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**TOWARD A PROSPECTIVE PAYMENT SYSTEM
FOR OUTPATIENT SERVICES:**

**IMPLEMENTATION OF APGs BY STATE MEDICAID
AGENCIES AND PRIVATE PAYERS**

FINAL REPORT

November 26, 1997

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This report could not have been written without generous cooperation from both private and public payers that have been designing and implementing APG-based payment systems. We especially thank our key contacts at the payers who met with us on-site to discuss their systems in-depth, including Marcia Stark of the Iowa Department of Human Services; Gary **McGrath** of Blue Shield of California; Barry Ford, formerly of Blue Shield of California and now at Blue Cross of California; and Erin Scott of Medical Mutual of Ohio. Key information about the development and experience with APG systems also came from the payers' primary consultants, including Kim Sheets of **3M/Health** Information Systems, Henry Miller of the Center for **Health** Policy Studies, and Scott **Earich** of Orion Consulting. We deeply appreciate the contributions of all of the hospital and ambulatory surgery center representatives we interviewed, and of all of the others not specifically mentioned who have participated during the course of our study.

Several members of the project team who are not authors of the report also contributed significantly to its content. The federal project officer, Joseph Cramer, provided guidance and support for the project. Elizabeth Closter, Tim Lake, and Kathleen Maloy conducted and documented many of the interviews on which the report is based. Amy Klein wrote most of an earlier project report **from** which the first chapter of this report was drawn. George Wright, formerly of **Mathematica** and now at the University of Washington, directed the study until Fall 1996. Margaret Sulvetta, of the Urban Institute, participated in the Iowa site visit and provided valuable advice throughout the project. Finally, we thank Robert **Kapler** and Daryl Hall for editing the report, and Patricia McCall and Felita **Buckner** for skillful production of the report.



CONTENTS

Chapter	Page
	EXECUTIVE SUMMARY xi
I	INTRODUCTION 1
A.	TRENDS IN OUTPATIENT SERVICES AND EXPENDITURES 2
1.	Hospital Outpatient Departments 2
2.	Ambulatory Surgery Centers 6
B.	THE APG SYSTEM CREATED BY 3M/HEALTH INFORMATION SYSTEMS 7
1.	3M/HIS Grouper
2.	Relative Weights 9
3.	Other Features 11
4.	Changes to Version 1.0 13
C.	STUDYMETHODS14
II	GOALS, SCOPE, AND DESIGN OF 11 APG SYSTEMS 17
A.	GOALS AND KEY CONSIDERATIONS IN SYSTEM DESIGN 19
1.	Goals 19
2.	Key Considerations in System Design 20
B.	SYSTEM SCOPE 23
1.	Providers Covered 23
2.	Services and Patients Covered 26
C.	USE OF 3M SYSTEM FEATURES 27
1.	Unit of Service 27
2.	Consolidation, Packaging, and Discounting 29
D.	DEVELOPMENT OF APG WEIGHTS 31

CONTENTS *(continued)*

Chapter		Page
II	E. RATES AND RISK PROTECTION	34
	1. Rates	34
	2. Risk Protection	38
III	EXPERIENCE WITH APGS	41
	A. PAYER PERSPECTIVES	42
	1. Implementation and Administration	44
	2. Effects on Reimbursement	49
	B. PROVIDER PERSPECTIVES	51
	1. Implementation and Administration	53
	2. Effects on Reimbursement	59
	3. Effects on Service Delivery	67
	C. CONCLUSIONS	68
	1. System Scope	69
	2. Rate Setting	69
	3. Risk Protection and Phase-In	71
	4. Implementation	73
	5. summary	73
	GLOSSARY	75

TABLES

Table		Page
I.1	PROPORTION OF U.S. SHORT-TERM COMMUNITY HOSPITALS WITH SELECTED OUTPATIENT-ORIENTED SERVICES 1988-1993	5
I.2	GEOGRAPHIC AVAILABILITY OF AMBULATORY SURGICAL CENTERS IN SELECTED STATES	8
II.1	OVERVIEW OF APG-BASED PAYMENT SYSTEMS	18
II.2a	OVERVIEW OF APG SYSTEMS	24
II.2b	SCOPE OF APG SYSTEMS	25
II.3	SCOPE AND FEATURES OF APG-BASED PAYMENT SYSTEMS	28
II.4	EXPENDITURE GOALS AND RATE SETTING	35
III.1	PAYERS' PERSPECTIVES ON APG-BASED PAYMENT SYSTEMS	43
III.2	COMPLEXITY OF APG-BASED PAYMENT SYSTEM	45
III.3	PROVIDERS' PERSPECTIVES ON APG-BASED PAYMENT SYSTEMS	52
III.4	DEGREE OF FINANCIAL RISK UNDER APG-BASED PAYMENT SYSTEMS	61

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FIGURES

Figure	Page
I.1	GROWTH IN MEASURES OF THE FREQUENCY OF HOSPITAL OP VISITS 4

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EXECUTIVE SUMMARY

Ambulatory patient groups are a patient classification system for outpatient services, developed by **3M/Health Information Systems (3M/HIS)** under a cooperative agreement with the Health Care Financing Administration (HCFA). **APGs** are similar in concept to diagnosis-related groups (**DRGs**), which form the heart of Medicare's prospective payment system (PPS) for inpatient care.

The development of the APG system was prompted both by the success of **DRGs** in controlling inpatient costs and by concerns about the growth of outpatient costs in the Medicare program. In 1990, Congress directed HCFA to develop a PPS for facility costs associated with all hospital outpatient services. (Facility costs include most expenses for outpatient care other than physician costs). HCFA sponsored the development of several patient classification systems for grouping individual outpatient services. One of these classification systems was **APGs**. The Balanced Budget Act of 1997 mandates that Medicare begin implementing by January 1999 a prospective payment system for hospital outpatient department services that incorporates a service classification system.

Since **3M/HIS** completed its patient classification system in 1990, 11 payers--5 Medicaid programs and 6 private insurers--have designed payment systems based on **APGs**, and 6 of the 11 have implemented APG-based payment systems. In 1995, HCFA contracted with **Mathematica Policy Research, Inc.**, to examine payers' and providers' experiences with these systems. This report summarizes the results of two components of the MPR study: (1) an in-depth study of three operational APG systems, based on site visits to the three payers and some of their contracted providers, and (2) telephone interviews with other payers that have implemented or plan to implement **APGs** and with some of their contracted providers. Site visits and interviews were conducted during 1996 and 1997.

Overall, we found that the six payers that have operational experience with **APGs** tailored their APG systems to their own priorities and markets, and implemented the systems without major incident. Payers report success in reducing outpatient costs, where that was the immediate goal, and they believe the system encourages higher-cost facilities to reduce costs and rewards lower-cost facilities for their efficiency. Providers' views are more mixed. Though they are generally resigned to the use of **APGs** and report generally adequate overall payment, they view the system as complex, generally cannot calculate expected payment under **APGs**, and often let payer computer systems group related claims rather than consolidating them prior to submission as was the intent of the system. We found no evidence of much behavioral response by providers, but that could change once the system is implemented by a large payer such as HCFA.

OVERVIEW OF THE 3M/HIS SYSTEM

The major feature of the APG system is its grouper. The APG grouper (Version 2.0) is an algorithm that classifies more than 8,000 procedure codes (**CPT-4/HCPCS** codes, or CPT codes) and diagnosis codes (**ICD-9-CM** codes) into 290 **APGs**. Services are categorized into three types of **APGs**: procedure, medical, and ancillary. Each APG contains codes for services that are clinically

similar and require similar levels of resources. Under the APG system, a relative weight is assigned to each APG. Generally speaking, an APG weight measures the average resources used to provide services in that group against the average resources used to provide all outpatient services. Payment for each APG is determined by multiplying the relative weight for that APG against a base rate. (The base rate is thus an average rate for all services covered by **APGs.**)

3M/HIS developed Version 1 .0 of the APG grouper and the first set of relative weights using primarily Medicare claims data for 1988. Version 2.0 of the grouper, based primarily on 1992 Medicare claims data, was completed in 1995. HCFA will develop relative payment weights for the Medicare program's planned APG-based payment system. Payers that have designed APG-based payment systems developed weights and base rates using their own claims data.

The basic unit of payment for the APG system is a "visit," broadly defined as outpatient services provided within a specified period of time (the "payment window"). All services that occur during this period of time are bundled by the APG system to determine payment for the visit. Version 1 .0 of the APG system developed by **3M/HIS** has three additional features that determine reimbursement: consolidation of significant procedures, packaging of ancillary services, and discounting of multiple services.

- Consolidation occurs when multiple related services are performed during a visit. The multiple **APGs** assigned to the multiple services are "consolidated" and result in only one payment--for the highest-intensity APG. The consolidation logic was eliminated from the new version of the grouper **3M/HIS** created for HCFA. HCFA will develop coding edits to perform the same function.
- **Ancillary packaging** incorporates reimbursement for ancillary services, such as anesthesia, into the payment for a significant procedure or medical visit.
- **Discounting** occurs when multiple unrelated services are performed during a visit. Under Version 1 .0, **3M/HIS** recommended that the procedure with the highest APG weight be paid at 100 percent of the payment weight; the procedure with the second highest weight be paid at 40 percent of the payment weight; and the third and subsequent procedures be paid at 20 percent of the payment weight. With Version 2.0, HCFA will use a 50 percent discount for multiple significant procedures.

GOALS, SCOPE, AND DESIGN OF 11 APG SYSTEMS

Our research identified 11 payers that have designed APG-based payment systems. Six of these payers implemented their systems between 1991 and 1996 (Table 1). The three payers that have the most experience with **APGs** (and hence were the subjects of our in-depth analysis) are the Iowa Medicaid program, Blue Shield of California, and Medical Mutual of Ohio. Payers that have designed but not yet implemented APG systems as of September 1997 are Blue Cross and Blue Shield of Utah and Medicaid programs in Massachusetts, Nebraska, Virginia, and Washington State.

TABLE 1
 OVERVIEW OF APG-BASED PAYMENT SYSTEMS
 (Operational and Planned)

	Implementation Date	Number/Type of Providers Covered	
		OPDs	ASCs
Operational Systems			
Public Payers			
Iowa Medicaid	1994	119	0
Private Payers			
Blue Shield of California	1991	40	70
Blue Cross of Idaho	1994	2	12
Alternative Health Delivery Systems (AI-IDS), Kentucky	1993	4	4
Medical Mutual of Ohio [*]	1995	50-60	0
Blue Cross of Washington/Alaska	1996	26	0
Planned Systems			
Public Payers			
Massachusetts Medicaid	October 1997	Yes	No
Nebraska Medicaid	Not known	Yes	No
Virginia Medicaid	None	Yes	No
Washington State	Not known	Yes	Yes
Private Payers			
Blue Cross/Blue Shield of Utah	October 1997	Yes	No^b

*Medical Mutual of Ohio has temporarily suspended use of **APGs** by **ASCs**.

^b**Blue** Cross/Blue Shield of Utah plans to implement **APGs** with **ASCs** in late 1998.

The most **common** reasons payers gave for adopting **APGs** were a desire to achieve cost savings and an interest in developing the capacity to identify and reward provider efficiencies. Other reasons for adopting **APGs** included the system's potential to simplify claims processing, increase predictability in costs, reduce variability in costs across hospitals, and more effectively target areas for savings. Private payers were more likely to cite cost containment as a reason for using **APGs**, while public payers were more likely to cite an interest in **identifying** and rewarding **efficiencies**.

Most payers use (or plan to use) **APGs** to reimburse both hospital outpatient departments (**OPDs**) and ambulatory surgery centers (**ASCs**) for facility costs associated with outpatient services (Table 1). However, some payers have excluded **ASCs** from their APG-based payment systems, at least initially, usually because they have very few **ASCs** among their contracted providers or because they believe that **APGs** might expose facilities with low patient volume to unacceptable levels of risk. Besides **ASCs**, the other large category of providers excluded from many APG-based payment systems are rural hospitals. (Some payers believe rural hospitals lack the technical capacity to implement **APGs** or would be placed at an unacceptably high risk by the system, because of their low service volume.)

Most of the 11 payers that have developed APG-based payment systems apply (or plan to apply) **APGs** to most surgical and nonsurgical outpatient services. Many payers exempt recurring, or "batch," services, such as physical therapy and reimburse providers for such services on a per-unit or per-visit basis. Two of the six payers with operational systems cover only outpatient surgery under **APGs**, and a third covers only outpatient surgery at **OPDs**, but most outpatient services at **ASCs**.

Payers have modified some features of the **3M/HIS** system and added others. Table 2 summarizes key features of the six operational APG-based payment systems. Payers are about evenly divided in terms of whether they use a 24-hour or a 72-hour payment window. Those that use a **72-hour** window contend that it appropriately groups related services that occur on separate days and discourages providers **from** altering practice patterns to increase reimbursement (for example, by scheduling pre- or post-operative procedures outside the payment window). Those that use a 24-hour window contend that it is more compatible with providers' billing systems and long enough for services to be bundled appropriately. Most payers consolidate significant procedures, and most believe that HCFA should not have eliminated the consolidation logic from Version 2.0 of the APG grouper. Most payers that have adopted Version 2.0 have purchased the **3M/HIS** proprietary version of the grouper, which retained the consolidation feature.

Developing APG weights was an enormous challenge for payers. Constructing the claims data sets needed to develop the weights was particularly difficult. Problems payers encountered included missing or inaccurate CPT codes on facility claims; **insufficient** numbers of claims to compute precise APG weights for lower-volume **APGs**; large variations in the charges for procedures assigned to particular **APGs**; and incompatibility between the grouper and claims data, because of the grouper's having been designed at a time when fewer procedures were performed on an outpatient basis.

TABLE 2

FEATURES OF SIX OPERATIONAL APG-BASED PAYMENT SYSTEMS

Payment System Feature	Payers
Groupers	At the time of our interviews, most payers that had implemented APGs were still using Version 1 .0 of the 3M/HIS grouper but planned to move to Version 2.0 shortly. Two payers were already using Version 2.0 ¹ .
Payment Window	Three payers have a 24-hour payment window and two have a 72-hour payment window. One negotiates the payment window with each provider.
Significant Procedure Consolidation	Almost all payers consolidate significant procedures. Some are still using Version 1 .0 of the APG grouper, which automatically consolidates related procedures. Most of the others that have moved to Version 2.0 have purchased the 3M/HIS proprietary version of the grouper, which includes the consolidation logic. (HCFA's Version of the 2.0 grouper, which is in the public domain, does not.)
Ancillary Packaging	Five payers package certain ancillary services. (The payer that does not has no formal system for packaging, but generally consolidates all services, including ancillary services, that occur on the same date.)
Discounting	Four payers discount multiple services, using varying discount formulas.
Weight and Rate Adjustments	Almost all payers vary their base rates by provider or provider type (e.g., ASCs and OPDs). One uses different weights for ASCs and OPDs .
Risk Protection	Most payers have adopted some form of risk protection for providers (e.g., outlier payments or risk corridors), but vary in terms of the type and extent of protection offered. Most reported that risk protection was a temporary measure to ease providers' transition to the new system.

