

WORKING P A P E R

Medicare Payment Differentials across Ambulatory Settings

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PREFACE

Separate payment systems are used in each ambulatory setting where care is provided to Medicare beneficiaries: hospital outpatient departments, ambulatory surgical centers and physician offices. For most services, Medicare pays different amounts for the facility-related component of providing comparable services in the different settings. The payment differentials have raised questions about what types of potentially perverse financial incentives exist that could influence a provider's choice of ambulatory setting and whether Medicare is paying a premium for services that could appropriately be provided in a less costly setting (MedPAC, 2004).

The Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services asked RAND to analyze issues related to modifying Medicare payment policy for health care services delivered in various ambulatory settings so that payment rates reflect the costs of delivering the services in each setting. This report describes our findings with respect to the payment and cost differentials for a set of high volume procedures provided in multiple ambulatory settings and discusses potential policy options. The study should be of interest to health policymakers.

This study was funded under HHS contract number 10030019. The research was conducted by RAND Health, a division of the RAND Corporation. A profile of RAND Health, abstracts of its publications, and ordering information can be found at www.rand.org/health. Comments on this report should be directed to Barbara Wynn, the principal investigator (wynn@rand.org).

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SUMMARY

Separate payment systems are used in each ambulatory setting where care is provided to Medicare beneficiaries: hospital outpatient departments (HOPDs), ambulatory surgical centers (ASCs) and physician offices (POs). For most services, Medicare pays different amounts for the facility-related component of providing comparable services in different settings. The payment differentials have raised questions about what types of potentially perverse financial incentives exist that could influence a provider's choice of ambulatory setting and whether Medicare is paying a premium for services that could appropriately be provided in a less costly setting (MedPAC, 2004).

PURPOSE

The Office of the Assistant Secretary for Planning and Evaluation asked RAND to analyze issues related to modifying Medicare payment policy for health care services delivered in various ambulatory settings so that payment rates reflect the costs of delivering the services in each setting. The study had three main objectives: (1) document the payment differentials for equivalent facility services provided to Medicare beneficiaries in different ambulatory settings; (2) inform the policy debate on whether the differentials reflect cost differences that should be accounted for in the payment systems; (3) develop potential policy options to reduce or eliminate inappropriate differentials.

STUDY DESIGN

The study was an exploratory analysis of the issues using a set of high-volume services that are performed in multiple ambulatory settings. We used the selected services to document at the procedure-code level the differences in the 2008 Medicare fee schedule *rates* across HOPDs, ASCs, and POs. These rate comparisons are indicative of the differences in Medicare payments across settings, but do not necessarily provide an accurate measure the *payment* differentials for some procedures because the definition of the items and services that are included in the unit of payment are not necessarily consistent across settings. We supplemented our analysis of Medicare payment differentials with an analysis of private insurance payment differentials for the study procedures. To explore differences in the costs of providing

services across settings, we drew on the available data and methods used in the hospital outpatient prospective payment system (OPPS) and physician fee schedule rate-setting processes to examine procedure-level cost differences in both total estimated cost and the percentage attributable to indirect costs. For ASCs, data limitations required that we take a different approach. We used administrative data and financial reports from ASCs collected by the California Office of Statewide Health Planning and Development to estimate an overall cost level that could be compared to HOPD cost level implicit in the OPPS conversion factor.

After documenting the payment and cost differentials across settings for the study procedures, our next task was to explore the factors beyond the rate-setting methodologies that might account for the differences. Based on a review of earlier studies, we identified four factors in addition to the underlying infrastructure differences that might explain differences in the cost of providing services: patient characteristics, accreditation and regulation, service content, and coding. We used an approach that combined analysis of data where possible and extensively supplemented these data with opinions of professionals providing the services selected for further study. We used a semi-structured interview approach to obtain this information.

Our selection of the study procedures and methodological approach was guided by a technical expert panel. We used the input of panel members and the findings from our interviews and cost analyses to frame the options for potential policy changes and to identify areas where additional research is needed.

SUMMARY OF FINDINGS

With the implementation of payment policy changes in 2008 that set ASC payment rates for most procedures at 67 percent of the amounts paid to ASCs, payment differentials have been largely standardized between HOPDs and ASCs. Some differentials remain because ASC services that are commonly furnished in POs are paid at the lower PO rate. The payment differential between HOPDs and ASCs will change over time due to different conversion factor update methods and separate budget-neutrality adjustments for recalibration of the relative weights. Payment rates for similar services vary widely between HOPD/ASCs and POs, with the size of the differential varying by service. Measuring these

differentials, however, is problematic because of differences in the related services that are packaged into the payment for a given procedure.

Private payer payment differentials are generally less than the Medicare payment differentials between HOPD and PO services. There are also substantial differences in the distribution of some of the study procedures across settings, with a higher percentage of non-Medicare patients receiving services in the PO setting and a lower percentage receiving services in the ASC setting.

Measurement of costs is extremely hampered by available data sources. Using the current fee schedule cost finding methods to compare HOPD and PO costs at the procedure-level, cost differentials between settings are also large, although smaller than the payment differentials. Payment differentials are larger than cost differentials chiefly because of budget neutrality provisions. Using California ASC data, the overall payment differential between HOPD and ASC costs appears roughly comparable to the cost differentials.

Our interviews and literature review found several differences between settings that may justify some of the observed cost and payment differentials. Patient comorbidity is seldom the primary reason for referral to HOPDs; patients receiving the study procedures are typically at low risk for adverse outcomes in all settings. However, patients requiring more resource-intensive procedures (e.g., additional equipment or medications) may be referred more frequently to the HOPD because the payment rate is perceived to be insufficient to cover the costs of providing care in the ASC/PO setting.

The physicians that we interviewed expressed a strong preference of the efficiency of ASCs relative to HOPDs, due to newer physical plants, shorter patient turnover time, dedicated resources in close proximity, as well as differences in "culture" that can promote slowness and inefficiency in the HOPD. The regulatory burden is much lower in POs than ASCs or especially HOPDs. However, HOPDs may benefit from being able to spread costs across more service lines. HOPDs also provide more charity care than ASCs and POs.

DISCUSSION

Our findings suggest that payment differentials between settings are large and variable among procedures to an extent that do not appear justified by factors we examined. What policies could be used to establish payment

differences consistent with "value-based" purchasing concepts? There is no obvious answer to this question. Indeed, the question raises several major policy issues:

- Medicare is paying more for services provided in HOPDs that could be appropriately provided in less resource-intensive settings. As a prudent buyer, when is it appropriate for Medicare pay more than the amount applicable to the "least costly" setting for comparable services?
- Policies that "level the playing field" across ambulatory settings could either decrease payments to HOPDs and/or increase payments to ASCs and POs. Under either approach, services are likely to shift to non-hospital settings and hospitals will face lower revenues for HOPD services that can be appropriately provided in other settings. What is likely to occur if hospitals lose their ability to cross-subsidize services that can only be provided in the hospital setting?
- While the differentials for particular services vary widely, they are an integral part of different payment systems for HOPD/ASC services on one hand and PO services on the other. Is it appropriate to deviate from site-specific fee schedules for particular services?

ADDRESSING ASC/HOPD PAYMENT DIFFERENTIALS

Payment differentials between ASCs and HOPDs have largely been standardized in 2008 but will begin to diverge because of differences in the update policies. There are several "tweaks" to the existing policy that could help to make payments more consistent with cost and maintain the relationship in the future.

- **Determine ASC conversion factor based on cost.** The ASC conversion factor was set at 67% of the OPPS conversion factor in order to be budget neutral with estimated ASC payments under the prior system. If ASC payment levels differ widely from actual ASC costs, it could lead to distortions in where services are provided. State databases containing both utilization and financial data could be used to measure differences in overall cost levels between the two settings.
- **Same update factor for ASC/HOPD.** Since ASCs and HOPDs will use different methods for updating the conversion factor, the payment differential (currently set at 67% on a budget-neutrality basis) will change over time in unpredictable ways. A legislative change to allow the same update factor would eliminate this source of variability in payment differentials between the two settings.
- **Maintain same OPPS/ASC relative weights over time.** The relative weights for OPPS procedures will be updated annually on a budget-neutral basis separately for HOPDs and ASCs. Consolidating the budget neutrality calculations or making the ASC budget neutrality adjustment to the conversion factor rather than the relative weights will preserve a consistent relationship between HOPD and ASC relative weights, but may also require legislative change.

ADDRESSING PO/HOPD PAYMENT DIFFERENTIALS

Payment differentials between POs and HOPDs are products of two different rate-setting approaches and are larger than between ASCs and HOPDs, so that addressing them would require more substantial policy changes. There are

several potential ways that PO/HOPD payments could be made more consistent, including:

- **Same bundling policies for PO as other settings.** A first step toward more consistent payments would be to apply the OPPS bundling rules to the PO setting to the extent practical. This may not be practical for two separate procedures involving two different physicians during the same encounter but should be feasible for items and supplies that are billed by the physician providing the service in a PO, such as contrast media and drugs that are bundled into the OPPS payment.
- **Consistent policies for multiple procedure discounting.** Discounting for imaging services applies only to services provided in the PO. The rationale for discounting is equally applicable to imaging services provided in the HOPD setting.
- **Reduce the differential for commonly performed PO services.** The payment differential between HOPDs and POs could be standardized for appropriate procedures, similar to how HOPD/ASC differentials were standardized. This could be done by blending the rates for HOPDs and POs or by capping the HOPD payment rates at a percentage of PO PE payment rates for services that could appropriately be performed in either setting and are not likely to vary in clinical content across settings. Either method could recognize the higher HOPD cost structure.

AREAS FOR ADDITIONAL RESEARCH

This exploratory study was performed using available data and a small set of study procedures chosen in part to maximize comparability. The interpretation of the results on payment and cost differentials is limited by differences in the comparability of services and methods between settings and by lack of a measure of efficient costs. The generalizability of the results is limited by the sample of study procedures. Further research could address these issues.

- **Comparability of services across settings.** Analysis of administrative data for services provided in physician offices and other non-facility settings is needed to inform the extent to which services that are bundled in the HOPD/ASC settings are separately paid in POs. This information is needed to fully understand the payment differentials between the settings. Analysis of 2008 or later utilization data would provide information on differences in the distribution of procedures within APCs between ASCs and HOPDs and whether there are differences in procedure mix between the two settings after the ASC policy changes are implemented.
- **Comparability of costs across settings.** Comparability of costs across settings could be addressed by conducting resource-based costing studies on selected procedures across all three settings. The findings from the non-Medicare payment analyses could be used to target candidate procedures.
- **Efficiency of care across settings.** While there is general agreement that Medicare should cover the costs of efficiently delivered care, there is no consensus on how to measure efficiency and the extent to which efficiency measures should consider not only cost but quality outcomes (McGlynn, 2008). The issue of whether ambulatory care is more efficiently delivered in one setting than another could be further addressed by expanding the unit of analysis to the episode of care that would include related services and follow-up care.

- **Generalizability.** Because one criterion in selecting the study procedures was that the procedures were unlikely to vary by patient characteristics and clinical content, our findings are not generalizable to the range of services provided in multiple ambulatory settings. Generalizability could be addressed by extending the analyses to more complex and invasive procedures.

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ACRONYMS

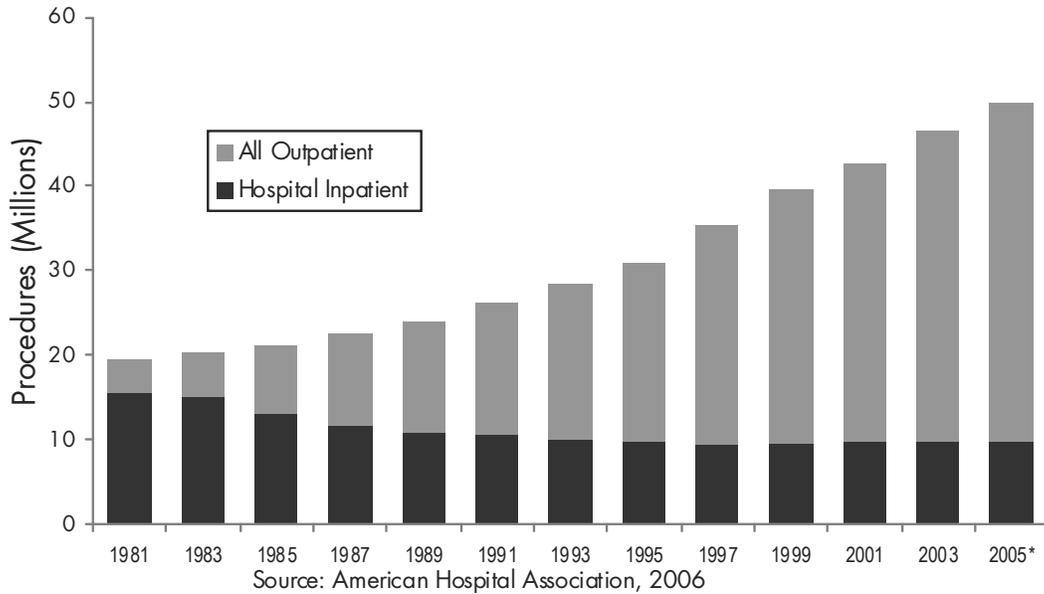
| | |
|--------|--|
| APC | Ambulatory payment classification |
| AAAHHC | Accreditation Association for Ambulatory Health Care |
| AAAASF | American Association for Accreditation of Ambulatory Surgery Facilities |
| ASC | Ambulatory surgical center |
| CCR | Cost-to-charge ratio |
| CON | Certificate-of-need |
| CPEP | Clinical Practice Expert Panel |
| CPT | Common Procedure Terminology |
| CMS | Centers for Medicare and Medicaid Services |
| HCC | Hierarchical Condition Category |
| HOPD | Hospital outpatient department |
| IDTF | Independent diagnostic testing facility |
| IOL | Intraocular lens |
| MRA | Magnetic resonance angiography |
| MRI | Magnetic resonance imaging |
| OPPS | Outpatient prospective payment system |
| PE | Practice expense |
| PEAC | Practice Expense Advisory Committee |
| PO | Physician office |
| RVU | Relative value unit |
| RW | Relative weight |
| TJC | The Joint Commission |

1. INTRODUCTION

Many health care services are provided in multiple ambulatory settings. For example, a colonoscopy can be performed in a hospital outpatient department (HOPD), ambulatory surgical center (ASC), or physician office (PO). Due in part to improvements in technology and health care delivery, many services that previously required an overnight hospital inpatient stay have migrated to ambulatory care settings. As a result, the volume of ambulatory care procedures has increased while inpatient procedure volume has progressively declined (Figure 1.1). Prospective payment for hospital inpatient care, implemented by Medicare in 1983 and subsequently adopted by other payers, also provided an incentive to provide services outside the traditional inpatient setting.

Separate Medicare payment systems are used in each ambulatory setting. For most services, Medicare pays different amounts for the facility-related component of providing comparable services in different settings (other payers using similar reimbursement schemes would do the same). The payment differentials have raised questions about what types of potentially perverse financial incentives exist that could influence a provider's choice of ambulatory setting and whether Medicare is paying a premium for services that could appropriately be provided in a less costly setting (MedPAC, 2004).

Figure 1.1
Inpatient vs. Outpatient Surgery Volume, 1981-2005



PURPOSE AND OBJECTIVES

The purpose of this study is to analyze issues related to modifying Medicare payment policy for health care services delivered in various ambulatory settings so that payment rates reflect the costs of delivering the services in each setting. The study has three main objectives: (1) document the payment differentials for equivalent services provided to Medicare beneficiaries in different ambulatory settings; (2) inform the policy debate on whether the differentials reflect cost differences that should be accounted for in the payment systems; (3) develop potential policy options to reduce or eliminate inappropriate differentials.

BACKGROUND

Overview of Current Medicare Payment Policy for Ambulatory Services

Medicare payment for physician *professional* services, based on the physician fee schedule, is the same in all ambulatory settings. However, payment differentials exist between settings for the facility-related components of care, such as nursing and other staff salaries, equipment, buildings, and supplies. In this study, when we discuss payment differentials, we are referring to differentials in the *facility* payments between settings. In HOPDs and ASCs, separate payments are made to cover the

facility portion of the service. Payment for the facility costs of services provided in POs (as well as independent diagnostic testing facilities or IDTFs) is made through the practice expense component of the physician fee schedule.

Physician Offices. Each service in the physician fee schedule is assigned relative value units (RVUs) for three components: physician work, practice expense (PE), and malpractice liability costs. PE RVUs are based on the costs of resource inputs used in providing a service including facility rent, non-physician personnel labor, equipment, and supplies. The estimates of resource inputs used for each procedure were originally provided by the Clinical Practice Expert Panel (CPEP). The CPEP estimates for most procedures have been refined based on supplemental data and recommendations of the Practice Expense Advisory Committee (PEAC). A revised methodology for calculating PE RVUs was adopted in 2007 and is being implemented over a four-year transition.

PE RVUs are calculated separately for the same service provided in facility (e.g., HOPD, ASC) and non-facility (e.g., PO, independent diagnostic testing facility such as a freestanding imaging center) settings since separate facility payments to an HOPD or ASC may cover many expenses that a physician incurs in a non-facility setting. PE payments are made for services provided in the facility setting because physicians use some of their own resources in delivering services in a facility, including pre- and post-procedural care and administrative expenses (e.g., scheduling and billing costs).

Hospital Outpatient Departments. The OPSS uses an ambulatory payment classification (APC) system to group clinically coherent sets of procedures that require similar resources. The service or item with highest median cost in an APC may not be more than twice as costly as the service or item with the lowest median cost in that APC, subject to certain exceptions (the "2 times rule"). Each APC has a relative weight based on the median cost for the procedures in the group relative to the median cost for a mid-level clinic visit. Costs are determined using data from hospital Medicare claims and cost reports. APC groupings and relative values are updated annually based on the most recent available data and recommendations of the APC Advisory Committee.

Payment is based on the APC relative weight multiplied by a dollar conversion factor and is adjusted for differences in wage levels across

geographic areas. Within each APC, payments for services and items that are considered an integral part of the primary procedure are packaged into the payment for the primary procedure. Separate payments are made for:

- Corneal tissue acquisition costs
- Brachytherapy sources furnished before July 1, 2008¹
- Blood and blood products
- Expensive drugs (those with a per day cost of \$60 or more in 2008)
- Certain new technology drugs, biologicals, and devices

Ambulatory Surgical Centers. Medicare coverage for services provided by an ASC is limited to items and services that are an integral part of a surgical procedure that does not pose significant safety risk when performed in an ASC and is not expected to require an overnight stay. Beginning in 2008, Medicare expanded the list of approved surgical procedures and revised the payment system to parallel the OPPS. ² ASCs are paid using the OPPS APCs. The 2008 APC relative weights are the same as those under OPPS. The 2008 conversion factor (calculated to result in aggregate payments under the new system equal to aggregate payments under the old rate methodology) equals 67% of the OPPS standard conversion factor. The hospital wage index is used as the geographic adjustment factor and is applied to 50 percent of the standard payment. Because the labor-related share for HOPDs is 60 percent under the OPPS, the geographic-adjusted conversion factor deviates from 67% of the OPPS rate at the MSA-level. In addition, the APC relative weights used for OPPS and ASC payment will diverge in the future because the annual budget neutrality calculation used in recalibrating the relative weights will be performed separately for HOPDs and ASCs. The ratio between the OPPS and ASC conversion factors will also change in the future because of different conversion factor update methodologies (consumer price index update for ASCs vs. hospital market basket update for OPPS).

Prior to 2008, the approved list of ASC procedures excluded procedures that are commonly performed in a PO. These procedures are now covered when performed in an ASC but the ASC payment rate is capped at the non-facility practice expense payment amount in the physician fee schedule. The purpose of

¹ The Medicare Medicaid, and SCHIP Extension Act requires Medicare to pay hospital outpatient departments for brachytherapy sources at charges adjusted to costs for sources furnished before July 1, 2008.

² There is a four-year transition from the old payment system to the new payment system for procedures that were on the approved list in 2007.

the cap is to reduce the incentive to convert POs to ASCs or to move office-based surgery into ASCs. Even with the cap, CMS estimates that 15 percent of surgical procedures will move from POs to ASCs (CMS, 2008).

If a non-covered service (such as a procedure on the HOPD "inpatient only" list) is provided in an ASC, the physician is paid for professional services based on the facility-setting PE. No additional payment is made to either the ASC or the physician for the facility-related costs of providing the service.³

Importance of Payment Differentials

The payment differentials between HOPDs, ASCs, and POs could simply be artifacts of the unique ways by which each payment system was developed and may not reflect actual differences in the cost of providing services (Wynn, 2004). Adding to the uncertainty is the fact that in some cases, the various care settings are virtually indistinguishable: a freestanding ASC may be similar to an outpatient surgical center that is part of a hospital, or it may closely resemble a PO. Some hospital systems have purchased POs and operate them as provider-based outpatient clinics.

The financial incentives created by payment differentials could potentially lead to two main types of unintended consequences that would be of concern. First, Medicare costs (as well as beneficiary cost sharing) might be increased by a lack of efficiency in payment for ambulatory care services. Second, the quality of care could potentially be decreased by inappropriate delivery of some services in ASCs and POs, where there is less capacity compared to hospitals to address serious complications that might arise. The extent to which either of these unintended consequences is occurring is not clearly understood. The recent rate of increase in the volume and costs of ambulatory care services provided to Medicare beneficiaries (MedPAC, 2006) highlights the importance of efficient payment arrangements for high-quality ambulatory care.

Different factors may account for cost differences across ambulatory settings. Patient selection could result in differences in the costs of delivering the same procedure in different settings. For example, physicians

³ This policy was effective in 2008. Previously, the physician payment for services that were not ASC covered-services was based on the PE for the non-facility setting.

may decide to perform procedures that are approved in multiple settings in an HOPD if the patient is determined to be at high risk for complications. Procedures may be more costly to deliver if patient risk factors, such as comorbidities and age, require more careful or intensive treatment. There may also be differences in the clinical content of the procedure between settings. Differences in infrastructure costs and regulatory requirements among the three care settings may also lead to differences in the costs of procedures.

