-DRGs 495–497
22558 – Anterior lumbar spine fusion – single interspace	8106 Lumbar and lumbosacral fusion, anterior technique 8136 Refusion of lumbar anterior	MS-DRGs 459–460
+22585 – Additional spinal fusion interspace	8162 Fusion or refusion of 2–3 vertebrae 8163 Fusion or refusion of 4–8 vertebrae 8164 Fusion or refusion of 9 or more vertebrae	CPT add-on for cervical, thoracic, or lumbar anterior approach fusions. ICD has separate codes to describe the number of fused vertebrae and the approach. DRG assignment depends on principal procedure.
22600 – Neck spine fusion, 1 level, posterior or posterolateral technique	8101 Atlas-axis spinal fusion 8103 Other cervical fusion, posterior technique 8131 Refusion of atlas-axis 8133 Refusion of other cervical posterior approach	MS-DRGs 471–473

22630 – Lumbar spine fusion including laminectormy and/or disectomy, posterior interbody technique, 1 level	8105 Dorsal and dorsolumbar fusion, posterior technique 8108 Lumbar and lumbosacral fusion, posterior technique 8138 Lumbar refusion	MS-DRGs 459–460
+22632 – Spine fusion extra segment	8162 Fusion or refusion of 2–3 vertebrae 8163 Fusion or refusion of 4–8 vertebrae 8164 Fusion or refusion of 9 or more vertebra	Add-on for cervical, thoracic, or lumbar anterior approach fusions. DRG assignment depends on principal procedure.
22830 – Exploration of spinal fusion	8019 Other arthrotomy NEC	MDC 8 MS-DRGs 515–517
+22840 – Insert posterior non-segmental instrumentation, 1 interspace +22842 Insert posterior segmental instrumentation, 3–6 vertebrae +22845 – Insert anterior instrumentation, 2–3 vertebral segments +22846 – Insert anterior instrumentation, 4–7 vertebral segments	Instrumentation is included in the spinal fusion and refusion codes.	MS-DRG assignment depends on primary procedure. Interbody cage insertion is CPT 22851. ICD 9 has separate codes for insertion of interbody spinal fusion device (84.51) and any insertion of recombinant bone morphogenetic protein (84.52)
22852 – Removal of posterior segmental instrumentation	8199 Joint structure operation NEC	MS-DRGs 515–517
22855 – Removal of anterior instrumentation	8199 Joint structure operation NEC	MS-DRGs 515–517
27130 – Total hip arthroplasty	8151 Total hip replacement	MS-DRGs 469–470
27447 – Total knee arthroplasty	8514 Total knee Replacement	MS-DRGs 469–470
27487 – Revision of total knee arthroplasty, with or without allograft, femoral and entire tibial component	8155 Revision of knee replacement, not otherwise specified 0080 Revision of knee replacement – total	MS DRGs 466–468
63081 – Remove vertebral body, anterior approach with decompression of spinal cord and/or nerve root, cervical, single segment 63082 – Cervical, each additional cervical segment 63090 – Remove vertebral body, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equine and/or nerve root 63091 – Each additional segment	7789 Partial Ostectomy NEC 7799 Complete Ostectomy NEC	MS-DRGs 515–517

We included only surgical stays that were reported as being scheduled at least 24 hours in advance. We chose these inpatient stays because they were most likely to include stays that might have been potential candidates for being performed in an ambulatory setting. In total, there were 11,755 WC inpatient stays involving a scheduled surgery, 10,774 of which were assigned

to MDC 8. Our findings with respect to specific study procedures (other than add-ons) are summarized in Table 4.8.

Table 4.8. Count of ICD-9-CM Procedures, Length of Stay, and Charges for Procedures Performed on WC Inpatients in OSHPD 2011 Inpatient Data

	Number of Procedures		Primary Procedure			
ICD-CM Code and Description	Primary	Secondary	Average Length of Stay for All Discharges	Percent Discharges With Less than 2-Day Stay	Mean Charges for All Discharges ($)	Mean Charges for Less than 2-Day Stays ($)
7769 Local excision of bone lesion NEC	13	31	4.8	23	74,795	33,998
8103 Other cervical fusion, posterior technique	82	36	3.6	5	145,230	80,112
8133 Refusion of other cervical posterior approach	41	14	3.0	22	111,882	59,019
8106 Lumbar and lumbosacral fusion, anterior technique	1,068	100	4.3	3	198,308	81,394
8136 Refusion of lumbar anterior	53	5	4.6	8	218,283	101,606
8105 Dorsal and dorsolumbar fusion, posterior technique	47	34	5.8	0	260,342	NA
8108 Lumbar and lumbosacral fusion, posterior technique	320	110	3.8	4	177,948	119,275
8138 Lumbar refusion	14	4	3.9	0	158,673	NA
8151 Total hip replacement	314	5	3.2	4	95,761	70,707
8514 Total knee replacement	2,095	23	3.3	3	91,811	67,391
0080 Revision of knee replacement – total	176	7	3.6	1	129, 507	57,916
8155 Revision of knee replacement, not otherwise specified	20	2	4.1	0	104,206	NA

We found that ICD Codes 7789 and 7799 were never reported as a primary procedure and have not listed them in Table 4.8. ICD Code 7769 (the crosswalk code for CPT 22214) was reported more often as a secondary procedure than as the primary procedure. These three codes were reported relatively infrequently, which reflects the exclusions for reporting the codes. ICD 7789, for example, is not reported for excision of bone ends associated with arthrodesis and arthroplasty. The remaining WC high-volume procedures are most often listed as the primary procedure. Across these procedures, the average length of stay was three days or longer and, with

the exception of ICD-8133 (Cervical refusions), less than 10 percent of the stays involved either a same day discharge or a one-night stay. For comparison, ICD Code 8102 (Other cervical fusion, anterior technique) (which is not on the "inpatient only" list) has an average length of stay of 2.0 days with 45 percent of the stays discharged after no more than a one-night stay.

We used the MS-DRG groupings exclusive of codes that are not on the "inpatient only" list to further examine the spinal surgery stays (Table 4.9). We considered only the MS-DRG grouping for the least complex surgeries (MS-DRG 460 (Spinal Fusion except Cervical without Major Complications or Comorbidities (MCC)) and MS-DRG 473 (Cervical Spinal Fusion without CC /MCC.) We were interested in determining the percentage of "inpatient only" cases that involved only 2–3 vertebrae fusions, and/or no discectomy, and/or no insertion of an interbody cage that were discharged within two days. Ninety-one percent of the "inpatient only" discharges assigned to MS-DRG 460 and 76 percent of those assigned to MS-DRG 473 had 2–3 fused vertebrae. The percentage of stays that were shorter than two days was still below 10 percent for the DRG 460 discharges. The pattern for the MS-DRG 473 cases was quite different. While the number of stays that involve an "inpatient only" procedure is relatively small, the percentage with less than two-day stays is above 20 percent when only 2–3 vertebrae are fused, no discectomy is involved, and/or there are no interbody cage insertions. About half of these cases are refusions, some of which may already be performed in ambulatory settings because the CPT codes do not distinguish between fusions and refusions.

Table 4.9. Length of Stay for WC Patients with "Inpatient Only" Procedures in 2011 OSHPD Data by DRG and Procedure Characteristics

		2–3 Vertebrae Fused			No Discectomy			No Interbody Cage		
DRG code	Total N	N	ALOS	% <2-day stay	N	ALOS	% <2-day stay	N	ALOS	% <2-day stay
DRG 460:	710	653	3.3	7	340	3.5	8	221	5.4	8
DRG 473:	111	84	2.4	29	90	2.7	21	72	3.7	24

Ninety percent of the cervical spinal surgeries assigned to MS-DRG 473 have ICD-CM 8102 reported as the principal procedure (which is covered in the ambulatory setting). For these stays, we investigated whether the insertion of an interbody cage or use of autografts significantly affected the average length of stay (Table 4.10). Both of these add-on codes are considered "inpatient only" procedures. We found that there were only minor differences in the average length of stay and percentage of patients discharged with no more than a one-night stay when these procedures were performed in conjunction with a cervical spinal fusion. We made the same comparison for the applicable lumbar fusions. While there are also minor differences between those that had autografts and/or interbody cages, the average length of stay is four days, and the percentage of stays that are shorter than two days is relatively low.

Table 4.10. Comparison of Length of Stay for WC Patients Assigned to MS-DRGs 473 and 460 by Use of Autografts and Interbody Cages, OSHPD 2011 Inpatient Data

		Autografts						Insertion of Interbody Cages					
		No			Yes			No			Yes		
ICD -9 primary code	Total N	N	ALOS	Percent <2-day stay	N	ALOS	% <2-day stay	N	ALOS	% <2-day stay	N	ALOS	% <2-day stay
8102	1112	761	1.87	48	351	2.2	40	339	1.6	57	773	1.8	47
8105, 8107, 8108	1406	495	3.8	5	911	4.0	1	368	4.0	6	1,028	4.0	2

Summary of Findings

Our data analyses focused on three questions: 1) which "inpatient only" procedures are high-volume WC procedures, 2) to what extent are these procedures being performed in ambulatory settings, and 3) when the study procedures are performed on an inpatient basis, what proportion of WC patients are discharged after no more than a one-night stay?

We identified 23 "inpatient only" surgical procedures (including add-on procedures) that were reported in the WCIS as being performed at least 100 times in 2011. We used these high-volume WC procedures as our study procedures for our assessment of whether certain "inpatient

only" procedures can be safely performed in an outpatient setting. All study procedures were orthopedic procedures, most of which were related to spinal surgeries but also involved hip and knee replacements or revisions.

We found that relatively few "inpatient only" procedures are currently performed on patients covered by either WC or private health plans as an ambulatory procedure. In total, 9,980 study procedures were reported in the WCIS data, of which only 1 percent was performed in ambulatory settings. With the exception of several add-on procedures for instrumentation and multi-level fusions, the study procedures were also rarely performed in an ambulatory setting for the non-WC population ages 18–64 years. For this population, "inpatient only" procedures make up a small percentage of ambulatory surgical procedures, and a higher percentage of these are performed as hospital outpatient procedures than as ASC procedures.

We found that more than 20 percent of WC patients receiving cervical spinal fusions with no complications or comorbidities were discharged after no more than a one-night stay. More than 90 percent of WC patients receiving lumbar fusions, total knee replacements, and total hip replacements required at least a two-night stay.

Chapter Five. Evidence from the Literature

We conducted a search of the MEDLINE-indexed literature to determine the level of evidence available supporting the appropriateness of performing hip and knee replacements and spinal fusions in the ambulatory setting involving multi-level fusions, autografts, or instrumentation. When screening search hits for papers of interest, we also reviewed articles that touched on issues discussed and analyzed in this report. These issues include postoperative length of stay experienced by patients, possible issues with same-day discharge to the home, as well as protocols to prospectively identify patients appropriate for same-day discharge. Our search algorithms are provided in Table 5.1.