NOTE: Terms are defined in the glossary on page 75.

¹A third payer, Iowa Medicaid, began using Version 2.0 in October 1997.

Payers' major goals for their APG-based payment systems are reflected in the decisions they made concerning base rates and such system features as risk corridors and outlier policies. All five of the private payers that have implemented systems reported that they had set aggregate spending levels and base rates to achieve savings. Only the Iowa Medicaid program expected no immediate reduction in outpatient expenditures. Five payers vary their base rates in some way to account for cost differences between **OPDs** and **ASCs**. (Most private payers negotiate base rates with individual providers.) Half the payers that currently use **APGs** initially adopted some form of risk protection, either a risk corridor (Blue Cross of Washington/Alaska) or both a risk corridor and an outlier provision (Iowa Medicaid and Medical Mutual of Ohio).

EXPERIENCE WITH APGs

Payers' experiences with **APGs** have been largely positive. Although developing and implementing an APG-based payment system was more difficult and costly than most payers had expected, most anticipate considerable benefits **from APGs**. Those that had **sufficient** experience with the system to assess its effects reported that **APGs** had helped standardize payments for like services at like facilities, encouraged efficiencies, simplified contract negotiations, and, in one case, reduced the variability in expenditures between indemnity products and managed care products.

Of the four payers that cited cost savings as an immediate goal, the two that were particularly aggressive in their consolidation and discounting policies reported significant reductions in outpatient expenditures under **APGs**. One of the two reported having recouped the cost of implementing the system within two years, and posted a 17 percent reduction in outpatient expenditures, for a total savings of \$23 million. The other payer also reported savings but declined to reveal the amount. Market pressures and payers' leverage with providers were key determinants of payers' ability to achieve savings under the system. The first payer also credited its use of comparative data from the APG system, which helped the insurer to leverage lower rates **from** higher-cost providers. The second payer attributed its savings to the fixed fee structure of the APG system, which acted to control charge inflation and to its policy of paying for only one procedure per visit. Payers that did not seek immediate cost savings as aggressively, if at all, were either not certain about the **financial** impacts of **APGs** or reported modest cost increases.

The difficulty of implementing and administering an APG-based payment system depended in part on its complexity. Coverage of a broad range of services, use of such features as risk protections, and use of blended or negotiated base rates increased payers' administrative burden. The Iowa Medicaid program and Medical Mutual of Ohio designed more complex payment systems and, not surprisingly, reported more difficulty implementing and administering their systems than did the four payers with less complex systems.

Providers' views of **APGs** were more mixed. Most providers seemed resigned to the use of **APGs** and reported that payment under the system was generally adequate. ASC representatives were more likely to cite advantages to the APG system, including its perceived potential to level the playing field between **ASCs** and **OPDs**. In addition, several ASC representatives compared **APGs** favorably with the Medicare ASC groupings, noting that **APGs'** numerous categories better reflect the cost of services.

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CONTENTS

Chapter	Page
	EXECUTIVE SUMMARY xi
I	INTRODUCTION 1
A.	TRENDS IN OUTPATIENT SERVICES AND EXPENDITURES 2
1.	Hospital Outpatient Departments 2
2.	Ambulatory Surgery Centers 6
B.	THE APG SYSTEM CREATED BY 3M/HEALTH INFORMATION SYSTEMS 7
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2.	Relative Weights 9
3.	Other Features 11
4.	Changes to Version 1.0 13
C.	STUDYMETHODS14
II	GOALS, SCOPE, AND DESIGN OF 11 APG SYSTEMS 17
A.	GOALS AND KEY CONSIDERATIONS IN SYSTEM DESIGN 19
1.	Goals 19
2.	Key Considerations in System Design 20
B.	SYSTEM SCOPE 23
1.	Providers Covered 23
2.	Services and Patients Covered 26
C.	USE OF 3M SYSTEM FEATURES 27
1.	Unit of Service 27
2.	Consolidation, Packaging, and Discounting 29
D.	DEVELOPMENT OF APG WEIGHTS 31

CONTENTS (continued)

Chapter		Page
II	E. RATES AND RISK PROTECTION	34
	1. Rates	34
	2. Risk Protection	38
III	EXPERIENCE WITH APGS	41
	A. PAYER PERSPECTIVES	42
	1. Implementation and Administration	44
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	1. Implementation and Administration	53
	2. Effects on Reimbursement	59
	3. Effects on Service Delivery	67
	C. CONCLUSIONS	68
	1. System Scope	69
	2. Rate Setting	69
	3. Risk Protection and Phase-In	71
	4. Implementation	73
	5. summary	73
	GLOSSARY	75

TABLES

Table		Page
I.1	PROPORTION OF U.S. SHORT-TERM COMMUNITY HOSPITALS WITH SELECTED OUTPATIENT-ORIENTED SERVICES 1988-1993	5
I.2	GEOGRAPHIC AVAILABILITY OF AMBULATORY SURGICAL CENTERS IN SELECTED STATES	8
II.1	OVERVIEW OF APG-BASED PAYMENT SYSTEMS	18
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II.3	SCOPE AND FEATURES OF APG-BASED PAYMENT SYSTEMS	28
II.4	EXPENDITURE GOALS AND RATE SETTING	35
III.1	PAYERS' PERSPECTIVES ON APG-BASED PAYMENT SYSTEMS	43
III.2	COMPLEXITY OF APG-BASED PAYMENT SYSTEM	45
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III.4	DEGREE OF FINANCIAL RISK UNDER APG-BASED PAYMENT SYSTEMS	61

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FIGURES

Figure		Page
I.1	GROWTH IN MEASURES OF THE FREQUENCY OF HOSPITAL OP VISITS	4

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^bBlue Cross/Blue Shield of Utah plans to implement APGs with ASCs in late 1998.

The most common reasons payers gave for adopting **APGs** were a desire to achieve cost savings and an interest in developing the capacity to identify and reward provider efficiencies. Other reasons for adopting **APGs** included the system's potential to simplify claims processing, increase predictability in costs, reduce variability in costs across hospitals, and more effectively target areas for savings. Private payers were more likely to cite cost containment as a reason for using **APGs**, while public payers were more likely to cite an interest in identifying and rewarding efficiencies.

Most payers use (or plan to use) **APGs** to reimburse both hospital outpatient departments (**OPDs**) and ambulatory surgery centers (**ASCs**) for facility costs associated with outpatient services (Table 1). However, some payers have excluded **ASCs** from their APG-based payment systems, at least initially, usually because they have very few **ASCs** among their contracted providers or because they believe that **APGs** might expose facilities with low patient volume to unacceptable levels of risk. Besides **ASCs**, the other large category of providers excluded from many APG-based payment systems are **rural** hospitals. (Some payers believe rural hospitals lack the technical capacity to implement **APGs** or would be placed at an unacceptably high risk by the system, because of their low service volume.)

Most of the 11 payers that have developed APG-based payment systems apply (or plan to apply) **APGs** to most surgical and nonsurgical outpatient services. Many payers exempt recurring, or "batch," services, such as physical therapy and reimburse providers for such services on a per-unit or per-visit basis. Two of the six payers with operational systems cover only outpatient surgery under **APGs**, and a third covers only outpatient surgery at **OPDs**, but most outpatient services at **ASCs**.

Payers have modified some features of the **3M/HIS** system and added others. Table 2 summarizes key features of the six operational APG-based payment systems. Payers are about evenly divided in terms of whether they use a 24-hour or a 72-hour payment window. Those that use a **72-hour** window contend that it appropriately groups related services that occur on separate days and discourages providers from altering practice patterns to increase reimbursement (for example, by scheduling pre- or post-operative procedures outside the payment window). Those that use a 24-hour window contend that it is more compatible with providers' billing systems and long enough for services to be bundled appropriately. Most payers consolidate significant procedures, and most believe that HCFA should not have eliminated the consolidation logic from Version 2.0 of the APG grouper. Most payers that have adopted Version 2.0 have purchased the **3M/HIS** proprietary version of the grouper, which retained the consolidation feature.

Developing APG weights was an enormous challenge for payers. Constructing the claims data sets needed to develop the weights was particularly **difficult**. Problems payers encountered included missing or inaccurate CPT codes on facility claims; **insufficient** numbers of claims to compute precise APG weights for lower-volume **APGs**; large variations in the charges for procedures assigned to particular **APGs**; and incompatibility between the grouper and claims data, because of the grouper's having been designed at a time when fewer procedures were performed on an outpatient basis.

TABLE 2

FEATURES OF SIX OPERATIONAL APG-BASED PAYMENT SYSTEMS

Payment System Feature	Payers
Groupers	At the time of our interviews, most payers that had implemented APGs were still using Version 1.0 of the 3M/HIS grouper but planned to move to Version 2.0 shortly. Two payers were already using Version 2.0 ¹ .
Payment Window	Three payers have a 24-hour payment window and two have a 72-hour payment window. One negotiates the payment window with each provider.
Significant Procedure Consolidation	Almost all payers consolidate significant procedures. Some are still using Version 1.0 of the APG grouper, which automatically consolidates related procedures. Most of the others that have moved to Version 2.0 have purchased the 3M/HIS proprietary version of the grouper, which includes the consolidation logic. (HCFA's Version of the 2.0 grouper, which is in the public domain, does not.)
Ancillary Packaging	Five payers package certain ancillary services. (The payer that does not has no formal system for packaging, but generally consolidates all services, including ancillary services, that occur on the same date.)
Discounting	Four payers discount multiple services, using varying discount formulas.
Weight and Rate Adjustments	Almost all payers vary their base rates by provider or provider type (e.g., ASCs and OPDs). One uses different weights for ASCs and OPDs .
Risk Protection	Most payers have adopted some form of risk protection for providers (e.g., outlier payments or risk corridors), but vary in terms of the type and extent of protection offered. Most reported that risk protection was a temporary measure to ease providers' transition to the new system.

NOTE: Terms are defined in the glossary on page 75.

¹A third payer, Iowa Medicaid, began using Version 2.0 in October 1997.

Payers' major goals for their APG-based payment systems are reflected in the decisions they made concerning base rates and such system features as risk corridors and outlier policies. All five of the private payers that have implemented systems reported that they had set aggregate spending levels and base rates to achieve savings. Only the Iowa Medicaid program expected no immediate reduction in outpatient expenditures. Five payers vary their base rates in some way to account for cost differences between **OPDs** and **ASCs**. (Most private payers negotiate base rates with individual providers.) Half the payers that currently use **APGs** initially adopted some form of risk protection, either a risk corridor (Blue Cross of Washington/Alaska) or both a risk corridor and an outlier provision (Iowa Medicaid and Medical Mutual of Ohio).

EXPERIENCE WITH APGs

Payers' experiences with **APGs** have been largely positive. Although developing and implementing an APG-based payment system was more **difficult** and costly than most payers had expected, most anticipate considerable benefits **from APGs**. Those that had **sufficient** experience with the system to assess its effects reported that **APGs** had helped standardize payments for like services at like facilities, encouraged efficiencies, simplified contract negotiations, and, in one case, reduced the variability in expenditures between indemnity products and managed care products.

Of the four payers that cited cost savings as an immediate goal, the two that were particularly aggressive in their consolidation and discounting policies reported significant reductions in outpatient expenditures under **APGs**. One of the two reported having recouped the cost of implementing the system within two years, and posted a 17 percent reduction in outpatient expenditures, for a total savings of \$23 million. The other payer also reported savings but declined to reveal the amount. Market pressures and payers' leverage with providers were key determinants of payers' ability to achieve savings under the system. The first payer also credited its use of comparative data **from** the APG system, which helped the insurer to leverage lower rates **from** higher-cost providers. The second payer attributed its savings to the fixed fee structure of the APG system, which acted to control charge inflation and to its policy of paying for only one procedure per visit. Payers that did not seek immediate cost savings as aggressively, if at all, were either not certain about the financial impacts of **APGs** or reported modest cost increases.

The difficulty of implementing and administering an APG-based payment system depended in part on its complexity. Coverage of a broad range of services, use of such features as risk protections, and use of blended or negotiated base rates increased payers' administrative burden. The Iowa Medicaid program and Medical Mutual of Ohio designed more complex payment systems and, not surprisingly, reported more difficulty implementing and administering their systems than did the four payers with less complex systems.

Providers' views of **APGs** were more mixed. Most providers seemed resigned to the use of **APGs** and reported that payment under the system was generally adequate. ASC representatives were more likely to cite advantages to the APG system, including its perceived potential to level the playing field between **ASCs** and **OPDs**. In addition, several ASC representatives compared **APGs** favorably with the Medicare ASC groupings, noting that **APGs'** numerous categories better reflect the cost of services.

Providers' experiences implementing and administering the new system depended largely on the level of their experience with CPT coding. Because precise CPT coding is necessary to ensure proper payment under the APG system, providers whose reimbursement had not previously depended on accurate procedure coding were at a disadvantage. Providers' ability or inability to compute expected payment also affected how readily they adapted to **APGs**. Few of the providers we contacted had installed the APG grouper to compute expected payment. Most providers reported that the grouper was incompatible with their billing systems as currently configured, and because **APGs** typically **affected** only a relatively small part of each provider's business, none of those we interviewed was willing to overhaul its system to integrate the grouper. Providers also cited the cost of the grouper as a reason for not using it. Some providers were using other software to estimate expected payment and track accounts receivable, but many have simply had to rely on payers to determine reimbursement correctly.

ASCs generally had less difficulty than **OPDs** adapting to the new system. The transition was reportedly simpler for **ASCs** because they have more experience with CPT coding; provide a narrower range of procedures; have smaller, more centralized operations; and are accustomed to being reimbursed on a per-visit or per-case basis. **OPDs** were much more likely to report having **difficulty** gathering the information necessary to create integrated claims. Many providers appear to rely on payers' editing capabilities to ensure that claims are properly compiled.

Most providers believe that they are being appropriately reimbursed for most services under **APGs** but because payers lack the system capabilities to analyze reimbursement, most are uncertain about the system's overall impact on their bottom line. Hence, providers' main concerns about the financial impacts of **APGs** focused on specific reimbursement issues. The level of providers' concern about these issues seemed to depend on the overall level of financial risk to which they were exposed under the system. Facilities that contract with the two payers that aggressively pursued immediate cost-savings (one of which provided no risk protections to providers), were most likely to complain about payment levels for specific services.

The system feature that drew the most criticism from providers--and that was credited by payers with producing considerable savings--was consolidation of significant procedures. Consolidation policies restrict payment to only the most costly procedure where multiple related procedures were performed. **ASC** staff were particularly likely to complain about consolidation policies, perhaps because, with their smaller patient loads, they are better able to identify cases in which their reimbursement has been significantly reduced by consolidation. Providers that contract with the one payer that limits reimbursement for a visit to payment for a single procedure or ancillary service, regardless of whether they were related, were most concerned about the impacts of consolidation. Although none of the contracting providers we contacted had quantified its losses, some indicated that multiple procedures are performed in half or more of all cases, resulting in a significant revenue loss.

Providers also complained about insufficient compensation for procedures that require costly materials or supplies. Respondents noted that as better, more expensive materials and technology have become available, the cost of performing certain procedures, including many orthopedic procedures, has risen dramatically, and APG weights have not been recalibrated to account for these higher costs.