Reducing Payment Differentials: A Brief History

The appropriateness of the payment differentials between ambulatory settings has been a long-standing Medicare payment policy issue. Under the prior cost-based reimbursement system for hospital outpatient services, blended payment rates applied to surgical procedures and to radiology and other diagnostic tests based on a the hospital's aggregate Medicare costs for these services and Medicare's payment rates for similar services in other ambulatory settings. Reducing differences in payment across ambulatory settings was an articulated policy goal when the hospital outpatient prospective payment system (OPPS) was being developed (Wynn, 2005). Nevertheless, when the system was actually implemented in 2000, the blended payment rates were dropped and with a few notable exceptions, payment for services provided in multiple ambulatory settings are based on different methods of estimating the costs of providing services in each setting. The major exceptions are:

- A single fee schedule applies to clinical diagnostic laboratory tests furnished by HOPDs, POs, and independent diagnostic clinical laboratories;
- Durable medical equipment, prosthetics, and orthotics furnished under Part B are paid under the same fee schedule;
- A single fee schedule applies to outpatient therapy services (physical therapy, occupational therapy, and speech-language pathology).

Because hospitals are assumed to have a higher cost structure than ASCs or POs, Medicare payments for most procedures are higher when they are furnished in HOPDs than in other ambulatory settings. Provisions in the Deficit Reduction Act of 2005 addressed particular situations where this has not been the pattern:

- Section 5102 capped the "technical" component of the physician fee schedule for imaging services (such as X-rays and magnetic resonance imaging) performed in POs and independent diagnostic testing facilities at the rates paid to HOPDs;

- Section 5103 capped the ASC rate for ambulatory surgery under the prior payment system at the rate paid to HOPDs.

OVERVIEW OF DATA AND METHODS

Our study involves an exploratory analysis of the issues using a set of high-volume services that are performed in multiple ambulatory settings. The services (which we defined by APC) and the method we used to select them are described in the next section. We used the selected services to document at the procedure-code level the differences in the 2008 Medicare fee schedule *rates* across HOPDs, ASCs, and POs. These rate comparisons are indicative of the differences in Medicare payments across settings, but do not necessarily provide an accurate measure the *payment* differentials for some procedures because the definition of the items and services that are included in the unit of payment are not necessarily consistent across settings. We reviewed Medicare policy instructions and coding guidance to identify where there may be comparability issues. However, we did not adjust the rate comparisons because doing so requires analyses of claims data that are beyond the scope of this study. We supplemented our analysis of Medicare payment differentials with an analysis of private insurance payment differentials for the study procedures. Our data source was Thomson Medstat's MarketScan® Database of commercial insurance claims in 2005.

To explore differences in the costs of providing services across settings, we drew on the available data and methods used in the OPPS and physician fee schedule rate-setting processes to examine procedure-level cost differences in both total estimated cost and the percentage attributable to indirect costs. For ASCs, data limitations required that we take a different approach. We used 2005 administrative data and financial reports from ASCs collected by the California Office of Statewide Health Planning and Development to estimate a cost per relative weight analogous to the OPPS conversion factor.

After documenting the payment and cost differentials across settings for the study procedures, our next task was to explore the factors beyond the rate-setting methodologies that might account for the differences. Based on a review of earlier studies, we identified four factors in addition to the underlying infrastructure differences that might explain differences in the cost of providing services: patient characteristics, accreditation and

regulation, service content, and coding. Although data would be optimal to determine the contributions of each of these factors, in most situations such data were unavailable or their use was infeasible for the current study. Therefore, we used an approach that combined analysis of data where possible and extensively supplemented these data with opinions of professionals providing the services selected for further study. We used a semi-structured interview approach to obtain this information.

Our selection of the study procedures and methodological approach was guided by a technical expert panel that convened at an all-day meeting at the beginning of the study and met once again by phone after our interviews and cost analyses were completed. We used the input of panel members and the findings from our interviews and cost analyses to frame the options for potential policy changes and to identify areas where additional research is needed.

OVERVIEW OF STUDY PROCEDURES

Methodology for selecting study procedures

For the purpose of selecting service categories for further analysis, we first identified three sets of Medicare high-volume services: one for those performed in the HOPD and PO, one for those performed in the HOPD and ASC, and the other for those performed in all three settings. To estimate volume and total payments for Medicare services, we used CMS administrative files⁴ containing payment rates and aggregate counts of services for the three settings. The payment rates for procedure selection were based on 2007 Medicare policy (before ASCs were paid on the basis of APCs). We used 2007 APCs to group clinically related services for analysis (for all three settings even though only the HOPD was actually paid in this manner in 2006 and 2007). We then identified APCs for further analysis considering the following criteria:

- High Medicare volume
- Performed at least 10 percent of the time in each of at least two ambulatory settings

⁴ The files included two files published with the OPSS Final Rule ("Median Costs for Hospital Outpatient Services by APC Group" and "Addendum A"; two files published with the Physician Fee Schedule ("Utilization" and "Addendum B"); and two files published with ASC payment rates ("Supporting Data" and "ASC HCPCS").

- Services for which the site-of-service payment differential has substantial impact on Medicare expenditures, but with varying sizes of payment differentials because they may lead to different policy alternatives
- Different types of services (e.g., diagnostic procedures, surgical procedures)
- Services with payment differentials that indicate higher payment rates in each of the three settings (HOPD, ASC, and PO) than in the other settings. This criterion is limited in applicability because ASC procedures were capped at the HOPD rate (and are now paid based on 67 percent of the OPPS rate) and the technical component of imaging services paid under the physician fee schedule are capped by the HOPD rate.
- The services are likely to be comparable across settings in terms of patient mix and outcomes. This criterion led to the selection of lower-acuity surgical procedures and non-invasive procedures that typically involve little follow-up.

The final set of study procedures was chosen based on these criteria with input from the project officers and a technical expert panel.

Study Procedures

Sixteen APCs were chosen for analysis (Table 1.1). Within each APC, we selected only those procedures (defined by CPT code) that represented more than five percent of the total volume for all services in the APC in 2006 in order to have a manageable group of procedures. Table 2.1 summarizes the study procedure volume in each setting by APC. Within each APC, there was considerable variation in the frequency each procedure was performed in different settings; the procedure-level data are listed in Appendix A. Of the 16 APCs studied, seven were primarily performed in HOPDs and POs, four were primarily performed in HOPDs and ASCs, and three were performed at least ten percent of the time in each of the three settings. The two drug infusion APCs each have one very high volume procedure that is performed only in the PO setting. When these procedures are excluded, the remaining procedures assigned to APC 440 and APC 441 are performed in HOPDs nine percent and 15 percent of the time, respectively.

Table 1.1
Volume of Selected Procedures in 2006 by APC by Setting

| APC | APC Description | Volume of | | | |
|-----|--|---------------------------|--------|-------|------|
| | | Selected Procedures, 2006 | % HOPD | % ASC | % PO |
| 20 | Level II Excision/ Biopsy | 620,976 | 14 | 0 | 86 |
| 22 | Level IV Excision/ Biopsy | 71,046 | 52 | 22 | 26 |
| 41 | Level I Arthroscopy | 193,635 | 65 | 35 | 1 |
| 100 | Cardiac Stress Tests | 3,246,335 | 24 | 0 | 76 |
| 143 | Lower GI Endoscopy | 2,427,206 | 55 | 40 | 6 |
| 158 | Colorectal Cancer Screening: Colonoscopy | 351,642 | 50 | 45 | 5 |
| 206 | Level II Nerve Injections | 1,019,135 | 20 | 20 | 60 |
| 207 | Level III Nerve Injections | 2,392,645 | 31 | 27 | 42 |
| 246 | Cataract Procedures with IOL Insert | 1,807,569 | 34 | 62 | 5 |
| 260 | Level I Plain Film Except Teeth | 12,913,807 | 61 | 0 | 39 |
| 280 | Level III Angiography and Venography | 356,731 | 85 | 0 | 15 |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 2,479,132 | 51 | 0 | 49 |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 462,987 | 63 | 0 | 37 |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast | 1,205,887 | 52 | 0 | 48 |
| 440 | Level V Drug Infusion | 1,748,100 | 2 | 0 | 98 |
| 441 | Level VI Drug Infusion | 2,397,055 | 1 | 0 | 99 |

We considered but after consultation with the technical expert panel decided not to include an evaluation and management service as a study procedure. The lack of standardization in definitions for how HOPD visits are coded is problematic. HOPDs are instructed to develop their own rules to determine the level for an HOPD clinic visit so that there is lack of consistency across hospitals and with PO level visits, for which the physician's professional services determine the practice expense.

ORGANIZATION OF THE REPORT

The remainder of this report is organized as follows. Chapter 2 discusses Medicare payment differentials for the selected procedures and compares them to the differentials in the private insurance sector. Chapter 3 presents estimates of the cost of providing the study procedures in each of the three settings. Chapter 4 discusses potential factors accounting for the cost differentials. Chapter 5 presents policy options for Medicare.

2. PAYMENT DIFFERENTIALS

In this chapter, we first describe the differences in the package of services covered by the units of Medicare payment for ambulatory services that affect the comparisons of payment rates across settings. We then present data on payment differentials in Medicare and compare them to private sector payment differentials for the study procedures.

DIFFERENCES IN PACKAGE OF SERVICES COVERED BY MEDICARE PAYMENT FOR AMBULATORY SERVICES

As noted in Chapter 1, the units of payment used by Medicare for ambulatory care services are APCs for HOPDs and ASCs (except for those ASC services that are paid under the practice expense component of the physician fee schedule) and procedures for POs. Each of these units of payment represents a package⁵ of various component services and items. Medicare packaging rules differ between physician offices and HOPD/ASCs. These differences in the units of service are the main methodological limitation in comparisons of payment rates across settings.

Packaging in Hospital Outpatient Department Payments. Until 2008, the OPDS used only "minimal" packaging of services into APC payments. Services and items were packaged if they were considered to be an "integral part" of a major service. For example, anesthesia, surgical supplies, inexpensive drugs (those that cost less than \$60 per day in 2008), and the use of recovery and observation facilities were packaged services. Implanted devices and prosthetics were packaged as well. In 2008, CMS increased the number of ancillary and supportive services that are packaged as an integral part of a primary service. The newly packaged services include guidance, image processing, imaging supervision and interpretation, intraoperative services, diagnostic radiopharmaceuticals, contrast media, and observation. However, many services furnished on the same day are still paid separately, including most ancillary services (e.g., imaging, diagnostic laboratory tests, expensive

⁵ In this paper, we refer to all of the service components included in a single unit of Medicare payment as "packaged." Sometimes a distinction is drawn between services provided before and after the main service, potentially by different providers in different settings, that are "bundled" into the unit of payment and services that are provided in conjunction with the major service that are "packaged."

drugs (those with per diem costs of \$60 or more in 2008) and visits to the emergency department and clinics. In addition, certain new drugs and technologies and the acquisition costs of corneal tissue are paid for separately via "pass-through" payments.

Packaging in Ambulatory Surgical Center Payments. As described in Chapter 1, ASCs are paid only for services that are on the approved list of surgical procedures. With the changes in the ASC payment methodology in 2008, the packaging rules for ASCs generally parallel those used in the OPPS. Minor ancillary services, implanted devices, inexpensive drugs and biologicals are packaged when provided in an ASC to the same extent they are packaged under OPPS (although ASCs receive an additional payment for new technology intraocular lens and HOPDs do not). For device-intensive APCs, the portion of the APC payment attributable to the device is paid the same amount as under OPPS; the remaining service-related portion of the APC payment is paid using the ASC conversion factor (67% of the OPPS conversion factor in 2008). ASCs are paid separately for a covered ancillary service if separate payment is also made under the OPPS and the service is provided on the same day as an integral part of the approved surgical procedure. A covered ancillary radiology service is integral to a primary surgical procedure if it is required for successful performance of the surgery and is performed in the ASC immediately preceding, during, or immediately following the surgery. Payment for the technical component of covered radiology services is capped at the physician fee schedule amount. Corneal tissue acquisition costs are reimbursed based on invoice costs. New drugs and devices that are paid under the OPPS new technology pass-through are paid a contractor-priced rate when furnished by an ASC.

Packaging in Physician Office Payments. Physician office "facility" payments are paid via the physician fee schedule. There are two important differences between HOPD/ASC packaging policies. First, less "packaging" occurs for some PO services that are furnished during the same encounter. Generally, supplies and equipment are bundled into the practice expense component of the fee schedule. Exceptions are pharmaceutical or radiopharmaceutical diagnostic imaging agent, pharmacologic stressing agent, and therapeutic radionuclide that are used in conjunction with diagnostic tests, brachytherapy procedures and therapeutic nuclear medicine procedures. Unlike HOPDs and ASCs where only drugs exceeding the cost threshold are

separately payable, all drugs regardless of cost are separately payable when provided in the PO. Second, payment for surgical services are bundled into a "global surgical period." Each surgical procedure is assigned a global surgical period of 0, 10, or 90 days. All pre-, intra-, and post-operative care provided during the global period by the surgeon, including supplies and treatment for complications and pain, is bundled into a single payment. In the 10 and 90 day post-operative period, the PE component assumes that any follow-up visits occur in the PO regardless of whether the surgical procedure was performed in a facility or PO. Some services, including diagnostic tests, the initial consult to determine the need for major surgery, and unplanned returns to the operating room, are paid separately. Services provided by other physicians during the surgical procedure are also paid separately. As a result, some procedures that are bundled for payment as an integral part of the primary procedure when performed in an HOPD/ASC setting are paid as separate procedures under the physician fee schedule.

The packaging rules for the three payment systems are summarized by type of service and site of care in Table 2.1.

Table 2.1

Summary of Packaging Rules in Medicare Payments for Several Types of Ambulatory Health Services in Hospital Outpatient Departments, Ambulatory Surgical Centers, and Physician Offices

| Type of service | HOPD | ASC | PO |
|-------------------------------|---|--|---|
| Medical visits and procedures | <ul style="list-style-type: none"> • Services provided on the same day that are integral to the primary procedure are packaged • Most drugs, supplies, and equipment packaged • Drugs above a cost threshold are paid separately with separate pass-through for certain new drugs • Many ancillary services paid separately | <ul style="list-style-type: none"> • Not approved ASC service; if performed, physician professional services are paid via fee schedule as a facility-setting service | <ul style="list-style-type: none"> • Integral services are routinely packaged • Injections packaged • Supplies packaged; covered drugs paid separately • Diagnostic tests paid separately |
| Surgical procedures | <ul style="list-style-type: none"> • Same policies as for medical visits and procedures • Implanted devices packaged • Separate pass-through payments for certain new devices • Any pre- and post follow-up clinic services separately paid | <ul style="list-style-type: none"> • Services packaged in HOPD are also packaged in ASC • Minor surgical services that are packaged with a medical procedure are not a covered ASC service • Separate contractor-priced payment for certain new drugs and devices • Any pre- or post visits to ASC not an approved ASC service; if performed in the ASC, physician paid via fee schedule as a facility-setting service • Additional payment for new technology intraocular lenses | <ul style="list-style-type: none"> • Pre-, intra-, and post-operative care within global surgical period bundled (0 or 10 days post for minor procedure, 90 days post plus 1 day pre for major procedure), including treatment of complications, pain management, supplies • Initial consult to determine need for surgery paid separately • Return to OR paid separately • If performed in PO, implanted device or prosthetic would be paid separately |
| Imaging | <ul style="list-style-type: none"> • Same policies as for medical visits and procedures • Imaging process procedures that are an integral part of primary procedure are packaged • Contrast media are packaged | <ul style="list-style-type: none"> • Ancillary radiology services that are separately payable under the OPPS are separately payable to the ASC based on the lower of the OPPS or physician fee schedule rate only if the services are an integral part of the covered surgical procedure and furnished on the day of the procedure • Other imaging services are not approved ASC service; if performed, physician paid via fee schedule for professional component only | <ul style="list-style-type: none"> • Most supplies bundled • Contrast media paid separately |

Source: Medicare Claims Processing Manual; *Federal Register*.

Implications for Payment Differential Comparisons for Study Procedures

Our comparisons of Medicare payment rates across ambulatory settings are based on a one-to-one comparison at the procedure code level of the fee schedule payment rates in each of the settings. Analysis of administrative data that reflect the incidence of related services is needed to understand the full implications of the different packaging policies on the comparisons. However, we note that the impact will vary across procedures and in some cases may significantly affect the comparison. We provide some examples below of packaging and other policies that affect the comparisons.

APC 41 (Level I Arthroscopy). Because very few arthroscopies are performed on Medicare patients in physician offices, there is no non-facility PE for these services. The Medicare ratio payment differential is based on the ratio of the HOPD payment to the physician fee schedule facility PE payment.

APC 100 (Cardiac Stress Tests).⁶ During a cardiac stress test, a patient either walks on a treadmill or is given an intravenous medication that simulates exercise while connected to an electrocardiogram machine. The drug that is administered to "exercise" a patient pharmacologically may or may not be bundled into the APC payment. For example, dipyridamole and adenosine are both vasodilators; the former is bundled while the latter is payable separately when the stress test is performed in an HOPD. The radiotracer that is injected during the simulated exercise portion is considered integral to the procedure and is bundled into the APC payment. The vasodilator and radiotracer are separately payable when the stress test is performed in a PO.

APCs 206 and 207 (Nerve Injections, Levels II and III). Nerve injections typically include a local anesthetic such as lidocaine and an anti-inflammatory drug such as cortisone. Both drugs are inexpensive and are included in the HOPD and ASC payment rates but are separately payable when the injections are performed in a PO. In addition, the nerve injection may be performed under fluoroscopic guidance using contrast media for precise needle placement. When the nerve injection is performed in an HOPD or ASC, payments for the fluoroscopic guidance and contrast material are bundled into the APC payment for the injection. Separate payments are made for fluoroscopic

⁶ Unlike most diagnostic tests, different codes are used for cardiac stress tests performed in a facility-setting (CPT code 93017) and in a PO (CPT code 93015). We have assigned the latter code to APC 100 in order to compare payments across settings.

guidance and for the contrast material when the nerve injection is performed in a PO.

APC 246 (Cataract Procedures with IOL Insert). The intraocular lens (IOL) inserted during a cataract procedure is bundled into the APC payment. No distinction is made in the HOPD payment between new technology IOLs and other IOLs. However, an additional \$50 payment is made to an ASC when a new technology IOL is inserted. Nearly 5 percent of cataract procedures with IOL insertions are performed in a PO or other freestanding facility. There are no non-facility setting PE RVUs for this procedure and payment is based on the facility-setting PE RVUs when it is performed outside an institutional setting. A separate Medicare fee schedule payment is made for IOLs inserted during cataract surgery in a PO.

APC 280 (Level III Angiography and Venography). Angiography and venography are invasive imaging procedures that use a contrast dye to make the blood vessels/veins visible to an xray. The service begins with vascular catheterization and injection of contrast media followed by the radiology procedure. The services included in this APC are covered only in the HOPD and PO; however, under the new OPSS policies, payment for angiography and venography procedures, including the vascular injection procedure, is bundled into the payment for the primary procedure. A separate OPSS payment is made only if no significant procedure is performed on the same day. The vascular injection and cost of the contrast media are bundled and included in the APC payment for the angiogram but are separately payable when the procedure is performed in a PO. Because of the different bundling policies, the procedure-code level comparison of the payment rates for these services is particularly problematic.

APC 337 (Magnetic Resonance Imaging (MRI) and Magnetic Resonance Angiography (MRA) without Contrast followed by Contrast). Two policies might affect the comparison of the payment rates for these procedures. First, contrast media used during a radiological procedure are bundled into the APC payment but are separately payable when the procedure is performed in a PO (or an IDTF). The implications for payment comparisons depend on the costliness of the contrast material that is used for the procedure. Although the payment for the procedures is capped at the OPSS rate, the limit applies only to the payment for the procedure and does not take into account the differences in bundling policies. With separate billing for the contrast media, the total

payment for the service may be higher in a PO when a single MRI or MRA is performed. Second, under the physician fee schedule, the technical component is reduced 25 percent if multiple MRI/MRA procedures are performed on contiguous body areas (this reduction is applied before the comparison is made to the OPPS rate). No reduction is made under the OPPS when multiple MRI/MRA procedures are performed.

MEDICARE PAYMENT DIFFERENTIALS FOR STUDY PROCEDURES

Data and Methods

In making the comparisons, we compared 2008 payment rates at the procedure code level without adjustment for differences in bundling policies. Analysis of administrative data to determine the utilization patterns for services provided in POs that are bundled into the APC payments would be needed to make this adjustment.

For ASCs, we used the fully implemented 2008 ASC payment rates rather than the actual 2008 payment rates that reflect the transition policies under the new payment system. Similarly, we used the fully-implemented PE RVUs from the physician fee schedule rather than the actual 2008 PE RVUs that reflect the transition to the revised method to setting the PE RVUs. We used these PE RVUs both to determine the physician payment rate and the rate applicable to ASC services that are paid under the physician fee schedule.⁷ Where applicable, we limited the physician payment for radiology services to the OPPS payment rate. We used the total PE payment the physician receives for performing services in a PO (i.e., the non-facility setting PE) to compare to the facility payments to hospitals and ASCs. An alternative approach would have been to compare the difference between the physician fee schedule payments for a service in a facility vs. non-facility setting to the HOPD and ASC payments. The difference represents the additional payment that a physician receives for performing the service in the PO and arguably could be more comparable to facility payments in ASCs and HOPDs because it does not include any practice expense associated with the professional services.

The APC-level ratios in the sections that follow are weighted averages, using the total procedure volume across HOPDs, ASCs, and POs as the weight to

⁷ The physician fee schedule payments are based on the rates effective January 1, 2008.