Table 5.1 Literature Search Algorithms for Selected Study Procedures

		Search Details			
Topic	*Algorithm*	*Database*	*Date*	*Search Hits (N)*	*Abstracts of Interest (N)*
Total hip replacement	hip AND (replacement* OR arthroplasty) AND (outpatient OR ambulatory OR asc) AND ("last 10 years"[PDat] AND Humans[Mesh])	MEDLINE	July 8, '13	220	14
Total knee replacement	knee AND (replacement* OR arthroplasty) AND (outpatient OR ambulatory OR asc) NOT hip AND ("last 10 years"[PDat] AND Humans[Mesh])	MEDLINE	Jul 8, '13	129	7
Spine arthrodesis w/ instrumentation	spine AND (laminectomy OR laminotomy OR arthrodesis) AND (outpatient OR ambulatory OR asc) AND ("last 10 years"[PDat] AND Humans[Mesh])	MEDLINE	Aug. 30, '13	111	7

Our search of the literature was limited by the search algorithm we used for each search and represents our best attempt to capture relevant papers for the issues discussed and analyzed in this report. More exhaustive literature searches could be conducted in the future—such as going back more than ten years—to verify we captured all relevant articles. Overall, a major shortcoming of the literature relevant to this report is a lack of studies using experimental designs, which makes it difficult to shed light on issues such as the relative safety of performing procedures in the inpatient versus hospital outpatient or ASC setting.

Hip and Knee Replacements

Overall, the literature determined to be relevant to this report was relatively small, with only six studies of relevance identified for knee replacements and five studies of relevance identified for hip replacements (Table 5.2). Most studies were single group feasibility studies of same-day discharge or discharge within 23 hours. No studies used experimental designs to compare outcomes by length of stay, or the safety of the inpatient versus ambulatory setting for hip and knee procedures. Case report studies of very few patients were largely excluded from our review.

We identified studies of inpatient hip and knee replacements in which patients had positive outcomes with either same-day discharge or discharge within 24 hours (Berger et al., 2009a; Berger et al., 2005; Koliskek et al., 2009b; Dorr et al., 2010). We caution that the results of these studies do not prove that same-day discharge or discharge within 24 hours is safe. To determine safety, larger studies employing more robust research designs are needed. No studies were identified that examined patient outcomes for hip and knee replacements conducted in either the hospital outpatient setting or freestanding surgical clinic setting. Given the available evidence we can only conclude that at least for some patients a one-night stay was found to not be needed. However, this does not mean these patients can be preoperatively identified or that the capability to provide services available in the inpatient setting, including a one-night stay, should not be available for all patients undergoing hip and knee replacements.

While evidence exists to suggest shortened length of stays for hip and knee replacements were not associated with increases in readmissions or other complications, evidence was also identified that complications do happen, and that when they do they most often happen within the time-frame of a typical hospital stay for hip and knee replacements (Parvizi et al., 2007). Such evidence, combined with the fact that it is difficult to preoperatively identify patients at risk for major complications, underscores safety concerns surrounding early discharge (Parvizi et al., 2007). In addition, for many of the complications identified, the inpatient setting may be the best setting to maximize patient safety, since staff and other resources to deal with these complications would in most cases not be available in the home setting (Parvizi et al., 2007).

Studies of the feasibility of making hip and knee replacements same-day discharge procedures largely conclude that while same-day discharge may be appropriate and safe for many patients, realizing same-day discharge is quite complicated, and many important questions remain unknown (Berger et al., 2009a; Berger et al., 2005; Dorr et al., 2010). As mentioned, while much is known about the characteristics of patients requiring longer hospital stays, much is also unknown about how to prospectively identify only patients for whom same-day discharge will prove to be possible, appropriate, and safe (Mears et al., 2009).

We also found evidence that at least for knee replacements, achieving same-day discharge is far from easy and may be appropriate only for certain settings. Berger and colleagues (2009a) noted for knee arthroplasty:

> "Having discharged more than 1,500 patients on the day of surgery and more than 1,500 patients on the day after surgery, we can conclude it is many times more difficult for the team to discharge a patient on the day of surgery than on the day after surgery. Everything must be perfectly executed to do outpatient total joint arthroplasty; any error or delay from any part of the team will result in failure of the outpatient goal."

Such comments demonstrate the difficulty in achieving same-day discharge. Comments from Berger and colleagues in another paper (2005) underscore that important and unanswered questions regarding the appropriate setting for knee replacements remain and require further study:

> "Should this [minimally invasive outpatient total knee arthroplasty] be done, and if so, should this only be done only at specialized, high-volume centers or can this be done in a community practice setting? Lastly, can this be done in outpatient centers where surgeon-owners have more control over the entire process?"

Despite the difficulty of achieving same-day discharge, as well as the unanswered questions regarding the appropriateness of performing knee replacements in ambulatory settings, evidence exists in the literature that some physicians are having success performing hip and knee replacements with same-day discharge on at least some of their patients. Evidence identified in our search also revealed that among patients receiving same-day discharge, the vast majority are satisfied and would choose same-day discharge again (Mears et al., 2009).

Table 5.2. Summary of Literature Informing the Appropriateness of Performing Total Knee and Total Hip Replacements in an Ambulatory Setting

Citation	*Intervention / Purpose, Outcomes, and Setting*	*Key Results*	*Implication(s) for Ambulatory Setting, and Key Limitations*
Total Knee Replacements			
Kolisek et al. *Comparison of outpatient versus inpatient total knee arthroplastly*. Clin Orthop Relat Res. 2009;467:1438-1442.	"Outpatient" protocol (discharge within 23 hours of knee replacement) compared to "inpatient" protocol (inpatient stay of 2–4 days) Prospective case and retrospective control comparison study, with 64 patients in each study arm; mean age 55 years (range 42–64 years) Outcomes: mean operative time; perioperative complication rates; Knee Society knee and function scores; radiographic outcomes Inpatient setting	No perioperative complications in either group No patients returned to hospital for any reason following discharge Similar short-term clinical outcomes between the two groups	"Outpatient" protocol (discharge within 23 hours from inpatient setting) may be safe for select patients "Inpatient" control group was retrospectively identified; no adjustments made to control for potential differences between groups Limited generalizability (single center, small sample size)

Citation	*Intervention / Purpose, Outcomes, and Setting*	*Key Results*	*Implication(s) for Ambulatory Setting, and Key Limitations*
Ilfeld et al. *Total knee arthroplasty as a one-night-stay procedure using continuous femoral nerve blocks at home: a prospective feasibility study*. Anesth Analg. 2006;102:87-90.	Continuous femoral nerve block to allow for only a single-night admission Single group prospective study of 10 patients, mean age 61 years Outcomes: proportion discharged home the day of surgery Inpatient setting	Nine of ten discharged day after surgery; one discharged four days after surgery due to bowel obstruction	Single-night stay may be enough for some patients No control arm Limited generalizability (single center, small sample size)
Vorhies et al. *Decreased length of stay after TKA is not associated with increased readmission rates in a national Medicare sample*. Clin Orthop Relat Res. 2012;470:166-171.	Medicare data used to determine if decreasing length of stay over time associated with increases in readmission Retrospective claims analysis of 4,063 patients, mean age 73 Outcomes: mean length of stay; readmission rate; causes of readmission	No evidence for link between reduction in LOS and changes in readmission rate (for 2002–2004 versus 2005–2007 periods)	Shorter LOS not associated with increased readmission rates

Citation	*Intervention / Purpose, Outcomes, and Setting*	*Key Results*	*Implication(s) for Ambulatory Setting, and Key Limitations*
Berger et al. *The feasibility and perioperative complications of outpatient knee arthroplasty.* Clin Orthop Relat Res. 2009;467:1443-1449.	Comprehensive perioperative clinical pathway to see if all patients could be discharged home the same day of surgery Single group prospective study of 111 patients, mean age 65 years (range 48–85 years) Outcomes: perioperative complication rate Inpatient setting	104 discharged home same day of surgery; seven hospitalized overnight Reason for overnight stay: difficulty with pain control, chest pain requiring workup for myocardial infarction, fear and apprehension of discharge, and inadequate control of nausea	Same-day discharge may be possible for a high percentage of patients No control arm Limited generalizability (single center, small sample size)
Berger et al. *Outpatient total knee arthroplasty with a minimally invasive technique*. J Arthrop. 2005;20:S33-S38.	Comprehensive perioperative clinical pathway to see if all patients could be discharged home the same day of surgery Prospective single group study of 50 low-risk patients, mean age 68 years (range 50–79 years) Outcomes: perioperative and postoperative outcomes; percent discharged same day; time to ability to walk; range of motion; incidence of reoperations and infections; emergency department visits and readmissions Inpatient setting	48 patients were discharged same day, one patient chose to stay overnight and was discharged the following morning, and one patient stayed two nights due to orthostatic hypotension and nausea preventing participation in physical therapy the day of surgery	No patients discharged home the same day as had short-term readmissions or post-discharge complications related to early discharge No control arm Limited generalizability (single center, small sample size)

Citation	Intervention / Purpose, Outcomes, and Setting	Key Results	Implication(s) for Ambulatory Setting, and Key Limitations
Parvizi et al. *Total joint arthroplastly: when do fatal or near-fatal complications occur?* J Bone Joint Surg Am. 2007;89:27-32.	*Please see entry in "Total Hip Replacements" section below*	*Please see entry in "Total Hip Replacements" section below*	*Please see entry in "Total Hip Replacements" section below*
Total Hip Replacements			
Parvizi et al. *Total joint arthroplasty: when do fatal or near-fatal complications occur?* J Bone Joint Surg Am. 2007;89:27-32.	Evaluation of systemic and local complications associated with hip and knee arthroplasty for six weeks after surgery Prospective single group study of 966 primary total hip and 670 primary total knee arthroplasty; mean age 60–70 years Outcomes: incidence, timing, and severity of complications; patient characteristics associated with negative outcomes Inpatient setting	One patient (0.06%) died during hospital stay; 104 major (life threatening) complications ranging from tachyarrhythmia, to myocardial infarction, to bowel obstruction or perforation; 17 major local complications 90% of major complications occurred within four days of surgery 58% of patients that experienced life-threatening complications had no identifiable predisposing factors	Most complications occur within time frame of hospital stay Prospectively identifying patients at risk of major complications difficult Authors caution against early discharge Limited generalizability (single center)

Citation	*Intervention / Purpose, Outcomes, and Setting*	*Key Results*	*Implication(s) for Ambulatory Setting, and Key Limitations*
Dorr et al. *Outpatient total hip arthroplasty*. J Arthrop. 2010;25:501-506.	Safety and efficacy study of same-day discharge following posterior mini-incision total hip approach Prospective single group study of 69 patients <65 years of age Outcomes: percent of patients that elect same-day discharge home; safety of going home same-day; association between same-day discharge and a variety of outcomes; patient satisfaction with same-day discharge Inpatient setting	Mean LOS of hospital stay was 11.1 hours; 53 of 69 (77%) discharged same-day of surgery; 16 stayed at least 1 night; 3 remained 2 nights, 1 remained 4 nights Reasons for not going home: pain, hypotension, dizziness, nausea, infection, home problems At six weeks 96% of patients discharged home same day reported they would do same-day surgery again No readmissions at six months for medical complications for all patients	Benefit for patients entirely psychological (no clinical benefits) Same-day discharge may be possible for some patients <65 years of age Limited generalizability (single center) No control arm
Berger et al. *Newer anesthesia and rehabilitation protocols enable outpatient hip replacement in selected patients.* Clin Orthop Relat Res. 2009;467:1424-1430.	Feasibility and safety study of same-day discharge Prospective single group study of 150 consecutive patients, aged 40–75 years Outcomes: percent completing inpatient protocol; patient satisfaction with same-day discharge, incidence of postoperative treatment and complications; percent walking prior to discharge; Harris hip score; readmissions and ER visits; time to discontinuing assistive devices Inpatient setting	All 150 patients discharged home the same day of surgery 144 patients satisfied with same-day discharge; six not happy and believed overnight stay would have been better for them Reasons for overnight stay: desire to remain hospitalized due to postoperative pain; nausea Only one patient readmitted in first three months	Same-day discharge may be possible for some patients Limited generalizability (single center) No control arm