Although providers did not specifically comment on their experience with outlier **provisions or** risk corridors, information from payers indicates that these system features have proved more important than they were expected to be and resulted in significant adjustments to payments under **APGs**. Analysts at Iowa Medicaid attributed the higher-than-expected proportion of outlier claims primarily to the poor data used to calculate initial weights and outlier thresholds.

Thus far, **APGs** appear to have had little or no effect on service delivery. Many providers have not incorporated the APG grouper into their billing systems and hence lack the data needed to analyze and change clinical practices. Some providers contend that the key reason service **delivery** has not changed under **APGs** is that the system's incentives are inappropriately aimed at facilities, rather than physicians, who control many of the decisions the system is intended to influence. To at least some extent, providers have also been shielded **from** system incentives, either because payers have not yet begun auditing claims carefully or because the system includes features to protect providers from significant risk.

IMPLICATIONS FOR HCFA'S IMPLEMENTATION PLANNING

The experience of the six payers to date with operational APG systems suggests HCFA may want to consider the following issues as it continues planning for implementation of its APG system for **ASCs** and hospital **OPDs**:

- *Whether financial risk protection features or exemptions are needed for some facilities.* *The* Iowa Medicaid program reported that some very low-volume facilities experienced erratic financial results under the system for a particular quarter or half-year period. This is not surprising since the financial equity of the system for providers is based on average gains and losses over a reasonably large patient load. Strategies to address this issue include an outlier policy, a risk corridor type mechanism, or exemption from the system. (Until this year, for example, Iowa Medicaid had both an outlier policy and a risk **corridor** in place.) Payers did not consistently exclude groups of facilities from the system. Rural hospitals and/or **ASCs** were often excluded, in part because of **concerns** that these facilities would face too much financial risk. However, these facilities do not appear to be suffering financially or having particular trouble where they have been included in the system.
- *Whether risk protection is needed more broadly during a phase-in period* Many providers and some payers believed some type of risk protection is necessary, at least in the first years of transition to an APG system. The purpose of risk protection mechanisms, such as a risk corridor, outlier policy, or base rate that adjusts for **hospital-specific** costs, is to protect providers against losses associated with exceptionally **high-cost** cases or cases in which the APG weights are inaccurate because of poor data, as well as to allow less efficient providers time to improve their performance. HCFA must weigh these advantages against the potential disadvantages-increased complexity of the system and the partial shielding of facilities **from** the incentives the system is designed to create.

- ***How aggressively to seek cost savings in the near term*** Payers varied widely in terms of how aggressively they sought immediate cost savings from the system. Iowa--the only public payer with operational experience with an APG system--implemented it in a budget-neutral environment and reports the budget neutrality was a key factor in ensuring hospitals' cooperation and thus smoother implementation of the system.
- ***How to pay for "batch," or recurring, services and new procedures.*** Many of the payers we interviewed paid for recurring services, such as physical or speech therapy, using a prospectively determined rate but using a different unit than the "visit" as defined for other medical and procedural visits. The Iowa Medicaid program, for example, pays for such services on a per unit (**15-minute**) or per visit (calendar day) basis. HCFA may want to consider a similar strategy. In addition, the dynamics of continuing change in medical practice, along with the payers' experience in having to update Version 1.0 prior to availability of Version 2.0, suggest HCFA may need a specific policy on when and how new outpatient procedures will be integrated into the APG system.
- ***How to make the system comprehensible, feasible and fair from the providers' perspectives.*** Providers we interviewed complained about their inability to calculate expected payment under existing APG systems, which they attributed to the complexity of the system and the cost and configuration of current software. Because the APG payers were a relatively small percent of each provider's business, many were resigned to "just trusting" the payer and doing manual spot-checks. Providers also reported a lack of sufficient lead time to change their computer systems, train staff on the system, and improve coding. Finally, payers' experience suggests HCFA will need to have a process in place to handle an influx of technical questions and case-level problems in the first months of the system. This will obviously be a significant challenge, given the number of facilities involved, and could be a reason to phase in the system by region.

CONCLUSION

In conclusion, the experience of the 11 private and public payers that have implemented or designed APG systems provide HCFA with a better understanding of the potential benefits and drawbacks of an APG system, as well as insight into many design variations and implementation strategies. Overall, payers have found that the APG system can be used to reduce costs, and they believe it encourages efficiency. (Some payers reported narrowing cost differences among facilities.) At the same time, a recurring complaint or theme about systems implemented to date is their complexity. In fact, the payer with the most experience with a complex version of the system recommends that other payers keep the system simple--for example, by avoiding a payment window longer than 24 hours, and addressing any problems that arise with "gaming" of the window by adjusting payment policy or simply reducing rates in the year after such behavior is documented.

Whether and how facilities can or will respond to the system by influencing the volume of services or patient mix is still an open question. We heard a few isolated rumors of response on a small scale, but for the most part, the payers that have implemented the system to date accounted for

a relatively small portion of facilities' business. Thus, the facilities we contacted have viewed the system as just another mechanism payers are using to reduce payments and have not attempted to understand the system or respond to its incentives. However, a Medicare APG system, because it would affect a much larger share of facilities' business, may magnify effects that have been too small to recognize under existing systems. Certainly, monitoring will be needed to identify any behavioral response and effects on system cost and patient care. Nevertheless, providers' responses suggest that the greatest impact may occur if and when payment incentives related to facility outpatient services is aligned with the incentives in payment for physician services.

I. INTRODUCTION

This report presents the results of a study of ambulatory patient groups (**APGs**), conducted by **Mathematica** Policy Research, Inc. (**MPR**), for the Health Care Financing Administration (HCFA). **APGs** are a patient classification system for outpatient services. **APGs** are similar in some ways to diagnosis-related groups (**DRGs**), which form the heart of Medicare's prospective payment system (PPS) for inpatient care. Both **DRGs** and **APGs** classify and group procedures into clusters of services that require similar patterns of resource use. Both can be used as a starting point for setting prospectively determined payments, providing incentives for efficient delivery of services. This report describes the design of 11 APG-based payment systems, and payers' and providers' experience with the six APG-based payment systems that have been implemented to date.

Interest in developing a prospective payment system for Medicare ambulatory care first arose following the implementation of **DRGs** in 1983. In 1990, Congress directed HCFA to develop a PPS that could be used to pay for hospital outpatient department facility costs (facility costs include most expenses for outpatient care other than physician costs). The Balanced Budget Act of 1997 mandates that Medicare implement a prospective payment system for hospital outpatient department services beginning in January 1999.

Over the years, HCFA sponsored research on the development of several patient classification systems for grouping individual outpatient services, including **APGs**. HCFA also funded evaluations of such systems. In 1991, Blue Shield of California began using **APGs** to determine payment prospectively for outpatient care. During the next five years, five other payers, including one public payer (the Iowa Medicaid program), followed suit. Other payers have since designed APG-based

payment systems, and two (the Massachusetts Medicaid program and Utah Blue Cross/Blue Shield) reported plans to implement their systems this year.

This chapter reviews the trends in outpatient services and expenditures, provides an overview of the APG system developed by **3M/Health** Information Systems, and describes the study methods. Chapter II describes the goals, scope, and design of the 11 APG-based payment systems we identified. Chapter III describes payers' and providers' experiences implementing and using APGs, and presents our conclusions.

A. TRENDS IN OUTPATIENT SERVICES AND EXPENDITURES

The use of ambulatory services--particularly in hospital outpatient departments (**OPDs**) and free-standing ambulatory surgery centers (**ASCs**)--has grown rapidly since the mid-1 980s. This has led to concern among payers about the rising costs of ambulatory care. In the following sections, we briefly describe the growth of outpatient care in **OPDs** and **ASCs** and discuss the impact of this growth on Medicare expenditures.

1. Hospital Outpatient Departments

Rapid growth in the use of outpatient services is largely but not exclusively a result of the shift from inpatient to outpatient care. Between 1983 and 1994, the annual number of outpatient visits delivered in community hospitals increased by 82 percent.¹ During the same period, hospital admissions and average length of stay dropped by 15 and 12 percent, respectively, (American Hospital Association 1995). Much of the decline in inpatient stays occurred during the 1980s following the implementation of prospective payment for Medicare hospital services, a payment

¹Following the definition of the American Hospital Association, community hospitals are **short-term, nonfederal, acute care hospitals**.

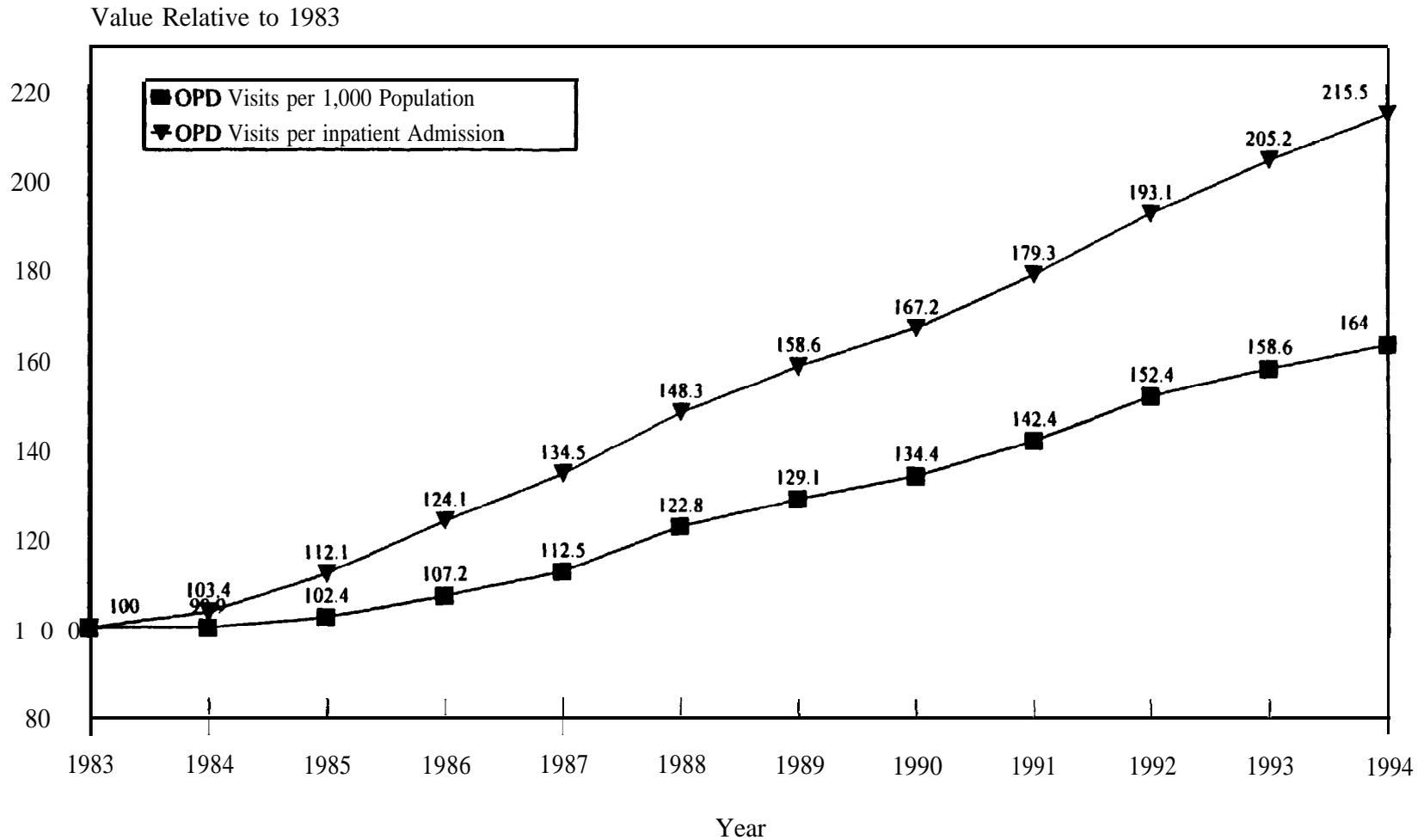
mechanism designed to encourage hospitals to reduce patients' length of stay. Between 1985 and 1995, the percentage of hospital revenue from outpatient services rose from 16.1 percent to 28.8 percent (ProPAC 1996).

Growth in the total volume of hospital outpatient visits is illustrated in Figure I. 1, which plots OPD visits per 1,000 in the U.S. population and OPD visits per hospital admission for the decade from 1983 to 1994 (U.S. Bureau of the Census 1996). The number of OPD visits per 1,000 population began growing rapidly after 1985, at an average compound rate of 5.4 percent. OPD visits per hospital admission has grown even faster, at a compound rate of 7.6 percent--growth sufficient to double the number of visits per admission every 10 years.

Many factors contributed to the rapid growth in the use of outpatient services, including:

- ***The Proliferation of OPDs.*** In 1985, about half of the hospitals in the U.S. had an outpatient department. By 1995, nearly all reported this capacity (ProPAC 1996).
- ***Technological Advances.*** Changes in diagnostic and imaging technologies have sharply expanded the range of services that can be provided on an outpatient basis. Indeed, the Prospective Payment Assessment Commission (ProPAC) estimates that 35 percent of the total increase in OPD expenditures during the 1980s was due to the greater intensity and complexity of services offered (ProPAC 1993).
- ***Financial Incentives to Shift Care from Inpatient to Outpatient Settings.*** Prospective payment for Medicare hospital-based care and payment methods of many managed care organizations provide hospitals with strong incentives to substitute **post-**acute and outpatient care for many services previously provided during inpatient stays (ProPAC 1997).
- ***Marketplace Competition.*** Changes in the marketplace have pushed hospitals to offer wider ranges of specialized ambulatory clinics and centers. Table 1.1 shows the proportion of short-term community hospitals that reported offering particular outpatient-oriented services. The proportions have increased across the board, testifying to the growing scope of services offered. For example, the proportion of hospitals reporting MRI capability (including mobile vans) almost tripled between 1988 and 1993.

Figure 1.1
 Growth in Measures of the Frequency of Hospital OPD Visits
 (1983=100)



SOURCE: American Hospital Association, *Hospital Statistics* as analyzed in U.S. Department of Commerce, *Statistical Abstract of the United States*, 1991 (Table 67), 1995 (Table 185), and 1996 (Table 189).

NOTES: Value of each year is divided by the base value for 1983. In 1983, there were 897 OPD visits per 1,000 population and 5.8 OPD visits per admission.

TABLE I. 1

PROPORTION OF U.S. SHORT-TERM COMMUNITY HOSPITALS
WITH SELECTED OUTPATIENT-ORIENTED SERVICES
1988-1993

Type of Services	1988	1993	Change
Cardiac Care			
Cardiac Catheterization	22.2%	33.2%	+11.1
Cardiac Rehabilitation	39.9 ^a	49.0	+9.1
Emergency			
EMS	89.2	92.1	+2.9
Trauma Center	12.7	16.7	+4.0
Radiology			
Megavoltage Radiation	17.4	20.8	+3.4
Radioactive Implants	22.7	25.8	+3.1
Therapeutic Radioisotope	23.3	26.6	+3.3
CT Scanner	60.5	77.4	+16.9
MRI	11.9	31.1	+19.2
Mental Health			
Outpatient (Alcoholism/Chemical Dependency)	17.9	21.8	+3.9
Outpatient (nonemergency) Psychiatric Service	16.8	23.3	+6.5
Other Specialty Clinics			
Outpatient Rehabilitation	43.5	55.5	+12.0
Hemodialysis	25.4	28.0	+2.6
Geriatric Services	--	65.0	--
Women's Health Center	13.5	20.7	+7.2

SOURCE: American Hospital Association (1989 and 1994). (Data from the 1988 and 1993 Annual Surveys).
Data cover nonfederal, short-term general hospitals.