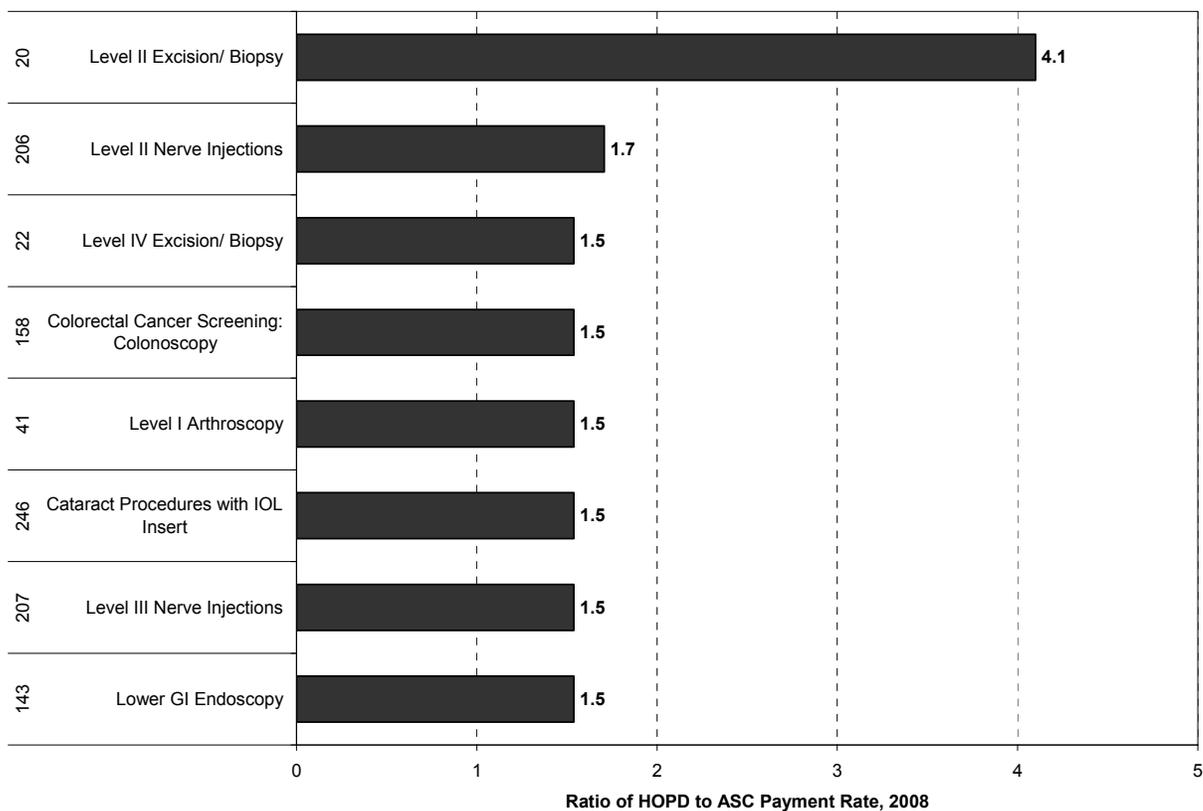
standardize for inter-procedure differences in volume between the settings. The payment differentials vary within APCs by procedure; the procedure-level data are listed in Appendix A. The study procedures were selected based on the 2007 APCs and we summarize the findings based on the 2007 APCs. Some procedures were reassigned under the OPSS to a different APC in 2008. In particular, most study procedures assigned to APC 280 in 2007 were reassigned to APC 279 in 2008. Our findings are based on the 2008 payment rates for the selected procedures, so that the average 2008 HOPD payment rate shown for APC 280 is a mix of OPSS rates for APC 279 (\$1839.41) and APC 280 (\$2847.85).

The ratios measure the payment differential between the two settings. The closer the ratio is to 1.0, the smaller the payment differential is between the two settings. For example, a ratio of 1.5 for the HOPD/ASC setting means that the average HOPD payment is 50 percent higher than the average ASC payment.

Hospital Outpatient Departments Compared to Ambulatory Surgical Centers

The Medicare payment differential in 2008 between HOPDs and ASCs for the study procedures is summarized in Figure 2.1 by APC. In 2008, ASCs are paid for most study procedures that are primarily performed in ASCs and HOPDs at 67% of the OPSS rate. For this reason, the 2008 payment differential for most APCs is 1.5. Two APCs - 20 (Level II-Excision/Biopsy) and 206 (Level II Nerve Injections) - included procedures for which ASCs are paid at the PO rate. The payment differentials are higher for these two APCs.

Figure 2.1
Medicare Payment Rates for Selected Procedures in Hospital Outpatient
Departments and Ambulatory Surgical Centers, 2008



Hospital Outpatient Departments Compared to Physician Offices

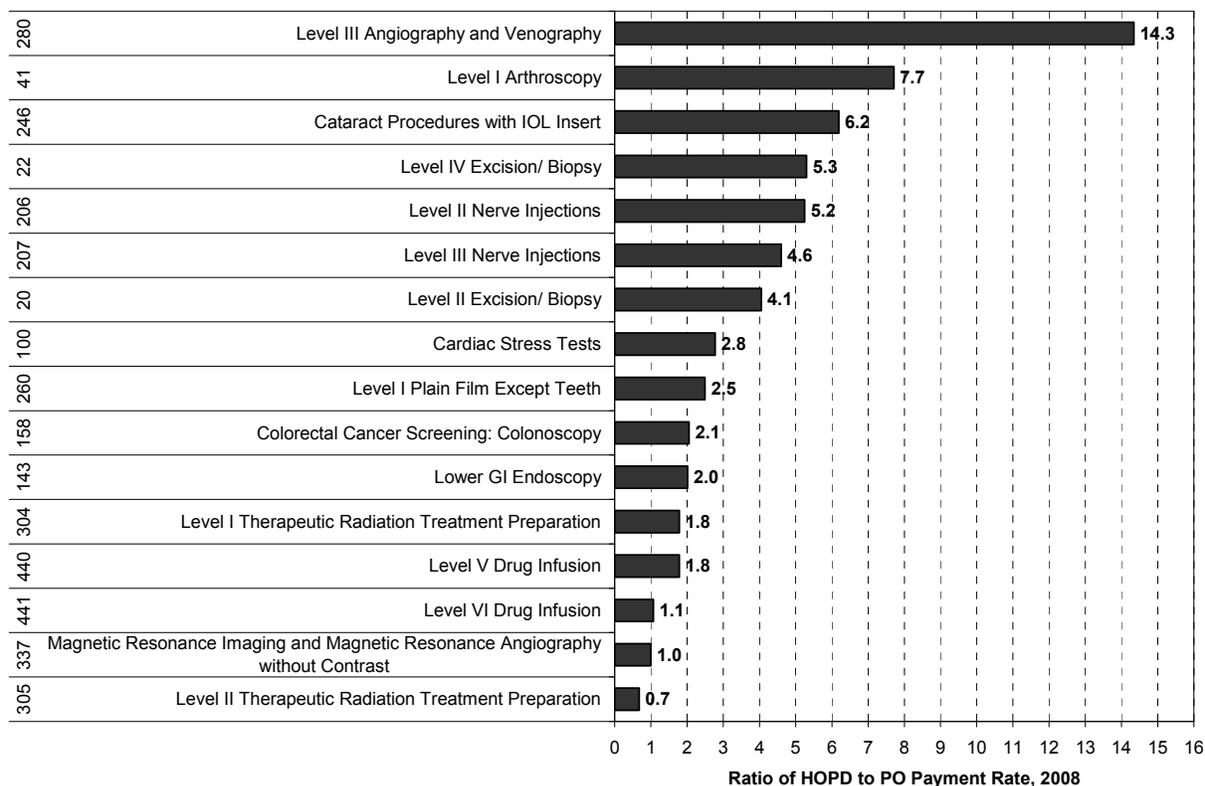
The Medicare payment differential between HOPDs and POs for the study procedures without adjustment for differences in packaging rules is summarized in Figure 2.2 by APC.

The payment differentials between HOPDs and POs are much larger than between HOPDs and ASCs. The size of the differential varies widely between APCs. HOPD payment ranges from a maximum of 14.3 times the PO payment (APC 280, Level III Angiography and Venography) to a minimum of 0.7 times the PO payment (APC 305, Level II Therapeutic Radiation Treatment Preparation). As noted in the preceding section, the payment comparison for APC 280 is particularly problematic because of the differences in packaging rules. Using CPT code 75671 (Angiography, carotid, cerebral, unilateral, radiological supervision and interpretation) as an example, the PE for the technical component when the service is provided in a non-facility setting is \$169.87

compared to \$2847.85 under the OPSS. However, the separate PE payment for inserting a needle or intracatheter into the carotid artery (CPT code 36100) adds an additional \$428.48 to the physician payment, producing an adjusted ratio of 4.8 ($\$2,847.85/\598.35) for this particular procedure before consideration of the additional PO payment for contrast media.

The HOPD payment rate is higher than the PO rate for 14 of the 16 APCs. The PO rate is higher only for APC 305. Reflecting the cap on radiology procedures, the PO rate for APC 337 (Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast followed by Contrast) is the same as the HOPD rate before consideration of the payment policy differences discussed in the preceding section; without the cap, the average HOPD payment would have been less than the PO rate (0.8).

Figure 2.2
Medicare Payment Rates for Selected Procedures in Hospital Outpatient Departments and Physician Offices, 2008

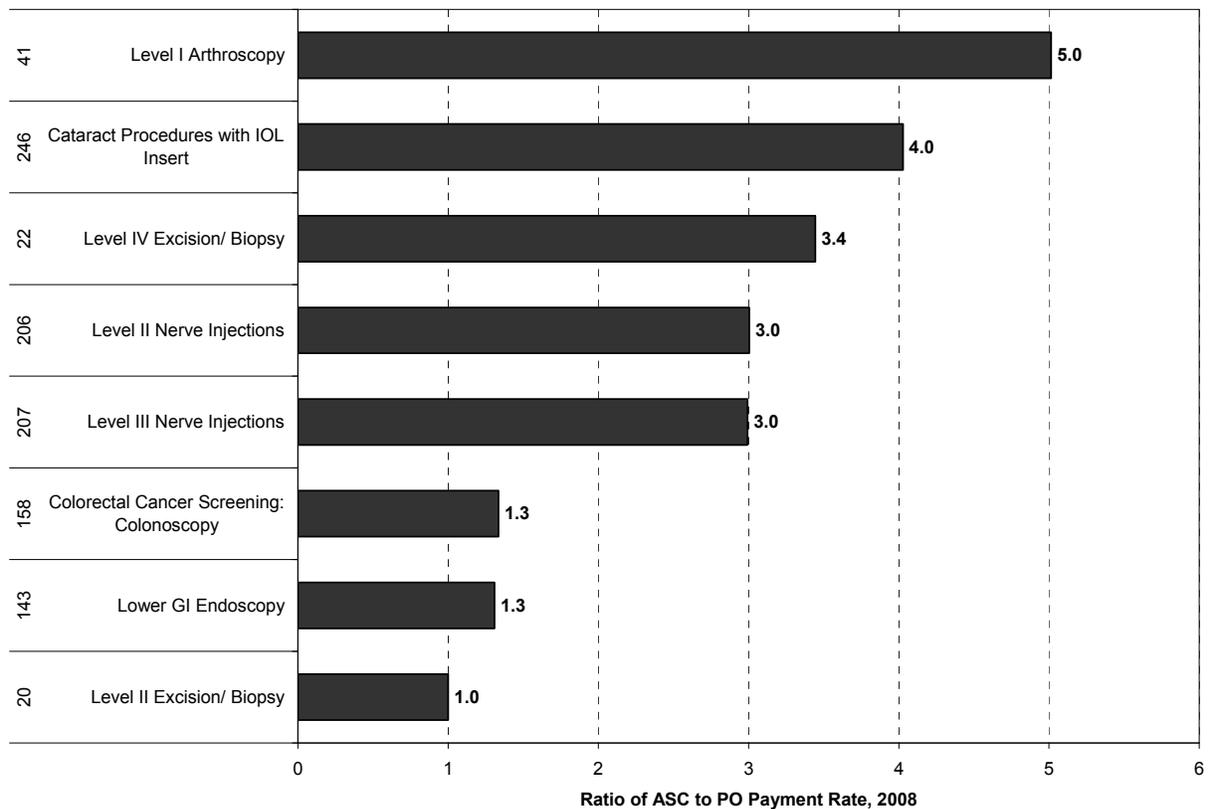


Ambulatory Surgical Centers Compared to Physician Offices

The Medicare payment differentials between ASCs and POs for the study procedures without adjustment for differences in packaging rules are summarized in Figure 2.3 by APC.

The PO payment rates for the two procedures with the largest differentials are based on a facility-setting PE. The contrast between an ASC payment that is 3.4 times the PO payment for APC 22 (Level IV Excision/Biopsy) and is the same as the PO payment for APC 20 (Level II Excision/Biopsy) reflects the difference between ASCs being paid based on the OPPS methodology (APC 22) and the Medicare physician fee schedule (APC 20). The ASC payment rate is 3.0 times the physician payment rate for both APCs for nerve injections. The PE payment for the technical component of fluoroscopic guidance (CPT code 77003) adds \$23.61 to the PO PE payment, resulting in adjusted payment differential ratios of 1.9 and 2.4 for APC 206 (Level II Nerve Injections) and APC 207 (Level III Nerve Injections), respectively, before taking into account a separate payment for contrast media. The ASC payment rate is 1.3 times the PO payment rate for both APC 158 (Colorectal Cancer Screening Colonoscopy) and APC 143 (Lower GI Endoscopy).

Figure 2.3
Medicare Payment Rates for Selected Procedures in Ambulatory Surgical Centers
and Physician Offices, 2008



COMMERCIAL INSURANCE PAYMENT DIFFERENTIALS

In this section, we describe our analyses comparing Medicare’s payment for the facility component of the study procedures to the average payments for facility services made by commercial insurers used by large employers. Medicare’s regulated prices are determined through payment formulas that may not reflect the market prices for services. Commercial insurance average payments for the facility component serve as a benchmark for market prices. We were particularly interested in whether market-based prices differentiate between settings for similar services since those findings could inform policy choices regarding Medicare site-of-service differentials. We investigated patterns in the number of services, total payments, and average payments across HOPD, ASC and physician offices at the CPT-code level but summarize the results by APC.

Data and Methods

Thomson Medstat maintains a proprietary dataset that contains commercial health claims for over 30 million employees and their dependents. The MarketScan[®] Database for outpatient services includes, among other items, the primary procedure (CPT code plus modifier), the number of procedures performed, the place of service, the type of claim (facility or professional) and the paid amount (prior to application of patient cost-sharing amounts). We limited our data set to 2005 claims for the non-Medicare population that reported one of the study procedures as the primary procedure and were paid on a fee-for-service basis. We excluded encounter claims and claims for Medicare beneficiaries (both fee-for-service and encounter). Because a claim may include more than one procedure, we selected only records that reported a single procedure. However, the packaging policies are likely to be more inclusive for commercial insurance plans than for Medicare (e.g., laboratory tests are likely to be included in the claims) so we did not make a direct comparison of Medicare payment rates to the non-Medicare average payment amounts. Instead, we computed payer-specific payment ratios between settings.

We used the type of claim and place of service codes to determine where each service was provided.

- We defined HOPD claims as any facility claims that reported the place of service as outpatient hospital or emergency department.
- We defined ASC claims as any facility claims that reported the place of service as ambulatory surgical center.
- We defined PO claims as any claims that reported the place of service as office or independent clinic. We used the modifier to identify the technical and professional component of diagnostic tests. We eliminated any claims with a professional services only modifier.

We assigned each claim to a Metropolitan Statistical Area based on the state and county in which the provider was located. We standardized for geographic differences in the costs of providing services using the hospital wage index for HOPD and ASC services and the geographic adjustment factor for PO services. For each procedure code, we generated counts of the number of services and total payments by site of service by geographic area. We calculated an average payment only if there were at least ten procedures performed in a given setting. For physician services (other than those for technical component only), we needed to allocate the payment between the facility and the professional/malpractice components. To do so, we applied the

ratio of the PE RVUs to total RVUs under the 2008 Medicare fee schedule to the total payment.

The APC-level payment ratios are weighted averages, using the total Medicare procedure volume across HOPDs, ASCs, and POs as the weight to standardize for inter-procedure differences in volume between the settings and populations. The payment differentials can vary by procedure; the procedure-level data are listed in Appendix B for HOPDs and POs.⁸ We are not reporting the payment differentials for ASCs because the ratios of the average HOPD payment to the average ASC payment were unreasonably low for many procedures, suggesting that even though we selected only facility claims, the ASC claims may include the payment for professional services as well as facility services.

We also explored how much competition there was between settings in a given geographic area. Appendix B provides information by procedure code on the number of markets that had at least 10 procedures provided in a particular setting.

Results

Distribution of Services across Ambulatory Settings

In total, there were 1,318,038 commercial fee-for-service claims that reported one of the study procedures as the primary procedure (Table 2.2). Generally, the HOPD is used less frequently as the site of service in the non-Medicare population than in the Medicare population and the PO is used more frequently. Across all study procedures, 29.0 percent and 64.9 percent of the non-Medicare procedures were performed in the HOPD and PO, respectively; in comparison, 42.9 and 47.7 percent of the Medicare procedures were performed in the HOPD and PO, respectively. The non-Medicare population had 6.0 percent of procedures performed in an ASC compared to 9.5 percent for the Medicare population. However, the higher Medicare ASC percentage is largely attributable to the Medicare high-volume APC 100 (Cataract procedure with IOL insertion), which is performed 61.5% of the time in an ASC; if this APC is excluded, the percentage of Medicare procedures performed in an ASC falls to 6.5 percent but remains higher than the non-Medicare percentage. Arthroscopy

⁸ The study procedures were selected based on the 2007 APCs. As noted previously, some procedures, particularly in APC 280, were reassigned to a different APC in 2008.

procedures were performed in ASCs more often for the non-Medicare population than the Medicare population. Nerve injection procedures were performed in POs more often for non-Medicare population; the Medicare population had a higher percentage of these services performed in ASCs or HOPDs.

Table 2.2
Number and Distribution of Non-Medicare Services and Distribution of Medicare Services by APC

| APC | Description | Non-Medicare Services | | | Medicare Services | | | |
|-----|--|-----------------------|--------|-------|-------------------|--------|-------|------|
| | | Number | % HOPD | % ASC | % PO | % HOPD | % ASC | % PO |
| 20 | Level II Excision/ Biopsy | 51,883 | 4.2 | 1.8 | 94.0 | 14.4 | 0.0 | 85.6 |
| 22 | Level IV Excision/ Biopsy | 5,821 | 33.4 | 22.8 | 43.7 | 51.8 | 21.7 | 26.4 |
| 41 | Level I Arthroscopy | 14,413 | 49.9 | 44.0 | 6.2 | 64.6 | 34.9 | 0.6 |
| 100 | Cardiac Stress Tests | 33,638 | 75.6 | 0.0 | 24.3 | 75.6 | 0.0 | 24.4 |
| 143 | Lower GI Endoscopy | 128,267 | 45.5 | 36.6 | 17.8 | 54.7 | 39.8 | 5.5 |
| 158 | Colorectal Cancer Screening: Colonoscopy | 2,366 | 43.8 | 43.9 | 12.3 | 50.2 | 45.3 | 4.6 |
| 206 | Level II Nerve Injections | 14,736 | 5.9 | 7.3 | 86.8 | 24.6 | 17.9 | 57.6 |
| 207 | Level III Nerve Injections | 90,960 | 19.1 | 17.6 | 63.3 | 31.0 | 27.2 | 41.8 |
| 246 | Cataract Procedures with IOL Insert | 11,285 | 33.9 | 49.9 | 16.2 | 33.6 | 61.5 | 4.9 |
| 260 | Level I Plain Film Except Teeth | 802,800 | 27.4 | 0.1 | 72.5 | 60.6 | 0.0 | 39.4 |
| 280 | Level III Angiography and Venography | 1,117 | 82.2 | 1.5 | 16.3 | 86.6 | 0.0 | 13.4 |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 55,695 | 26.1 | 0.0 | 73.9 | 50.9 | 0.0 | 49.1 |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 17,437 | 29.8 | 0.0 | 70.1 | 62.7 | 0.0 | 37.3 |
| 337 | MRI and MRA | 91,958 | 27.4 | 0.0 | 72.6 | 51.8 | 0.0 | 48.2 |
| 440 | Level V Drug Infusion | 125 | 30.4 | 0.0 | 69.6 | 2.2 | 0.0 | 97.8 |
| 441 | Level VI Drug Infusion | 1,209 | 17.9 | 0.2 | 81.8 | 0.9 | 0.0 | 99.1 |
| | ALL APCs | 1,323,710 | 29.1 | 6.0 | 64.9 | 46.2 | 10.0 | 43.8 |

Competitive Markets

The study procedures were covered by the commercial insurance plans in 400 MSAs or market areas. APC 143 (Lower GI Endoscopy) had the largest number of markets where at least 10 procedures were provided in each of the three settings. For example, there were 160 markets with competition between ASCs and HOPDs in performing diagnostic colonoscopies. There was also competition between POs and HOPDs (115 markets) and between ASCs and POs (81 markets) in providing this procedure. APC 207 (Level III Nerve Injections) was also performed in all three settings in a number of markets.

APC 260 (Level I Plain Film Except Teeth) had the most services. In all 400 market areas, there was competition between POs and HOPDs in providing these services to non-Medicare patients. POs and HOPDs also competed to provide services in APC 337 (Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast followed by Contrast).

Nearly all services in APC 41 (Level I Arthroscopy) occurred in markets where HOPDs and ASCs competed to provide these services. Most markets where cataract surgeries were performed also had competition between HOPDs and ASCs.

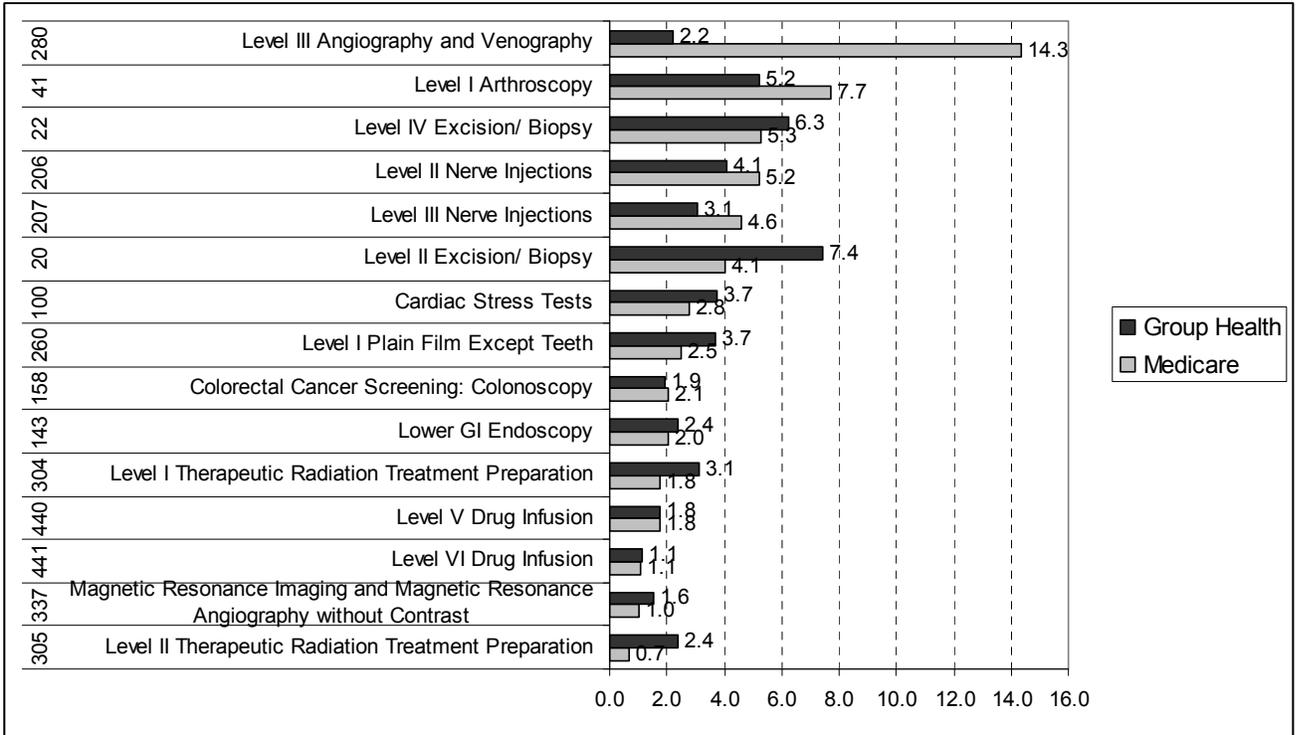
A few markets had knee arthroscopies and cataract surgeries with IOL insertion performed in physician offices as well. Finally, most therapeutic radiation treatment preparation services (APCs 304 and 305) and cardiac stress tests (APC 100) were provided in markets that had competition between HOPDs and POs.