Citation	*Intervention / Purpose, Outcomes, and Setting*	*Key Results*	*Implication(s) for Ambulatory Setting, and Key Limitations*
Mears et al. *THA with a minimally invasive technique, multi-modal anesthesia, and home rehabilitation*. Clin Orthop Relat Res. 2009;467:1412-1417.	Feasibility study of 23-hour discharge using a minimally invasive technique with a specific anesthesia protocol and rapid rehabilitation protocol Prospective study of 665 patients, average age of 62 years Outcomes: time to discharge; discharge destination; complications; factors associated with length of stay Inpatient setting	Overall mean LOS of 1.9 days (range 0–10 days) 18 (3%) of patients discharged the same day of surgery (17 to home / self-care and 1 to home health agency) and 277 (42%) discharged within 24 hours (of which 247 were discharged home / self-care) Reasons for staying in the hospital for at least one night included need for blood transfusion, slow progress with physical therapy, and cardiac issues. Four factors associated with longer hospital stay: female gender, increasing age, higher American Society of Anesthesiologists physical status classification, and increasing blood loss	In an unselected population possible to achieve a 23-hour hospital stay for nearly half of patients No control arm Limited generalizability (single center)
Ilfeld et al. *Total hip arthroplasty as a one-night-stay procedure using an ambulatory continuous psoas compartment nerve block: a prospective feasibility study.* Reg Anesth Pain Med. 2006;31:113-8.	Feasibility of overnight-stay procedure using a continuous psoas compartment nerve block Prospective study of 12 patients Outcomes: discharge home the same day of surgery Inpatient setting	In phase two of the study four of five patients met discharge criteria for discharge on postoperative day one, of which three were discharged home Pain was well controlled, sleep disturbances minimal, patient satisfaction high	For a subset of patients without comorbidities a one-night-stay may be appropriate No control arm; very small sample Limited generalizability (single center)

Spinal Procedures

Medicare already covers single-level cervical and lumbar spinal fusions in a hospital outpatient setting but does not cover autografts, multi-level fusions (other than certain lumbar fusions), or instrumentation used in these procedures. Further, cervical disc arthroplasty is covered, but lumbar disc arthroplasty is considered an "inpatient only" procedure. We found seven articles in the peer-reviewed literature that explicitly involved one or more of the "inpatient only" services related to spinal fusions that were provided in an ambulatory setting (Table 5.3). Each study concerned anterior cervical discectomy and fusion (ACDF). Each study was a single group retrospective non-experimental design with likely selection bias.

There is some evidence that either one-level or two-level anterior cervical spinal fusions with instrumentation can be safely performed in an outpatient setting for selected patients. The criteria for patient selection are not well established. The evidence is scantier with respect to more than two-level fusions and autografts. One study examined three-level fusions (Villaciencio et al., 2007), but all patients were admitted for a 23-hour stay and were sometimes observed for up to 15 hours after completion of the surgery. Most studies included patients with allografts only. The one study that included patients with an autogenous iliac crest bone graft found that the number of unplanned admission rates (6 percent) could be decreased by more than one-third if the bone graft is not harvested.

We did not identify studies examining lumbar spinal disc arthroplasty performed in an outpatient setting. This is a relatively new procedure. Medicare does not cover the procedure for patients age 60 years and older and has left coverage for younger patients to local Medicare contractor coverage determinations. Where these determinations have been made, the procedure is not covered. Group health plan coverage policies vary. For example, United HealthCare (2013) and Aetna (2013) maintain there is insufficient evidence to cover the procedure while Anthem Blue Cross (2013) considers it medically necessary if certain criteria are met that are consistent with FDA approval for the device.

Table 5.3 Summary of Literature Informing the Appropriateness of Performing Certain Spinal Procedures in an Ambulatory Setting

Citation	Intervention / Purpose, Study Design, and Setting	Key Results	Implication(s) for Outpatient Setting, and Key Limitations
Erickson et al. *Outpatient anterior cervical discectomy and fusion*. Am J Orthop. 2007;36:429-432.	Evaluation of outcomes for patients with cervical radiculopathy secondary to foraminal stenosis or a herniated disc who underwent anterior cervical discectomy with fusion. 1- and 2-level fusions with no instrumentation. Retrospective study of 56 patients, single center, between 1993 and 1996; 45% female, mean age 42 years Outcomes: patient safety and patient satisfaction ASC setting. Used a home care nurse after discharge, who monitored the patient at 8, 16, and 24 hours after surgery. The nurse also administered 3 doses of intravenous antibiotic therapy in the home.	Mean (range) time in hours: ASC 4.98 (1.83–8.77), operating room 1.49 (0.87–2.20), procedure 0.87 (0.37–1.68), recovery room 2.4 (0.8–6.52) All patients discharged home same day of surgery; no admissions required One complication in recovery (transient numbness to bilateral fingertips) Only major complication was an ICBG site infection (hospitalization was required 6 months after surgery; patient eventually had full recovery) 96% of patients reported being satisfied with their outpatient experience	In select patients anterior cervical discectomy and fusion may be safely performed in ASC setting Limited generalizability: data are old (1993–1996); small sample; single ASC

Citation	Intervention / Purpose, Study Design, and Setting	Key Results	Implication(s) for Outpatient Setting, and Key Limitations
Garringer and Sasso, *Safety of anterior cervical discectomy and fusion performed as outpatient surgery*. J Spinal Disord Tech 2010;23:439-443.	Determine safety and complications of one-level ACDF. Retrospective review of prospectively collected data on 645 consecutive patients from 1993 to 2006 (mean age 48 years; range 19–88). Included patients with plating and autogenous iliac crest bone graft. Outcomes: incidence of acute complications Outpatient setting	Six percent of patients required an unplanned hospital admission. Number of planned admissions can be decreased by more than one-third if autogenous iliac crest bone graft is not harvested; no patients were discharged from outpatient setting before their hospital admission Two patients developed acute complications (epidural hematomas); no patients died	Outpatient setting appears to be safe for the majority of patients, but up to 6 percent required an unplanned hospital admission Single center
Liu, Briner, and Friedman, *Comparison of inpatient vs. outpatient anterior cervical discectomy and fusion: a retrospective case series*. BMC Surg 2009;9:3.	Switching patients undergoing single-level ACDF with plating from inpatient to outpatient setting. 1-level fusions only. Retrospective review of 64 inpatients (mean age 56 years) and 45 outpatients (mean age 49 years) Outcomes: incidence of complications; overall patient outcomes (“excellent” to “poor”) Hospital outpatient and inpatient	During switch to outpatient setting, 27.4% of patients still seen in inpatient setting due to medical comorbidities (N=14), older age (N=1), and patient preference (N=2) No significant differences in outcomes between inpatients and outpatients Four complications occurred among the inpatients; none occurred among the outpatients (potentially driven by selection bias during outpatient phase of study) No outpatients unexpectedly converted to inpatients	For some patients hospital outpatient setting may be appropriate; however not all patients appropriate for outpatient setting Optimal criteria (e.g., age, comorbidities) for determining appropriate setting for patient unknown Single center, small sample, non-experimental design

Citation	Intervention / Purpose, Study Design, and Setting	Key Results	Implication(s) for Outpatient Setting, and Key Limitations
Sheperd , C. S. and Young, W. F. *Instrumented Outpatient Anterior Cervical Discectomy and Fusion: Is it Safe?* Int Surg. 2012 Jan-Mar; 97(1): 86–89	Examine safety of performing ACDF procedures with instrumentation in an ASC dedicated to spine surgery. Patients were selected for outpatient surgery if they had limited comorbidities and the surgery involved only 1 or 2 levels. Retrospective review of 152 patients with ACDF during the study period (2007–2009). 51% male. All patients had instrumented fusion using an anterior cervical plating system and allograft bone. 103 single level; 49 2 level. Outcomes: overall complication rate; emergency room visits; readmissions; patient satisfaction	All patients discharged by six hours after surgery; six patients returned to the hospital emergency room with one inpatient admission. Overall complication rate = 3.9 percent. Patient surveys (49% response rate) indicated pain was controlled during first 48 hours (98%), no nausea or vomiting (98%) and 100% would have the surgery performed again on an outpatient basis.	Current evidence suggests that ACDF with instrumentation can be performed safely on an outpatient basis in selected patients. Criteria for performing should include (1) 1- or 2-level surgeries, (2) few comorbidities such as obesity or heart disease, and (3) patient preference. Patients not randomized to inpatient or outpatient setting (selection bias likely)
Stieber et al. *Anterior cervical decompression and fusion with plate fixation as an outpatient procedure.* Spine J. 2005;5:503-507.	Evaluate safety and feasibility of anterior cervical discectomy and fusion with instrumentation and 1- & 2-level fusions. Retrospective medical record review; treatment group (N=30) received surgery in ASC setting, and two control groups (N=30 for each) received surgery in inpatient setting Overall, 48% male, mean age 43–45 years (depending on study group) Free-standing ASC	No major complications 13% and 10% of patients treated in inpatient and outpatient settings, respectively, experienced minor complications. 7% of patients in inpatient group had increased LOS owing to complications, and 7% were readmitted for early complications; no outpatient surgery patients were admitted for a complication. Lower complication rate in patients treated in ASC setting (vs. inpatient setting) likely due to selection bias.	Select patients are appropriate for anterior cervical discectomy and fusion in outpatient setting; however, population of patients exists for whom inpatient setting is most appropriate option Patients not randomized to inpatient or outpatient setting (selection bias likely)

Citation	Intervention / Purpose, Study Design, and Setting	Key Results	Implication(s) for Outpatient Setting, and Key Limitations
Trahan et al. *Feasibility of anterior cervical discectomy and fusion as an outpatient procedure.* World Neurosurg. 2011;75:145-148.	Study goal was to demonstrate outpatient setting is safe within a selective patient population Retrospective chart review of 117 patients (mean age 50 years) seen by a single physician in either the inpatient (N=58) or outpatient setting (N=59) Hospital outpatient (?)	Overall, 56% of single-level ACDF patients and 43% of two-level ACDF patients were discharged the same day Outpatient group had lower average levels of existing comorbidities versus inpatient group Operative times ranged from 41 minutes to 138 minutes overall Overall there was one complication	For many patients outpatient ACDF may be appropriate; many others undergoing ACDF require overnight stays in the inpatient setting Single center, small sample, non-experimental study design
Villavicencio et al. *The safety of instrumented outpatient anterior cervical discectomy and fusion*. Spine J 2007;7:148-153.	Evaluate safety and feasibility of single-, two- and three-level ACDF with instrumentation on an outpatient or 23-hour observation period Retrospective chart review of 103 patients at a single site; 43% female, mean age 50 years Outpatient	Average hospitalization time was 8 hours (range 2–15 hours) for 96.1% of patients; four patients (3.9%) were discharged after a 23-hour observation period Overall complication rate 3.8%; 1.9% minor complications and 1.9% major complications Major complications: one patient experienced dehydration and one patient vertebral fracture A literature search and meta-analysis conducted by the authors found a major complication rate of 0.95% and average lengths of stay in inpatient setting to range between 20 hours and 4 days	Outpatient setting is safe and appropriate for many patients undergoing ACDF with instrumentation Single center, small sample, non-experimental design

Chapter Six. Payment Policies for "Inpatient Only" Procedures

Under current OMFS policies, "inpatient only" procedures are covered as an exception that permits a payer to authorize payment for an "inpatient only" service in an ambulatory setting at an agreed-upon rate when medically appropriate. If any services are to be removed from the "inpatient only" list for WC patients, an OMFS allowance is needed for those services. In this regard, Section 74 of SB 863 requires DIR to consider a fee set at 85 percent of the Medicare fee schedule amount for the service when performed on an inpatient basis.