NOTE: The third column lists the arithmetic difference in percentage shares between the two years.

^aData for 1990.

- **Acceptance of Ambulatory Care.** Finally, the use of outpatient services has grown as a result of increased hospital, physician, and patient acceptance of ambulatory care (Sulvetta 1991). Fifty-seven percent of surgeries at community hospitals were performed on an outpatient basis in 1994, compared with 16 percent in 1980 and 36 percent in 1985 (U.S. Bureau of the Census 1996).

The fast-paced growth in the use of outpatient services has led to concern among payers, including Medicare program managers, about the corresponding growth in spending for ambulatory care. In 1997, the Medicare program will spend an estimated \$20.9 billion for hospital outpatient care, about nine times the amount spent in 1980. Hospital outpatient care expenses will account for an estimated 11 percent of total Medicare spending in 1997, up from 5 percent in 1980 (ProPAC 1997).²

The growth in expenditures for outpatient care may be attributable in part to the payment methodologies used to reimburse providers. The Medicare program, for example, generally reimburses facilities for ambulatory care on the basis of cost or discounted charges and sets no limits on growth in costs or charges over time. Because these payment methodologies generally provide no incentive for providers to control costs and improve efficiency, payers have begun to explore other methodologies that include such incentives.

2. Ambulatory Surgery Centers

The trend toward outpatient surgery has been bolstered by the expansion of free-standing **ASCs** that compete directly with hospital **OPDs**. In 1995, there were 1,994 Medicare-certified **ASCs** nationally, compared with 485 in 1986 (ProPAC 1995).

²**Beneficiary** copayments will account for 13 percent of total expenditures and 40 percent of hospital outpatient expenditures

Despite their growing presence, ASCs accounted for only about 5 percent of all Medicare-reimbursed outpatient surgery in 1992 (ProPAC 1993). However, their share for some types of procedures was much higher. In particular, ASCs accounted for 19 percent of all Medicare-reimbursed cataract removals.

Federal policy has encouraged the growth of ASCs. Legislation initially authorized Medicare payment to ASCs in 1982. HCFA subsequently expanded the list of procedures that could be performed at an ASC and covered by Medicare from approximately 500 to 2,300 by 1996. Certification requirements were also changed to allow single-specialty physician-sponsored entities to be eligible for Medicare reimbursement. The fact that ASCs set lower rates, and hence lower copayments, for most Medicare beneficiaries than hospital do OPDs has also boosted the popularity of ASCs.

ASCs are not uniformly distributed across states. Table I.2 compares the number of ambulatory centers in 1997 in several states. California, with 409, had by far the largest number of centers. It is therefore not surprising that Blue Shield of California included ASCs as well as hospital outpatient departments in its introduction of APGs. In contrast, 10 states had nine or fewer centers in 1997.

B. THE APG SYSTEM CREATED BY 3M/HEALTH INFORMATION SYSTEMS

Currently, Medicare uses a piecemeal approach to reimburse for outpatient care: various OPD services may be reimbursed on a reasonable-cost basis, through fee schedules, through flat-rate prospective payment, or through blended rates. The Balanced Budget Act of 1997 mandates the replacement of this mix of payment systems with an outpatient PPS beginning in January 1999. Over the years, HCFA sponsored research on several patient classification systems that could be used for prospective payment for hospital outpatient services. The APG system was developed by 3M/Health Information Systems (3M/HIS) under a cooperative agreement with HCFA. The system

TABLE I.2

GEOGRAPHIC AVAILABILITY OF AMBULATORY SURGICAL
CENTERS IN SELECTED STATES

State	Number of Freestanding ASCs
STATES WITH MOST FREE-STANDING ASCs (1993)	
California	409
Florida	219
Texas	150
Maryland	137
Georgia	109
Washington	91
Illinois	89
Arizona	81
New Jersey	71
Tennessee	69
STATES WITH FEWEST FREE-STANDING ASCs (1993)	
New Mexico	9
West Virginia	9
Maine	8
Montana	8
North Dakota	8
Rhode Island	7
Wyoming	7
Alaska	4
Delaware	4
Vermont	2

SOURCE: SMG Marketing Group, Inc. 1997.

is intended to offer several advantages over the current Medicare payment system for the facility-cost portion of outpatient **services**. **3M/HIS** completed Version 1.0 of the system in 1990 and Version 2.0 in 1995.

1. 3M/HIS Grouper

The major feature of the APG system developed by **3M/HIS** is its grouper. The APG grouper Version 2.0 is an algorithm that classifies more than 8,000 procedure codes (**CPT-4/HCPCS** codes) and diagnosis codes (**ICD-9-CM**) into 290 **APGs** (seven fewer than in Version 1.0). Each APG contains procedure or diagnosis codes that are clinically similar and require similar levels of resources, according to the data used to develop the system. Any given outpatient service (CPT code) will be grouped into one, and only one APG.

Under the grouper, outpatient services are categorized into three types of **APGs**: procedure, medical, and ancillary. A procedure APG involves a significant procedure “which is normally scheduled, is the reason for the visit, and which dominates the use of time and resources during the visit” (**Vertrees** et al. 1994). When a visit involves more than one procedure, each procedure code is assigned an APG. A medical APG is a visit to a clinician that does not involve a significant procedure. By definition, when a medical APG is assigned, no procedure APG is assigned for that visit. An ancillary APG includes minor procedures, such as immunizations and tests. Many ancillary procedures are packaged (incorporated) into procedure and medical **APGs**; however, if an ancillary service is not packaged into a procedure or medical APG, it is paid as a separate APG.

2. Relative Weights

A second key component of the **3M/HIS** APG system is a set of relative weights. Weights are key to any payment system based on service groupings, as they provide the means to calculate

payment amounts. The payment amount for each APG is calculated by multiplying the APG's weight by the average or "base" payment for all APGs. Thus, each APG has a payment amount associated with it. However, as discussed below, assignment of multiple APGs during a visit do not always result in multiple payments.

Generally speaking, APG weights measure the resources used to provide certain ambulatory care procedures against the resources used to provide all other ambulatory care procedures. For example, suppose that patients with procedures grouped under APG1 require twice the resources of patients receiving services grouped under APG2. APG1 could require greater resources for many reasons: for example, the procedures associated with APG1 may take longer, require the use of more expensive equipment, or use more nonphysician staff time. Regardless of the reason for the difference, the APG1 weight will be twice as high as the APG2 weight. An important feature of relative weights is that they are based on the average resources of a large population of patients, rather than the experience of individual patients.

The weight of an individual APG is without inherent meaning. Weights derive their meaning in two ways: (1) in comparison with other APG weights and (2) when multiplied by a base payment amount, to help specify the dollar amount to be paid to the provider. The system developers did not determine a base payment amount for Medicare, in part because such an amount is sensitive to policy decisions and other specific system parameters.

Because the APG system was developed under a cooperative agreement with HCFA for potential use in the Medicare program, Medicare claims were the primary data source used to calculate relative weights for the original 297 APGs.³ As discussed in Chapter III, other payers used

³Other data used include: 1988 New York State ambulatory data for 17 hospitals and community health centers; the National Ambulatory Care Survey; the U.S. Army Ambulatory Care Database; the
(continued...)

their own claims data to calculate relative weights for their APG payment systems. Weights for some procedures--particularly procedures that are infrequently performed for the Medicare population and/or the populations insured by the other payers that have developed APG systems--differed substantially.

3. Other Features

Version 1.0 of the APG system developed by 3M/HIS has three other important features: consolidation, ancillary packaging, and discounting. The consolidation logic was eliminated from the new system (Version 2.0) developed for HCFA, but retained in 3M/HIS' proprietary Version 2.0. Most payers that have implemented APGs are using the proprietary version.

a. Consolidation

Multiple procedures provided during the same visit may be associated with multiple APGs. However, if the procedures are related to one another (for example, a simple skin excision and a complex skin incision), they will be "consolidated" and result in only one payment--for the higher-intensity APG. If the significant procedures are in different APGs, the system refers to a significant procedure consolidation list to determine if multiple APGs will be used in computing payment. The list identifies, for each significant procedure APG, the other significant procedure APGs that are an integral part of the procedure and can be performed with relatively little additional effort or resource use. If the procedures are all in the same APG, payment is computed only once for that APG.

HCFA plans to develop coding edits that will perform the same function as the consolidation logic in Version 1 .0.

³(...continued)

Relative Value Units for Physicians; and the Resource Based Relative Value System (Averill et al. 1990).

b. Ancillary Packaging

Ancillary services are often performed along with a significant procedure or medical visit. For example, anesthesia will often accompany surgical procedures. Ancillary packaging incorporates reimbursement for ancillary services into the payment for the procedure or medical APG. When ancillary services are packaged into an APG, no separate payment is made to the provider for the ancillary service. That is not to say that no payment is made for the service; rather, the payment is incorporated into the payment amount based on the average resources and relative weight calculated for the APG. **Averill** et al. (1993) give a simple example of ancillary packaging:

If a packaged ancillary costs \$20 and is performed for 50 percent of the patients in a medical APG, then \$10 (i.e., 50 percent of \$20) would be included in the payment rate for the medical APG.

The **3M/HIS** grouper uses “uniform packaging.” A uniform group of ancillaries is packaged into every procedure or medical visit, regardless of whether they are **performed** on that visit. The ancillaries on the **uniform** packaging list are primarily simple laboratory tests, simple pathology, anesthesia, simple radiology, other minor tests (for example, **EKGs**) and minor procedures and therapies. To limit the financial risk to providers, only relatively low-cost ancillaries are uniformly packaged. Ancillaries that are not on the uniform packaging list are assigned their own **APGs** and reimbursed separately.

c. Discounting

Discounting occurs when multiple procedures performed on the same visit are not related (and thus not consolidated). Some of the costs of providing the second and subsequent procedures are actually overhead costs associated with providing the initial procedure. For example, the costs associated with pulling a patient’s file, conducting basic tests, and using a patient room are basically

fixed costs that can be allocated across multiple procedures. Since no information is available to identify the precise marginal costs of additional procedures, 3M/HIS and HCFA policy staff arrived at discounting rates based on their own judgment and consensus: In Version 1.0, the significant procedure with the highest APG weight is paid at 100 percent of the payment weight; the procedure with the second highest weight is paid at 40 percent of the payment weight; and the third and subsequent procedures are paid at 20 percent of the payment weight. HCFA plans to reimburse of the procedure with the highest weight at 100 percent and all subsequent procedures at 50 percent of the payment weight.

Nonpackaged ancillary services are discounted only if they are within a single APG. With the exception of laboratory tests, nonpackaged ancillaries in the same APG are discounted at the same levels as significant procedure APGs. Nonpackaged laboratory tests in the same APG are discounted less steeply; payment is 100 percent for the **first** test and 80 percent for all subsequent tests.

4. Changes to Version 1.0

According to 3M/HIS in its final report on the Version 2.0 grouper developed for HCFA (Aver-ill et al. 1995), the major changes from Version 1.0 to Version 2.0 include:

- ***Elimination of Significant Procedure Consolidation.*** With the new grouper developed for HCFA, grouping and code editing are two distinct processes, as they are in the Medicare DRG system.
- ***Elimination of the Admitted or Died APG.*** Under Version 1.0, patients who died during an ambulatory visit or who were admitted to the hospital following an ambulatory visit were assigned to a separate APG, to ensure that facilities were fairly reimbursed for the high costs typically associated with such patients. 3M/HIS eliminated this APG in Version 2.0 because data suggested that the costs for these patients did not differ significantly from costs under the APGs to which these patients would otherwise have been assigned.

- ***Addition of Five Radiological and One Mental Health Therapy Procedure APGs.*** To more accurately describe the processes and costs involved in providing certain services, 3M/HIS assigned procedure APGs to services that were previously assigned ancillary or medical APGs.
- ***Addition of Partial Hospitalization APGs.*** Partial hospitalization is becoming increasingly common for mental health and substance abuse patients. 3M/HIS created these APGs in anticipation of the creation of procedure codes for these treatment modalities.
- ***Elimination of the Use of Age and Sex to Define Medical APGs.*** Use of patient age and sex to define medical APGs was deemed unnecessary and therefore eliminated to **simplify** the system.

In sum, the 3M/HIS model is primarily a classification system for outpatient services, but includes some features such as consolidation, packaging, and discounting that could be used in a payment system. In Chapter II, we describe how payers have adapted the 3M/HIS model and incorporated additional features to create their payment systems.

C. STUDY METHODS

This report summarizes results from two components (see 1 and 2 below) of a study of the implementation of APG-based payment systems by state Medicaid agencies and private payers. An earlier report (Klein et al. 1997) described the APG payment system adopted by the Iowa Medicaid program, and a separate summary submitted to HCFA summarizes the various strategies private payers use to control costs in hospital OPDs and ASCs. The three components of the study consisted of:

1. Visits to public and private payers and other stakeholders for in-depth study of three operational APG payment systems.
2. Telephone interviews with a broader set of payers who have implemented or are developing APG-based systems, to determine how they use or plan to use the APG system for payment to OPDs and ASCs.

3. Telephone interviews with a sample of private payers (indemnity and managed care) to collect information about the strategies they use to control costs in hospital **OPDs** and **ASCs**.

The project team examined in detail the APG-based payment systems implemented by three payers: the Iowa Medicaid program, Blue Shield of California, and Medical Mutual of Ohio (formerly Blue Cross of Ohio). In each site, members of the project team met with the payer staff responsible for implementing **APGs**, staff of hospitals and/or **ASCs** that are using **APGs**, and other stakeholders, such as staff of the state hospital association. Members of the project team conducted telephone interviews with representatives of three other payers who are currently using **APGs** and five other payers who have developed but not yet implemented APG-based payment systems. The latter group includes state Medicaid programs in Massachusetts, Nebraska, Virginia, and Washington. Thus, we collected information about the goals, scope and design of a total of 11 **APG**-based payment systems (discussed in Chapter II). In addition, we assessed the implementation and operational experiences of 6 payers currently using **APGs**, with a particular focus on the three payers with the most experience with the system: Iowa Medicaid, Blue Shield of California, and Medical Mutual of Ohio (the subject of Chapter III). To capture a range of provider perspectives, we interviewed urban and rural **OPDs** and **ASCs**, and included among the **ASC** interviewees representatives of both multi- and single-specialty centers.

Following semistructured interview protocols, project staff focused discussions on five issues: (1) development of the APG payment system, (2) implementation and operational experience, (3) financial impacts, (4) effects on patient care, and (5) overall assessment. Most respondents cooperated generously with the study. Project staff analyzed the results by synthesizing themes from the information obtained in the individual and group interviews.