Comparative Payment Differentials

Figure 2.4 compares by APC the average ratio of HOPD payment to PO payment under the commercial insurance plans and Medicare. With a few notable exceptions, the commercial insurance payment differentials follow the same general pattern as Medicare's payment differentials. Across all procedures, the non-Medicare ratio of HOPD to PO payment is somewhat higher than the Medicare ratio (3.5 vs. 2.8), indicating that the commercial insurance plans pay HOPDs relatively more than POs compared to Medicare.

- The non-Medicare ratio for APC 280 (Level III Angiography and Venography) is much less than Medicare's and is more in line with the overall ratio of HOPD to PO payments. It reflects both a lower average payment to HOPDs and a higher payment to POs. Because the MarketScan[®] Database reports the total payment for the procedure, the PO payment is likely to include payments for related procedures (the vascular injection procedure and contrast material).
- The non-Medicare ratio for APC 41 (Level I Arthroscopy) is considerably lower and reflects both a lower average payment to HOPDs and a higher payment to POs than under Medicare.
- The non-Medicare ratios for APC 206 and 207 (Level II and III nerve injections) are lower than Medicare's. The ratios reflect relatively higher payments to POs than under Medicare and may include payments for fluoroscopic guidance.
- The non-Medicare ratios for APC 20 and 22 (Level II and IV Excision/Biopsy) are higher than Medicare's and may be attributable to inclusion of the pathology services in the non-Medicare payments.

Figure 2.4
Comparison of Non-Medicare and Medicare Payment Differentials: Ratio of HOPD
to PO Payment



3. COST DIFFERENCES

In this chapter, we present estimates of the costs of the study procedures in each of the three settings and compare them to the payment differentials. Our analyses should be considered exploratory because cost comparisons across settings are complicated by the lack of consistent data.

OVERVIEW OF FEE SCHEDULE COST FINDING METHODS

For HOPD services, Medicare uses *accounting costs* to reflect differences in resource costs. Accounting costs refers to a method of determining the costs of outpatient services using annual cost reports filed by hospitals. Direct and indirect costs are allocated to each ancillary service department through a cost finding methodology and then apportioned to Medicare based on a ratio of Medicare charges to total charges for the ancillary service department. The methodology relies on accurate cost finding and on charges that are consistently related to costs. However, studies have found that in response to the inpatient prospective payment system, hospitals shifted costs to ancillary services so that accounting costs overstate the economic costs of providing services (Miller et al., 1990; Miller et al., 1995. Moreover, there is evidence that charging practices are influenced by a number of factors, including competition, payer mix, and cost allocation practices and that charges have become less meaningful measures of cost over time (Dobson et al., 2005).

For services paid under the physician fee schedule, the PEAC makes recommendations regarding the specific resources required to perform a particular service. The RVUs are based on the cost of specific items and services consumed when a service is provided. However, the accuracy of the estimations is hampered by the lack of current information on indirect practice expenses for many specialties and, as physician billing for more ancillary services such as imaging has increased, estimation of the per use costs of high cost equipment has become increasingly problematic (Ginsburg and Berenson, 2007). Further, there is evidence that the Relative Value Update Committee's median intraservice time estimates for surgical procedures are significantly longer than intraservice times from operative logs, leading to

an overstatement of the practice expense costs of surgical procedures relative to non-invasive procedures (McCall et al., 2006).

With respect to ASC services, sources of data that can be used to estimate the costs of specific procedures in ASCs are scarce. The General Accountability Office (2006) performed a survey of ASC costs in order to evaluate the applicability of APCs to ASC payments, but the data are not available for public use. The Medical Group Management Association (MGMA) publishes a survey (2206) of approximately 100 single- and multi-specialty ASCs including aggregate financial data. Some states, such as California, also collect and make available as public use data files some aggregate financial data on ASCs that can be linked to ASC administrative data.

Ideally, resource costs would be used to measure the cost difference across settings. Resource costing identifies each component of a health care activity, the type and amount of resources used for each component, and attaches unit costs to each resource so that the cost of each component and the overall cost of the activity can be calculated. It is an expensive cost finding methodology that may not be feasible for broad scale use in a payment system. Studies (Miller et al., 1990; Miller et al., 1995) conducted during the 1990's by the Center for Health Policy Studies used resource-costing techniques to look at differences in the costs of selected procedures in different ambulatory settings. The researchers found that hospital resource costs were actually lower than ASC costs. The researchers identified two reasons for this: higher productivity (staff handle more cases and space is used more productively) and procedure volume. The ASCs were operating at less than full capacity and were not able to achieve the same economies of scale as hospitals. Sample size limitations meant that the findings were suggestive but not definitive. Moreover, the studies were conducted when ASCs were in their infancy; higher volume and specialization are likely to have enhanced ASC productivity in more recent years.

METHODOLOGY FOR MEASURING COST DIFFERENTIALS

Physician Offices

We based our methods on those used by CMS to estimate of the cost of services in setting physician PE relative values in the physician fee schedule. CMS instituted a new "bottom-up" method for determining the direct costs in the 2007 physician fee schedule final rule. The old method used a

"top-down" process to allocate aggregate specialty-specific pools of direct and indirect cost to specific services. Under the "bottoms up method", CMS determines the direct PE by adding the CPEP service-specific direct cost estimates for non-physician labor, equipment, and supplies. CMS then adjusts for budget neutrality so that the aggregate direct cost pool remains the same and divides by the conversion factor to determine the adjusted direct PE RVU. The direct cost budget neutrality factor in 2008 was .592.

Indirect costs are allocated using the "top-down" process to services based on the direct costs and physician work used to produce that service. CMS calculates procedure-specific indirect costs as follows:

1. For each service, determine the percentages of indirect and direct costs using weighted averages of specialty-specific data from the American Medical Association's Socioeconomic Monitoring System data from 1999 and supplementary surveys.
2. Create the "indirect allocator" to determine how much in indirect costs should be allocated to the service. First, use the service-specific percent indirect and direct cost from the previous step to estimate indirect costs based on direct PE RVUs [(percent indirect/percent direct)*PE RVU]. Then add the physician work RVUs for that service. If the clinical labor component of the PE RVU is greater than the physician work RVU, substitute it for the physician work RVU. For global services, add both the clinical component of the PE RVU and the physician work RVU.
3. Adjust the indirect allocator for budget neutrality so that the aggregate indirect cost pool is unchanged. The 2008 budget neutrality factor for indirect costs was .362.
4. Multiply by the Indirect Practice Cost Index to adjust for the relative use of indirect costs by specialties providing that service.

In this study, we used this method to measure the costs of services in POs, with some modifications.

Direct Costs

We estimated direct costs by adding the revised CPEP direct cost estimates for each service for non-physician labor, equipment, and supplies. The difference between this value and the value used to produce the direct PE RVU is that the budget neutrality adjustment was not applied. This assumes that the revised CPEP estimates of the amount of labor, equipment, and supplies and the prices used in the RVU calculations lead to a realistic estimate of actual costs. We performed a sensitivity analysis using a different assumption about the utilization of equipment in setting its price.

Indirect costs

Unlike direct costs, the indirect allocator used by CMS in the calculation of indirect PE RVUs reflects only the relative costs of services and is not a good estimate of actual indirect costs. We based our calculation

of actual indirect costs on the direct cost estimate and the percentage of direct costs for each service implicit in the total PE RVU. To calculate the percentage of direct costs, we first converted the direct costs to RVUs by applying the budget neutrality adjustment and dividing by the conversion factor and then divided the direct cost RVU by the total PE RVU. Next, we calculated indirect costs by multiplying the amount of (non-budget-neutrality-adjusted) direct costs by the percentage of indirect costs (1-percentage of direct costs).

Hospital Outpatient Departments

We used a modified version of the method used by CMS to calculate service costs in the APC rate-setting process. CMS recalibrates the APC relative value weights every year to reflect changes in the relative costs of services based on analysis of the most recent claims and cost reports data. In its annual cost calculations, CMS first calculates cost-to-charge ratios (CCRs) at the cost center and overall hospital level for every hospital submitting an OPPS claim using data from Medicare cost reports. Claims are flagged for hospitals with nonsense or outlier CCRs. Outlier CCRs are also removed at the cost center level. All revenue codes appearing in OPPS claims are then mapped to cost centers using a four-level matching hierarchy, with the overall hospital CCR being the last (default) layer of the hierarchy. The mapped CCRs are then used to convert the charges listed with each revenue code to costs.

All claims are then separated into five groups using status indicators: (1) claims with a single procedure payable under OPPS; (2) claims with multiple procedures payable under OPPS; (3) claims with a single procedure packaged and not separately reimbursed under OPPS; (4) claims with multiple procedures packaged and not separately reimbursed under OPPS; (5) claims with no procedures payable under OPPS. Categories 3, 4, and 5 are set aside. Multiple-procedure claims (category 2) are split into "pseudo" single-procedure claims where possible using the line-item dates and other methods. Multiple-procedure claims that could not be split are excluded. The costs of any packaged services appearing on the claims are then packaged with the major procedure.

All claims are adjusted for geographic wage differences by applying the 60% labor portion of costs by a geographic wage index. The median costs for each procedure are then calculated and procedures were reallocated to different APCs if flagged by the "2 times rule" (the median cost of any

significant service cannot be more than 2 times the median cost of any other significant service in that APC). Finally, the median cost of each APC is calculated.

We used the OPPS data file that was used in the annual calibration of the APC relative weights for 2007. First, we filtered the file for claims containing the procedure codes of interest. We then split multiple-procedure claims into pseudo-single claims, following the CMS methodology. CMS has added the cost estimates of each procedure by revenue code, based on CCRs, to the OPPS claims, but additional analysis was used to differentiate between direct and indirect costs. First, we calculated the provider-specific percentages of direct and indirect costs for each cost center using Medicare cost reports, differentiating between several additional categories of costs such as salaries, movable equipment, benefits, and capital. We filled in missing values using CCRs from related cost centers, or if unavailable, a hospital-wide value. If no data were available for a hospital, the average CCR for the cost center across all hospitals was used.

Specifically, the following values were calculated using the Medicare cost report files:

Direct Costs

- Salaries (before step-down allocation): Worksheet A, Column 1, Lines 37-63
- Other direct costs (before step-down allocation): Worksheet A, Column 1, Lines 37-63
- Movable Equipment (directly assigned): Worksheet B Part I, Columns 2+4, Lines 37-63
- Net Expenses for Allocation: Worksheet A, Column 7, Lines 37-63

Indirect Costs

- Capital Related Costs (minus directly assigned movable equipment, after step-down allocation): Worksheet B Parts II and III, Column 27, Lines 37-63
- Employee Benefits: Worksheet B Part I minus Parts II and III, Column 5, Lines 37-63
- Other Indirect Costs: Total Costs minus costs in all other categories

We then applied the percentages of costs in each category to the OPPS claims. Using a cost-center-to-revenue-code crosswalk, we split the costs on the OPPS claims into direct, indirect, and subcategories. We then calculated the median of each category by APC across claims.

Ambulatory Surgical Centers

We used California data for ASCs to compare the average cost of procedures in ASCs to HOPDs. The financial data includes aggregate information

on the number of surgical procedures, operating expenses by major categories (staff, contract professional, supplies, depreciation and other), and revenues by categories (gross patient revenues, contractual allowances and charity care allowances, net patient revenues, , other revenues). It does not contain information on the volume of specific procedures performed in ASCs or allocation weights that would allow calculation of allocation of total expenses to specific procedures.

Using the California OSHPD administrative data for ambulatory surgery in 2005, we assigned APCs to the procedures on each record and determined the relative weights (RWs) applicable to each record based on the APC assignments. We summed the total RWs performed in each ASC during the year. We linked the facility-level utilization information on total RWs to the wage-adjusted total operating costs for each California ASC from the financial data. We were able to link the financial and utilization 2005 data for 429 licensed ambulatory surgery centers. We found inconsistencies between the number of records in the administrative data and the number of encounters in the financial data that we addressed by scaling the RWs to match the encounter volume in the financial data.⁹ We then calculated a standard cost per RW "conversion factor" which we compared to an adjusted OPPI conversion factor to provide a rough overall cost comparison. In 2005, the average Medicare margin for hospital outpatient services was -9.2 percent (MedPAC, 2008). We estimated the hospital outpatient cost per RW by multiplying the 2005 conversion factor (\$56.98) by 1.092.

The financial data include professional contracts as a separate item. We were concerned that this item may include physician services such as payments to anesthesiologists that would be separately payable under the Medicare physician fee schedule. Therefore, we calculated the cost per RW including and excluding the contract professional services. We also classified ASCs into single-specialty and multi-specialty facilities based on the types of services provided by the ASC during the year from California utilization data and examined whether multi-specialty ASCs have a different cost structure than single-specialty ASCs.

⁹ The mean ratio of claims in the utilization data to encounters in the financial data was .94 with a median of 1.0. To scale the RWs, we divided the RWs in the utilization data by the facility-specific ratio of ratio of claims to reported encounters.

PROCEDURE COSTS IN HOSPITAL OUTPATIENT DEPARTMENTS COMPARED TO PHYSICIAN OFFICES

The results of the comparison of study procedures costs in HOPDs and POs are summarized in Figure 3.1 by APC. Procedure-level cost data are listed in Table A3 in Appendix A. Costs were higher in HOPDs than POs for 10 of the 12 APCs with cost data available in both settings.¹⁰ However, the magnitude of the differential varied widely between the APCs examined. In general, the cost differentials are not as large as the payment differentials (see Figure 3.2). APC 206 (Level II Nerve Injections) is the only APC where the average payment differential between the two settings is less than the average cost differential. For the remaining procedures, the average payment differential ranged from about 150 percent of the cost differential (APC 100 Cardiac Stress Tests) to 280 percent higher (APC 280 Level III Angiography and Venography). The differences between the cost and payment differentials are largely accounted for by the budget neutrality adjustments under both payment systems (particularly the PE component of the physician fee schedule) and the use of conversion factors that are updated for inflation using different price indices rather than the average increase in actual costs.

¹⁰ Cost data were unavailable for the remaining 4 study APCs because the procedure is not performed in POs or because of data unavailability resulting from procedure or APC coding changes between years.

Figure 3.1
Ratio of Hospital Outpatient Department to Physician Office Estimated Costs
for Selected Study Procedures

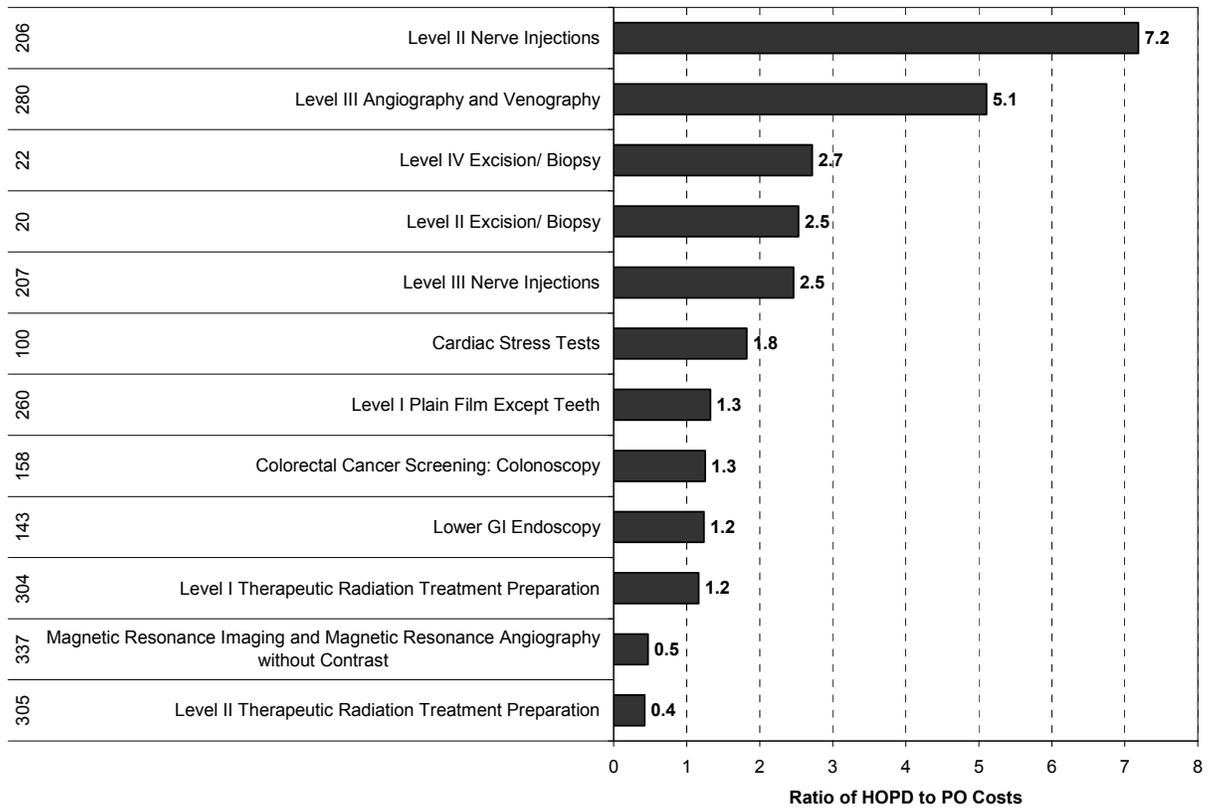
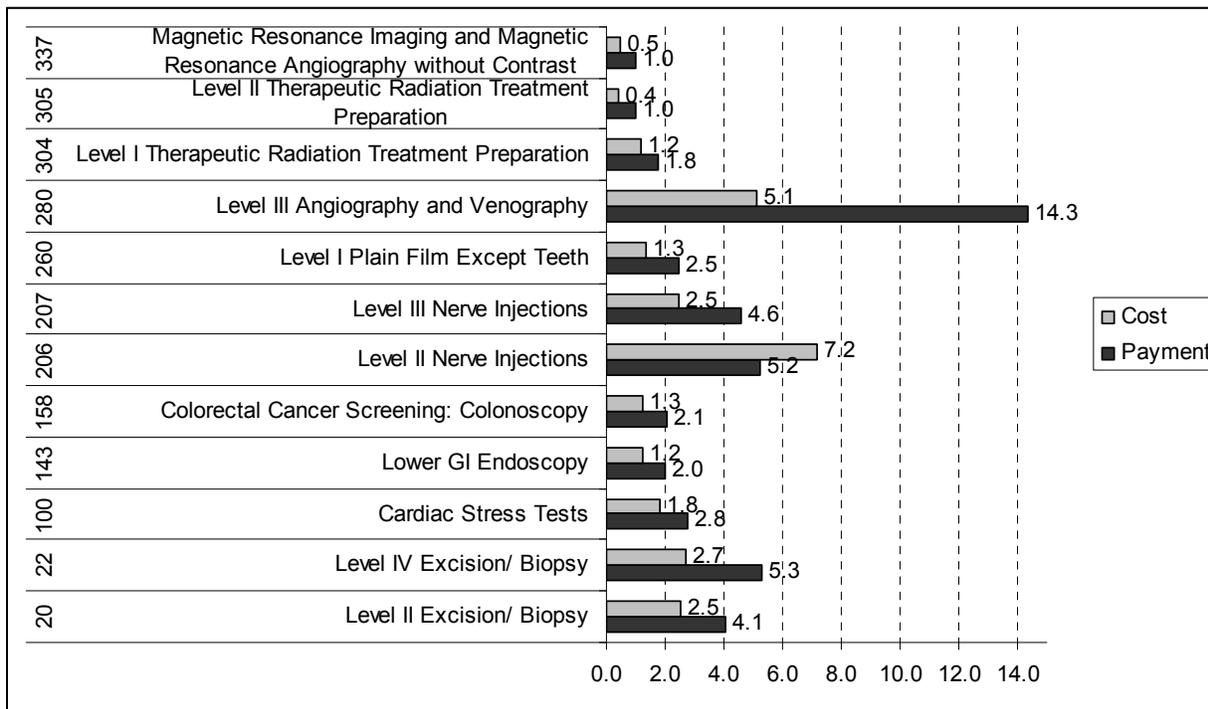


Figure 3.2
Comparison of Ratios of Hospital Outpatient Department to Physician Office
Payments and Estimated Costs for Selected Study Procedures



These data should be interpreted as preliminary, exploratory findings only. There is low comparability in the costing methods and data sources used in the two settings. The results are also not adjusted for differences in packaging/bundling between the two settings discussed in Chapter 2.