If medically appropriate, covering "inpatient only" services in an ambulatory setting could meet two objectives: 1) reduce WC medical expenditures, and 2) increase worker choice regarding where services are delivered. Ideally, the fee schedule amount should be neutral with respect to where the services are delivered by covering the estimated cost of providing the service and providing a reasonable rate of return. Striking the appropriate balance is important. A rate substantially in excess of costs creates provider incentives to accept patients for ambulatory surgery who are more appropriate candidates for inpatient surgery. The rate, particularly for add-on procedures, should not be substantially higher than what the provider receives for performing a similar procedure that is currently covered in the ambulatory setting. Otherwise, an incentive would be created to perform medically unnecessary procedures. A rate substantially below inpatient surgery allowances creates payer incentives to encourage surgery in an ambulatory setting that is more appropriately provided on an inpatient basis.

To explore potential fee schedule options, we use the high-volume cervical spinal procedure codes identified as the most promising candidates for removal from the "inpatient only" list in Chapter Four. The procedures that we consider are:

- CPT 22552 and 22585 for one additional fusion level. This would provide an allowance for two-level anterior cervical spinal fusions in addition to one-level fusions reported using CPT 22551 and 22554 (both of which are single-level anterior cervical fusions currently payable under APC 208). Even though CPT 22552 is not a high-volume procedure, we included it so that we could examine a more general policy that would allow multi-level anterior cervical spinal fusions.
- CPT 22845. This would provide an allowance for segmental anterior instrumentation for two or three vertebral segments.

We examine two basic policy alternatives for paying for these procedures in an ambulatory setting. Consistent with SB 863, the first option would be to pay for the ambulatory surgery based on a multiple of the Medicare inpatient rate for the procedures. The second option would be to base the rate on the amounts paid for comparable services under the hospital prospective payment system.

Paying for ambulatory surgeries at a percentage of the Medicare inpatient rate raises several issues. The OMFS for inpatient services includes allowances for teaching activities and for serving a disproportionate share of low-income patients determined on a hospital-specific basis. The 2013 hospital-specific rates applicable to WC inpatient services range from a low of $7,245 to a high of $17,011 before adjustment for the DRG relative weight (DWC, 2013a). Hospital-specific rates complicate the determination of what would be payable if the procedure had been performed on an inpatient basis, since there is no direct link between where the ambulatory surgery is performed and where it would otherwise be provided on an inpatient basis. Unlike the inpatient rates, the OMFS for ambulatory surgery facility services adjusts only for differences in hospital wage levels across geographic areas. Because this is the only adjustment that is relevant to ambulatory surgery facility fees, a reasonable approach would be to ignore the hospital-specific adjustments and to determine the allowance for "inpatient only" services based solely on a geographically adjusted payment rate.

As noted earlier, the MS-DRGs classify patients into clinically coherent groups with similar resource use. Depending on the patient's principal diagnosis, whether the patient has any major complications or comorbidities (MCCs) or other complications or comorbidities (CCs), and whether a posterior fusion is performed during the same surgical encounter, a discharge with ICD-9 Code 8102 reported as the primary procedure could group to any one of the MS-DRGs listed in Table 6.1. Neither the additional fusion level nor the instrumentation would affect the MS-DRG assignment or OMFS allowance for an inpatient stay.

Table 6.1. MS-DRGs that Include ICD-9-CM Code 8102 as a Primary Procedure: Comparison of Relative Weights, Number of WC Inpatients, and Average Length of Stay, 2011 OSHPD Inpatient Data

MS - DRG	Description	2014 Relative Weight	Number of WC discharges in 2011 with Code 8102	WC Average length of stay in days
MDC 1 Diseases and disorders of the nervous system				
028	Spinal procedures with MCC	5.4339	0	NA
029	Spinal procedures with CC or spinal neurostimulators	3.0782	1	4
030	Spinal procedures without MCC/CC	1.8091	16	2.5
MDC 8 Diseases and disorders of the musculoskeletal system and connective tissue				
453	Combined anterior-posterior spinal fusion with MCC	11.7453	5	8.0
454	Combined anterior-posterior spinal fusion with CC	8.0200	11	5.0
455	Combined anterior-posterior spinal fusion without MCC/CC	6.2882	13	3.7

471	Cervical spinal fusion with MCC	4.9444	13	7.0
472	Cervical spinal fusion with CC	2.9288	218	2.5
473	Cervical spinal fusion without MCC/CC	2.2458	1,112	1.7
MDC 21 Injuries, Poisonings, and Toxic Effects of Drugs				
907	Other procedures for injuries with MCC	3.9235	0	NA
908	Other procedures for injuries with CC	1.9485	0	NA
909	Other procedures for injuries without MCC/CC	1.2150	0	NA
MDC 24 Multiple significant trauma				
957	Other procedures for significant multiple trauma with MCC	6.7306	0	NA
958	Other procedures for significant multiple trauma with CC	3.8734	0	NA
959	Other procedures for significant multiple trauma without MCC/CC	2.5391	0	NA

Note: MCC = major complication or comorbidity; CC = other complication or comorbidity

Policy and practical considerations suggest that if a payment rate is to be established based on the MS-DRG payment rate, the payment should be based on the MS-DRG to which most candidates for ambulatory surgery would otherwise be assigned. In the case of the cervical spinal fusions, 80 percent of the WC discharges were assigned to MS-DRG 473 (Cervical spinal fusion without MCC or CC). A rate based on the average rate for all potentially applicable MS-DRGs in Table 6.1 is both unnecessary and inappropriate. The hospital outpatient rate is for the surgery. The costs of performing the surgery are likely to vary depending on the number of levels that are fused and the instrumentation that is used. However, the differences in average MS-DRG costs (which are accounted for in the relative weights) are more likely to be attributed to differences in the clinical needs and length of stay for the mix of patients assigned to each MS-DRG than in the surgery costs. Patients receiving an anterior/posterior combined fusion have a longer length of stay and higher costs than patients assigned to MS-DRG 473 and are more appropriately treated in an inpatient setting. Similarly, patients with an MCC or CC are less likely to be appropriate candidates for ambulatory surgery. Even if one of those DRGs were the most common assignment for WC patients, it would be more appropriate to base the payment for the ambulatory surgery on the MS-DRG without MCC or CC.

Within MS-DRG 473, there is a mix of WC patients. The average length of stay is 1.7 days (standard deviation = .98) when same day discharges are included as 0 length of stay. An issue is whether the OMFS allowance should be based on all patients assigned to MS-DRG 473 or whether it should be related to the estimated cost for those patients who are most likely to be candidates for ambulatory surgery, e.g., those who are discharged with no more than a one-night stay. In Table 6.2, we compare the average length of stay and charges for all WC patients

assigned to MS-DRG 473 to those that are discharged after no more than a one-night stay with ICD-9 codes 8102 and 8132 (which correspond to CPT 22551 and CPT 22554 cervical spinal fusions). The average charges for the WC patients that had ICD-9 procedures 8102 or 8132 and were discharged with no more than a one-night stay were 82 percent of the average charges for all WC patients assigned to the MS-DRG.

Table 6.2. Comparison of Average Length of Stay and Charges for All MS-DRG 473 WC Inpatients to WC Inpatients Assigned to MS-DRG 473 with ICD-9-CM Procedures 8102 or 8132 Involving No More than a One-Night Stay, 2011 OSHPD Inpatient Data

	Number of Discharges	ALOS	Average Charges
All discharges	1,241	1.8	$ 91,926
ICD-9 8102 and 8132 only	1,147	1.7	$ 89,686
ICD-9 8102 and 8132 with <2 day stay only	579	0.98	$ 75,719

The OMFS allowance for inpatient hospital services includes all facility services provided during the inpatient stay, including routine room and board services that would not be applicable when the services are provided in an ambulatory setting. Analysis of the Medicare data file used to establish the 2014 MS-DRG relative weights indicates that the surgery charges (operating/recovery room, anesthesia, medical supplies, implanted devices, drugs) account for 88 percent of the charges for patients assigned to DRG 473 (RAND analysis of FY 2014 AOR file). A rate based on 88 percent of the Medicare inpatient rate for DRG 473 would approximate the estimated costs for the surgical procedure including any instrumentation used during the surgery.

Either approach—basing the allowance on estimated charges for patients assigned to the DRG who are likely to be appropriate candidates for ambulatory surgery (82 percent of the Medicare inpatient rate) or on the estimated charges for surgery as a proportion of DRG charges (88 percent)—is feasible to implement and provides a reasonable allowance for "inpatient only" cervical fusions performed in an ambulatory setting. This payment would be in lieu of any other payments made under the hospital outpatient prospective payment system for any other procedures performed during the surgical encounter.

A different policy alternative would be to relate the allowance for the ambulatory surgery to the allowance for comparable services under the OMFS fee schedule for ambulatory surgery facility fees. This is the approach that Colorado has taken in its fee schedule for "inpatient only" spinal fusions. The Medicare rate for APC 208 Laminectomies and Laminotomies determines the allowance for cervical fusions that are currently covered in an ambulatory setting (CPT 22551 and CPT 22554) and could be used as the starting point for determining an allowance for the "inpatient only" procedures. In this regard, the OMFS allowance for ASCs is 80 percent of the

Medicare rate for surgery provided to hospital outpatients, and the allowance for hospital outpatient surgery is 120 percent of the Medicare rate.[12]

An issue is what adjustments to the APC 208 allowances would be needed, if any, to establish a reasonable allowance for the add-on procedures. Fusion of an additional level is unlikely to increase facility costs significantly.[13] However, with few exceptions (e.g., CPT 22856 (Cervical spinal arthroplasty)), the procedures that are assigned to APC 208 do not involve instrumentation (because of the "inpatient only" list), and device costs account for only 2.7 percent of the costs of procedures assigned to APC 208. Without some adjustment, at least with respect to the ASC rate, it is unlikely the APC 208 allowance would be sufficient to cover hardware costs. For hospital outpatient services, the 120 percent multiplier provides some cushion for hardware costs. However, spinal fusion procedures are more expensive than most procedures assigned to APC 208, and an adjustment may also be appropriate for hospital outpatient surgery.

A study involving 102 single-level anterior cervical discectomy and fusion procedures performed at a single institution investigated the extent to which surgeon choices affected the hardware costs. The study found that instrumentation costs (without hospital overhead) ranged from $1,098 to $10,921, nearly a tenfold variation (Epstein et al., 2011). Allowing a separate pass-through payment for instrumentation would increase administrative burden and create no incentives for efficient hardware choices. Further, it would be contrary to the SB 863 provision to eliminate the OMFS pass-through for inpatient spinal hardware. At the same time, limited information is available to determine an appropriate add-on amount for instrumentation. One potential approach would be to create an add-on to the APC allowance based on the proportion of DRG 473 inpatient surgery costs attributable to devices. Charges for implanted devices accounted for 43 percent of the surgery charges in the 2014 Medicare data files. When the components of surgery charges are converted to hospital costs, implanted devices account for 55 percent of surgery costs. On a per encounter basis this could translate into a per encounter allowance of up to $7,179. The allowance is based on all spinal fusions assigned to DRG 473 and likely overstates the hardware costs for patients with two or three vertebrae fusions. Further analysis would be needed to isolate the additional allowance for hardware used for two or three vertebrae fusions from other cervical fusions involving additional levels. For comparison,

---

[12] As a result, the ASC allowance is 67 percent of the allowance for ambulatory surgery provided to a hospital outpatient (80/120 = 67). The Medicare ASC rate is about 56 percent of the hospital outpatient rate (MedPAC, 2013). While the OMFS allowance for ASC services is lower than the hospital outpatient allowance, it is higher than 120 percent of the Medicare ASC rate.