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II. GOALS, SCOPE, AND DESIGN OF 11 APG SYSTEMS

Our research identified 11 payers that have developed APG-based payment systems to reimburse for facility costs associated with outpatient services. Six of these payers had implemented their systems before we began our data collection; two others reported that they planned to do so by the end of 1997. Table II. 1 lists the 11 payers and the actual or planned implementation dates of their systems. Of the 11, five are state Medicaid programs, four are Blue Cross and/or Blue Shield plans, and one, Medical Mutual of Ohio, was a Blue Cross and Blue Shield plan until April 1997. The last is a small commercial plan that is owned by and contracts with four hospital systems.

Blue Shield of California was the first payer to implement an APG-based payment system and now uses **APGs** to determine reimbursement for 40 of the 300 hospitals and nearly all 70 of the **ASCs** that have contracted with the insurer to be part of a preferred network of providers. The Iowa Medicaid program was the first and, at the time of our interviews, only, public payer using **APGs**. Iowa Medicaid currently reimburses 119 **OPDs** through this prospective payment system. The third payer with a large-scale APG-based payment system is Medical Mutual of Ohio, which has implemented the system with 50 to 60 **OPDs**. Implementation for **ASCs** in Ohio is in its earliest stages. Only three **ASCs** are under contract to be reimbursed under **APGs** and none was being paid under the system in July 1997.

Payers that have introduced APG-based payment systems on a smaller scale are Alternative Health Delivery Systems (AI-IDS), a health plan based in Louisville, Kentucky, that is owned by and contracts with four hospital systems and uses **APGs** to reimburse the six hospitals and four **ASCs** in the four systems; Blue Cross of Idaho, which has implemented **APGs** with 12 **ASCs** and 2 **OPDs**;

TABLE II. 1

OVERVIEW OF APG-BASED PAYMENT SYSTEMS
(OPERATIONAL AND PLANNED)

	Implementation Date
Operational Systems	
Public Payers	
Iowa Medicaid	1994
Private Payers	
Blue Shield of California	1991
Blue Cross of Idaho	1994
Alternative Health Delivery Systems (AI-IDS), Kentucky	1993
Medical Mutual of Ohio	1995
Blue Cross of Washington/Alaska	1996
Planned Systems	
Public Payers	
Massachusetts Medicaid	October 1997
Nebraska Medicaid	Not known
Virginia Medicaid	None
Washington State	Not known
Private Payers	
Blue Cross/Blue Shield of Utah	October 1997

and Blue Cross of Washington/Alaska, which has implemented **APGs** with 26 **OPDs** in Washington State.

Blue Cross and Blue Shield of Utah implemented its APG-based payment system in October 1997. At the time of our interviews earlier in the year, the insurer planned to phase in use of the system with 20 of the 43 hospitals with which it contracts and 8 of 10 **ASCs**. Four state Medicaid programs were also planning to implement **APGs** at that time. One of the four, the Massachusetts Medicaid program, began using **APGs** in October 1997. Implementation schedules for the other Medicaid programs are uncertain. At the time of our interview, the APG system designed by the Washington State Department of Labor and Industries, which operates the state's Medicaid program, was awaiting approval by the last of the three agencies in the department. The Nebraska Medicaid program has delayed implementation of **APGs** for at least two years. (The program had planned to introduce both **APGs** and **DRGs** at the same time, but because hospitals strongly objected to adopting both payment systems simultaneously, only **DRGs** were implemented.) The Virginia Medicaid program spent about 18 months developing an APG-based payment system but shelved its plans when HCFA delayed implementation of **APGs** for Medicare. The state expects to begin using **APGs** if and when HCFA does.

A. GOALS AND KEY CONSIDERATIONS IN SYSTEM DESIGN

1. Goals

The most common reasons payers gave for adopting **APGs** were a desire to achieve cost savings and an interest in developing the capacity to identify and reward provider **efficiency**. Most of the payers we interviewed had previously taken steps to control costs, usually by reimbursing providers at less than 100 percent of charges. **APGs** were perceived as a better mechanism than discounted charges for reducing costs and providing incentives for **OPDs** and **ASCs** to deliver services more

efficiently. Payers also identified four other reasons for adopting **APGs**, including the system's potential to simplify claims processing, increase predictability in costs, reduce variability in costs across hospitals, and more effectively target areas for savings. **HCFA's** expressed intention to use **APGs** was reportedly a factor in some payers' decision but was more frequently cited as a key factor in providers' willingness to accept **APGs**.

Although the small number of payers that have adopted APG-based payment systems makes it difficult to generalize about differences among them, private and public payers appear to have been motivated by somewhat different goals. Private payers were more likely to cite cost containment as a reason for using **APGs**, while public payers were more likely to cite an interest in identifying and rewarding efficiency. Although the ultimate goal of improved efficiency is also to contain costs, public payers appear to be pursuing cost savings less aggressively than their private counterparts.

2. Key Considerations in System Design

Market forces, policy considerations, and technical and administrative constraints influenced the design and implementation of APG systems.

The extent to which payers considered the potential negative impacts of **APGs** on providers--and designed their systems or implementation strategies accordingly--seemed to depend on both market dynamics and the extent to which payers were motivated by objectives other than cost savings. Although it is difficult to generalize from 11 examples, private payers that hold a large share of the market seemed more likely than others to implement **APGs** without soliciting much provider input, while public payers, and private payers with less market power, were more likely to consider the impacts of **APGs** on the health care infrastructure, seek provider involvement in the planning process, and respond to providers' concerns.

a. Provider Involvement in the Planning Process

Most payers recognized the importance of including providers, primarily hospitals, in some aspects of the decision-making process. However, the level of involvement sought varied widely, with public payers usually seeking greater participation by providers. Some private payers reportedly offered providers no opportunity to review or comment on design decisions. This decision not to involve providers in the planning process was seen by some as the source of many problems later encountered with the system.

To the extent that payers did seek provider input, their objectives often differed. Public payers tended to emphasize their desire to get input from providers on decisions about major aspects of the APG system, such as the payment window, whereas private payers tended to emphasize the need to include providers in some aspects of decision making about **APGs** in order to enhance their willingness to use the system. One notable exception among private payers is Blue Cross of Washington/Alaska, which aggressively sought provider input and reportedly emphasized **trust-**building with hospitals.

The two private payers that have implemented **APGs** on a large scale neither consulted providers in the decision to use **APGs** nor solicited their input in the design of the system. Both payers were in a strong bargaining position relative to providers (one because of general market pressures to reduce prices and the other because of its large market share) and were therefore able to make conversion to the new system a contract requirement for at least some providers. (The first payer was able to implement **APGs** for all **ASCs** but gave hospitals the choice of being reimbursed on the basis of **APGs**, **ASC** groupings, or discounted charges.) In contrast, the Iowa Medicaid program not only solicited provider input from the Association of Iowa Hospitals and Health Systems (AIHHS), but also acted upon key recommendations made by the association's APG task force. Massachusetts

Medicaid and Virginia Medicaid also reported having invited providers to participate in advisory groups.

In some instances, providers influenced decisions about **APGs** without being directly involved in the planning process. Several payers noted that the need to ensure provider buy-in had **influenced** rate setting, choices regarding system features (such as the level of packaging), and/or the timing of implementation. For example, anticipated resistance **from** providers discouraged some payers from packaging ancillaries as aggressively as they would have liked.

b. Provider Characteristics Considered in System Design

Before adopting **APGs**, payers typically paid for outpatient services in ways that implicitly or explicitly accounted for differences in facilities' costs. (Many, for example, paid discounted charges.) Whether and how to accommodate cost differentials among facilities--as well as differences in volume, service mix, coding practices, and technical expertise--continued to be an important issue for payers as they designed their APG systems. Some of the provider characteristics that payers considered include:

- **Type of Facility.** Most payers treat **ASCs** and **OPDs** differently, in recognition of their differences in costs, patient volume, range of services provided, experience with CPT coding, and/or market power.
- **Provision of Direct Medical Education (DME).** A few payers adjust or plan to adjust payments to teaching hospitals to compensate them for higher costs. The Iowa Medicaid program initially included a DME 'add-on' in its system, but subsequently eliminated it. (Some studies dispute the need for additional compensation for these facilities.)
- **Location and Patient Volume.** Some payers excluded rural providers and providers with low patient volume from at least the initial implementation of **APGs**, in the belief that these providers lacked the technical capacity to implement **APGs** or would be placed at an unacceptably high risk by this method of payment.

B. SYSTEM SCOPE

One of the **first** issues payers faced in designing their APG system was deciding which type or types of providers (for example, **OPDs** and/or **ASCs**), categories of services, and patient groups would be covered under **APGs**.

1. Providers Covered

Most payers use (or plan to use) **APGs** to reimburse both **OPDs** and **ASCs** for facility costs associated with outpatient services (Tables **II.2a** and **II.2b**). However, 4 of the 11 payers we contacted either had implemented **or planned** to implement **APGs** only with **OPDs**. Some of these payers, including the Iowa, Nebraska, and Virginia Medicaid programs, currently contract with no or almost no **ASCs**, as there are few in the state.

Two payers explicitly chose to exclude **ASCs** from their APG-based payment system, at least initially. Another payer encountered serious difficulties using **APGs** with the three **ASCs** it initially brought under the system and now reimburses only **OPDs** through this mechanism. Two payers pursued the opposite strategy. One uses **APGs** with all 12 **ASCs** in the state with which it contracts but with only two **OPDs**. The other made use of **APGs** a contract requirement for **ASCs**, but permitted the individual hospitals with which it contracts to decide whether or not to use the new system. Because this payer represents only a small share of most **OPDs'** business, it lacked the leverage to require hospitals to adopt **APGs**. Many hospitals have chosen not to use **APGs** and, for the most part, continue to be paid discounted fee-for-service rates for outpatient surgeries. Smaller hospitals are particularly likely to reject the system, reportedly because they lack the resources and capacity to justify incorporating **APGs** into their billing systems.

TABLE II.2a
OVERVIEW OF APG SYSTEMS
(Operational APG Systems)

	Public			Private		
	Iowa Medicaid	Blue Shield of California	Blue Cross of Idaho	Kentucky AHDS	Medical Mutual of Ohio	Blue Cross of Washington/Alaska
NUMBER OF PROVIDERS USING APGs						
OPDs	119	40	2	4	50-60	26
ASCs	0	70	12	4	0	0
OUTPATIENT SERVICES COVERED						
OPDs	Most	Outpatient surgery only	Outpatient surgery only	Outpatient surgery only'	Most	Most
ASCs	NA	Outpatient surgery only	Most	Outpatient surgery only'	NA	NA

*At the time of our interviews, AHDS planned to expand the use of **APGs** to cover most outpatient services by April 1997.

NA = Not applicable

TABLE II.2b
SCOPE OF APG SYSTEMS
(Planned APG Systems)

	Public				Private
	Massachusetts Medicaid	Nebraska Medicaid	Virginia Medicaid	Washington State	Blue Cross/Blue Shield of Utah
TYPE OF PROVIDERS THAT WILL USE APGS					
OPDs	Yes	Yes	Yes	Yes	Yes
ASCs	No	No	No	Yes	Yes
OUTPATIENT SERVICES COVERED					
OPDs	Most	M o s t	Most	Most	M o s t
ASCs	NA	NA	NA	Most	Most

NA= Not applicable

Payers gave various reasons for focusing on **OPDs** or **ASCs**. Some considered it advisable to gain experience using the system for one type of provider before implementing it for the other. Our contact at the Massachusetts Medicaid program, for example, reported that policymakers were particularly interested in getting the system in place for **OPDs** and hospital-licensed health centers, because they account for by far the largest share of the program's outpatient costs. However, policymakers expected to expand the system to include **ASCs** once program staff had some experience with **APGs**. Another reason given for excluding **ASCs**, at least initially, was low service volume. Blue Cross of Washington/Alaska excluded not only **ASCs**, but also certain hospitals with low patient volume, because Blue Cross analysts believed the system might expose these facilities to unacceptable levels of risk. By contrast, Blue Cross of Idaho introduced **APGs** for the surgery centers first because of their greater experience with CPT coding.

Besides **ASCs**, the other large category of providers excluded from many APG-based payment systems are rural hospitals. Medical Mutual of Ohio, for example, chose not to implement **APGs** for rural hospitals because these facilities represented only a small fraction of Medical Mutual's business and were expected to have considerable difficulty implementing the system. Blue Cross and Blue Shield of Utah also plans to exempt rural hospitals because **APGs** are believed to pose too great a risk for these facilities. The Iowa Medicaid program, on the other hand, implemented **APGs** with 89 rural hospitals.

2. Services and Patients Covered

Most of the 11 payers that have developed APG-based payment systems apply (or plan to apply) **APGs** to most surgical and nonsurgical outpatient services. The category of services that payers most frequently exempt are recurring, or "batch," services, such as physical therapy. The Iowa Medicaid program, for example, pays providers prospectively for such services on a per-unit (15-

minute) or per visit (calendar day) basis, as it did prior to implementing **APGs**. The services that Iowa carves out include occupational, physical, and speech therapy; chemotherapy; dialysis; and radiation therapy. In addition, the Iowa Medicaid program contracts with a managed care plan to provide all **mental** health care services.

One payer, Blue Shield of California, covered only outpatient surgeries under **APGs** at the time of our visit. Blue Shield chose not to use **APGs** for medical procedures initially because APG weights derived from the limited charge data available at the start of the system were not viewed as adequately reflecting cost variability in medical services. Blue Cross of Idaho has also restricted the use of **APGs** by **OPDs** to outpatient surgeries but uses **APGs** to reimburse most outpatient services provided at **ASCs**.

Some payers cover only certain patient groups under **APGs**. Public payers cover only enrollees in their indemnity plans, whereas some private payers cover both managed care and indemnity enrollees under **APGs**.

C. USE OF 3M SYSTEM FEATURES

No two APG-based payment systems are alike. Payers have modified features of the **3M/HIS** system and have added others designed to protect both providers and themselves from significant losses under the prospective payment systems. Table II.3 summarizes key features of the six **APG**-based payment systems that were in operation at the time of our interviews.

1. Unit of Service

The basic unit of payment for the APG system is a “visit,” broadly defined as outpatient services provided within a specified period of time (the “payment window”). All services that occur during this period of time are bundled by the APG system to determine payment for the visit.