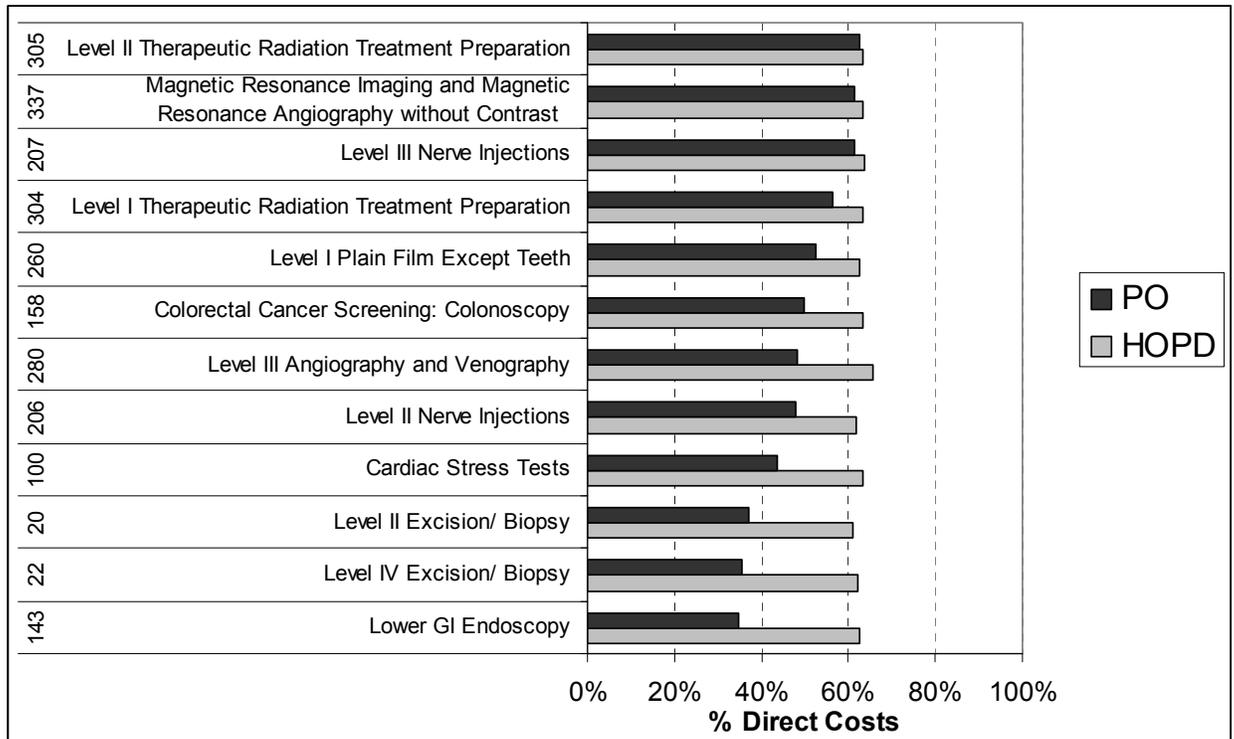
Direct vs. Indirect Costs

We also examined the percentage of direct and indirect costs for the study procedures in the two settings. The Center for Health Policy’s resource-costing study had found that direct costs comprised a higher portion of total costs in HOPDs (58%) than ASCs (48%). The researchers concluded that indirect costs are spread over a lower volume of procedures in ASCs and that many hospitals provide ambulatory surgery as a joint product with inpatient surgery and are able to realize more efficiencies with indirect costs. Indirect costs also had less impact on hospital radiology costs relative to physician offices.

We also found that the estimated percentages of direct costs were higher in HOPDs than POs for all 12 APCs (Figure 3.3). The percentage of direct costs in HOPDs was remarkably similar across APCs, despite the use of hospital cost

center-specific data in constructing the estimates. The estimated percentage of direct costs in POs varied much more than in HOPDs, ranging from a high of 63% for APC 305 (Level II Therapeutic Radiation Treatment Preparation) to a low of 35% for APC 143 (Lower GI Endoscopy) and APC 22 (Level IV Excision/Biopsy).

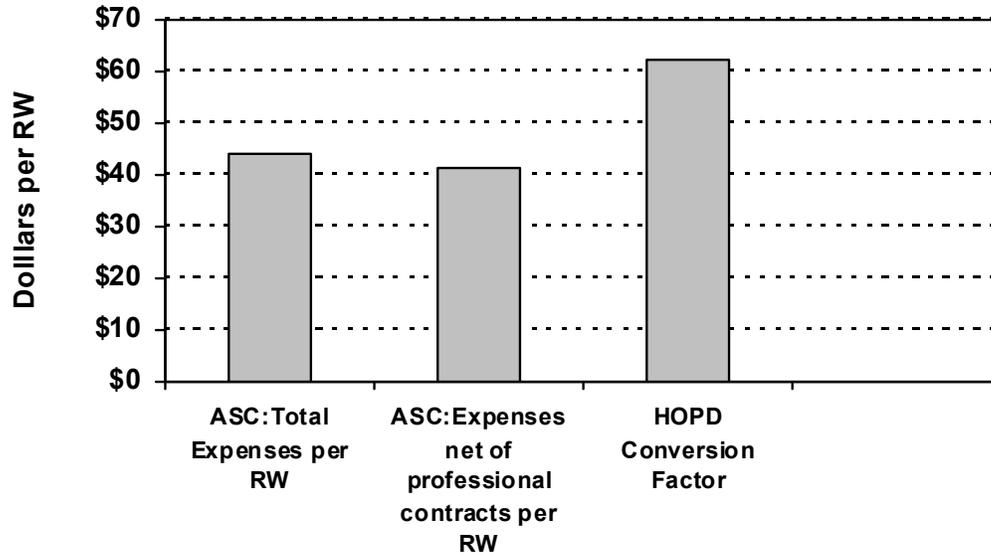
Figure 3.3
Direct Costs as a Percentage of Total Costs for Selected Procedures in Physician Offices and Hospital Outpatient Departments



PROCEDURE COSTS IN AMBULATORY SURGICAL CENTERS COMPARED TO HOSPITAL OUTPATIENT DEPARTMENTS

We found that the average expense per RW in 2005 was \$41 net of expenses for professional contracts and \$44 based on total expenses. In the same year, the conversion factor used for HOPD payment under OPSS adjusted to estimated cost was \$62. Using this estimate, California ASCs costs were 66-71% of estimated HOPD costs. In 2008, ASCs are paid at 67% of the HOPD OPSS rate based on the budget neutrality requirements under the new payment system. Multi-specialty California ASCs had higher costs per relative value unit than single-specialty ASCs, but the differences were slight.

Figure 3.3
Estimated Cost per Relative Value Unit in California Ambulatory Surgical
Centers vs. Hospital Outpatient Departments, 2005



These data should be interpreted as preliminary, exploratory findings. The results are for one state and measure compare the overall costliness of services provided to all patients in ASCs with that provided to Medicare patients in HOPDs.

4. POTENTIAL EXPLANATIONS FOR COST DIFFERENTIALS

METHODS

We used a number of strategies to examine four types of factors beyond differences in infrastructure that may lead to the differences in costs (patient clinical characteristics, service content, charity care, and accreditation and regulation). Although definitive, objective data would be optimal to determine the contributions of each of these factors, in most situations such data were unavailable or their use was infeasible for the current study. Therefore, we used an approach that combined analysis of data where possible and supplemented these data with opinions of professionals providing the services selected for further study and a scan of the literature on the topics that were most likely to affect costs.

Clinical Specialty Society Professional Interviews

The four factors described above naturally aggregate into two groups, clinical and administrative. Engaging clinical (medical) specialty societies provided insights primarily, although not exclusively, into potential differences in patient characteristics and service content. We engaged in discussions with specialty societies whose members provide the study procedures¹¹:

- American College of Cardiology
- American Academy of Orthopaedic Surgeons
- American Gastroenterological Association
- American Academy of Ophthalmology
- American Society of Cataract and Refractive Surgery
- American Society of Anesthesiologists
- American College of Radiology
- American College of Radiation Oncology

The physicians interviewed had experience in multiple practice settings, offering insight into potential differences in patient mix, complexity and content of the services provided. Questions regarded their analysis of the differences in reimbursement by location, potential reasons for those

¹¹ We were unsuccessful in obtaining insights particular to the dermatology procedures in APC 20 and 22.

differences, and specific suggestions regarding strategies to better understand the extent to which the differences reflect practice differences or simply represent artifacts resulting from different evolution of the payment schemes. We provided each group with specialty-specific CPT procedure codes and data on service volume and payment rates in multiple settings. We asked whether within any code patients are likely to be relatively homogeneous or, if not, the reasons and clinical situations why there would be differences. For those individuals that participated in the discussion who have managerial oversight responsibilities within their practice settings, we probed in greater depth about the administrative and regulatory burdens associated with their practices.

Our interviews were conducted in the Fall of 2007 after the proposed rules revising Medicare payment policies were issued but before the changes were finalized and implemented effective January 1, 2008.

RESULTS OF THE INTERVIEWS AND LITERATURE REVIEW

Patient Clinical Differences

Themes from Literature

Several previous studies suggest that patients with higher average risk for complications are treated more often in HOPDs than in ASCs and POs (discussed in more detail below). All three settings are expected to treat "routine" patients, but patients with higher level of risk might be more likely to be referred to HOPDs from the non-hospital venues. The HOPD patient mix is a hybrid of patients who usually seek their ongoing routine care from the HOPD and patients referred to an HOPD by POs or ASCs because of their (presumed) increased complexity.

Several studies have compared the health status of patients treated across ambulatory settings using claims data. One rationale for the studies is that lower-risk patients might be less expensive to treat, so that systematic differences in patient characteristics between settings could justify payment differentials. These studies characterized patients treated in each setting following two basic approaches: (1) identifying patient risk factors, and (2) identifying complications or adverse events following treatment.

Winter (2003) measured patient risk using Medicare claims data and Hierarchical Condition Categories (HCCs), a risk adjustment score used in Medicare Advantage capitated payments. The rate of complications/adverse

events associated with a procedure was not measured. The analysis showed that patients treated in HOPDs had higher average HCCs than those treated in ASCs for ten procedures commonly performed in both settings. The author concluded that services provided in ASCs were likely to cost less than those provided in HOPDs in part because of lower patient complexity.

Wynn et al. (2004) used Medicare claims data to measure risk factors and adverse events for three procedures: cataract surgery, colonoscopy, and MRI of the head/neck/brain. The authors first conducted a literature review to identify measures that could be used to compare the nature of the services and outcomes between ambulatory settings. They convened expert panels of physicians to rate which measures identified in the literature review would be most appropriate for investigating differences in patients and outcomes by setting for each study procedure, and then constructed the measures using Medicare claims data. For the three procedures, the expert panels generally did not believe that patient characteristics such as comorbidities should affect the appropriateness of one setting over another. The analysis of Medicare claims data indicated that for colonoscopy and cataract surgery, a larger share of patients treated in hospital outpatient departments tended to have hypertension and/or diabetes, comorbidities that had been identified as risk factors. For all three procedures, patients treated in HOPDs had higher HCC risk scores than patients treated in other settings, indicating that they might be more medically complex.

In a follow-up study, Sloss et al. (2006) conducted further analysis of data on the same three procedures, incorporating risk adjustment. The authors used clinical expert opinion to identify both general medical conditions and procedure-specific conditions that were likely to increase the cost of performing the procedure.¹² Analysis of Medicare claims data found that the incidence of most patient conditions that might increase the cost of performing one of the three procedures were very low in all settings; the vast majority of conditions were present in fewer than ten percent of patients. Looking across all three services and settings, no single setting had

¹² For example, 22 conditions were examined for cataract surgery, including general medical conditions such as age over 85 years, dementia, acute episode of COPD, prescription drug dependence, alcohol abuse, schizophrenia and tremor, and ophthalmologic conditions such as pseudoexfoliation of lens capsule, progressive high myopia, dislocation of lens, and posterior synechiae.

consistently higher incidence of conditions that might increase the cost of the procedure. Two statistical differences were found: HOPD patients had significantly higher incidence of cost-increasing conditions than ASC patients for cataract surgery and colonoscopy, but patients treated for MRI of the head, neck, and brain in POs and independent diagnostic testing facilities had higher rates of certain cost-increasing conditions than those treated in HOPDs. Risk-adjusted rates of adverse outcomes following the three procedures were very low in all settings, and the magnitudes of significant differences among settings were quite small.

Several other studies have focused on the rate of complications and adverse events in different settings. Fleischer et al. (2004) used Medicare claims to examine mortality and inpatient admission after 16 surgical procedures commonly performed in ASCs, HOPDs, and POs. The authors found that risk-adjusted rates of mortality and inpatient admission were highest following procedures performed in HOPDs. Procedures performed in ASCs were least likely to result in these adverse events: the rate of risk-adjusted mortality and admission within seven days of the procedure was higher in POs than in ASCs. The authors concluded that the differences were reflective of selection of HOPDs by physicians for riskier patients, and that risk-adjustment using claims data did not adequately control for these differences. The metrics used also cannot determine the extent of differences in the quality of care delivered.

Themes from Interviews

Interview participants largely agreed that referrals are primarily driven by payers rather than patient acuity. The interviewees believe that, for the conditions examined, the majority of patients can be served safely and adequately in all three settings, especially with the recent technological advancements that have allowed procedures to move out of the hospital. The interviewees suggested that payers influence referral patterns in two ways. First, some private payers contract with hospitals for an entire service package including ambulatory surgery and do not cover surgical services provided in ASCs. Second, physicians/ASCs risk losing money on more intensive patients when they perform the surgery outside the hospital setting because of the lower payment rates in these settings. As a result, they may refer more resource-intensive patients to the HOPD. For instance, the interviewees suggested that some patients may require additional supplies, medication,

implants, or other ancillary services that in their view would not be sufficiently reimbursed by the ASC or PO payment. Examples of patients that are more likely to be referred to the HOPD included cancer patients with chronic pain, patients receiving pharmacologically-induced stress tests, and those likely to require multiple hardware implants during shoulder arthroscopy. As one physician elucidated, "practices would perform the procedures in the safest and most convenient location unless the facility payments received were insufficient to cover the cost of the service or insurance requirements mandated physicians to redirect."

Regardless of what factors influence referrals, the respondents almost unanimously agreed that most patient differences affecting the cost of the study procedures among the settings are insignificant. Sick patients are a very small percentage of the total patient population for ambulatory services. Additionally, our study surgical procedures were elective procedures that very sick patients are unlikely to undergo in the first place, or would at least delay surgery until underlying conditions were addressed.

Surgery settings are also largely determined by availability. Some geographical regions have few or no ASCs, thereby increasing the percentage of procedures performed in HOPDs.

The respondents furthermore believe that patients would prefer to undergo surgery in an ASC or PO over an HOPD, "because of the speed with which they receive service, greater comfort, and less bureaucracy."

Clinical Content Differences

Another potential justification for payment differentials is a difference in how procedures are performed in the three different settings. Once again we turned to previous research as well as interviews with members of professional societies to examine this possibility. We found consensus that clinical service content does not noticeably vary across settings, but ASCs are more efficient than HOPDs, due to their ability to specialize in certain procedures.

Themes from Literature

The resource cost studies conducted by the Center for Health Policy Studies (Miller et al., 1990; Miller et al., 1995) found that HOPDs and ASCs used similar staff and supplies for surgical procedures. The researchers found no substantial differences in nursing salaries or fringe benefits and

concluded that there were no reasons why costs would vary systematically since the actual procedures are performed similarly in both settings. With respect to physician offices, the small sample size did not provide sufficient confidence levels to support conclusions for most procedures. However, lower costs were consistently tied to the use of fewer and often lower salaried staff to perform supportive services. Physicians also have less equipment and overhead costs. Surgical procedures performed in a physician's office (such as excision) were more costly when performed in an ASC or HOPD. The researchers attributed the higher costs in non-physician office settings to differences in care patterns, such as two nurses in the operating room and facility protocols for post-operative care prior to discharge.

Using data from the Center for Studying Health System Change's Community Tracking Study as well as expert interviews, Casalino, Devers and Brewster (2003) concluded that ASCs increase productivity, decrease costs, and improve overall quality. While the procedures are similar in each setting, ASCs have more specialized staff and quicker turnaround time than HOPDs, allowing them to serve as "focused factories".

Themes from Interviews

The members of the specialty societies we interviewed echoed the findings of Casalino's team. They indicated that the staff and resources needed for the study procedures are the same in all three settings and reiterated that the main situation in which they would prefer an HOPD over an ASC is one where the patient required additional resources that would not be captured in the ASC reimbursement rate.

The interviewees noted that with respect to most services, ASCs develop economies of scale by having staff dedicated to a certain set of operations, and materials in closer proximity than HOPDs, which have generalist staff and larger facilities. One potential area where an ASC/PO might be disadvantaged is with respect to procedures such as fluoroscopic guidance where a dedicated technician in those settings may not be as productively utilized as a hospital technician that serves a larger patient population with more diverse clinical conditions.

Charity Care

Another potential justification for payment differentials that we investigated was charity care. Because of safety net laws pertaining to

hospitals, we expected that HOPDs would deliver more uncompensated services. To confirm this assumption we looked at existing literature, spoke to the major specialty societies, and observed national data as well as state statistics from California and Pennsylvania.

Themes from Literature

Hospitals - particularly public hospitals, academic medical centers, and other mission-based hospitals - are likely to have higher numbers of medically underserved patients with either Medicaid or no insurance. The Emergency Medical Treatment and Active Labor Act requires acute care hospitals offering emergency medical services to provide emergency medical treatment to all patients, including the uninsured and underinsured. After being stabilized, an uninsured or underinsured patient requiring additional care may be transferred to another care facility (e.g., a public hospital) provided that needed services are available. With increased demand for public services and limited funding to provide that care, hospitals and their emergency departments are finding transfer for definitive care to be increasingly difficult.

HOPDs, therefore, are expected to provide more safety net services to medically underserved populations than ASCs or POs. In addition to being a financial risk, these patients may also bring more comorbidities and management complications to the HOPD. For these hospitals, higher payment for HOPD vs. ASC or PO services represents in part necessary cost-shifting to support uncompensated or undercompensated care. ASCs and POs, by selectively treating well-insured, more-profitable patients, could cause a decrease in profitable volume in HOPDs and thereby limit the extent to which hospitals are able to cost shift between payers. Hospitals are also compensated for safety net services in several other ways, including non-profit tax status, disproportionate share payments, and state and local indigent care pools in some states. Approximately 1100 teaching hospitals in the U.S. also receive indirect medical education (IME) payments for inpatient care that arguably supports charity care as well as teaching activities. However, the amount of safety net care and support through the IME mechanism varies widely between hospitals.

Hospitals are concerned about the cost implications of patient selection by physicians with a financial relationship to an ASC. The concern is that physicians will selectively refer less complicated, profitable patients to an ASC in which they have an ownership interest (AHA, 2006). ASCs are exempt

from the federal self-referral prohibition (the "Stark law") against physicians making a referral to an entity with which they have a financial relationship for designated health services for which Medicare or Medicaid would otherwise pay and are also a "safe harbor" under the federal Anti-Kickback Statute (FASA website). Several states have considered (but not passed) laws designed to limit physician self-referral to ASCs. Gabel and colleagues (2008) recently found that physicians are more likely to send well insured patients to ASCs and Medicaid patients to HOPDs.

There is little information available from previous studies on the extent to which HOPDs treat charity care or Medicaid patients compared to ASCs or POs. Based on an analysis of MGMA survey data, the AHA reported that 3.5% of ASC patients were on Medicaid and 0.3% were given charity care (AHA, 2006). In comparison, the AHA reports that Medicaid represents 14.6% of hospitals' revenue (inpatient and outpatient). Charity care is often provided in POs. In 1996, 86% of ambulatory visits by uninsured participants in the Medical Expenditure Panel Survey were to POs, compared to 8% to HOPDs and 6% to emergency rooms.

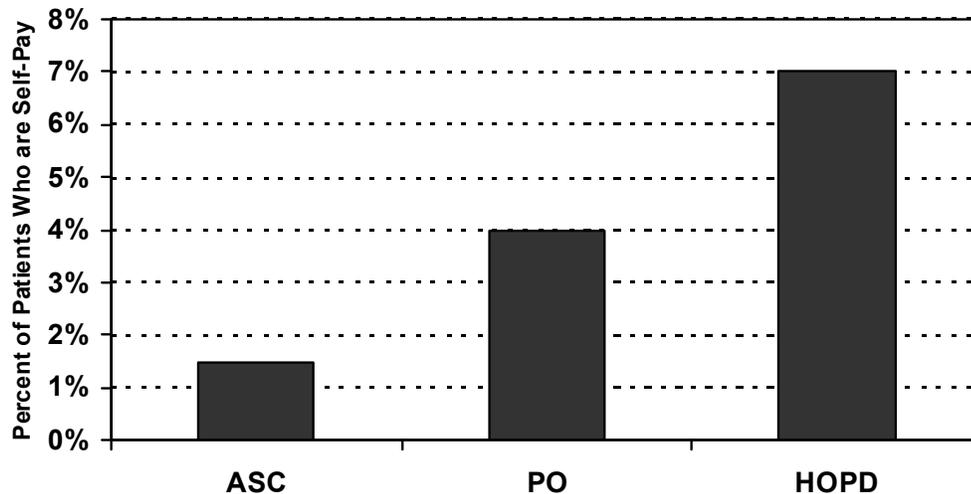
Themes from Interviews

In terms of charity care, our respondents acknowledged that HOPDs are more likely to bear the brunt of uncompensated care. However, they maintained that such cases are a small percentage of total procedures performed. Further, they noted that some states require a certain amount of charity care on the part of ASCs, or prohibit financial discrimination in accepting patients as a condition of licensure or certificate of need.

Findings from Data

The National Ambulatory Medical Care Survey, the National Hospital Ambulatory Medical Care Survey and the California and Pennsylvania data all indicate that HOPDs have more "self pay" patients, and provide more uncompensated care. Figure 5.1 compares the findings from the surveys and our analysis of the CA ASC data.

Figure 4.1
Percent of Patients Who are Self-Pay in Ambulatory Surgical centers, Physician Offices, and Hospital Outpatient Departments



Regulation and Accreditation

Because hospitals have more comprehensive regulations guiding their practice, we looked to Medicare conditions of participation, state licensure requirements, accreditation criteria and certificate of need laws affecting services provided in HOPDs, ASCs, and POs to explore potential reasons for cost differentials.

Themes from Literature

State Licensure Requirements

All states require hospitals to be licensed, whereas only 43 states require the same of ASCs. State licensure requirements for ASCs vary in the extent to which they are comparable to Medicare requirements. Only seven states enforce regulations for physician offices that perform outpatient surgery (AHA, 2006; Hochstadt, 2003). New York recently enacted a law that requires effective July 2009 that office-based surgery and other invasive procedures requiring moderate sedation, deep sedation, or general anesthesia, and certain liposuction procedures be performed in a setting that has obtained and maintained accreditation from an entity approved by the state Health Commissioner (NY website). The state has recognized three organizations- Accreditation Association for Ambulatory Health Care (AAAHC), American

Association for Accreditation of Ambulatory Surgery Facilities (AAAASF), and The Joint Commission (TJC) - as accreditation entities for office-based surgery. The law also mandates reporting of adverse events.