[13] For example, a prospective study of anterior cervical discectomy and fusion with plating found that the mean surgical times were similar (81.7 minutes for one-level versus 84.4 minutes for two-level) and that the average post-operative recovery unit times were actually longer for one-level than two-level fusions (92.5 minutes versus 80.8 minutes). This particular ASC has a separately licensed convalescent center (similar to a nursing home) that kept the average patient another 20 hours before discharge (Pettine and Mohnssen, undated).

Orthopedic Network News (2010) reported that the average cost for cervical spinal implants was $3,893 for one-level fusions and $4,749 for two-level fusions in 2010. The average across all levels was $5,070.

In Table 6.3 we compare the estimated 2014 standard payment rate (prior to adjustment for geographic location) under different alternatives for setting the allowance:

Option 1: Base the allowance on the Medicare inpatient rate

1a. 85 percent of the Medicare rate (as suggested by SB 863)

1b. 82 percent of the Medicare rate (which is based on short-stay discharges)

1c. 88 percent of the Medicare rate (which is based on estimated surgery costs).

Option 2: Base the allowance on the Medicare rate for APC 208

2a. Make no special adjustment for the "inpatient only" procedures (122 percent of the Medicare outpatient rate for hospital outpatient departments and 82 percent for ASCs) and assign the procedures to APC 208. This is consistent with the approach taken for add-on code CPT 22614 for an extra segment of a lumbar spinal fusion. It provides no additional facility payment for multi-level cervical spinal fusions. Note: the OMFS provides for an additional 2 percent in the multiplier (i.e., 1.22 rather than 1.20) to account for outliers).

2b. Create an add-on payment when spinal hardware is used (e.g., $3,893 for one-level cervical spinal fusions based on the *Orthopedic News* report).

Table 6.3. 2014 Allowances under Different Rate-Setting Alternatives for DRG 473 "Inpatient Only" Add-on Procedures[14]

Basis for OMFS 2013 Allowance	Standard Allowance Before Geographic Adjustment
1. Medicare inpatient rate for DRG 473 ($14,406.18)	
a. 85 percent (all patients)	$ 12,245.25
b. 82 percent (patients < 2-day stay)	$ 11,813.07
c. 88 percent (estimated cost for surgery)	$ 12,677.44
2. Medicare outpatient rate for APC 208 ($3,995.49)	
a. Assign to APC with comparable services	
Hospital: 122 percent of Medicare rate ($3,995.49 × 1.22)	$6,765.47
ASC: 80 percent of Medicare rate ($3,995.49 × 0.82)	$4,510.31
b. Provide an add-on for spinal hardware	
Hospital: 120 percent + $3,893	$8,403.31
ASC: 80 percent + $3,893	$6,899.87

[14] As of March 1, 2014, the OMFS rates have not been updated for the CMS 2014 updates. In the 2014 final rule, CMS implemented a new policy that packages surgical add-on codes with the primary surgical procedure. Previously, these codes had been payable separately (subject to a 50 percent reduction applicable to multiple procedures performed in the same encounter). Since this change has a significant impact on the rate comparisons, we have estimated 2014 OMFS allowances for the rate comparison. To compute the Medicare inpatient rate, we updated the 2013 allowance for operating costs by the estimated increase in the hospital market basket ($5,805.19 × 1.025 = $5,950.32) and updated the 2013 allowance for capital-related costs by the estimated increase in the capital market basket ($458.90 × 1.012 = $464.40). Summing these two amounts results in an estimated 2014 Medicare standard inpatient rate of $6,414.72. This rate is somewhat higher than the actual standard Medicare rate because the OMFS rates have been updated by the full rate of increase in the hospital market basket since 2004, while the Medicare updates for inflation have been reduced for policy adjustments. The inpatient rate for DRG 473 equals the standard OMFS rate multiplied by the MS-DRG 2014 relative weight ($6,414.72 × 2.2458 = $14,406.18). We used a similar approach to estimate the 2014 OMFS rate for APC 208. We updated the OMFS unadjusted 2013 conversion factor (DWC, 2013b) by the estimated increase in the hospital market basket ($70.761 × 1.025) and multiplied by the 2014 relative weight for APC 208 (55.0874). The resulting rate, $3,995.49is lowerthan the actual Medicare rate because of differences in the update factors over time.

Discussion

The add-on procedures for cervical spinal surgery were chosen to illustrate the issues involved in setting an allowance because they are the most promising candidates for removal from the "inpatient only" list. However, DRG 473 is somewhat atypical in that a single procedure (ICD Code 8102) accounts for 90 percent of the primary procedures, and the Medicare average length of stay is 1.8 days. Because room and board costs account for a relatively small proportion of the inpatient cost, there is less difference between the costs for the procedure in the inpatient and ambulatory setting than would be the case for procedures assigned to a DRG with a longer average length of stay. For example, DRG 470 (Major Joint Replacement or Reattachment of Lower Extremity without MCC) (which includes total hip and knee replacements) has a Medicare average length of stay of 3.4 days, and surgery charges are a lower percentage of total charges (79 percent). If OMFS rates are to be established for "inpatient only" procedures based on the Medicare inpatient rate, one implication from the comparison of DRGs 473 and 470 is that a single across-the-board percentage of the DRG rate is unlikely to result in an appropriate allowance for the individual procedures. Given the importance of creating neutral incentives with respect to where the surgery is performed, DIR should have the flexibility to set an OMFS allowance for any "inpatient only" procedures on a procedure-specific basis.

APC 208 already establishes an allowance for cervical spinal fusions. If an "inpatient only" rate were established, an issue is when the APC 208 rate should apply and when the "inpatient only" rate should apply. Only one rate should apply to the surgical encounter. (In other words, the facility should not be able to obtain the APC allowance for CPT 22551 and a DRG-based "inpatient only" allowance for the additional level and/or instrumentation). Moreover, it would be important to define the conditions under which the "inpatient only" allowance would apply. Fusing an additional level should not trigger the substantially higher DRG-based payment amount. The difference in the payment is substantial, yet fusing the additional level if no instrumentation is involved should be minimal. The "inpatient only" allowance should be reserved for surgeries involving spinal hardware.

A number of other issues would need to be addressed if a DRG-based OMFS allowance were established for "inpatient only" procedures. Little is known about the services provided after a patient is discharged from an ASC for an "inpatient only" procedure and how post-discharge costs would compare to those for patients discharged after an inpatient stay. Additional home health services such as are documented in Erickson et al. (2007) or a one-night stay in a non-medical "hotel" or licensed non-hospital medical facility would diminish any savings that might accrue from performing the surgery on an ambulatory basis. A policy is also needed for post-surgical hospital admissions. The policy should discourage ambulatory facilities from performing surgery on high-risk patients who would be more appropriately treated in an inpatient setting but also assure that patients receive any medically needed follow-up hospital care. Another issue is whether any "inpatient only" procedures that Medicare subsequently removes

from the “inpatient only” list would revert to the standard OMFS payment methodologies for ambulatory surgery facility fees.

Limited data are available that can be used to establish an appropriate allowance for “inpatient only” procedures provided in an outpatient setting. Conceptually, an OMFS allowance based on the estimated costs for the inpatient surgery (as opposed to the entire stay) has some appeal. This rate should be sufficient to cover the estimated costs of performing the procedure in an ambulatory setting and provide a reasonable rate of return. Further, the rate does not rely on having an outpatient payment rate for comparable procedures. For the cervical spinal procedures, this is not an issue because the primary procedure is already payable in an ambulatory setting, but it may be an issue with other procedures, such as total hip replacements, where no related procedures are currently payable in an ambulatory setting. However, there are several drawbacks to this approach as well. As discussed above, a single multiplier is unlikely to work across the range of “inpatient only” procedures. The differential between the outpatient allowance for comparable services and the DRG-based payment for “inpatient only” services could create incentives to provide medically unnecessary services or use inappropriate patient selection criteria for ambulatory surgery. Also, ancillary policies would need to be developed for post-discharge services.

The less problematic approach would be to build on the current OMFS for outpatient services. The “inpatient only” procedures could be assigned to the most comparable APC. This approach avoids several of the shortcomings of the DRG-based approach. By relating the allowances to those for comparable outpatient services, the incentives would be neutral with respect to where the services are provided, and payment policies for post-discharge would not be needed. The drawback to this approach is that it is unlikely to provide a reasonable allowance to ASCs for device costs. We would not expect average device costs to vary by setting. The add-on to the APC payment could work well when device costs are the major difference between the “inpatient only” procedures and the comparable ambulatory procedures, but further research would be needed to establish an appropriate add-on amount.

Chapter Seven. Discussion of Findings and Recommendations

This study examines the feasibility and appropriateness of including procedures that Medicare has determined to "inpatient only" procedures on the OMFS. The questions that we were asked to investigate included the following:

- What policy considerations should be addressed in allowing certain "inpatient only" services to be performed in ASCs?
- Which "inpatient only" services can be safely performed in the ASC setting for WC patients?
- If an OMFS allowance were set for "inpatient only" services that are performed in an ASC, what multiplier to the Medicare inpatient rate or other fee schedule methodology should be considered? What are the projected cost savings with the use of this multiplier?
- How applicable are ASC findings to the hospital outpatient department setting? What are potential implications regarding services that would be allowed and the fee schedule that would be used?

Discussion of Findings

In Chapter Three, we established a framework for our analysis of whether certain "inpatient only" procedures should be routinely covered in an ASC setting by adapting the Medicare criteria for determining whether a procedure should be removed from the "inpatient only" list. When we use this framework to assess our findings, our analysis of the high-volume WC procedures, and review of the literature, we find that with a few potential exceptions, there is little support for allowing the "inpatient only" procedures to be routinely performed on WC patients in an outpatient setting.

- *Most ASCs that are eligible for an OMFS facility fee, or alternatively, a particular class of ASCs, are generally equipped to provide the services to the WC population.*

Finding: As discussed in Chapter Two, ASCs that are currently eligible for an OMFS facility fee are likely to be equipped to provide services that do not require a one-night stay. This finding applies to both state-licensed facilities and physician-owned ASCs that are either Medicare-approved or accredited for the level of surgical services they are providing. However, Medicare has several requirements for patient protection that are not found in the minimum accreditation requirements for non-Medicare-certified physician-owned facilities. These include accepting only patients who are likely to require less than a 24-hour stay, assuring appropriate post-discharge arrangements are made, and providing the patient with written disclosure of any financial interests between the ASC and the physician (Table 2.1).

It is less clear whether non-Medicare-certified ASCs are equipped to provide the necessary staffing and oversight services when a one-night stay is required. This has implications for which

procedures might be removed from the "inpatient only" list and which patients might be appropriate candidates for ambulatory surgery.