TABLE II.3

SCOPE AND FEATURES OF APG-BASED PAYMENT SYSTEMS

Payment System Feature	Payers
SYSTEM SCOPE - OPERATIONAL AND PLANNED SYSTEMS (11)	
Providers Covered	Most payers use or plan to use APGs to reimburse both OPDs and ASCs . Four payers have implemented or planned to implement systems only with OPDs , and one has focused on ASCs .
Services Covered	Most payers cover or plan to cover most surgical and nonsurgical outpatient services. The services most commonly exempted and reimbursed by other mechanisms are recurring services, such as physical therapy. Two payers restrict the use of APGs to outpatient surgery, at least in some settings (OPDs).
SYSTEM FEATURES - OPERATIONAL SYSTEMS (6)	
Grouper	At the time of our interviews, most payers that had implemented APGs were still using Version 1.0 of the 3M/HIS grouper but planned to move to Version 2.0 shortly. Two payers were already using Version 2.0. ¹
Payment Window	Three payers have a 24-hour payment window and two have a 72-hour payment window. One negotiates the payment window with each provider.
Significant Procedure Consolidation	Almost all payers consolidate significant procedures. Some are still using Version 1.0 of the APG grouper, which automatically consolidates related procedures. Most of the others that have moved to Version 2.0 have purchased the 3M/HIS proprietary version of the grouper, which includes the consolidation logic (HCFA's version of the 2.0 grouper, which is in the public domain, does not.)
Ancillary Packaging	Five payers package certain ancillary services. (The one payer that does not has no formal system for packaging, but generally consolidates all services, including ancillary services, that occur on the same date.)
Discounting	Four payers discount multiple services, using varying discount formulas.
Weight and Rate Adjustments	Almost all payers vary their base rates by provider or provider type (e.g., ASCs and OPDs). One uses different weights for ASCs and OPDs .
Risk Protection	Most payers have adopted some form of risk protection for providers (e.g., outlier payments or risk corridors), but vary in terms of the type and extent of protection offered. Most reported that risk protection was a temporary measure to ease providers' transition to the new system.

NOTE: Terms are defined in the glossary on page 75.

¹A third payer, Iowa Medicaid, began using Version 2.0 in October 1997.

For payers, the challenge has been to specify a payment window that is compatible with providers' billing procedures, that appropriately groups related services, and that does not encourage providers to alter practice patterns to increase reimbursement. The chief advantages of a 72-hour window, according to payers who chose this option, are that it permits the appropriate bundling of pre- and post-operative procedures that occur on separate days and discourages providers from "gaming the window" by requiring patients to return a day or two after a procedure simply to obtain payment for two visits rather than one. Payers who specified a 24-hour payment window contend that the shorter period is more compatible with hospitals billing and administrative procedures and, in most cases, is long enough for services to be bundled appropriately.

Several payers emphasized the need for flexibility in bundling claims and noted that although they have stipulated a payment window, they expect payers to bundle related claims that occur outside the window as appropriate. One payer has opted to negotiate with each facility to either establish a facility-specific payment window (in some cases, of more than 72 hours in length) or leave the window unspecified with the understanding that facilities will bundle services appropriately. This payer intends to use back-end auditing to prevent gaming of the payment window. Although this payer is very satisfied with its arrangements, a variable length window would not be a practical option for HCFA.

2. Consolidation, Packaging, and Discounting

a. Consolidation

Almost all payers consolidate significant procedures. One payer is particularly aggressive in consolidating services and maintains a policy of paying only for the highest-cost procedure on each claim. Payers believe consolidation provides the bulk of the cost-savings under the system and creates incentives for efficient service provision. They generally consider the elimination of the

consolidation logic in Version 2.0 of the grouper a mistake. Another payer that was using Version 2.0 at the time of our interviews is analyzing its data to determine whether to restore the consolidation feature. Other payers that have since moved to Version 2.0 purchased the 3M/HIS proprietary version of the grouper, which retains the consolidation logic.

b. Ancillary Packaging

All but one payer packages ancillary services and includes payments for ancillary services within the payments of the APGs with which they are generally associated. Packaging strategies typically differed somewhat from the original 3M/HIS system. Iowa Medicaid, for example, did not package two radiological ancillary services that were packaged under the 3M/HIS system. And of the 29 ancillary service APGs that were uniformly packaged in Version 1.0 of the 3M/HIS system (and denied payment if billed without a significant procedure or medical APG), only three were uniformly packaged in Iowa.

One payer has not formal system for packaging ancillary services,⁷ but because this payer fully consolidates all services provided for a given diagnosis on a given day, it effectively packages all ancillary services. (Although this payer generally does not reimburse for ancillary services provided during an outpatient procedural visit, it reportedly will reimburse for unforeseen high-cost services, such as a CT test with a high-cost contrast agent, when medical need is documented by a physician.) Ancillary services associated with an outpatient procedure, but not performed during the visit (e.g., preoperative tests) are reimbursed through a variety of mechanisms, such as capitation (HMO contracts) or discounted charges (PPO contracts), depending on the type of facility and type of contract.

⁷This payer does not have a uniform list of packaged ancillary services, nor does it package specific ancillaries with specific procedures.

c. Discounting

Discounting occurs when multiple procedures performed on the same visit are not related (and thus not consolidated). In Version 1 .0, **3M/HIS** recommended a discounting process whereby the significant procedure with the highest APG weight is paid at 100 percent of the payment weight, the procedure with the second highest weight is paid at 40 percent of the payment weight, and the third and subsequent procedures are paid at 20 percent of the payment weight. About half the 11 payers discount or plan to discount payments for multiple procedures. Iowa Medicaid follows the general model recommended by **3M/HIS** in Version 1 .0, but uses different discounting rates (100, 60, and 40 percent). Massachusetts Medicaid plans to follow the model HCFA will adopt, reimbursing for the procedure with the highest weight at 100 percent and for all subsequent procedures at 50 percent of the payment weight.

D. DEVELOPMENT OF APG WEIGHTS

Under its contract to HCFA, **3M/HIS** developed a set of APG weights based primarily on Medicare data. All 11 payers we interviewed elected not to use this set of weights, but to instead develop weights using their own claims data, which they believed better represented their enrollee population and the relative resources associated with the broad range and high volume of services currently performed on an outpatient basis.

Most of the payers we interviewed, including four of the six that have implemented **APGs**, designed their systems using Version 1 .0 of the **3M/HIS** grouper but plan to update to Version 2.0. Many made small modifications to version 1 .0 of the grouper to update it and better reflect their claims experience.

Constructing the claims data sets required for the development of APG weights presented enormous challenges. Problems payers encountered included missing or inaccurate CPT codes on

facility claims; insufficient charge data to compute precise APG weights; large variations in the charges for procedures assigned to particular **APGs**; and incompatibility between the grouper and claims data, because of the grouper's having been designed at a time when fewer procedures were performed on an outpatient basis.

- **Missing or Inaccurate CPT Codes.** Probably the most difficult problem payers faced was that the CPT codes needed to develop weights were missing from many claims. (One payer, for example, found that two-thirds of its facilities' claims lacked CPT codes.) In many cases, codes were missing because they were not required for reimbursement during the time period covered by the claims database, and providers therefore spent limited time completing this section of the claim form, recording only the key procedure or procedures and excluding lesser ones. To address this problem, payers typically matched facility claims to the corresponding physician claims, which contained the necessary procedure data. Matching was not possible in all cases, however. One payer, for example, was able to match **only** half the facility claims that lacked CPT codes.
- **Limited Charge Data to Compute Some APG Weights.** Some payers had relatively little charge data to compute weights, particularly for **APGs** that contain procedures that are performed infrequently. (This is especially likely to be a problem when payers create separate databases for a subset of providers, such as **ASCs**.) With small samples, estimates of average charges tend to be less precise. To address this problem, payers typically took steps to increase the usable data by correcting coding on existing claims to the extent possible. One payer that had previously computed weights using a sample of claims plans to recalibrate weights using Version 2.0 of the grouper and charge data for all providers in its network rather than a subset, as was used originally. The use of the larger sample of charge data is expected to substantially reduce the likelihood of random error in weighting.
- **Large Variations in Charges for Some Procedures Assigned to a Given APG.** Another problem cited by payers is the enormous variability in charges for services within certain **APGs**. One payer, Iowa Medicaid, addressed the problem of statistical outliers by assigning truncated values to claims with costs far above or below the typical cost for claims within the APG. Other payers contend that the variability in charges argues for an increase in the number of **APGs**.
- **Incompatibility Between the Grouper and Claims Data** Payers reported encountering some difficulty mapping CPT codes on their claims to the **3M/HIS** grouper, which was designed based on claims from an earlier period, when fewer procedures were performed

on an outpatient basis. (That is, some CPT codes for new outpatient procedures do not have an APG in which they can be grouped.)

To improve the quality of claims data, payers have worked with providers to improve coding. Some payers, such as the Massachusetts Medicaid program, are **sufficiently** satisfied with providers' response to have few concerns about the quality of their claims data. Another payer reported that improvements in providers' coding practices have come somewhat slowly and have been largely due to the payer's strategy for negotiating rates. Since this payer began requiring CPT codes in 1994, it has used claims data to analyze charges (adjusted for case mix) and negotiated aggressively for discounts **from** higher-charge facilities. This approach has reportedly encouraged providers to focus on the accuracy of their coding.

A few payers constructed separate OPD and ASC claims data sets to develop weights. Some payers and providers contend that the cost differences between **ASCs** and **OPDs** argue for different weighting systems for the two types of facilities. (The Federated Ambulatory Surgery Association (FASA), which represents the surgery center industry, urged HCFA to develop a separate set of weights for **ASCs**, using data **from** its 1994 ASC cost survey.) However, none of our respondents explained why services performed in an ASC setting should require different resources relative to one another than they do in **OPDs**.

For Blue Cross of Idaho, the decision to construct an ASC-only claims data base was dictated by the fact that none of the hospitals for which it had claims data were using CPT coding. (Blue Cross also uses these weights to reimburse two **OPDs**.) However, our contact at Blue Cross added that using ASC claims data to develop the weighting system for **ASCs** had helped ensure that the weights accurately reflect **ASCs'** costs. Blue Shield of California used separate charge data sets to

develop initial sets of weights for **OPDs** and **ASCs**, but combined data bases and produced a single set of weights when it updated to Version 2.0 of the grouper.

E. RATES AND RISK PROTECTION

Payers' major goals for their APG-based payment system are clearly reflected in the decisions they made concerning base rates and such system features as risk corridors and outlier policies. Private payers were more likely than public payers to pursue immediate reductions in aggregate spending **and** somewhat less likely to have structured their systems to shield providers against the possibility of major losses.

1. Rates

a. Aggregate Spending Targets

The payment amount associated with a given APG is determined by multiplying a base rate against the relative weight assigned to that APG. The base rate is thus an average rate for all services covered by **APGs**. Payers' first step in establishing base rates was to set aggregate spending goals. Most payers, including all but one of the six private payers, reported that they had set their base rates to achieve reductions in aggregate spending (Table 11.4). Massachusetts Medicaid, for example, set a single base rate for all **OPDs**, based on 1996 spending, minus 5 percent for anticipated savings due to increased efficiency, 5 percent to create an outlier pool, and 3 percent to cover anticipated increases in expenditures due to changes in coding practices. (Changes in coding practices would include more accurate coding and "code creep" in ambiguous cases where providers would code the higher-revenue-producing code.)

Four payers reported that they expected no immediate reductions in aggregate spending from **APGs**. Three set their base rates to maintain expenditures at or below the previous year's levels

TABLE II.4

EXPENDITURE GOALS AND RATE SETTING
AS REPORTED SPRING/SUMMER 1997
(Operational and Planned APG Systems)

Short-Term Change in Aggregate Spending Planned by Payer	Payer	Base Rates
Reduction	Blue Shield of California	Rates negotiated with individual OPDs and ASCs
	AHDS, Kentucky	Rates negotiated with individual OPDs and ASCs
	Medical Mutual of Ohio	Rates negotiated with individual OPDs and ASCs
	Blue Cross/Blue Shield of Utah	Undecided
	Blue Cross of Washington/Alaska	Universal rate for OPDs
	Massachusetts Medicaid	Universal rate for OPDs
No Reduction (Revenue Neutral)	Blue Cross of Idaho	Rates negotiated with individual OPDs and ASCs
	Nebraska Medicaid	Undecided
	Virginia Medicaid	Universal rate for OPDs, with wage adjustment
	Iowa Medicaid	Blended rates for OPDs

NOTE: Washington State is not represented in the table because policymakers have not yet defined aggregate spending goals or rate policies.

(with limited adjustments for inflation in one case), and one payer, Iowa Medicaid, budgeted a higher amount for outpatient expenditures under **APGs** than it had spent the previous year under its cost-based system. The state assumed that increases in the volume of services would increase total expenditures by 6 percent, and that changes in coding practices would increase expenditures by another 6 percent. Iowa's base payment amount was set to anticipate these increases and thus keep expenditures within budget.*

b. Variations in Base Rates

Most payers set different base rates for different providers or groups of providers, and all but one of the payers that use **APGs** with both **OPDs** and **ASCs** vary their base rates in some way to account for cost differences between the two. (AHDS in Kentucky initially set different base rates for the two types of facilities, but adopted a universal rate when it updated its system to Version 2.0 of the grouper and expanded the range of services covered.)

Three payers (all private insurers) negotiate base rates with individual **OPDs** and/or **ASCs**. One payer in a highly competitive market estimated that differences in rates negotiated with individual hospitals or **ASCs** are driven 90 percent by market factors (such as prevailing prices in the local market and relative market power of the payer and providers) and 10 percent by facility characteristics such as geography, specialty mix, patient mix, and facility personnel (e.g., training and union affiliation). Because of hospitals' higher operating and capital costs, rates negotiated with **OPDs** are by one estimate 55 percent higher, on average, than those negotiated with **ASCs**. (Estimates of rate differentials between **OPDs** and **ASCs** vary.)

*Volume of services actually decreased the first year **APGs** were used, because of increased enrollment in managed care. Few changes in coding practices were observed, perhaps because Medicaid represents too small a proportion of providers' business to prompt changes to standard coding practice.

The Iowa Medicaid program uses blended rates. Iowa calculated a statewide amount, which it then averages with a hospital-specific amount based on hospital-specific outpatient charges, to determine the base rate for each hospital. By using hospital-specific charges as a proxy for costs, Iowa reimburses hospitals with historically high costs at higher rates than hospitals with historically lower costs, giving high-cost providers time to become more efficient. By using statewide prices as part of the base payment amount, Iowa financially rewards hospitals with costs below the statewide average (in theory, the more efficient providers). The state's APG system initially included a direct medical education (DME) adjustment, in recognition of the higher costs incurred by teaching hospitals. The DME add-on was eliminated when Iowa adopted a statewide funding system for graduate medical education.

Some payers are considering a range of options. One may adopt a universal base rate for **OPDs** or six base rates based on the hospital peer groupings used in the DRG **system**.³ Options under consideration by another payer include facility-specific, negotiated rates; facility-group rates; location-based group rates; and a single base rate for **OPDs** and another for **ASCs**. Payer staff expect that whatever option is chosen, **ASCs** will be reimbursed at a lower rate than **OPDs**, because of their lower overhead costs. This payer is also considering a two-tiered approach, **with** base rates set by provider group and by APG category (procedure, medical, and ancillary). Such an approach would allow the insurer to target reductions in expenditures to the category of services in which costs appear to be most **inflated** (that is, ancillary services).

³The six groups are urban hospitals, rural hospitals, reassigned rural hospitals, hospitals with fewer than 30 Medicaid admissions annually, psychiatric hospitals, and rehab hospitals.