Medicare Participation Requirements

Medicare participating hospitals and ASCs must meet any applicable state licensing requirements and either meet additional Medicare standards or be accredited by an organization that CMS has determined has standards that meet Medicare requirements.¹³

Medicare's requirements regarding governing bodies, qualifications for staff, physical examination of patients, anesthesia administration, fire safety, lighting, medical services, radiology and laboratory services are similar for hospitals and ASCs (to the extent they provide the relevant services). However, in other areas, requirements for hospitals and ASCs differ significantly, largely because of the hospital's broader mission to provide inpatient care. Patient discharge plans are more complicated in the hospital, where a social worker must create a care plan. Hospitals must have an organized medical staff, as well as utilization review, requirements that do not apply to ASCs. Hospitals are obligated to maintain a facility-wide quality assurance program with written plans of implementation, whereas ASCs only have to conduct informal self-assessments. Hospitals have stricter guidelines regarding patient's rights, such as informed consent, as well as a grievance process. In terms of infection control, both ASCs and HOPDs are required to provide a "sanitary environment", but only hospitals must have an infection control officer. Hospitals also have more stringent standards in terms of drug administration and pharmaceutical services than ASCs. Additionally, hospitals must have radiological and food services available, which are not requirements for ASCs.

Regarding emergency equipment, however, an ASC has arguably a greater burden relative to the burden borne by an HOPD (as opposed to the overall hospital burden). The ASC must purchase and possess items such as cardiac defibrillators and tracheostomy sets for itself. Unlike the ASC, hospital operating suites need not have dedicated equipment, but rather can share

¹³ Approximately 85 percent of ASCs are Medicare approved. We assume that some of the study procedures performed on Medicare patients in physician offices that are typically done in a facility setting such as cataract surgery and arthroscopy are performed in ASCs that have chosen not to participate in Medicare but which may be licensed or accredited.

equipment already present at the hospital for inpatient care. Additionally, an ASC must have a written transfer agreement with a local, Medicare participating hospital or all the physicians operating at the ASC must have a formal arrangement to transfer patients to such a hospital.

Table 4.1 lists the differences between the hospital conditions of participation and ASC conditions for coverage specific to surgical services. The hospital conditions apply to ambulatory surgery provided in both operating suites that are integrated with inpatient surgery and to dedicated ambulatory surgery units that may be housed on the main campus of the hospital or are owned and operated by the hospital in a different location.

**Table 4.1
Surgical Service Requirements in Hospital Conditions of Participation and for
Conditions for Coverage of ASCs**

| Surgical Services | Hospital Conditions of Participation | ASC Conditions for Coverage |
|--------------------------|--|--|
| Supervision | Operating room must be supervised by a doctor of medicine or osteopathy, or a an experienced registered nurse | N/A |
| Patient Records | Must have complete history and physical prior to surgery | N/A |
| Informed Consent | Must have informed consent prior to surgery | No specific requirement but may be required by state law |
| Equipment | Emergency call system, cardiac monitor, resuscitator, defibrillator, aspirator and tracheostomy set must be available to operating room suites | Emergency call system, oxygen, ventilator, cardiac defibrillator, cardiac monitor, tracheostomy, laryngoscopes and endotracheal tubes, suction equipment |
| Post-operative care | Must have "adequate provisions for immediate post-operative care" | Patients must be discharged in the company of responsible adult |

CMS (2007) has issued a proposed rule to alter ASC Conditions for Coverage that would bring the ASC requirements closer to hospital standards. The proposed changes include implementing a stricter quality assurance performance improvement requirement, establishing patients' rights provisions, and designating an infection control officer in all ASCs. If implemented, these changes would narrow the differences between the participation requirements for hospitals and ASCs

Medicare does not have standards other than state licensure that must be met by POs. However, there are requirements for IDTFs that primarily provide diagnostic testing. An IDTF must have at least one supervising physician who is responsible for the direct and ongoing oversight of the quality of the testing performed, the proper operation and calibration of equipment used to perform tests, and the qualifications of non-physician IDTF personnel who use the equipment. The supervising physician must evidence proficiency in the performance and interpretation of each type of diagnostic procedure performed by the IDTF. Each non-physician (often referred to as a technician or technologist) who performs the diagnostic tests must be state licensed or certified by a recognized national credentialing body. All technicians must meet the standard of a state license or certification or a national credentialing body. With respect to services requiring direct physician supervision, such as the procedures assigned to APC 337 (MRI and MRA without Contrast followed by Contrast), a physician must be physically on the IDTF premises and in the suite of offices where the tests are being performed. In the office setting, the physician must be present in the office suite and immediately available ('within earshot').

Accreditation

Hospitals accredited through The Joint Commission (TJC) or the American Osteopathic Association are deemed to comply with Medicare Conditions of Participation. Three organizations - AAAASF, AAHC, or TJC- have deemed status accreditation processes for ASCs. These organizations also accredit other ambulatory surgical centers that do not elect to become Medicare certified (such as plastic surgery centers that perform few Medicare-covered services). As with the state laws regarding licensure, requirements for ASCs vary among the competing accrediting organizations.

Certificate of Need

Certificate-of-Need (CON) laws require hospitals and in some states, non-hospital entities to demonstrate that new or expanded services or facilities would meet an unmet need. The intent is to control health care costs through coordinated planning, but some argue that the laws restrain price competition. Currently 37 states have CON laws for hospitals and many regulate non-hospital services as well. With respect to the study procedures, the number of states with relevant CON laws (NCSL website) are:

- ASCs, 28 states;
- MRI, 21 states;

- Cardiac catheterization, 26 states;
- Radiation therapy, 25 states.

There has been renewed attention to CON laws with the growth of ASCs and IDTFs. Not surprisingly, the proliferation rates are higher for these facilities in states that do not have CON.

Themes from Interviews

The interview respondents noted the higher overall regulatory burden for hospitals but did not share a common agreement on how this might impact the cost of the study procedures. They also noted the increased attention given to accreditation of both ASCs and physician offices as well as the likely impact of the proposed revisions in the Medicare ASC conditions for coverage, both of which are likely to reduce the differences in regulatory burden with respect to the study procedures.

Some interviewees contended that in some respects non-hospital settings actually have a greater burden in meeting regulatory requirements. For instance, the physician supervision requirements are more burdensome for an IDTF than a hospital or PO. Furthermore, while the hospital participation (accreditation) processes are more burdensome, the costs are allocated to all service lines whereas all the costs are allocated solely to the surgical procedures in an ASC.

5. SUMMARY AND DISCUSSION

SUMMARY OF FINDINGS

Payment differentials have been largely standardized between HOPDs and ASCs with the implementation of the 2008 payment policy changes. However, the size of the differentials still vary for some procedures because ASC services that are commonly performed in POs are paid at the PO rate, which is usually much lower than the OPPS rate. The payment differential between HOPDs and ASCs will also change over time due to different conversion factor update methods and separate budget-neutrality adjustments for recalibration of the relative weights. Payment rates for similar services vary widely between HOPD/ASCs and POs, with the size of the differential varying by service. Measuring these differentials, however, is problematic because of differences in packaging policies.

Private payer payment differentials are generally smaller than the Medicare payment differentials. There are also differences in the distribution of some of the study procedures across settings, with a higher percentage of non-Medicare patients receiving services in the PO setting and a lower percentage receiving services in the ASC setting.

Measurement of costs is extremely hampered by available data sources. As a result, it is difficult to determine how well Medicare payment rates reflect the actual costs of services. Using the current fee schedule cost finding methods to compare HOPD and PO costs at the procedure-level, cost differentials between settings are also large, although typically smaller than the payment differentials. Payment differentials are higher than cost differentials largely because of budget neutrality provisions. Using California ASC data to compare overall differences in HOPD and ASC costs, the overall payment differential between these providers appears roughly comparable to the cost differentials.

Our interviews and literature review found several differences between settings that may justify some of the observed cost and payment differentials. Patient comorbidity is seldom the primary reason for referral to HOPDs; patients receiving the study procedures are typically at low risk for adverse outcomes in all settings. However, patients requiring more resource-intensive

services (e.g., additional equipment or medications) may be referred more frequently to the HOPD because the payment rate is perceived to be insufficient to cover the costs of providing care in the ASC/PO setting. With the expansion of the ASC list of covered procedures and the payment policy changes, no conclusions are possible at this time regarding whether the mix of procedures covered by an APC payment will be comparable between the two settings.

The physicians that we interviewed expressed a strong preference of the efficiency of ASCs relative to HOPDs, due to newer physical plants, shorter patient turnover time, dedicated resources in close proximity, as well as differences in "culture" that can promote slowness and inefficiency in the HOPD. The regulatory burden is much lower in POs than ASCs or especially HOPDs. However, HOPDs may benefit from being able to spread costs across more service lines. HOPDs also provide more charity care than ASCs and POs.

There are several important limitations that should be considered when interpreting these results. The payment and cost differentials do not reflect differences in the units of service between settings that arise due to differences in packaging and bundling rules. The cost estimates were based on available data, using different data sources and methods for each setting. The interviews were conducted with a limited number of clinical experts and may reflect their unique perspectives.

DISCUSSION

In the sections that follow, we first provide an overview of different approaches that could be used by Medicare to pay for ambulatory services in multiple settings, and then discuss specific policy changes which might be considered.

Approaches to Medicare Payment for Ambulatory Services in Multiple Settings

One approach to Medicare payment is to base payment rates on the costs of providing the procedure in each setting. This approach assumes that the cost differences between settings are due to factors that are of value to the Medicare program and should be compensated. This is, in principle, the basis of the current Medicare payment policy for ambulatory services (Winter, 2003). The relative payment rates for services in each payment system are based on estimates of service costs in each setting. Yet, the distinctions between the settings and the nature of the services that they provide are blurred. Many

hospitals have established ambulatory care centers that operate separately from the inpatient product lines and resemble community-based ambulatory care settings. ASCs range from large multi-specialty centers providing a range of surgical procedures similar to those provided to hospital outpatients to single-specialty centers that more closely resemble a physician office. Further, as our study illustrates, different methods are used to estimate costs in each setting, and many of the cost data and methods used in these estimates are limited. Better measurement of resource costs would enable the elimination of profit differentials between care settings, where they exist.

The policy question is the extent to which the cost differences between settings are due to factors that are of value to the Medicare program and should be compensated. The difficulty in answering this question is judging which cost differences (for each type of service) are "justified" differences related to patient mix, service, content, etc. that should be reimbursed, rather than "inefficiencies" or other unjustified costs that should not. An alternative would be to base payment rates on costs in the least expensive setting (Winter, 2003). Under this type of system, after controlling for patient risk factors, service content, etc. - either by selecting services without meaningful differences, or by adjusting payments to reflect these factors - payment levels would be set in relation to the cost of providing the services in the most efficient setting. For example, Medicare caps payments to ASCs for procedures that are commonly provided in POs at the PO payment rate. The underlying assumption is that services that are commonly provided in POs are effectively delivered there, and that there is no justification for additional costs related to providing these services in ASCs. This encourages ASCs that are more costly than POs to either improve their efficiency or not provide the service.

Delivery of outpatient care within a hospital infrastructure that is designed and maintained for inpatient care has both cost and payment implications. What may seem like "inefficiencies" when compared to service delivery in community-based settings may be an unavoidable consequence of the joint production of inpatient and outpatient care to a broader mix of patient. Furnishing HOPD services that can also be provided in a less costly setting helps cover the fixed costs of providing services that are most appropriately provided in a hospital setting. Serving a broader patient population generates inefficiencies on one hand for particular services, but also has the potential

to spread fixed costs over more services and to use the hospital's equipment and facilities more productively on the other. Shifting services to non-hospital settings would raise the cost of these "hospital-only" services. Paying based on a "least costly setting" approach would mean that hospitals would have less ability to cross-subsidize more costly "hospital only" services. Under either scenario, the underlying issue is the extent to which general outpatient care should subsidize the cost of specialized care and standby services appropriately provided only in a hospital setting.

Despite the study limitations, our findings suggest that payment differentials between settings are large and variable among procedures to an extent that do not appear justified by factors we examined. What policies could be used to establish payment differences consistent with "value-based" purchasing concepts? There is no obvious answer to this question. Indeed, the question raises several major policy issues:

- Medicare is paying more for services provided in HOPDs that could be appropriately provided in less resource-intensive settings. As a prudent buyer, when is it appropriate for Medicare pay more than the amount applicable to the "least costly" setting for comparable services?
- Policies that "level the playing field" across ambulatory settings could either decrease payments to HOPDs and/or increase payments to ASCs and POs. Under either approach, services are likely to shift to non-hospital settings and hospitals will face lower revenues for HOPD services that can be appropriately provided in other settings. What is likely to occur if hospitals lose their ability to cross-subsidize services that can only be provided in the hospital setting?
- While the differentials for particular services vary widely, they are an integral part of different payment systems for HOPD/ASC services on one hand and PO services on the other. Is it appropriate to deviate from site-specific fee schedules for particular services?

Addressing ASC/HOPD Payment Differentials

Payment differentials between ASCs and HOPDs have largely been standardized in 2008 but will begin to diverge because of differences in the update policies. There are several "tweaks" to the existing policy that could help to make the payment differentials between the two settings consistent with costs and maintain the relationship in the future.

- **Determine ASC conversion factor based on cost.** The ASC conversion factor was set at 67% of the OPDS conversion factor in order to be budget neutral with estimated ASC payments under the prior system. If the payment levels differ widely from actual ASC costs, it could lead to distortions in where services are provided. The availability of national data on ASC costs has limited comparisons of HOPD and ASC costs in the past. Our exploratory analyses using the California ASC data could be expanded to other state databases that contain both utilization and financial data. While this approach does not account for differences in the costs of specific procedures, it does provide a measure of differences in overall cost levels between the two settings.

- **Same update factor for ASC/HOPD.** Since ASCs and HOPDs will use different methods for updating the conversion factor, the payment differential (currently set at 67% on a budget-neutrality basis) will change over time in unpredictable ways. A legislative changes to allow the same update factor would eliminate this source of variability in payment differentials between the two settings.
- **Maintain same OPSS/ASC relative weights over time.** The relative weights for OPSS procedures will be updated annually on a budget-neutral basis separately for HOPDs and ASCs. The result will be differences in APC relative weights between ASCs and HOPDs. Harmonizing the budget neutrality calculation for recalibration into a single calculation or making the ASC budget neutrality adjustment to the conversion factor rather than the relative weights will preserve a consistent relationship between HOPD and ASC relative weights.

Addressing PO/HOPD Payment Differentials

Payment differentials between POs and HOPDs are products of two different rate-setting approaches and are larger than between ASCs and HOPDs, so that addressing them would require more substantial policy changes. There are several potential ways that PO/HOPD payments could be made more consistent.

- **Same bundling policies for PO as other settings.** There are substantial differences in the bundling of services between settings. These differences increased in 2008 when additional services were bundled into the OPSS payments, making the actual differentials less transparent. A first step toward more consistent payments would be to apply the HOPD bundling rules to the PO setting to the extent practical. This may not be practical for two separate procedures involving two different physicians during the same encounter but could be feasible for items and supplies that are billed by the physician providing the service in a PO, such as contrast media and drugs below the OPSS cost threshold for separate payment.
- **Consistent policies for multiple procedure discounting.** Policies for multiple procedure discounting for surgical procedures apply to both settings, but discounting for imaging services applies only to services provided in the PO/IDTF. The rationale for discounting is equally applicable to imaging services provided in the HOPD setting.
- **Consider ways to level payments for commonly performed PO services.** The payment differential between HOPDs and POs could be standardized for appropriate procedures, similar to how HOPD/ASC differentials were standardized. There are several ways this could be implemented:
 - **Blended rate (pre-OPSS policy for HOPDs).** HOPDs and POs could each be paid a blended rate of the OPSS and physician fee schedule payment amounts for services commonly performed in both settings. The blend could differ by setting (so that it would reduce the differential but retain higher payments for HOPD services) or the same payment could apply to both settings.

- **Payment Cap.** HOPD payment rates could be capped at a percentage of PO PE payment rates for services that could appropriately be performed in either setting and are not likely to vary in clinical content across settings. The cap could recognize that relatively higher cost structure of HOPDs (e.g., 150 percent of the amount payable for services performed in the PO) and would retain the underlying structure of the OPPS for services unaffected by the cap.

AREAS FOR ADDITIONAL RESEARCH

This exploratory study was performed using available data and a small set of study procedures chosen in part to maximize comparability. The interpretation of the results on payment and cost differentials is limited by differences in the comparability of services and methods between settings and by lack of a measure of efficient costs. The generalizability of the results is limited by the sample of study procedures. Further research could address these issues.

- **Comparability of services across settings.** Analysis of administrative data for services provided in physician offices and other non-facility settings would inform the extent to which services that are bundled in the HOPD/ASC settings are separately paid in POs. This information is needed to fully understand the payment differentials between the settings. Analysis of 2008 or later utilization data would provide information on differences in the distribution of procedures within APCs between ASCs and HOPDs and whether there are differences in procedure mix between the two settings after the ASC policy changes are implemented. Because the billing instructions do not require coding of bundled procedures, it is unlikely that administrative data will be usable to examine whether ASCs are steering more expensive patients to HOPDs for a given procedure.
- **Comparability of costs across settings.** APC relative weights are currently set using cost estimates derived from claims data and hospital cost reports. Physician fee schedule relative values are set using direct cost estimates from physician expert groups and indirect cost estimates from specialty surveys. Both methods have shortcomings and were criticized in our interviews. The APC weight-setting process is viewed as inaccurate because of limitations in the cost report and claims data. It is also not very transparent because the calculations leading to the costs are complicated and hard to follow. The variation in cost estimates for procedures between hospitals is very large. On the other hand, the physician expert input method used in PE relative value-setting process was criticized as politically motivated and leading to overestimates of direct costs. However, the estimates are transparent since all of the supplies, equipment, and labor estimated for each procedure are listed in the public domain. The indirect costing methodology was criticized as inaccurate. Comparability of costs across settings could be addressed by conducting resource-based costing studies on selected procedures across all three settings. The findings from the non-Medicare payment analyses could be used to target candidate procedures.
- **Efficiency of care across settings.** While there is general agreement that Medicare should cover the costs of efficiently delivered care, there is no consensus on how to measure efficiency and the extent to which efficiency measures should consider not only cost but quality outcomes (McGlynn, 2008). The issue of whether care is more

efficiently delivered in one ambulatory setting than another could be further addressed by expanding the unit of analysis to the episode of care. Instead of examining only the procedure-level cost differences, an episode analysis would also account for differences in the provision of related services and follow-up care.

- **Generalizability.** Because one criterion in selecting the study procedures was that the procedures were unlikely to vary by patient characteristics and clinical content, our findings are not generalizable to the range of services provided in multiple ambulatory settings. Generalizability could be addressed by extending the analyses to more complex and invasive procedures.