- *The procedure is similar to other surgical codes that are currently eligible for a facility fee.*
  Finding: As discussed in Chapter Four, there are several categories of codes that could be considered related to spinal surgery codes that are already covered as ambulatory surgery:
    - Add-on procedures for spinal surgeries
    - "Inpatient only" procedures that are separately reported in CPT but are not reported in ICD-9-CM as a separate procedure when incidental to another procedure
    - "Inpatient only" procedures that are classified into the same MS-DRG as procedures that are covered in an outpatient setting (e.g., spinal fusions).

  There are no related procedures for total hip and knee replacements that are already covered in the ambulatory setting.
- *The procedure is being performed by numerous providers (hospitals or ASCs) on the non-Medicare/Medicaid population ages 18–64 years.*
  Finding: The FAIR Health and OSHPD AS data indicate that relatively few "inpatient only" procedures are being performed in an ambulatory setting (Tables 4.4–4.6).
- *When the procedure is performed in the inpatient setting, at least 15 percent of WC patients are discharged after no more than a one-night stay.*
  Finding: More than 20 percent of WC patients receiving cervical spinal fusions with no complications or comorbidities are discharged after no more than a one-night stay. More than 90 percent of WC patients receiving lumbar fusions, total knee replacements, and total hip replacements require at least a two-night stay (Table 4.8).
- *The procedure can be appropriately and safely performed in an ASC.*
  Finding: As discussed in Chapter Five, only three articles that we reviewed involved surgeries performed in an ASC. There is not an evidence base to establish patient selection criteria for ASC procedures. While WC does not distinguish between hospital outpatient and ASC settings, Medicare does make this distinction and covers spinal fusions in a hospital outpatient setting but not in an ASC

The most promising candidates for removal from the WC "inpatient only" listing are certain cervical fusion "add-on" procedure codes. The highest-volume cervical fusion procedure, CPT 22551 (Cervical fusion, anterior approach with discectomy) is already covered in an outpatient setting. The limited evidence available in the literature suggests that two-level cervical fusions and the use of instrumentation for one- or two-level fusions can be performed safely on an outpatient basis. Further, the OSHPD inpatient data indicate that a substantial percentage of patients with cervical fusions without complications and comorbidities are discharged after no more than a one-night stay. However, we did not identify evidence-based selection criteria to suggest which patients are appropriate candidates for having cervical procedures with the add-on procedures in an outpatient setting. Second, with the exception of instrumentation, relatively few

of the "inpatient only" add-on procedures for cervical spinal fusions are being performed on an ambulatory basis in California ASCs.

Current OMFS policies require that the prior authorization process for performing an "inpatient only" procedure include an agreed-upon allowance for the procedure. This procedure allows individual consideration of the anticipated services, including any implanted device costs, other procedures that will be performed during the same encounter, and post-discharge services *before* the services are provided. As discussed in Chapter Six, we did not identify readily available data that could be used to establish an appropriate methodology for pricing "inpatient only" procedures furnished in an ASC setting. We found that a single multiplier to the DRG rate is not suitable for the full range of WC high-volume "inpatient only" procedures because of the differences in the length of stay and resources required for the average patient relative to those patients most likely to be candidates for ambulatory surgery (Table 6.2). Moreover, the most likely "inpatient procedures" that could be performed as ambulatory surgery—add-on procedures for cervical spinal fusions that are already covered as an ambulatory procedure—have differing impacts on the incremental costs of providing them. For example, one- and two-level spinal fusions are unlikely to have significantly different ASC facility costs, while the use of instrumentation could add significantly to the cost, depending on surgeon preferences.

With respect to other WC programs, we found a mix of policies (Table 3.1). Several states (e.g., Washington, Texas) have policies that are similar to those used in California. The federal WC program expressly excludes "inpatient only" services from being provided in an ambulatory setting, while other states (e.g., Maryland, Michigan) have a general policy that procedures with no Medicare fee schedule amount shall be priced By Report. Colorado's fee schedule covers the spinal fusion codes in an ambulatory setting but sets the allowance at the same rate as the ambulatory surgery facility fee for spinal procedures that are already covered in an outpatient setting.

Recommendations

Several policy implications emerged with respect to paying for "inpatient only" procedures in an ASC setting. Our data analyses and review of the literature do not provide strong support for removing any procedures from the "inpatient only" list with the possible exception of procedures related to anterior cervical spinal fusions. While the literature suggests that certain "inpatient only" procedures have been safely performed on some patients in an outpatient setting, it is limited with respect to the ASC setting (where WC coverage policies are already more expansive than Medicare's). The administrative data indicate relatively few procedures are currently being performed in this setting on either WC or privately insured patients. These decisions should continue to be made on a case-by-case basis with payer approval required for both the medical necessity of the procedure and the setting in which it occurs.

The differences between the Medicare health and safety standards and minimum accreditation requirements for non-Medicare-certified ASCs suggest that DWC should establish additional conditions before an "inpatient only" procedure is performed in an ASC setting:

- The provider has determined that the patient is likely to require less than a 24-hour stay and has assured that the patient's post-discharge needs will be appropriately met.
- The request for prior authorization for the procedure should document the provider's assessment that the procedure can be safely performed in the ASC setting with less than a 24-hour stay, include post-discharge plans, and disclose any relevant financial interests.
- The patient should also be provided upon referral (in advance of the date of the procedure) written financial disclosure of any physician financial interest as required by Medicare standards. At the same time, the patient should also be given written notification that the procedure is typically performed in an inpatient setting.

There are several fee schedule impediments to removing the add-on procedures for cervical fusions and other related procedures from the "inpatient only" list. As discussed in Chapter 6, some related procedures are likely to have a negligible impact on facility costs relative to the cervical spinal procedures that are already covered in an ambulatory setting, and a substantially higher payment for performing the additional procedures would create inappropriate incentives. Instrumentation is most likely to have a significant cost impact, but further research would be needed to set an appropriate allowance for instrumentation. If the fee schedule were based on a multiple of the DRG payment, policies would need to be established for allowances for post-discharge care, including any subsequent hospital admissions.

Arguably, the flexibility of the current approach to establishing a reasonable allowance for approved "inpatient only" procedures is preferable to developing an across-the-board pricing methodology. This is because the appropriate allowance might depend on individual circumstances. We considered whether it would be appropriate to remove selected procedures from the "inpatient only" list but not establish an OMFS allowance for the services. Under current OMFS policies, a service that does not have a fee schedule amount is priced based on the physician's report of the services that were performed (described as By Report or BR). The difference between retaining the related procedures on the "inpatient only" list and removing them without a fee schedule amount is subtle but important. The OMFS policies require agreement on the price for the procedure in advance for "inpatient only" procedures but not for services priced BR. Given the various considerations needed to arrive at a reasonable price for the procedure, a requirement that the price for the procedure be agreed upon in advance appears appropriate. However, the dispute resolution process that would apply when there is there is lack of agreement between the provider and payer on the price needs to be clarified. Unless there is an OMFS allowance or a contracted price, the dispute would not be subject to the independent bill review process. It is not clear whether the "agreed-upon allowance" would be deemed a

contracted price and what process applies when the provider and payer fail to agree on an allowance. The Texas WC program, which requires that there be a written agreement between the payer and health care provider that includes the payment amount and any terms of the agreement, is a potential model for clarifying policies.

Lastly, assuming the current policies are continued, we see no reason to apply different "inpatient only" policies to hospital outpatient settings than to ASCs. The circumstances are somewhat different for "inpatient only" procedures furnished to hospital outpatients than in ASC settings. Because of the ready availability of hospital emergency services and observation services for overnight stays, some services may be more appropriately performed in a hospital outpatient setting than an ASC setting. Medicare's "inpatient only" list is applicable for hospital outpatients; further restrictions apply to ASC services that have not been adopted for WC ASC patients. Further, because hospitals have higher infrastructure costs than ASCs, the costs of providing an "inpatient only" procedure may be higher for hospital outpatients than for ASC patients. Retaining the current policies allows payers and providers to determine the most appropriate setting for the patient and to agree upon a reasonable allowance for performing the service in a hospital outpatient or ASC setting. If OMFS pricing were established for one or more "inpatient only" procedures, different allowances based on current OMFS differentials for hospital outpatient versus ASC services might be appropriate for other than device costs, which should not vary by setting.

Our recommendations reflect the principle that the safety of the injured worker is of paramount concern and that any cost efficiencies are secondary. They are guided by the following considerations:

- Any expansion should be limited to procedures that are likely to require less than a 24-hour stay and should be based on evidence that Medicare's findings with regard to the procedures are not relevant for the WC patient.
- Only ASCs that have established prospective patient selection criteria needed to assure patient safety and have appropriate informed consent procedures should be allowed to perform "inpatient only" procedures.
- Payment incentives must be carefully structured to discourage an ASC from taking patients who might be at unnecessary risk if the procedure were performed on in an ambulatory setting. Payment incentives must also be structured to provide medically unnecessary procedures. An across-the-board pricing policy is unlikely to achieve this balance.

Our recommendations are to 1) retain the current OMFS policies with regard to "inpatient only" procedures performed in an ambulatory setting, and 2) strengthen patient protections when services are performed in an ASC. These recommendations are made in the context of the Medicare annual review of the "inpatient only" listing and the relatively few WC "inpatient only" procedures that are being performed in an ambulatory setting. In its review process,

Medicare considers the safety not only for its aged population but also whether the procedure might be safely performed in an outpatient setting on its younger disabled population. In restricting federal workers' compensation coverage of ASC procedures to the Medicare listing, the Office of Workers' Compensation program (OWCP) acknowledges that some procedures might be appropriately performed in an ASC on a younger, healthier patient but notes that "for the larger number of OWCP program beneficiaries whose health is more likely to be compromised by disability and age, an ASC may be a questionable setting for those same procedures" (Department of Labor, 2013). The current OMFS policy is already less restrictive than the OWCP policy because it uses the hospital outpatient listing of covered procedures and allows a case-by-case consideration of whether the services might be appropriately performed in an ASC setting.

Appendix

This appendix contains two tables. Table A.1 is taken from several sources. The code listing, description and status codes, and APC assignment are from Addendum B of the Medicare update to the hospital outpatient prospective payment system for 2014 (CMS, 2013). The listing includes most spinal procedures that are relevant for a WC patient population. The status code indicators are as follows:

C = inpatient only code

T = major procedure that is subject to the multiple procedure discounting rules

E= a procedure that is not covered by the Medicare program.

The APC to which covered outpatient procedures are assigned is also shown. The relevant APCs and the estimated 2014 Medicare rates used for OMFS rate-setting purposes before geographic adjustment and application of the multipliers are as follows:[15]

APC	Description	Unadjusted Medicare Rate Used by OMFS
0045	Bone/Joint Manipulation Under Anesthesia	$1,152.20
0050	Level II Musculoskeletal Procedures Except Hand and Foot	$2,570.87
0051	Level III Musculoskeletal Procedures Except Hand and Foot	$3,774.25
0129	Level I Closed Treatment Fracture	$107.96
0138	Level II Closed Treatment Fracture	$173.12
0139	Level III Closed Treatment Fracture	$448.05
0208	Laminotomies and Laminectomies	$3,995.49

The WCIS volume in Table A.1 is taken from our analysis of the 2011 WCIS data for physician bills for "inpatient only" surgeries. The indicators for the add-on procedures are based on RAND analysis of the 2013 CPT code book.