2. Risk Protection

Three of the six payers that currently use **APGs** and two of the five payers that designed systems include or plan to include some mechanism to shield providers--and in some cases, **themselves--from** risk of substantial losses under the system. Given the poor quality of the data used to calculate initial weights, and the consequent imprecision of the weights themselves, both payers and providers feared that without these protections, the new payment system might pose unacceptably high risks.

Payers tend to view these protections as temporary measures, designed to give higher-cost providers time to adjust to the prospective payment system. Including these protections also helped reduce providers' resistance to the new system. One of the payers we visited, Blue Shield of California, has opted not to shield providers from financial pressure and includes no risk-protection features in its system. (However, hospitals' use of **APGs** was voluntary, and payment levels were negotiated with individual providers rather than set and were therefore likely to reflect historical costs to some extent.)

a. Risk Corridors

Only two payers adopted risk corridors. For the first two years that the Iowa Medicaid program operated its APG system, hospitals were guaranteed not to gain or lose more than 5 percent of actual costs under the system. In response to lobbying from the hospital industry, the Medicaid program increased the risk corridor to 10 percent in year three. The risk corridor was eliminated the following year (October 1996). One private payer created facility-specific ceilings and floor for total reimbursements for the first year of **APG** use and, after rebasing its system weights, will determine whether to maintain the risk corridors in year two. Another private payer opted for a less generous variation on the traditional risk corridor: if a hospital's reimbursements fall below the negotiated risk

corridor allowed for the first year only, the hospital receives a one-time prospective adjustment to the next year's rates.

b. Outlier Policy

Outlier policies protect providers from large losses on individual cases. Two of the payers that were using APGs at the time of our interviews, as well as the two that planned to implement their systems this year, provide supplemental payments to providers to at least partially compensate them for losses on exceptionally high-cost cases. Representatives of the Iowa Medicaid reported that the program had adopted an outlier policy both to ease hospitals' fears of high losses and to ensure that providers would not shun high-cost cases.

Criteria for determining whether a case qualifies as an outlier and formulas for calculating outlier payments vary. In Iowa, outlier payments are set at 60 percent of the amount by which actual costs exceed a specified threshold. Two private payers adjust for both high and low outliers. (High outliers are charges that exceed the APG payment by a specified amount, and low outliers are charges that fall below the APG payment by a specified amount).

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III. EXPERIENCE WITH APGS

Payers' appraisals of **APGs** are largely positive. Those that had sufficient experience with the system to assess its effects indicated that **APGs** had improved their control over expenditures for outpatient care and, in some cases, reduced the variability in reimbursements to different facilities for similar services. Moreover, payers that had set out to reduce expenditures for outpatient services reported that they had succeeded in doing so.

Providers' views of the system are more mixed. Most are uncertain about the system's impact on their bottom line, and many raised concerns about specific reimbursement issues--particularly the lack of payment for second and subsequent related procedures performed during a single visit and insufficient compensation for procedures that require costly materials and equipment. Providers also expressed concern about the complexity of the APG system relative to other reimbursement mechanisms, the incompatibility of the APG grouper with facilities' billing systems, and facilities' consequent inability to monitor accounts receivable. None of the providers we contacted reported having used the system as a management tool, and, to date, **APGs** appear to have had little or no effect on utilization and service patterns.

In this chapter, we describe payers' and providers' experiences implementing and operating the APG system, and we present their impressions of the effects of **APGs** on reimbursement and service delivery. Also covered are some general **conclusions** about experiences to date with **APGs** and the implications of these experiences for **HCFA's** plans to implement **APGs** in the Medicare program. Because most of the payers that have adopted **APGs** are small players in their respective markets (relative to Medicare) or have implemented **APGs** on a limited scale, current experiences with **APGs** may not reflect the potential effects of the APG system were it to be adopted by the Medicare program.

Information about payers' and providers' experiences was gathered in visits to the three payers that have been using **APGs** on a large scale for several years--Iowa Medicaid, Blue Shield of California, and Medical Mutual of Ohio--and to some of their contracted providers. Information also comes from telephone interviews with the three other payers that were using **APGs** at the time of our data collection--Blue Cross of Washington/Alaska, Blue Cross of Idaho, and Alternative Health Delivery Systems in Kentucky--and from some of their contracted providers.

A. PAYER PERSPECTIVES

Payers anticipate many benefits from **APGs** but, for several reasons, were usually unable to **identify** many effects with certainty. Many payers do not have enough data, or have not yet analyzed the data they do have, to determine how their costs have changed under **APGs**. Complicating this analysis are the many market changes that occurred simultaneous with the implementation of **APGs**, as well as the difficulty of separating the effects of **APGs** from those of other cost-containment efforts payers had mounted prior to implementing **APGs**.

The advantage of **APGs** most commonly cited by payers is the system's usefulness in reducing the variation in reimbursements to different facilities for similar services (Table III. 1). Several payers also reported aggregate cost savings, but only one specified the magnitude of the savings achieved under **APGs**. A few payers said that data from the system were useful for identifying provider inefficiencies, and one payer mentioned that use of the system had simplified contract negotiations.

The reported drawbacks of **APGs** generally pertain to implementation and administration of the system. A few payers believe the APG system is overly complex, and even payers that were pleased with the system reported significant difficulties developing and implementing it. Payers' greatest challenges were developing relative weights and modifying existing systems to process claims.

TABLE III. 1

PAYERS' PERSPECTIVES ON APG-BASED PAYMENT SYSTEMS

BENEFITS TO DATE

- Reduction in cost differences across providers
- Cost savings
- Identification of areas of inefficiency
- Simplification of contract negotiations

DIFFICULTIES/DRAWBACKS

- Difficulty developing relative weights
 - **Difficulty** operationalizing system
 - Difficulty processing claims
 - Need to overcome historic coding problems
 - Need to educate providers/respond to questions during implementation
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This section describes payers' experiences implementing and administering the new payment system and describes the reported effects of APG-based payment systems on reimbursement.

1. Implementation and Administration

The degree of difficulty payers had implementing and administering an APG-based payment system depended in large part on its complexity. Table III.2 lists some of the factors that increased the complexity of payment system and complicated implementation and administration for payers. These factors include the use of such features as risk protections, the use of blended or negotiated base rates, and coverage of a broad range of outpatient services under **APGs**. The Iowa Medicaid program and Medical Mutual of Ohio designed more complex payment systems and, not surprisingly, reported more difficulty implementing and administering their systems than did the four payers with less complex systems. The payers we interviewed are the "pioneers" of APG systems. In the future, payers could profit from the example of other systems to reduce start-up effort.

a. Implementation

Developing and implementing an APG-based payment system was a more protracted and costly process than most payers had anticipated. Payers were faced four main challenges: designing new payment features, such as risk corridors, that were not envisioned in the **3M/HIS** model; calculating weights and base rates from limited and imperfect data; designing new information systems and procedures for processing claims; and educating providers about the new payment system. In some cases, start-up activities included efforts to improve providers' proficiency with CPT coding.

Most payers reported having devoted a significant period, typically two to three years, to planning and start-up activities. Efforts to involve providers in decisions about system features and

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TABLE 111.2

COMPLEXITY OF APG-BASED PAYMENT SYSTEM
(Payer Perspective)

Payer	Factors That Increase Complexity					
	Payment Window >24 hours	Consolidation/ Discounting	Outlier Provision	Risk Corridor	Individualized Base Rates	Most Outpatient Services Covered
More Complex Systems						
Iowa Medicaid	✓	✓	✓	✓	✓	✓
Medical Mutual of Ohio	✓	✓	✓	✓	✓	✓
Less Complex Systems						
Blue Cross of Washington/Alaska		✓		✓		✓
AHDS, Kentucky	✓	✓			✓	
Blue Cross of Idaho		✓			✓	✓
Blue Shield of California		✓			✓	

policies tended to prolong the development process. In Iowa, the **18-month** time frame set by the Iowa legislature proved insufficient, and the state Medicaid program required another 6 months to complete the development process. The other payer with a complex system developed its APG system in 16 months, but this time frame did not allow for provider involvement.

System Design and Database Development. Payers generally required extensive technical assistance from private consultants to complete the design work, typically to construct their claims databases and develop APG weights. As described in the previous chapter, it was necessary to substantially manipulate the claims data, including matching of facility and physician claims, to produce weights that payers could be reasonably confident reflected providers' costs. Less time was needed to design such system features as discounting rates and risk corridors.

Technical Assistance/Provider Education. Payers typically devoted few resources to provider education. For example, two offered seminars on the basic methodology and requirements of the APG system but left it to providers to obtain more extensive technical assistance **from** coding and APG experts if they desired. One payer representative we interviewed emphasized the need for payers to offer technical assistance “**up front, at the system level,**” by making available to computer staff at individual facilities technical specialists capable of addressing specific systems issues, but he admitted that his own firm did not provide this kind of technical assistance. Only one payer, Blue Cross of Washington/Ah&a, reported having spent considerable time training and educating hospital staff. Blue Cross arranged several educational sessions for all hospitals, developed a detailed billing manual, and hired an APG coordinator to act as a liaison with providers.

Phase-In Strategies. Some payers have phased in, or are in the process of phasing in APGs, initially applying the new system to only a subset of their contracted providers or a particular category of services. Medical Mutual of Ohio, for example, brought its APG payment system on line with six

hospitals in the Toledo area and six months later began implementing APGs with hospitals in other cities. Blue Cross of Washington/Alaska has implemented the new system with one hospital at a time. AI-IDS in Kentucky initially required only the six OPDs in the four contracted hospital systems to use APGs and applied the new payment mechanism only to surgical procedures. The insurer subsequently began using APGs to reimburse the four surgery centers with which it contracts and, at the time of our interview, planned to expand the system soon to cover all outpatient services.’

Respondents differed in their opinions about the advisability of phasing in APGs. A representative of the Hospital Council of Northern and Central California advocated an incremental approach to implementation, beginning with coverage of surgical procedures, to ease facilities into the system. In contrast, one payer strongly advised against a gradual transition to APGs, contending that such an approach would confuse providers and complicate the implementation process.

b. Administration

Claims Processing. Three of the six payers that are currently operating APG-based payment systems reported having had difficulty modifying their computer systems and payment administration processes to accommodate APGs. The problems encountered by the Iowa Medicaid program were particularly significant, forcing a six-month delay in the implementation of the state’s APG system while the state’s fiscal agent updated its computer system to accept and store the procedure codes needed to assign APGs. Financial constraints precluded two small payers that use APGs from upgrading their mainframe systems to accommodate APGs. Both operate the APG grouper on stand-alone PCs and re-enter information **from** the PCs into their claims processing systems.

‘The Massachusetts Medicaid program, which implemented its system in October 1997, reported at the time of our interviews that it planned to implement APGs only with OPDs initially. The state also planned to cover only a subset of significant procedures for the first 6 months, phasing in coverage of the remaining procedures over the next 6 to 12 months.

Processes for Addressing Questions and Disputes. Some payers established new processes for handling billing disputes and responding to providers' questions. For the most part, these processes appeared to be functioning to providers' satisfaction at the time of our interviews. The only criticisms came from Iowa providers interviewed in the first year **APGs** were used by the Iowa Medicaid program. Iowa Medicaid delegated responsibility for addressing providers' questions and concerns to its fiscal agent. The fiscal agent's reported failure to fulfill this role successfully within the first year of APG use in Iowa may be attributable to staff turnover within the organization and the rapid implementation of **APGs**, which permitted little time for staff training.

Contract Negotiation. Whether implementation of **APGs** simplified the contract negotiation process for payers depended on their previous reimbursement methodologies. For one private payer, for example, negotiating APG base rates with facilities has been significantly easier than its previous approach of negotiating the fee for each CPT code with each ASC.

Monitoring and Auditing. To date, payers appear to have made few significant efforts to monitor compliance with the new system or develop quality assurance procedures. Hence, little information is available about the extent of such problems as upcoding, unbundling of services, or volume increases. Although several payers indicated that they intend to rely on back-end auditing to ensure compliance and prevent such abuses as gaming of the window, it is not clear that any are strictly auditing their claims yet. None of the providers we contacted reported having had payments adjusted as a result of back-end auditing.

Payers generally devote more resources to monitoring payments than to analyzing service trends. One payer, for example, produces monthly cost reports to compare individual hospitals' actual and expected reimbursement and notifies facilities of potential problems. However, payers' analyses of

the financial impacts of **APGs** appear to be fairly limited. None of the payers we contacted have conducted analyses to identify the effects of specific features of their APG systems.

Some payers said they have begun analyzing their claims data to identify inefficiencies in service delivery. But efforts to use APG data to highlight potential areas for improvement have thus far been limited. Moreover, providers have shown little interest in the data that payers have made available, commenting, for example, that the information the payer shares with them is too general to be very useful.

2. Effects on Reimbursement

Payers generally consider **APGs** an effective mechanism for controlling facility costs associated with outpatient services. The extent to which payers were able to use **APGs** to achieve cost savings depended on a range of market and political factors.

Of the four payers that cited cost savings as an immediate goal, two were particularly aggressive in their consolidation and discounting policies, and both reported significant reductions in outpatient expenditures under **APGs**. One reported having recouped the cost of implementing the system within two years and posted a 17 percent reduction in outpatient expenditures for a total savings of \$23 million. This payer, which holds a large share of its market, attributed its savings to competitive pressures and the use of comparative data from the APG system, which allowed it to leverage lower rates from higher-cost providers. The other payer also reported savings but declined to reveal the amount. This payer attributed its savings to the fixed fee structure of the APG system, which acted to control charge inflation, and to its policy of paying for only one procedure per visit. But market factors and the payer's ability to negotiate low base rates were probably more important. Although this payer has a much lower market share than Medicare does, for example, the high level of

competition among providers in the market gave the insurer considerable leverage in its contract negotiations with **ASCs**, and, to a lesser extent, hospitals.

Other payers, which did not seek immediate cost savings as aggressively, if at all, either were not certain about the financial impacts of **APGs** or, in the case of the Iowa Medicaid program, reported modest cost increases in the first years of using **APGs**. Payment levels have since decreased, and the state expects to achieve aggregate savings this year. However, the savings were attributed to lower costs driven by broader market forces and managed care, not **APGs**.

Payers also indicated that **APGs** helped standardize payments for like services at like facilities, encouraged efficiencies, simplified contract negotiations, and, in the case of Medical Mutual of Ohio, reduced the variability in expenditures between indemnity products and managed care products. Blue Cross of Washington/Alaska highlighted the effectiveness of **APGs** in achieving its primary goal of reducing the enormous variability in costs across providers and noted that APG data allowed it to zero in on cost variations in its negotiations with providers. Blue Cross did not yet have the data to analyze other effects on reimbursement. Blue Cross of Idaho, which did not seek immediate cost savings with **APGs**, emphasized the extent to which **APGs** simplified contract negotiations. The insurer has not had **sufficient** experience with the system to identify other outcomes with certainty.