APPENDIX A. PROCEDURE-LEVEL MEDICARE DATA

Table A.1
Volume of Study Procedures in 2006 by Setting

| APC | APC Description | HCPCS | HCPCS Description | Total Service | | | |
|-----|---------------------------|-------|------------------------------|---------------|--------|-------|------|
| | | | | Volume, 2006 | % HOPD | % ASC | % PO |
| 20 | Level II Excision/ Biopsy | 11403 | Exc tr-ext b9+marg 2.1-3 cm | 54,415 | 21% | | 79% |
| 20 | Level II Excision/ Biopsy | 11420 | Exc h-f-nk-sp b9+marg 0.5 < | 36,753 | 14% | | 86% |
| 20 | Level II Excision/ Biopsy | 11421 | Exc h-f-nk-sp b9+marg 0.6-1 | 45,638 | 12% | | 88% |
| 20 | Level II Excision/ Biopsy | 11422 | Exc h-f-nk-sp b9+marg 1.1-2 | 47,960 | 18% | | 82% |
| 20 | Level II Excision/ Biopsy | 11442 | Exc face-mm b9+marg 1.1-2 cm | 54,820 | 17% | | 83% |
| 20 | Level II Excision/ Biopsy | 11603 | Exc tr-ext mlg+marg 2.1-3 cm | 65,535 | 10% | | 90% |
| 20 | Level II Excision/ Biopsy | 11622 | Exc h-f-nk-sp mlg+marg 1.1-2 | 54,600 | 9% | | 91% |
| 20 | Level II Excision/ Biopsy | 11641 | Exc face-mm malig+marg 0.6-1 | 78,643 | 9% | | 91% |
| 20 | Level II Excision/ Biopsy | 11642 | Exc face-mm malig+marg 1.1-2 | 137,174 | 12% | | 88% |
| 20 | Level II Excision/ Biopsy | 11643 | Exc face-mm malig+marg 2.1-3 | 45,438 | 21% | | 79% |
| 22 | Level IV Excision/ Biopsy | 11426 | Exc h-f-nk-sp b9+marg > 4 cm | 6,054 | 52% | 10% | 38% |
| 22 | Level IV Excision/ Biopsy | 11626 | Exc h-f-nk-sp mlg+mar > 4 cm | 7,420 | 49% | 11% | 41% |
| 22 | Level IV Excision/ Biopsy | 11646 | Exc face-mm mlg+marg > 4 cm | 11,242 | 44% | 12% | 44% |
| 22 | Level IV Excision/ Biopsy | 20680 | Removal of support implant | 33,270 | 59% | 28% | 13% |
| 22 | Level IV Excision/ Biopsy | 21555 | Remove lesion, neck/chest | 6,130 | 40% | 26% | 34% |
| 22 | Level IV Excision/ Biopsy | 21930 | Remove lesion, back or flank | 6,930 | 46% | 25% | 30% |
| 41 | Level I Arthroscopy | 29824 | Shoulder arthroscopy/surgery | 34,262 | 76% | 24% | 0% |

| APC | APC Description | HCPCS | HCPCS Description | Total Service | | | |
|-----|--|-------|---|---------------|--------|-------|------|
| | | | | Volume, 2006 | % HOPD | % ASC | % PO |
| 41 | Level I Arthroscopy | 29848 | Wrist endoscopy/surgery | 15,976 | 52% | 48% | 1% |
| 41 | Level I Arthroscopy | 29880 | Knee arthroscopy/surgery | 65,929 | 66% | 33% | 1% |
| 41 | Level I Arthroscopy | 29881 | Knee arthroscopy/surgery | 77,468 | 61% | 39% | 1% |
| 100 | Cardiac Stress Tests | 93015 | Cardiovascular stress test-tracing,s+1 | 2,213,978 | 0% | | 100% |
| 100 | Cardiac Stress Tests | 93017 | Cardiovascular stress test-tracing only | 1,032,357 | 76% | | 24% |
| 143 | Lower GI Endoscopy | 45378 | Diagnostic colonoscopy | 894,544 | 56% | 37% | 6% |
| 143 | Lower GI Endoscopy | 45380 | Colonoscopy and biopsy | 682,706 | 55% | 40% | 5% |
| 143 | Lower GI Endoscopy | 45384 | Lesion remove colonoscopy | 260,495 | 58% | 38% | 4% |
| 143 | Lower GI Endoscopy | 45385 | Lesion removal colonoscopy | 589,461 | 51% | 44% | 6% |
| 158 | Colorectal Cancer Screening: Colonoscopy | G0105 | Colorectal scrn; hi risk ind | 142,193 | 47% | 49% | 4% |
| 158 | Colorectal Cancer Screening: Colonoscopy | G0121 | Colon ca scrn not hi rsk ind | 209,449 | 52% | 43% | 5% |
| 206 | Level II Nerve Injections | 64472 | Inj paravertebral c/t add-on | 204,058 | 13% | 18% | 69% |
| 206 | Level II Nerve Injections | 64476 | Inj paravertebral l/s add-on | 626,395 | 18% | 22% | 61% |
| 206 | Level II Nerve Injections | 64640 | Injection treatment of nerve | 89,292 | 5% | | 95% |
| 206 | Level II Nerve Injections | G0260 | Inj for sacroiliac jt anesth | 99,390 | 67% | 33% | 0% |
| 207 | Level III Nerve Injections | 62310 | Inject spine c/t | 150,096 | 37% | 29% | 35% |
| 207 | Level III Nerve Injections | 62311 | Inject spine l/s (cd) | 935,245 | 41% | 26% | 33% |
| 207 | Level III Nerve Injections | 64475 | Inj paravertebral l/s | 386,240 | 21% | 23% | 56% |
| 207 | Level III Nerve Injections | 64483 | Inj foramen epidural l/s | 456,682 | 27% | 33% | 40% |
| 207 | Level III Nerve Injections | 64484 | Inj foramen epidural add-on | 238,655 | 22% | 31% | 47% |
| 207 | Level III Nerve Injections | 64623 | Destr paravertebral n add-on | 225,727 | 19% | 24% | 57% |
| 246 | Cataract Procedures with IOL Insert | 66984 | Cataract surg w/iol, 1 stage | 1,807,569 | 34% | 62% | 5% |
| 260 | Level I Plain Film Except Teeth | 71010 | Chest x-ray | 3,286,413 | 76% | | 24% |
| 260 | Level I Plain Film Except Teeth | 71020 | Chest x-ray | 9,627,394 | 55% | | 45% |

| APC | APC Description | HCPCS | HCPCS Description | Total Service | | | |
|-----|--|-------|--|---------------|--------|-------|------|
| | | | | Volume, 2006 | % HOPD | % ASC | % PO |
| 280 | Level III Angiography and Venography | 75625 | Contrast x-ray exam of aorta | 75,825 | 92% | | 8% |
| 280 | Level III Angiography and Venography | 75630 | X-ray aorta, leg arteries | 23,329 | 92% | | 8% |
| 280 | Level III Angiography and Venography | 75650 | Artery x-rays, head & neck | 29,428 | 86% | | 14% |
| 280 | Level III Angiography and Venography | 75671 | Artery x-rays, head & neck | 26,364 | 88% | | 12% |
| 280 | Level III Angiography and Venography | 75680 | Artery x-rays, neck | 30,336 | 86% | | 14% |
| 280 | Level III Angiography and Venography | 75685 | Artery x-rays, spine | 20,012 | 84% | | 16% |
| 280 | Level III Angiography and Venography | 75710 | Artery x-rays, arm/leg | 55,743 | 70% | | 30% |
| 280 | Level III Angiography and Venography | 75716 | Artery x-rays, arms/legs | 67,180 | 92% | | 8% |
| 280 | Level III Angiography and Venography | 75724 | Artery x-rays, kidneys | 28,514 | 76% | | 24% |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77280 | Sbrt management | 249,274 | 61% | | 39% |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77300 | Radiation therapy dose plan | 803,076 | 35% | | 65% |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77331 | Special radiation dosimetry | 188,076 | 44% | | 56% |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77336 | Radiation physics consult (non-FAC only) | 1,238,706 | 60% | | 40% |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77290 | Set radiation therapy field | 303,370 | 62% | | 38% |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77315 | Teletx isodose plan complex | 105,572 | 65% | | 35% |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77321 | Special teletx port plan | 25,940 | 62% | | 38% |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77328 | Brachytx isodose plan compl | 28,105 | 62% | | 38% |

| APC | APC Description | HCPCS | HCPCS Description | Total Service | | | |
|-----|--|-------|--|---------------|--------|-------|------|
| | | | | Volume, 2006 | % HOPD | % ASC | % PO |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast | 70553 | Mri brain w/o & w/dye | 792,151 | 53% | | 47% |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast | 72158 | Mri lumbar spine w/o & w/dye | 283,680 | 48% | | 52% |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast | 74183 | Mri abdomen w/o & w/dye | 130,056 | 53% | | 47% |
| 440 | Level V Drug Infusion | 90760 | Intravenous infusion, hydration; initial, up to 1 hour | 277,182 | 0% | | 100% |
| 440 | Level V Drug Infusion | 90765 | Intravenous infusion, for therapy, prophylaxis, or diagnosis (specify substance | 1,332,125 | 0% | | 100% |
| 440 | Level V Drug Infusion | 96521 | Refilling and maintenance of portable pump | 97,471 | 25% | | 75% |
| 440 | Level V Drug Infusion | 96522 | Refilling and maintenance of implantable pump or reservoir for drug delivery, sy | 41,322 | 30% | | 70% |
| 441 | Level VI Drug Infusion | 96413 | Chemo adm, IV infusion; up to 1 hour, single or initial substance/drug | 2,257,492 | 0% | | 100% |
| 441 | Level VI Drug Infusion | 96416 | Chemo adm, IV infusion; initiation of prolonged chemo infusion (more than 8 hour | 133,288 | 14% | | 86% |
| 441 | Level VI Drug Infusion | 96422 | Chemo adm, intra-arterial; infusion technique, up to one hour | 1,409 | 76% | | 24% |
| 441 | Level VI Drug Infusion | 96425 | Chemo adm, intra-arterial; infusion technique, initiation of prolonged infusion | 1,033 | 21% | | 79% |
| 441 | Level VI Drug Infusion | 96440 | Chemotherapy administration into pleural cavity, requiring and including thorace | 53 | 57% | | 43% |
| 441 | Level VI Drug Infusion | 96445 | Chemotherapy administration into peritoneal cavity, requiring and including peri | 1,794 | 36% | | 64% |
| 441 | Level VI Drug Infusion | 96450 | Chemotherapy administration, into CNS (eg, intrathecal), requiring and including | 1,986 | 50% | | 50% |

Table A.2
Medicare Payment Rates for Study Procedures by Setting, 2008

| APC | APC Description | HCCPS | HCCPS Description | OPPS Payment Rate (\$) | PO Payment Rate (\$) | ASC Payment Rate (\$) |
|-----|---------------------------|-------|---|------------------------|----------------------|-----------------------|
| 20 | Level II Excision/ Biopsy | 11403 | Exc tr-ext b9+marg 2.1-3 cm | 553 | 98 | 98 |
| 20 | Level II Excision/ Biopsy | 11420 | Exc h-f-nk-sp b9+marg 0.5 < | 553 | 70 | 70 |
| 20 | Level II Excision/ Biopsy | 11421 | Exc h-f-nk-sp b9+marg 0.6-1 | 553 | 85 | 85 |
| 20 | Level II Excision/ Biopsy | 11422 | Exc h-f-nk-sp b9+marg 1.1-2 | 553 | 93 | 93 |
| 20 | Level II Excision/ Biopsy | 11442 | Exc face-mm b9+marg 1.1-2 cm | 553 | 101 | 101 |
| 20 | Level II Excision/ Biopsy | 11603 | Exc tr-ext mlg+marg 2.1-3 cm | 553 | 154 | 154 |
| 20 | Level II Excision/ Biopsy | 11622 | Exc h-f-nk-sp mlg+marg 1.1-2 | 553 | 149 | 149 |
| 20 | Level II Excision/ Biopsy | 11641 | Exc face-mm malig+marg 0.6-1 | 274 | 139 | 139 |
| 20 | Level II Excision/ Biopsy | 11642 | Exc face-mm malig+marg 1.1-2 | 553 | 154 | 154 |
| 20 | Level II Excision/ Biopsy | 11643 | Exc face-mm malig+marg 2.1-3 | 553 | 163 | 163 |
| 22 | Level IV Excision/ Biopsy | 11426 | Exc h-f-nk-sp b9+marg > 4 cm | 1345 | 137 | 874 |
| 22 | Level IV Excision/ Biopsy | 11626 | Exc h-f-nk-sp mlg+mar > 4 cm | 1345 | 189 | 874 |
| 22 | Level IV Excision/ Biopsy | 11646 | Exc face-mm mlg+marg > 4 cm | 1345 | 225 | 874 |
| 22 | Level IV Excision/ Biopsy | 20680 | Removal of support implant | 1345 | 310 | 874 |
| 22 | Level IV Excision/ Biopsy | 21555 | Remove lesion, neck/chest | 1345 | 221 | 874 |
| 22 | Level IV Excision/ Biopsy | 21930 | Remove lesion, back or flank | 1345 | 230 | 874 |
| 41 | Level I Arthroscopy | 29824 | Shoulder arthroscopy/surgery | 1833 | 249 | 1192 |
| 41 | Level I Arthroscopy | 29848 | Wrist endoscopy/surgery | 1833 | 201 | 1192 |
| 41 | Level I Arthroscopy | 29880 | Knee arthroscopy/surgery | 1833 | 245 | 1192 |
| 41 | Level I Arthroscopy | 29881 | Knee arthroscopy/surgery | 1833 | 234 | 1192 |
| 100 | Cardiac Stress Tests | 93015 | Cardiovascular stress test-tracing,s+1 | NA | 73 | Not Covered |
| 100 | Cardiac Stress Tests | 93017 | Cardiovascular stress test-tracing only | 163 | 59 | Not Covered |
| 143 | Lower GI Endoscopy | 45378 | Diagnostic colonoscopy | 564 | 243 | 366 |
| 143 | Lower GI Endoscopy | 45380 | Colonoscopy and biopsy | 564 | 296 | 366 |
| 143 | Lower GI Endoscopy | 45384 | Lesion remove colonoscopy | 564 | 274 | 366 |
| 143 | Lower GI Endoscopy | 45385 | Lesion removal colonoscopy | 564 | 319 | 366 |

| APC | APC Description | HCPCS | HCPCS Description | OPPS Payment Rate (\$) | PO Payment Rate (\$) | ASC Payment Rate (\$) |
|-----|--|-------|------------------------------|------------------------|----------------------|-----------------------|
| 158 | Colorectal Cancer Screening: Colonoscopy | G0105 | Colorectal scrn; hi risk ind | 500 | 243 | 325 |
| 158 | Colorectal Cancer Screening: Colonoscopy | G0121 | Colon ca scrn not hi rsk ind | 500 | 243 | 325 |
| 206 | Level II Nerve Injections | 64472 | Inj paravertebral c/t add-on | 261 | 46 | 170 |
| 206 | Level II Nerve Injections | 64476 | Inj paravertebral l/s add-on | 148 | 42 | 96 |
| 206 | Level II Nerve Injections | 64640 | Injection treatment of nerve | 449 | 92 | 92 |
| 206 | Level II Nerve Injections | G0260 | Inj for sacroiliac jt anesth | 449 | E | 292 |
| 207 | Level III Nerve Injections | 62310 | Inject spine c/t | 449 | 114 | 292 |
| 207 | Level III Nerve Injections | 62311 | Inject spine l/s (cd) | 449 | 101 | 292 |
| 207 | Level III Nerve Injections | 64475 | Inj paravertebral l/s | 449 | 42 | 292 |
| 207 | Level III Nerve Injections | 64483 | Inj foramen epidural l/s | 449 | 145 | 292 |
| 207 | Level III Nerve Injections | 64484 | Inj foramen epidural add-on | 261 | 62 | 170 |
| 207 | Level III Nerve Injections | 64623 | Destr paravertebral n add-on | 449 | 64 | 292 |
| 246 | Cataract Procedures with IOL Insert | 66984 | Cataract surg w/iol, 1 stage | 1520 | 245 | 988 |
| 260 | Level I Plain Film Except Teeth | 71010 | Chest x-ray | 44 | 14 | Not Covered |
| 260 | Level I Plain Film Except Teeth | 71020 | Chest x-ray | 44 | 19 | Not Covered |
| 280 | Level III Angiography and Venography | 75625 | Contrast x-ray exam of aorta | 1839 | 112 | Not Covered |
| 280 | Level III Angiography and Venography | 75630 | X-ray aorta, leg arteries | 1839 | 116 | Not Covered |
| 280 | Level III Angiography and Venography | 75650 | Artery x-rays, head & neck | 2848 | 112 | Not Covered |
| 280 | Level III Angiography and Venography | 75671 | Artery x-rays, head & neck | 2848 | 170 | Not Covered |
| 280 | Level III Angiography and Venography | 75680 | Artery x-rays, neck | 1839 | 150 | Not Covered |
| 280 | Level III Angiography and Venography | 75685 | Artery x-rays, spine | 1839 | 129 | Not Covered |
| 280 | Level III Angiography and Venography | 75710 | Artery x-rays, arm/leg | 1839 | 134 | Not Covered |
| 280 | Level III Angiography and Venography | 75716 | Artery x-rays, arms/legs | 1839 | 168 | Not Covered |

| APC | APC Description | HCPCS | HCPCS Description | OPPS Payment Rate (\$) | PO Payment Rate (\$) | ASC Payment Rate (\$) |
|-----|--|-------|--|------------------------|----------------------|-----------------------|
| | Venography | | | | | |
| 280 | Level III Angiography and Venography | 75724 | Artery x-rays, kidneys | 1839 | 167 | Not Covered |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77280 | Sbrt management | 99 | 169 | Not Covered |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77300 | Radiation therapy dose plan | 99 | 45 | Not Covered |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77331 | Special radiation dosimetry | 99 | 31 | Not Covered |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77336 | Radiation physics consult (non-FAC only) | 99 | 43 | Not Covered |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77290 | Set radiation therapy field | 250 | 512 | Not Covered |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77315 | Teletx isodose plan complex | 250 | 79 | Not Covered |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77321 | Special teletx port plan | 250 | 58 | Not Covered |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77328 | Brachytx isodose plan compl | 250 | 200 | Not Covered |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast | 70553 | Mri brain w/o & w/dye | 525 | 525 | Not Covered |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast | 72158 | Mri lumbar spine w/o & w/dye | 525 | 525 | Not Covered |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast | 74183 | Mri abdomen w/o & w/dye | 525 | 525 | Not Covered |
| 440 | Level V Drug Infusion | 90760 | Intravenous infusion, hydration; initial, up to 1 hour | 115 | 50 | Not Covered |
| 440 | Level V Drug Infusion | 90765 | Intravenous infusion, for therapy, prophylaxis, or diagnosis (specify substance) | 115 | 62 | Not Covered |
| 440 | Level V Drug Infusion | 96521 | Refilling and maintenance of portable pump | 115 | 120 | Not Covered |
| 440 | Level V Drug Infusion | 96522 | Refilling and maintenance of implantable pump or reservoir for drug delivery, sy | 115 | 106 | Not Covered |

| APC | APC Description | HCPCS | HCPCS Description | OPPS Payment Rate (\$) | PO Payment Rate (\$) | ASC Payment Rate (\$) |
|------------|------------------------|--------------|--|---------------------------------------|-------------------------------------|--------------------------------------|
| 441 | Level VI Drug Infusion | 96413 | Chemo adm, IV infusion; up to 1 hour, single or initial substance/drug | 149 | 139 | Not Covered |
| 441 | Level VI Drug Infusion | 96416 | Chemo adm, IV infusion; initiation of prolonged chemo infusion (more than 8 hour | 149 | 156 | Not Covered |
| 441 | Level VI Drug Infusion | 96422 | Chemo adm, intra-arterial; infusion technique, up to one hour | 149 | 171 | Not Covered |
| 441 | Level VI Drug Infusion | 96425 | Chemo adm, intra-arterial; infusion technique, initiation of prolonged infusion | 149 | 178 | Not Covered |
| 441 | Level VI Drug Infusion | 96440 | Chemotherapy administration into pleural cavity, requiring and including thorace | 149 | 37 | Not Covered |
| 441 | Level VI Drug Infusion | 96445 | Chemotherapy administration into peritoneal cavity, requiring and including peri | 149 | 37 | Not Covered |
| 441 | Level VI Drug Infusion | 96450 | Chemotherapy administration, into CNS (eg, intrathecal), requiring and including | 149 | 32 | Not Covered |

Table A.3
Costs of Study Procedures in HOPDs and POs

| APC | APC Description | HCPCS | HCPCS Description | HOPD Total Cost, 2005 (\$) | HOPD % Direct Cost, 2005 | PO Total Cost, 2008 (\$) | PO % Direct Cost, 2008 |
|-----|---------------------------|-------|---|----------------------------|--------------------------|--------------------------|------------------------|
| 20 | Level II Excision/ Biopsy | 11403 | Exc tr-ext b9+marg 2.1-3 cm | 453 | 61% | 147 | 40% |
| 20 | Level II Excision/ Biopsy | 11420 | Exc h-f-nk-sp b9+marg 0.5 < | 416 | 63% | 105 | 48% |
| 20 | Level II Excision/ Biopsy | 11421 | Exc h-f-nk-sp b9+marg 0.6-1 | 474 | 62% | 128 | 42% |
| 20 | Level II Excision/ Biopsy | 11422 | Exc h-f-nk-sp b9+marg 1.1-2 | 585 | 60% | 140 | 40% |
| 20 | Level II Excision/ Biopsy | 11442 | Exc face-mm b9+marg 1.1-2 cm | 391 | 60% | 153 | 38% |
| 20 | Level II Excision/ Biopsy | 11603 | Exc tr-ext mlg+marg 2.1-3 cm | 384 | 60% | 233 | 34% |
| 20 | Level II Excision/ Biopsy | 11622 | Exc h-f-nk-sp mlg+marg 1.1-2 | 417 | 61% | 224 | 35% |
| 20 | Level II Excision/ Biopsy | 11641 | Exc face-mm malig+marg 0.6-1 | 455 | 61% | 209 | 36% |
| 20 | Level II Excision/ Biopsy | 11642 | Exc face-mm malig+marg 1.1-2 | 577 | 61% | 232 | 34% |
| 20 | Level II Excision/ Biopsy | 11643 | Exc face-mm malig+marg 2.1-3 | 647 | 60% | 246 | 32% |
| 22 | Level IV Excision/ Biopsy | 11426 | Exc h-f-nk-sp b9+marg > 4 cm | 1025 | 61% | 207 | 35% |
| 22 | Level IV Excision/ Biopsy | 11626 | Exc h-f-nk-sp mlg+mar > 4 cm | 814 | 61% | 285 | 34% |
| 22 | Level IV Excision/ Biopsy | 11646 | Exc face-mm mlg+marg > 4 cm | 805 | 61% | 340 | 29% |
| 22 | Level IV Excision/ Biopsy | 20680 | Removal of support implant | 1227 | 63% | 468 | 36% |
| 22 | Level IV Excision/ Biopsy | 21555 | Remove lesion, neck/chest | 904 | 61% | 333 | 40% |
| 22 | Level IV Excision/ Biopsy | 21930 | Remove lesion, back or flank | 915 | 62% | 348 | 39% |
| 41 | Level I Arthroscopy | 29824 | Shoulder arthroscopy/surgery | 2709 | 64% | . | . |
| 41 | Level I Arthroscopy | 29848 | Wrist endoscopy/surgery | 1170 | 65% | . | . |
| 41 | Level I Arthroscopy | 29880 | Knee arthroscopy/surgery | 1746 | 63% | . | . |
| 41 | Level I Arthroscopy | 29881 | Knee arthroscopy/surgery | 1697 | 64% | . | . |
| 100 | Cardiac Stress Tests | 93015 | Cardiovascular stress test-tracing,s+1 | . | . | . | . |
| 100 | Cardiac Stress Tests | 93017 | Cardiovascular stress test-tracing only | 162 | 63% | 89 | 44% |
| 143 | Lower GI Endoscopy | 45378 | Diagnostic colonoscopy | 459 | 63% | 368 | 36% |
| 143 | Lower GI Endoscopy | 45380 | Colonoscopy and biopsy | 553 | 62% | 447 | 35% |