Table A.2 provides procedure counts on codes specifically identified by the California Ambulatory Surgery Association as being of interest. The counts are from the FAIR Health data for privately insured patients ages 18–64. The setting is defined by the place of service reported on the physician bill.

[15] See the footnote to Table 6.3 for an explanation of the calculation of the unadjusted Medicare rate for purposes of the OMFS. The rate is slightly different from the Medicare rate because of different update factors.

Table A.1. Spinal Procedures by Different Characteristics: Status Code, APC Assignment, WCIS Total Volume, Applicable High-Volume Add-on Codes

CPT Code	Description	Status Code	APC	WCIS Total Volume for Inpatient Only Codes	High Volume Add-On Procedures for Primary Code			
					20936 20937 20938	22585	22632	22840,22842 22845,22846
22010	I&d p-spine c/t/cerv-thor	C		3				
22015	I&d abscess p-spine l/s/ls	C		9				
22100	Remove part of neck vertebra	T	0208					
22101	Remove part thorax vertebra	T	0208					
22102	Remove part lumbar vertebra	T	0208					
22103	Remove extra spine segment	T	0208					
22110	Remove part of neck vertebra	C		0				x
22112	Remove part thorax vertebra	C		0				
22114	Remove part lumbar vertebra	C		1				x
22116	Remove extra spine segment	C		4				
22206	Incis spine 3 column thorac	C		0				x
22207	Incis spine 3 column lumbar	C		7				x
22208	Incis spine 3 column adl seg	C		0				
22210	Incis 1 vertebral seg cerv	C		5				
22212	Incis 1 vertebral seg thorac	C		7				x
22214	Incis 1 vertebral seg lumbar	C		108				x
22216	Incis addl spine segment	C		87				
22220	Incis w/discectomy cervical	C		11				x
22222	Incis w/discectomy thoracic	T	0208					x
22224	Incis w/discectomy lumbar	C		35				x
22226	Revise extra spine segment	C		31				
22305	Closed tx spine process fx	T	0129					x
22310	Closed tx vert fx w/o manj	T	0138					x
22315	Closed tx vert fx w/manj	T	0139					x
22318	Treat odontoid fx w/o graft	C		0				x
22319	Treat odontoid fx w/graft	C		0	x			x
22325	Treat spine fracture	C		49				x
22326	Treat neck spine fracture	C		11				x
22327	Treat thorax spine fracture	C		10				x
22328	Treat each add spine fx	C		21				
22505	Manipulation of spine	T	0045					
22520	Percut vertebroplasty thor	T	0050					
22521	Percut vertebroplasty lumb	T	0050					
22522	Percut vertebroplasty addl	T	0050					
22523	Percut kyphoplasty thor	T	0052					
22524	Percut kyphoplasty lumbar	T	0052					
22525	Percut kyphoplasty add-on	T	0052					
22526	Idet single level	E		0				
22527	Idet 1 or more levels	E		0				
22532	Lat thorax spine fusion	C		1	x			x
22533	Lat lumbar spine fusion	C		4	x			x

CPT Code	Description	Status Code	APC	WCIS Total Volume for Inpatient Only Codes	High Volume Add-On Procedures for Primary Code			
					20936 20937 20938	22585	22632	22840,22842 22845,22846
22534	Lat thor/lumb addl seg	C		2				
22548	Neck spine fusion	C		3	x			x
22551	Neck spine fuse&remov bel c2	T	0208					
22552	Addl neck spine fusion	C		39				
22554	Neck spine fusion	T	0208		x	x		x
22556	Thorax spine fusion	C		10	x	x		x
22558	Lumbar spine fusion	C		771	x	x		x
22585	Additional spinal fusion	C		764				
22586	Prescrl fuse w/ instr l5/s1	C		0				
22590	Spine & skull spinal fusion	C		4	x			x
22595	Neck spinal fusion	C		2	x			x
22600	Neck spine fusion	C		107	x			x
22610	Thorax spine fusion	C		36	x			x
22612	Lumbar spine fusion	T	0208		x			x
22614	Spine fusion extra segment	T	0208					
22630	Lumbar spine fusion	C		608	x		x	x
22632	Spine fusion extra segment	C		231				
22633	Lumbar spine fusion combined	C		0				
22634	Spine fusion extra segment	C		0				
22800	Post fusion </6 vert seg	C		31	x			x
22802	Post fusion 7-12 vert seg	C		10	x			x
22804	Post fusion 13/> vert seg	C		2	x			x
22808	Ant fusion 2-3 vert seg	C		15	x			x
22810	Ant fusion 4-7 vert seg	C		1	x			x
22812	Ant fusion 8/> vert seg	C		0	x			x
22818	Kyphectomy 1-2 segments	C		1				
22819	Kyphectomy 3 or more	C		0				
22830	Exploration of spinal fusion	C		350				
22840	Insert spine fixation device	C		503				
22841	Insert spine fixation device	C		8				
22842	Insert spine fixation device	C		921				
22843	Insert spine fixation device	C		34				
22844	Insert spine fixation device	C		2				
22845	Insert spine fixation device	C		1,178				
22846	Insert spine fixation device	C		148				
22847	Insert spine fixation device	C		1				
22848	Insert pelv fixation device	C		28				
22849	Reinsert spinal fixation	C		57				
22850	Remove spine fixation device	C		64				
22851	Apply spine prosth device	T	0050					
22852	Remove spine fixation device	C		247				
22855	Remove spine fixation device	C		113				
22856	Cerv artific diskectomy	T	0208					
22857	Lumbar artif diskectomy	C		39				

CPT Code	Description	Status Code	APC	WCIS Total Volume for Inpatient Only Codes	High Volume Add-On Procedures for Primary Code			
					20936 20937 20938	22585	22632	22840,22842 22845,22846
22861	Revise cerv artific disc	C		1				
22862	Revise lumbar artif disc	C		0				
22864	Remove cerv artif disc	C		0				
22865	Remove lumb artif disc	C		1				
63001	Remove spine lamina 1/2 crvl	T	0208					x
63003	Remove spine lamina 1/2 thrc	T	0208					x
63005	Remove spine lamina 1/2 lmbr	T	0208					x
63011	Remove spine lamina 1/2 scrl	T	0208					x
63012	Remove lamina/facets lumbar	T	0208					x
63015	Remove spine lamina >2 crvcl	T	0208					x
63016	Remove spine lamina >2 thrc	T	0208					x
63017	Remove spine lamina >2 lmbr	T	0208					x
63020	Neck spine disk surgery	T	0208					x
63030	Low back disk surgery	T	0208					x
63035	Spinal disk surgery add-on	T	0208					
63040	Laminotomy single cervical	T	0208					x
63042	Laminotomy single lumbar	T	0208					x
63043	Laminotomy addl cervical	C		11				
63044	Laminotomy addl lumbar	C		46				
63045	Remove spine lamina 1 crvl	T	0208					x
63046	Remove spine lamina 1 thrc	T	0208					x
63047	Remove spine lamina 1 lmbr	T	0208					x
63048	Remove spinal lamina add-on	T	0208					
63050	Cervical laminoplsty 2/> seg	C		1				x
63051	C-laminoplasty w/graft/plate	C		4				x
63055	Decompress spinal cord thrc	T	0208					x
63056	Decompress spinal cord lmbr	T	0208					x
63057	Decompress spine cord add-on	T	0208					
63064	Decompress spinal cord thrc	T	0208					x
63066	Decompress spine cord add-on	T	0208					
63075	Neck spine disk surgery	T	0208					x
63076	Neck spine disk surgery	T	0208					
63077	Spine disk surgery thorax	C		62				x
63078	Spine disk surgery thorax	C		19				
63081	Remove vert body dcmprn crvl	C		363				x
63082	Remove vertebral body add-on	C		298				
63085	Remove vert body dcmprn thrc	C		1				x
63086	Remove vertebral body add-on	C		1				
63087	Remov vertbr dcmprn thrclmbr	C		65				x
63088	Remove vertebral body add-on	C		26				
63090	Remove vert body dcmprn lmbr	C		307				x
63091	Remove vertebral body add-on	C		221				
63101	Remove vert body dcmprn thrc	C		1				

CPT Code	Description	Status Code	APC	WCIS Total Volume for Inpatient Only Codes	High Volume Add-On Procedures for Primary Code			
					20936 20937 20938	22585	22632	22840,22842 22845,22846
63102	Remove vert body dcmprn lmbr	C		3				
63103	Remove vertebral body add-on	C		0				
63170	Incise spinal cord tract(s)	C		0				x
63172	Drainage of spinal cyst	C		1				x
63173	Drainage of spinal cyst	C		0				x
63180	Revise spinal cord ligaments	C		0				x
63182	Revise spinal cord ligaments	C		0				x
63185	Incise spine nrv half segmnt	C		3				x
63190	Incise spine nrv >2 segmnts	C		2				x
63191	Incise spine accessory nerve	C		0				x
63194	Incise spine & cord cervical	C		0				x
63195	Incise spine & cord thoracic	C		0				x
63196	Incise spine&cord 2 trx crvl	C		0				x
63197	Incise spine&cord 2 trx thrc	C		0				x
63198	Incise spin&cord 2 stgs crvl	C		0				x
63199	Incise spin&cord 2 stgs thrc	C		0				x
63200	Release spinal cord lumbar	C		0				x
63250	Revise spinal cord vsls crvl	C		0				x
63251	Revise spinal cord vsls thrc	C		0				x
63252	Revise spine cord vsl thrlmb	C		0				x
63265	Excise intraspinl lesion crv	C		2				x
63266	Excise intrspinl lesion thrc	C		0				x
63267	Excise intrspinl lesion lmbr	C		2				x
63268	Excise intrspinl lesion scrl	C		0				x
63270	Excise intrspinl lesion crvl	C		0				x
63271	Excise intrspinl lesion thrc	C		1				x
63272	Excise intrspinl lesion lmbr	C		2				x
63273	Excise intrspinl lesion scrl	C		0				x
63275	Bx/exc xdrl spine lesn crvl	C		0				x
63276	Bx/exc xdrl spine lesn thrc	C		0				x
63277	Bx/exc xdrl spine lesn lmbr	C		4				x
63278	Bx/exc xdrl spine lesn scrl	C		0				x
63280	Bx/exc idrl spine lesn crvl	C		0				x
63281	Bx/exc idrl spine lesn thrc	C		1				x
63282	Bx/exc idrl spine lesn lmbr	C		2				x
63283	Bx/exc idrl spine lesn scrl	C		1				x
63285	Bx/exc idrl imed lesn cervl	C		0				x
63286	Bx/exc idrl imed lesn thrc	C		0				x
63287	Bx/exc idrl imed lesn thrlmb	C		0				x
63290	Bx/exc xdrl/idrl lsn any lvl	C		1				x
63295	Repair laminectomy defect	C		0				
63300	Remove vert xdrl body crvcl	C		2				x
63301	Remove vert xdrl body thrc	C		0				x
63302	Remove vert xdrl body thrlmb	C		0				x

CPT Code	Description	Status Code	APC	WCIS Total Volume for Inpatient Only Codes	High Volume Add-On Procedures for Primary Code			
					20936 20937 20938	22585	22632	22840,22842 22845,22846
63303	Remov vert xdrl bdy lmbr/sac	C		0				x
63304	Remove vert idrl body crvcl	C		0				x
63305	Remove vert idrl body thrc	C		0				x
63306	Remov vert idrl bdy thrclmbr	C		0				x
63307	Remov vert idrl bdy lmbr/sac	C		0				x
63308	Remove vertebral body add-on	C		1				x