| APC | APC Description | HCPCS | HCPCS Description | HOPD Total Cost, 2005 (\$) | HOPD % Direct Cost, 2005 | PO Total Cost, 2008 (\$) | PO % Direct Cost, 2008 |
|-----|--|-------|------------------------------|----------------------------|--------------------------|--------------------------|------------------------|
| 143 | Lower GI Endoscopy | 45384 | Lesion remove colonoscopy | 556 | 63% | 414 | 35% |
| 143 | Lower GI Endoscopy | 45385 | Lesion removal colonoscopy | 570 | 63% | 482 | 34% |
| 158 | Colorectal Cancer Screening: Colonoscopy | G0105 | Colorectal scrn; hi risk ind | 464 | 63% | 368 | 41% |
| 158 | Colorectal Cancer Screening: Colonoscopy | G0121 | Colon ca scrn not hi rsk ind | 460 | 63% | 368 | 55% |
| 206 | Level II Nerve Injections | 64472 | Inj paravertebral c/t add-on | 416 | 64% | 70 | 51% |
| 206 | Level II Nerve Injections | 64476 | Inj paravertebral l/s add-on | 512 | 61% | 63 | 55% |
| 206 | Level II Nerve Injections | 64640 | Injection treatment of nerve | 392 | 64% | 139 | 43% |
| 206 | Level II Nerve Injections | G0260 | Inj for sacroiliac jt anesth | 370 | 63% | . | . |
| 207 | Level III Nerve Injections | 62310 | Inject spine c/t | 392 | 63% | 173 | 67% |
| 207 | Level III Nerve Injections | 62311 | Inject spine l/s (cd) | 351 | 63% | 153 | 65% |
| 207 | Level III Nerve Injections | 64475 | Inj paravertebral l/s | 439 | 63% | 209 | 60% |
| 207 | Level III Nerve Injections | 64483 | Inj foramen epidural l/s | 435 | 63% | 220 | 56% |
| 207 | Level III Nerve Injections | 64484 | Inj foramen epidural add-on | 422 | 62% | 94 | 54% |
| 207 | Level III Nerve Injections | 64623 | Destr paravertebral n add-on | 516 | 68% | 97 | 60% |
| 246 | Cataract Procedures with IOL Insert | 66984 | Cataract surg w/iol, 1 stage | 1359 | 65% | . | . |
| 260 | Level I Plain Film Except Teeth | 71010 | Chest x-ray | 34 | 63% | 25 | 52% |
| 260 | Level I Plain Film Except Teeth | 71020 | Chest x-ray | 43 | 63% | 33 | 53% |
| 280 | Level III Angiography and Venography | 75625 | Contrast x-ray exam of aorta | 1163 | 66% | 193 | 50% |
| 280 | Level III Angiography and Venography | 75630 | X-ray aorta, leg arteries | 1165 | 65% | 216 | 45% |
| 280 | Level III Angiography and Venography | 75650 | Artery x-rays, head & neck | 1219 | 65% | 203 | 48% |
| 280 | Level III Angiography and Venography | 75671 | Artery x-rays, head & neck | 1359 | 65% | 293 | 47% |
| 280 | Level III Angiography and Venography | 75680 | Artery x-rays, neck | 1100 | 65% | 265 | 47% |

| APC | APC Description | HCPCS | HCPCS Description | HOPD Total Cost, 2005 (\$) | HOPD % Direct Cost, 2005 | PO Total Cost, 2008 (\$) | PO % Direct Cost, 2008 |
|-----|---|-------|--|----------------------------|--------------------------|--------------------------|------------------------|
| 280 | Level III Angiography and Venography | 75685 | Artery x-rays, spine | 1234 | 67% | 224 | 48% |
| 280 | Level III Angiography and Venography | 75710 | Artery x-rays, arm/leg | 1215 | 66% | 227 | 49% |
| 280 | Level III Angiography and Venography | 75716 | Artery x-rays, arms/legs | 1277 | 65% | 283 | 49% |
| 280 | Level III Angiography and Venography | 75724 | Artery x-rays, kidneys | 1421 | 66% | 295 | 43% |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77280 | Sbrt management | 134 | 63% | 255 | 67% |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77300 | Radiation therapy dose plan | 81 | 63% | 68 | 55% |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77331 | Special radiation dosimetry | 72 | 63% | 47 | 42% |
| 304 | Level I Therapeutic Radiation Treatment Preparation | 77336 | Radiation physics consult (non-FAC only) | 105 | 63% | 66 | 57% |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77290 | Set radiation therapy field | 255 | 63% | 773 | 69% |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77315 | Teletx isodose plan complex | 198 | 63% | 120 | 50% |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77321 | Special teletx port plan | 179 | 63% | 87 | 52% |
| 305 | Level II Therapeutic Radiation Treatment Preparation | 77328 | Brachytx isodose plan compl | 235 | 64% | 303 | 54% |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography | 70553 | Mri brain w/o & w/dye | 494 | 63% | 1041 | 61% |

| APC | APC Description | HCPCS | HCPCS Description | HOPD Total Cost, 2005 (\$) | HOPD % Direct Cost, 2005 | PO Total Cost, 2008 (\$) | PO % Direct Cost, 2008 |
|-----|--|-------|--|-------------------------------------|-----------------------------------|--------------------------------------|---------------------------------|
| | without Contrast | | | | | | |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast | 72158 | Mri lumbar spine w/o & w/dye | 493 | 64% | 1019 | 61% |
| 337 | Magnetic Resonance Imaging and Magnetic Resonance Angiography without Contrast | 74183 | Mri abdomen w/o & w/dye | 470 | 63% | 1093 | 62% |
| 440 | Level V Drug Infusion | 90760 | Intravenous infusion, hydration; initial, up to 1 hour | . | . | 76 | 49% |
| 440 | Level V Drug Infusion | 90765 | Intravenous infusion, for therapy, prophylaxis, or diagnosis (specify substance | . | . | 93 | 48% |
| 440 | Level V Drug Infusion | 96521 | Refilling and maintenance of portable pump | . | . | 182 | 48% |
| 440 | Level V Drug Infusion | 96522 | Refilling and maintenance of implantable pump or reservoir for drug delivery, sy | . | . | 160 | 47% |
| 441 | Level VI Drug Infusion | 96413 | Chemo adm, IV infusion; up to 1 hour, single or initial substance/drug | . | . | 209 | 48% |
| 441 | Level VI Drug Infusion | 96416 | Chemo adm, IV infusion; initiation of prolonged chemo infusion (more than 8 hour | . | . | 235 | 48% |
| 441 | Level VI Drug Infusion | 96422 | Chemo adm, intra-arterial; infusion technique, up to one hour | 149 | 64% | 259 | 47% |
| 441 | Level VI Drug Infusion | 96425 | Chemo adm, intra-arterial; infusion technique, initiation of prolonged infusion | 152 | 61% | 269 | 47% |
| 441 | Level VI Drug Infusion | 96440 | Chemotherapy administration into pleural cavity, requiring and including thorace | 52 | 63% | 320 | 50% |
| 441 | Level VI Drug Infusion | 96445 | Chemotherapy administration into peritoneal cavity, requiring and including peri | 74 | 68% | 312 | 51% |
| 441 | Level VI Drug Infusion | 96450 | Chemotherapy administration, into CNS (eg, intrathecal), requiring and including | 170 | 67% | 287 | 50% |

APPENDIX B NON-MEDICARE PROCEDURES

**Table B.1
Comparison of Distribution of Procedures Across Settings**

| CPT | Description | Non-Medicare Services | | | | Medicare Services | | |
|-------|------------------------------|-----------------------|-------|-------|-------|-------------------|-------|-------|
| | | Number | %HOPD | %ASC | %PO | %HOPD | %ASC | %PO |
| 11403 | Exc tr-ext b9+marg 2.1-3 cm | 9,727 | 5.7% | 1.9% | 92.4% | 20.7% | 0.0% | 79.3% |
| 11420 | Exc h-f-nk-sp b9+marg 0.5 < | 7,100 | 4.0% | 1.5% | 94.5% | 14.2% | 0.0% | 85.8% |
| 11421 | Exc h-f-nk-sp b9+marg 0.6-1 | 10,061 | 2.9% | 1.2% | 96.0% | 11.7% | 0.0% | 88.3% |
| 11422 | Exc h-f-nk-sp b9+marg 1.1-2 | 9,089 | 4.7% | 2.1% | 93.2% | 18.0% | 0.0% | 82.0% |
| 11442 | Exc face-mm b9+marg 1.1-2 cm | 6,331 | 4.4% | 3.0% | 92.7% | 17.1% | 0.0% | 82.9% |
| 11603 | Exc tr-ext mlg+marg 2.1-3 cm | 3,241 | 2.9% | 1.0% | 96.1% | 10.4% | 0.0% | 89.6% |
| 11642 | Exc face-mm malig+marg 1.1-2 | 3,600 | 3.7% | 2.2% | 94.1% | 12.3% | 0.0% | 87.7% |
| 20680 | Removal of support implant | 3,279 | 40.0% | 29.7% | 30.3% | 58.7% | 28.2% | 13.0% |
| 21555 | Remove lesion, neck/chest | 662 | 20.4% | 16.2% | 63.4% | 39.9% | 25.9% | 34.2% |
| 21930 | Remove lesion, back or flank | 897 | 26.4% | 18.7% | 54.8% | 45.6% | 24.7% | 29.7% |
| 29824 | Shoulder arthroscopy/surgery | 1,705 | 45.7% | 47.4% | 6.8% | 75.8% | 23.9% | 0.2% |
| 29848 | Wrist endoscopy/surgery | 767 | 49.5% | 40.7% | 9.8% | 51.6% | 47.6% | 0.8% |
| 29880 | Knee arthroscopy/surgery | 2,810 | 51.4% | 43.1% | 5.5% | 66.4% | 33.0% | 0.6% |
| 29881 | Knee arthroscopy/surgery | 9,131 | 50.2% | 43.8% | 6.0% | 60.6% | 38.7% | 0.6% |
| 45378 | Diagnostic colonoscopy | 63,041 | 45.3% | 36.1% | 18.6% | 56.2% | 37.5% | 6.3% |
| 45380 | Colonoscopy and biopsy | 33,239 | 45.7% | 38.0% | 16.3% | 54.8% | 40.4% | 4.8% |
| 45384 | Lesion remove colonoscopy | 11,171 | 50.3% | 35.1% | 14.6% | 58.3% | 37.6% | 4.1% |
| 45385 | Lesion removal colonoscopy | 20,816 | 43.5% | 36.8% | 19.7% | 50.7% | 43.6% | 5.8% |
| 62310 | Inject spine c/t | 11,982 | 22.3% | 18.5% | 59.2% | 36.9% | 28.6% | 34.5% |

| | | | | | | | | |
|-------|--|-----------|-------|-------|-------|-------|-------|-------|
| 62311 | Inject spine l/s (cd) | 36,454 | 23.6% | 15.4% | 61.0% | 41.1% | 25.8% | 33.1% |
| 64472 | Inj paravertebral c/t add-on | 5,551 | 11.0% | 16.9% | 72.1% | 12.7% | 18.2% | 69.0% |
| 64475 | Inj paravertebral l/s | 14,783 | 12.5% | 13.4% | 74.1% | 21.2% | 22.6% | 56.3% |
| 64483 | Inj foramen epidural l/s | 18,511 | 15.4% | 21.9% | 62.7% | 27.3% | 33.0% | 39.7% |
| 64484 | Inj foramen epidural add-on | 6,567 | 10.2% | 22.9% | 66.8% | 22.1% | 31.3% | 46.6% |
| 64623 | Destr paravertebral n add-on | 2,663 | 26.3% | 24.1% | 49.6% | 18.9% | 24.1% | 57.0% |
| 64640 | Injection treatment of nerve | 8,934 | 1.2% | 0.5% | 98.3% | 4.6% | 0.0% | 95.4% |
| 66984 | Cataract surg w/iol, 1 stage | 11,285 | 33.9% | 49.9% | 16.2% | 33.6% | 61.5% | 4.9% |
| 70553 | Mri brain w/o & w/dye | 68,179 | 27.7% | 0.0% | 72.2% | 52.8% | 0.0% | 47.2% |
| 71010 | Chest x-ray | 70,408 | 57.1% | 0.2% | 42.7% | 75.7% | 0.0% | 24.3% |
| 71020 | Chest x-ray | 732,392 | 24.6% | 0.0% | 75.4% | 55.4% | 0.0% | 44.6% |
| 72158 | Mri lumbar spine w/o & w/dye | 17,944 | 23.5% | 0.0% | 76.4% | 48.0% | 0.0% | 52.0% |
| 74183 | Mri abdomen w/o & w/dye | 5,835 | 34.9% | 0.0% | 65.1% | 53.5% | 0.0% | 46.5% |
| 77280 | Sbrt management | 8,207 | 25.8% | 0.0% | 74.2% | 61.0% | 0.0% | 39.0% |
| 77290 | Set radiation therapy field | 11,019 | 30.4% | 0.0% | 69.6% | 62.1% | 0.0% | 37.9% |
| 77300 | Radiation therapy dose plan | 7,471 | 25.2% | 0.1% | 74.7% | 34.5% | 0.0% | 65.5% |
| 77315 | Teletx isodose plan complex | 4,304 | 29.5% | 0.0% | 70.5% | 64.8% | 0.0% | 35.2% |
| 77321 | Special teletx port plan | 1,321 | 29.1% | 0.2% | 70.7% | 62.0% | 0.0% | 38.0% |
| 77328 | Brachytx isodose plan compl | 793 | 25.2% | 0.3% | 74.5% | 62.2% | 0.0% | 37.8% |
| 77331 | Special radiation dosimetry | 4,331 | 23.7% | 0.1% | 76.2% | 44.5% | 0.0% | 55.5% |
| 77336 | Radiation physics consult (non-FAC only) | 35,686 | 26.7% | 0.0% | 73.3% | 60.5% | 0.0% | 39.5% |
| 93017 | Cardiovascular stress test-tracing only | 33,638 | 75.6% | 0.0% | 24.3% | 75.6% | 0.0% | 24.4% |
| 96450 | Chemotherapy administration, into CNS (eg, intrathecal), requiring and including | 747 | 23.6% | 0.4% | 76.0% | 50.1% | 0.0% | 49.9% |
| G0105 | Colorectal scrn; hi risk ind | 724 | 41.7% | 45.0% | 13.3% | 46.9% | 48.9% | 4.3% |
| G0121 | Colon ca scrn not hi rsk ind | 1,642 | 44.7% | 43.4% | 11.9% | 52.4% | 42.8% | 4.8% |
| | | 1,318,038 | 29.0% | 6.0% | 64.9% | 42.9% | 9.4% | 47.7% |

Table B.2
Number of Markets with at least 10 Procedures in Two or More Settings and Percent of Total Procedures Performed in Those Markets

| CPT | | ASC/HOPD Markets | | | PO/HOPD Markets | | | PO/ASC Markets | | |
|-------|------------------------------|------------------|----------------|-----------------|-----------------|---------------|-----------------|----------------|---------------|----------------|
| | | No. of MSAs | % ASC services | % HOPD Services | No. of MSAs | % PO services | % HOPD Services | No. of MSAs | % PO services | % ASC Services |
| 11403 | Exc tr-ext b9+marg 2.1-3 cm | 1 | 13.3 | 9.7 | 13 | 93.8 | 95.2 | 4 | 12.9 | 68.0 |
| 11420 | Exc h-f-nk-sp b9+marg 0.5 < | . | . | . | 1 | 60.1 | 82.4 | 1 | 39.9 | 60.0 |
| 11421 | Exc h-f-nk-sp b9+marg 0.6-1 | . | . | . | 2 | 81.3 | 79.5 | 1 | 18.7 | 61.1 |
| 11422 | Exc h-f-nk-sp b9+marg 1.1-2 | . | . | . | 6 | 81.8 | 93.0 | 2 | 18.2 | 52.4 |
| 11442 | Exc face-mm b9+marg 1.1-2 cm | . | . | . | 2 | 39.0 | 78.7 | 3 | 61.0 | 82.0 |
| 11603 | Exc tr-ext mlg+marg 2.1-3 cm | . | . | . | 2 | 100.0 | 100.0 | . | . | . |
| 20680 | Removal of support implant | 11 | 88.6 | 80.4 | 11 | 90.5 | 84.3 | 10 | 66.7 | 85.0 |
| 29824 | Shoulder arthroscopy/surgery | 9 | 100.0 | 100.0 | 1 | 64.9 | 7.3 | 1 | 64.9 | 8.4 |
| 29880 | Knee arthroscopy/surgery | 14 | 100.0 | 100.0 | 1 | 57.1 | 9.2 | 1 | 57.1 | 15.7 |
| 29881 | Knee arthroscopy/surgery | 48 | 99.6 | 97.2 | 5 | 56.5 | 12.8 | 3 | 41.6 | 11.3 |
| 45378 | Diagnostic colonoscopy | 160 | 97.4 | 91.0 | 115 | 95.9 | 78.7 | 81 | 66.9 | 72.5 |
| 45380 | Colonoscopy and biopsy | 109 | 98.0 | 94.4 | 68 | 94.2 | 72.5 | 54 | 62.8 | 69.5 |
| 45384 | Lesion remove colonoscopy | 42 | 97.5 | 88.5 | 26 | 92.7 | 67.6 | 16 | 52.7 | 50.6 |
| 45385 | Lesion removal colonoscopy | 86 | 97.6 | 92.9 | 52 | 86.3 | 60.4 | 40 | 66.8 | 55.6 |
| 62310 | Injct spine c/t | 26 | 71.1 | 70.2 | 37 | 90.4 | 88.6 | 28 | 66.7 | 85.6 |
| 62311 | Injct spine l/s (cd) | 60 | 77.7 | 68.6 | 114 | 95.5 | 97.7 | 82 | 65.8 | 96.0 |
| 64472 | Inj paravertebral c/t add-on | 7 | 47.2 | 82.6 | 7 | 62.9 | 88.4 | 18 | 99.1 | 96.1 |
| 64475 | Inj paravertebral l/s | 18 | 65.0 | 63.5 | 35 | 81.6 | 89.1 | 33 | 67.1 | 91.7 |
| 64483 | Inj foramen epidural l/s | 36 | 80.4 | 78.8 | 51 | 80.7 | 86.0 | 55 | 78.0 | 95.4 |
| 64484 | Inj foramen epidural add-on | 7 | 49.0 | 69.4 | 10 | 60.0 | 81.7 | 22 | 90.7 | 95.9 |
| 64623 | Destr paravertebral n add-on | 3 | 58.6 | 44.4 | 7 | 65.3 | 98.4 | 8 | 74.4 | 97.5 |
| 64640 | Injection treatment of nerve | . | . | . | 1 | 100.0 | 100.0 | . | . | . |
| 66984 | Cataract surg w/iol, 1 stage | 50 | 91.8 | 94.2 | 22 | 70.5 | 54.5 | 25 | 76.2 | 56.1 |
| 70553 | Mri brain w/o & w/dye | . | . | . | 182 | 100.0 | 100.0 | . | . | . |
| 71010 | Chest x-ray | 3 | 33.6 | 8.0 | 182 | 100.0 | 100.0 | 3 | 8.6 | 33.6 |
| 71020 | Chest x-ray | 9 | 66.6 | 12.3 | 400 | 100.0 | 100.0 | 9 | 10.0 | 66.6 |
| 72158 | Mri lumbar spine w/o & w/dye | . | . | . | 81 | 100.0 | 100.0 | . | . | . |
| 74183 | Mri abdomen w/o & w/dye | . | . | . | 26 | 100.0 | 100.0 | . | . | . |
| 77280 | Sbrt management | . | . | . | 32 | 100.0 | 100.0 | . | . | . |
| 77290 | Set radiation therapy field | . | . | . | 52 | 100.0 | 100.0 | . | . | . |
| 77300 | Radiation therapy dose plan | . | . | . | 30 | 100.0 | 100.0 | . | . | . |
| 77315 | Teletx isodose plan complex | . | . | . | 17 | 100.0 | 100.0 | . | . | . |

| | | | | | | | | | | |
|-------|--|---|-------|-------|----|-------|-------|---|------|-----|
| 77321 | Special teletx port plan | . | . | . | 3 | 100.0 | 100.0 | . | . | . |
| 77328 | Brachytx isodose plan compl | . | . | . | 1 | 100.0 | 100.0 | . | . | . |
| 77331 | Special radiation dosimetry | . | . | . | 17 | 100.0 | 100.0 | . | . | . |
| 77336 | Radiation physics consult (non-FAC only) | . | . | . | 98 | 100.0 | 100.0 | . | . | . |
| 93017 | Cardiovascular stress test-tracing only | . | . | . | 86 | 100.0 | 100.0 | . | . | . |
| 96450 | Chemotherapy administration, into CNS (eg, intrathecal), requiring and including | . | . | . | 1 | 100.0 | 100.0 | . | . | . |
| G0121 | Colon ca scrn not hi rsk ind | 7 | 100.0 | 100.0 | 1 | 57.6 | 3.5 | 1 | 57.6 | 4.0 |

Table B.3
Comparison of HOPD/PO Payment Differentials

| APC | CPT | | Ratio of PO to HOPD Payment | |
|-----|-------|--|-----------------------------|----------|
| | Code | Description | Non-Medicare | Medicare |
| 20 | 11403 | Exc tr-ext b9+marg 2.1-3 cm | 7.7 | 5.7 |
| 20 | 11422 | Exc h-f-nk-sp b9+marg 1.1-2 | 7.3 | 6.0 |
| 22 | 20680 | Removal of support implant | 3.6 | 4.3 |
| 41 | 29881 | Knee arthroscopy/surgery | 2.9 | 7.8 |
| 100 | 93017 | Cardiovascular stress test-tracing only | 3.2 | 2.8 |
| 143 | 45378 | Lower GI Endoscopy | 2.1 | 2.3 |
| 143 | 45380 | Colonoscopy and biopsy | 1.8 | 1.9 |
| 143 | 45384 | Lesion remove colonoscopy | 1.4 | 2.1 |
| 143 | 45385 | Lesion removal colonoscopy | 1.8 | 1.8 |
| 206 | 64472 | Inj paravertebral c/t add-on | 2.4 | 5.6 |
| 207 | 62310 | Inject spine c/t | 2.5 | 3.9 |
| 207 | 62311 | Inject spine l/s (cd) | 2.3 | 4.4 |
| 207 | 64475 | Inj paravertebral l/s | 2.2 | 10.7 |
| 207 | 64483 | Inj foramen epidural l/s | 2.3 | 3.1 |
| 207 | 64484 | Inj foramen epidural add-on | 3.6 | 4.2 |
| 207 | 64623 | Destr paravertebral n add-on | 2.1 | 7.0 |
| 246 | 66984 | Cataract surg w/iol, 1 stage | 7.9 | 6.2 |
| 260 | 71010 | Chest x-ray | 3.2 | 3.1 |
| 260 | 71020 | Chest x-ray | 3.3 | 2.3 |
| 304 | 77280 | Sbrt management | 2.0 | 0.6 |
| 304 | 77300 | Radiation therapy dose plan | 3.5 | 2.2 |
| 304 | 77331 | Special radiation dosimetry | 3.9 | 3.2 |
| 304 | 77336 | Radiation physics consult (non-FAC only) | 1.7 | 2.3 |
| 305 | 77290 | Set radiation therapy field | 1.9 | 0.5 |
| 305 | 77315 | Teletx isodose plan complex | 2.3 | 3.2 |
| 305 | 77321 | Special teletx port plan | 3.5 | 4.3 |
| 337 | 70553 | Mri brain w/o & w/dye | 1.4 | 0.8 |
| 337 | 72158 | Mri lumbar spine w/o & w/dye | 1.3 | 0.8 |
| 337 | 74183 | Mri abdomen w/o & w/dye | 1.4 | 0.8 |

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