Table A.2. Frequency of "Inpatient Only" Procedures of Interest to the California Ambulatory Surgery Association in Ambulatory Settings for California Privately Insured Patients Age 18–64 in FAIR Health 2011 Data

CPT Code and Description	ASC	Hospital outpatient	Total for Ambulatory Facilities
22558 - Lumbar spine fusion	15	14	29
22585 - Additional spinal fusion	17	24	41
22600 - Neck spine fusion	5	-	5
22630 - Lumbar spine fusion	2	6	8
22632 - Spine fusion extra segment	1	-	1
22830 - Exploration of spinal fusion	11	8	19
22840 - Insert spine fixation device	11	7	18
22841 - Insert spine fixation device	2	3	5
22842 - Insert spine fixation device	9	2	11
22845 - Insert spine fixation device	76	54	130
22846 - Insert spine fixation device	6	6	12
22849 - Reinsert spinal fixation	-	3	3
22850 - Remove spine fixation device	4	8	12
23472 - Reconstruct shoulder joint	2	13	15
27125 - Partial hip replacement	-	-	-
27130 - Total hip arthroplasty	11	30	41
27132 - Total hip arthroplasty	-	-	-
27134 - Revise hip joint replacement	-	2	2
27137 - Revise hip joint replacement	-	1	1
27138 - Revise hip joint replacement	-	-	-
27447 - Total knee arthroplasty	25	44	69
27486 - Revise/replace knee joint	-	2	2
27487 - Revise/replace knee joint	6	5	11
63043 - Laminotomy addl cervical	-	-	-
63044 - Laminotomy addl lumbar	8	4	12
63050 - Cervical laminoplsty 2/> seg	-	2	2
63051 - C-laminoplasty w/graft/plate	-	-	-
63081 - Remove vert body dcmprn crvl	20	12	32
63082 - Remove vertebral body add-on	46	10	56
63090 - Remove vert body dcmprn lmbr	1	2	3
63091 - Remove vertebral body add-on	1	2	3
63265 - Excise intraspinl lesion crv	-	-	-
63267 - Excise intrspinl lesion lmbr	7	19	26

References

Aetna, *Clinical Policy Bulletin Number 0591: Intervertebral Disc Prostheses* (last review September 16, 2013; effective March 8, 2002. As of December 13, 2013: http://www.aetna.com/cpb/medical/data/500_599/0591.html

Anthem, *Lumbar Fusion and Lumbar Artificial Intervertebral Disc (LAID)* CG-SURG-33 effective May 13, 2013. As of December 13, 2013: http://www.anthem.com/medicalpolicies/guidelines/gl_pw_c160722.htm

American Association for Accreditation of Ambulatory Surgery Facilities, Inc., *Regular Standards and Checklist for Accreditation of Ambulatory Surgery Facilities*, Version 13, August 2011. As of March 11, 2014: http://www.aaaasf.org/standards.html.

Berger, Richard A., Sharat K. Kusuma, Sheila A. Sanders, Elizabeth S. Thill, and Scott M. Sporer. "The feasibility and perioperative complications of outpatient knee arthroplasty," *Clinical Orthopaedics and Related Research,* June 2009a, Vol. 467, No. 6, pp. 1443–1449.

Berger, Richard A., Sheila Sanders, Tad Gerlinger, Craig Della Valle, Joshua J. Jacobs, and Aaron G. Rosenberg, "Outpatient total knee arthroplasty with a minimally invasive technique," *Journal of Arthroplasty*, October 2005, Vol. 20, Supplement 3, pp. 33–38.

Berger, Richard A., Sheila A. Sanders, Elizabeth S. Thill, Scott M. Sporer, and Craig Della Valle, "Newer anesthesia and rehabilitation protocols enable outpatient hip replacement in selected patients," *Clinical Orthopaedics and Related Research,* June 2009b, Vol. 467, No. 6, pp.1424–1430.

California Department of Industrial Relations, Division of Workers' Compensation, "Official Medical Fee Schedule-Inpatient Hospital Fee Schedule," effective March 15, 2013a. As of October 24, 2013: http://www.dir.ca.gov/dwc/OMFS9904.htm#4

California Department of Industrial Relations, Division of Workers' Compensation, "Official Medical Fee Schedule–Hospital Outpatient Departments and Ambulatory Surgical Centers," effective April 1, 2013a, b. As of October 24, 2013: http://www.dir.ca.gov/dwc/OMFS9904.htm#6

California Office of Statewide Health Planning and Development, Facilities Development Division. Code Application Notice 1-7-2100, Clinics. Revised June 29, 2011. As of March 11, 2014: http://www.oshpd.ca.gov/fdd/Regulations/CANs/2010/1-7-2100.pdf

California Office of Statewide Health Planning and Development, Health Care Information Division. 2011 ambulatory surgery center public use file. As of March 11, 2014: http://www.oshpd.ca.gov/HID/Data_Request_Center/Manuals_Guides.html

California Office of Statewide Health Planning and Development, Health Care Information Division. 2011 inpatient hospital patient discharge data public use file. As of March 11, 2014: http://www.oshpd.ca.gov/HID/Data_Request_Center/Manuals_Guides.html

California Senate Bill 863, approved September 19, 2012. As of March 11, 2014: http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201120120SB863

Centers for Medicare & Medicaid Services, "Hospital Outpatient Prospective Payment – Final Rule with Comment" (2014), 2013c. As of January 7, 2014: http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Hospital-Outpatient-Regulations-and-Notices-Items/CMS-1601-FC-.html?DLPage=1&DLSort=2&DLSortDir=descending

Centers for Medicare & Medicaid Services, State Operations Manual Appendix L – Guidance for Surveyors: Ambulatory Surgical Centers, Revision 76, December 22, 2011.

Centers for Medicare & Medicaid Services, "Medicare Program: Changes to the Ambulatory Surgical Centers Patient Rights Conditions for Coverage–Final Rule." Federal Register, Vol. 76, No. 205, 2011.

Dorr, Lawrence D., Deborah J. Thomas, Jinjun Zhu, Manish Dastane, Lisa Chao, and William T. Long, "Outpatient total hip arthroplasty," *Journal of Arthroplasty,* June 2010, Vol. 25, No. 4, pp. 501–506.

Epstein, Nancy E., Garry S. Schwall, Timothy Reilley, Thomas Insinna, Andrea Bahnken, and Donald C. Hood, "Surgeon choices, and the choice of surgeons, affect total hospital charges for single-level anterior cervical surgery," *Spine*, May 2011, Vol. 36, No. 11, pp. 905–909.

Erickson, Mark, Brandon S. Fites, Michael T. Thieken, and Alan W. McGee, "Outpatient anterior cervical discectomy and fusion," *American Journal of Orthopedics*, August 2007, Vol. 36, No. 8, pp. 429–432.

Garringer, Sean M., and Richard C. Sasso, "Safety of anterior cervical discectomy and fusion performed as outpatient surgery," *Journal of Spinal Disorders and Techniques,* October 2010, Vol. 23, No. 7, pp. 439–443.

Ilfeld, Brian M., Peter F. Gearen, F. Kayser Enneking, L. F. Berry, E. H. Spadoni, S. Z. George, and Krista Vandenborne, "Total hip arthroplasty as a one-night-stay procedure using an ambulatory continuous psoas compartment nerve block: a prospective feasibility study," *Regional Anesthesia and Pain Medicine,* March-April 2006, Vol. 31, No. 2, pp. 113–118.

Kolisek, Frank R., Mike S. McGrath, Nenette M. Jessup, Eric A. Monesmith, and Michael A. Mont, "Comparison of outpatient versus inpatient total knee arthroplasty," *Clinical Orthopaedics and Related Research,* June 2009, Vol. 467, No. 6, pp. 1438–1442.

Liu, Jeffrey T., Rudy P. Briner, and Jonathan A. Friedman, "Comparison of inpatient vs. outpatient anterior cervical discectomy and fusion: a retrospective case series," *BMC Surgery,* 2009, Vol. 9, No. 3.

Mears, Dana Christopher, Simon C. Mears, Jacques E. Chelly, Feng Dai, and Katie L. Vulakovich, "THA with a minimally invasive technique, multi-modal anesthesia, and home rehabilitation: factors associated with early discharge?" *Clinical Orthopaedics and Related Research,* June 2009, Vol. 467, No. 6, pp. 1412–1417.

Medical Board of California, "Frequently Asked Questions – Outpatient Surgery Settings." As of March 11, 2014: http://www.mbc.ca.gov/Consumers/Outpatient_Surgery/Outpatient_Surgery_FAQ.aspx

Medical Board of California, "Outpatient Surgery Setting Database." As of March 11, 2014: http://www2.mbc.ca.gov/OSSDPublic/

Orthopedic Network News, "2010 Spinal Surgery Update," Vol. 21, No. 4, October 2010.

Parvizi, Javad, Alan Mui, James J. Purtill, Peter F. Sharkey, William J. Hozack, and Richard H. Rothman, "Total joint arthroplasty: When do fatal or near-fatal complications occur?" *Journal of Bone and Joint Surgery, American Volume,* January 2007, Vol. 89, No. 1, pp. 27–32.

Pettine, Kenneth, and Carter R. Mohnssen, "Spine Surgery at an Ambulatory Surgery Center." As of April 10, 2014: http://societyforambulatoryspinesurgery.org/spine-surgery-at-an-ambulatory-surgery-center/

Sheperd, Courtney S., and William F. Young, "Instrumented Outpatient Anterior Cervical Discectomy and Fusion: Is it Safe?" *International Surgery*, January-March 2012, Vol. 97, No. 1, pp. 86–89.

Stieber, Jonathan R., Kevin Brown, Gordon D. Donald, and Jason D. Cohen, "Anterior cervical decompression and fusion with plate fixation as an outpatient procedure," *The Spine Journal,* September-October 2005, Vol. 5, No. 5, pp. 503–507.

Trahan, Jayme, Marina V. Abramova, Erich O. Richter, and John C. Steck, "Feasibility of anterior cervical discectomy and fusion as an outpatient procedure," *World Neurosurgery*, January 2011, Vol. 75, No. 1, pp. 145–148.

Villavicencio, Alan T., Evan Pushchak, Sigita Burneikiene, and Jeffrey J. Thramann, "The safety of instrumented outpatient anterior cervical discectomy and fusion," *The Spine Journal,* March-April 2007, Vol. 7, No. 2, pp. 148–153.

Vorhies, John S., Yun Wang, James H. Herndon, William J. Maloney, and James I. Huddleston, "Decreased length of stay after TKA is not associated with increased readmission rates in a national Medicare sample," *Clinical Orthopaedics and Related Research,* January 2012, Vol. 470, No. 1, pp. 166–171.

United HealthCare, Total Artificial Disc Replacement for the Spine, Medical Policy Number 2012T0457M effective October 1, 2013. As of December 13, 2013: https://www.unitedhealthcareonline.com/ccmcontent/ProviderII/UHC/en-US/Assets/ProviderStaticFiles/ProviderStaticFilesPdf/Tools%20and%20Resources/Policies%20and%20Protocols/Medical%20Policies/Medical%20Policies/Artificial_Total_Disc_Replacement_for_the_Spine.pdf

United States Department of Labor, Office of Workers' Compensation Programs. "Ambulatory Surgery Center (ASC) Payment Policies." As of October 1, 2013: http://www.dol.gov/owcp/regs/feeschedule/fee/ASC_payment_policy_6-27-05.htm