Risk protections have significantly affected reimbursement under some APG-based systems. About 12 percent of claims submitted to the Iowa Medicaid program during the first two years of APG use were categorized as outliers and thus qualified for supplemental payment, a level all stakeholders considered high and have now reduced by adjusting the outlier thresholds. Analysts at Iowa Medicaid attributed the higher-than-expected proportion of outlier claims primarily to the poor data used to calculate initial outlier thresholds **and/or** weights. The only other payer with an outlier provision reported that 7 percent of its claims under the new system were either high or low outliers,

a lower percentage than the previous year.² The insurer did not indicate whether it paid out more to providers to cover high outlier claims than it took in from providers to cover low outlier claims. Three payers (Iowa Medicaid, Medical Mutual of Ohio, and Blue Cross of Washington/Alaska) used some sort of risk corridor, at least temporarily. (Iowa Medicaid eliminated its risk corridor after three years.)

One reimbursement issue raised by several payers concerns new outpatient procedures that have not yet been assigned to an APG. Payers typically reimburse new procedures (procedures that do not yet have a CPT code or have a CPT code that has not been assigned to an APG) on the basis of discounted charges or through a fee schedule based on the ASC procedure groupings. Some payers expressed concern about the constant need for updates within the APG system and noted that payment under cost- or charge-based reimbursement systems for numerous procedures undercuts the objectives of the APG system. One payer reported that 15 to 18 percent of procedures are not covered by **APGs** (Version 1 .0) and are reimbursed by another method. (Some payers have also addressed the problem by informally assigning procedures to **APGs** pending update of the system.) Several payers reported that Version 2.0 addresses this problem almost fully at present but predicted that updates to this version of the grouper will become necessary as health care delivery continues to evolve.

B. PROVIDER PERSPECTIVES

Providers' views on **APGs** were generally more negative than positive. However, most providers reported that payment was adequate under **APGs** (Table 111.3). Moreover, payers indicated that few providers were unhappy enough with **APGs** to refuse to contract with payers that are using the new system. Some ASC representatives reported that **APGs** better reflect the cost of services than do the

*High **outliers** are claims in which charges are substantially higher than the APG payment; low outliers are claims in which charges are substantially lower.

TABLE III.3

PROVIDERS' PERSPECTIVES ON APG-BASED PAYMENT SYSTEMS

POSITIVE RESPONSES

- Payment under **APGs** is generally adequate.
- **APGs** are more precise than Medicare's ASC groupings and more accurately reflect resource use for procedures.
- APG-based payment systems have the potential to level the playing field between **OPDs** and **ASCs**.

NEGATIVE RESPONSES

- Consolidation of significant procedures results in underpayment for multiple procedures performed during the payment window.
 - Providers cannot calculate expected payment easily, if at all, because the APG grouper is incompatible with their billing systems or too expensive.
 - APG weights do not adjust for variable costs of materials and equipment used in procedures.
 - The APG system is overly complex and creates a substantially greater administrative burden than other reimbursement methodologies.
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Medicare ASC groupings, and some believe that use of APG-based payment systems offers an opportunity for payers to “level the playing field” between OPDs and ASCs.

Providers’ primary complaints about the system concern certain features--particularly consolidation of significant procedures--and the **difficulty** of implementing and administering the system. **OPDs** typically reported greater difficulties than **ASCs** in this regard.

1. Implementation and Administration

Providers’ experiences implementing and administering the new system depended in large part on the level of their experience with CPT coding. Those whose reimbursement had not previously depended on accurate procedure coding found it much more difficult to adapt to **APGs**. The complexity of providers’ billing systems and their ability or inability to compute expected payment also affected how readily they adapted to the new system. System parameters, particularly the length of the payment window and the range of services covered, also played a role. Providers that have complex billing systems and are being reimbursed under complex APG systems faced greater challenges adapting to **APGs** and, not surprisingly, raised more concerns about administrative aspects of the system than did the others.

a. Implementation

Ease of implementation depended on such factors as providers’ prior experience with CPT coding and the accessibility of the APG grouper. The level of provider involvement in decisions about system design did not appear to be a major determinant of ease of implementation. Although the Association of Iowa Hospitals and Health Systems participated in discussions concerning the design of the state Medicaid program’s APG system, for example, hospitals still had considerable

difficulty adapting to the new system. In general, **OPDs** had more difficulty than **ASCs** implementing **APGs**.

Experience With CPT Coding. Precise CPT-4 coding is necessary to ensure proper payment under the APG system. The level of coding expertise prior to implementation of **APGs** varied widely among providers, with **ASCs** generally having had more experience than **OPDs** using CPT codes in billing. Providers that had been using CPT coding with some degree of rigor under other payment systems, and for whom a large portion of revenue was generated from CPT billing, such as the **ASCs** paid under the Medicare ASC groupings, adapted fairly readily to the APG system, while those whose staff were less familiar with CPT coding or whose systems could not easily accommodate the new coding requirements were at a significant disadvantage.

In addition to training billing staff, facilities that had not previously used CPT coding extensively have also had to educate medical staff about the importance of carefully documenting details of procedures in patients' medical records. One ASC representative noted that a difference of a few centimeters in the recorded size of a skin lesion, for example, can mean a difference in the CPT code assigned for its removal, and, consequently, in the APG weight applied and payment received.

Accessibility of the APG Grouper. About 30 Iowa hospitals--primarily urban hospitals with high Medicaid volume- have purchased the grouper. The other three-quarters reportedly spot-check remittances with hand calculations. Very few of the other providers we contacted had installed the APG grouper to compute expected payment. Not even those that had been given the grouper (facilities that contract with Blue Cross of Idaho) had opted to use it. Many providers reported that the grouper was incompatible with their billing systems as currently configured, and because **APGs** typically affected only a relatively small part of each providers' business, none of those we interviewed was willing to overhaul its system in order to integrate the grouper. (Similarly, most

vendors are unwilling to develop grouper software that would be more accessible to providers until demand for the software increases--in other words, until HCFA begins using **APGs** for Medicare.)

Providers also cited the high cost of the grouper as a reason for not using it.

Billing System Complexity. Facilities with more decentralized billing systems had greater difficulty implementing **APGs**. Hospitals were particularly likely to have trouble identifying related services, because their medical record coding is typically decentralized, with different departments assuming responsibility for their own records. In addition, some hospital representatives observed that the system's fundamental assumptions about the flow of billing information within facilities were erroneous. Hospitals that contract with two of the payers we visited reported significant difficulty adapting to the new system, and many hospitals that contract with the third opted not to be paid under the system since they were offered other options. In contrast, **ASCs** seem to have had a relatively easy time developing new procedures for calculating and tracking payments under **APGs**, because of their more centralized billing and the much smaller number of services they provide. **All** of the California **ASCs** we contacted, for example, had installed PC software--essentially, a crosswalk between CPT codes and **APGs**--to determine expected payment.

Lead Time. Providers generally reported that they were given too little time to reconfigure their management information systems, train staff in new coding and claims processing procedures, and develop an understanding of the potential impacts of **APGs**. (In at least one case, providers were notified well in advance that conversion to **APGs** would be an issue in contract negotiations, but perhaps because they did not understand the magnitude of the change, the facilities made little apparent effort to prepare for the new system.) A representative of the Hospital Council of Northern and Central California stated that facilities need at least a year to create new systems and/or modify existing ones.

Technical Assistance/Provider Education. With the exception of Blue Cross of Washington/Alaska, payers typically devoted few resources to provider education. Whether providers were satisfied with the amount of training offered depended in large part on whether they were already accustomed to billing on the basis of procedure codes. Most hospitals had limited experience with CPT coding and were dissatisfied with the amount of training and technical assistance offered by payers. For example, providers in Iowa found the state-sponsored training sessions too general for their needs, and some of the larger hospitals subsequently hired private consultants to help prepare staff for the new coding requirements. In contrast, all of the California **ASCs** we contacted were already familiar with CPT coding and hence had little need for or interest in extensive technical training. Moreover, most viewed the system as yet another fee schedule, like the Medicare ASC groupings, rather than as a potential management tool, and therefore saw no need to gain a detailed understanding of the workings or clinical rationale of the system.

b. Billing and Monitoring

Some providers, notably hospitals, reported having difficulty gathering the information necessary to create an integrated claim that includes all of the services provided to a patient within a specified period of time. A payment window of more than 24 hours may have contributed to providers' difficulties. Providers that contract with two payers that use a 72-hour window or a variable-length window were more likely than others to comment on the difficulty of constructing integrated claims. However, the third payer with a long window did not report complaints from providers about the length of the window. Providers' chief objection to payment windows that exceed one day concerns the considerable manual processing required to compile a complete record of services provided over a two- or three-day period. Payers, on the other hand, worry that a narrower window may encourage

unbundling of services. For this reason, one payer is considering expanding its one-day window to two days.

Some providers said that while they make an effort to submit a single claim for each visit, they also rely on payers' editing capabilities to identify related services on separate claims and ensure that claims are properly compiled.³ Providers also contend that the longer payment window is not necessary to discourage unbundling of services and that payer audits, peer review, and consumer demands are enough to prevent facilities from trying to obtain additional reimbursement by scheduling services outside the payment window. (Providers believe that multiple copayments and the inconvenience of having to make more than one visit are strong incentives for patients to demand that services be performed on a single day, if at all possible.)

Apart from the **difficulty** of constructing a single claim for each visit, providers reported relatively few problems billing for services under **APGs**. However, many providers seem to have made a trade-off between billing ease and monitoring capability. Most of the payers we interviewed reported that they can and do submit claims without assigning APG codes to services. Hence, those that were previously using CPT codes in billing have been able to maintain existing processes for coding claims. Many of the providers we interviewed do not compute expected payment. (Although all of the California providers we contacted said that they calculate expected payment for each claim using a separate, PC-based program, few other providers reported doing so.)

Submitting claims without APG codes or estimates of expected payment is obviously simpler for providers. However, without estimates of expected payment, facilities are unable to track accounts receivable and must simply trust payers to provide accurate reimbursement. Moreover, the

³**Consultants** to the Iowa Medicaid program indicated that their review of claims submitted to the Medicaid program suggests that most hospitals did not systematically try to capture related claims.

lack of detailed claims data makes it impossible for providers to identify inefficiencies in their approach to service delivery or otherwise use the APG system as a management tool.

c. Claims Processing

Providers generally appear to be satisfied with the speed and accuracy of claims processing under **APGs**. Providers under only two of the APG systems reported any problems with processing. When we heard criticism, it concerned the providers' ability to get their questions answered or to get a consistent response. By contrast, providers that were most satisfied with this aspect of the system reported that the payer was highly responsive and willing to work with them on an individual basis to resolve reimbursement issues. Several providers we interviewed commented that the need for appeals processes to resolve reimbursement disputes was heightened by the complexity of the APG system, and one respondent expressed concern that a payer, such as HCFA, that handles a huge volume of claims may not be able to address billing questions and disputes on an individual basis.

d. Differences in ASCs' and OPDs' Experiences Implementing and Administering APGs

OPDs appear to have had more difficulty than **ASCs** adapting to the new system. Several of the payers and providers we interviewed reported that the transition to **APGs** was simpler for **ASCs** than for **OPDs** because **ASCs** provide a narrower range of procedures; have smaller, more centralized operations; and are accustomed to being reimbursed on a per-visit or per-case basis. In addition, many **ASCs** had been using CPT codes in their billing for some time. In California, for example, **ASCs** reported few difficulties implementing the new system, while many **OPDs**, given the choice of being reimbursed on the basis of **APGs**, **ASC** groupings, or discounted charges, decided against **APGs**, in part because they expected to have difficulty administering an APG-based payment system.

However, some of the 11 payers that have developed APG-based payment systems have chosen

to implement **APGs only** with **OPDs**, in part because **ASCs** are believed to lack the staff and computer resources needed to implement and administer the system. The experience of the few **ASCs** that one payer attempted to bring on line tends to support this assessment. One **ASC** that began using **APGs** subsequently asked the insurer to suspend use of the system because the facility's PC grouper was unable to calculate the expected payment correctly. Another **ASC** was unable to implement the new system at all because its staff were unfamiliar with **CPT** coding. (The center had not yet moved from paper billing, which does not require **CPT** codes, to electronic billing, which does.) The differences in **ASCs'** experiences in the two sites may be attributable in part to the more complicated consolidation and discounting methods used by one payer relative to the other.

2. Effects on Reimbursement

Most providers believe that they are being appropriately reimbursed for most services under **APGs**, and that overall payment levels are fair. Some facilities--including some that contract with payers that have sought savings under **APGs--implied** that their overall reimbursement had actually increased under **APGs**. In Iowa, the Medicaid program's reconciliation process indicated that Iowa hospitals in the state have fared at least as well under the **APG** system as they, had under the previous system, which reimbursed the lesser of costs or charges. Most providers, however, are uncertain about the system's impact on their bottom line. Hence, their main concerns about the financial impacts of **APGs** tend to involve specific reimbursement issues. Two in particular are the lack of payment for second and subsequent procedures performed during a single visit and insufficient compensation for procedures that require costly materials and equipment.

Providers' uncertainty about the financial impacts of **APGs** stems primarily from their inability or unwillingness to use the **APG** grouper and their consequent inability to calculate expected payments and compare reimbursement under **APGs** with reimbursements under other payment

methodologies. Even if they could do this, however, isolating the effects of **APGs** would be very difficult, given other changes in the health care market.

The level of providers' concern about specific reimbursement policies seems to depend on the overall level of financial risk to which they are exposed under **APGs**. Aggressive consolidation and/or discounting policies, use of universal rates, lack of risk protection, and payers' pursuit of immediate cost-savings all tend to increase providers' financial risk under **APGs** (Table 111.4). Facilities that contract with the two payers with these characteristics appear to face greater financial risk under **APGs** than do facilities that contract with payers that have not pursued immediate cost-savings as aggressively, if at all. Not surprisingly, providers that contract with the two more aggressive payers were among the most vocal in their criticism of payment levels for specific services.

Interviewees observed that an assumption underlying the APG system is that "wins" will cancel "losses": although reimbursement for any given visit may be higher or lower than the facility's costs for that visit, total reimbursement to the facility over a longer period is expected to roughly equal total costs (minus whatever savings the payer attempts to achieve). Some ASC representatives compared the APG system favorably with Medicare's ASC procedure groupings in this regard, noting that **APGs'** larger number of rate categories better reflect variations in costs across procedures. But even these respondents cited large disparities between average costs and average reimbursement for some **APGs** that they attributed to system flaws, particularly the imprecision of weights.

a. Issues Related to APG Weights

There is a widespread belief among both payers and providers that some **APGs** systematically overpay and others systematically underpay, suggesting that there is an underlying problem with (1)

TABLE 111.4

DEGREE OF FINANCIAL RISK UNDER APG-BASED PAYMENT SYSTEMS
(Provider Perspective)

Payer	Factors That Increase Providers' Financial Risk			
	Payer Pursues Immediate Cost Savings	Aggressive Consolidation/Discounting	Universal Base Rates	No Risk Protection
Systems That Expose Providers to More Risk				
Payer A	✓	✓		✓
Payer B	✓	✓		
Systems That Expose Providers to Less Risk				
Payer C	✓			✓
Payer D	✓		✓	
Payer E				✓
Payer F				

the data used to calculate weights or the APG groupings themselves, and/or (2) the system's failure to adjust to changes in medical technology that increase costs for materials and supplies.

Imprecise Weights. Some respondents attributed the disparities between costs and reimbursement to the poor quality of the data used to develop the weights and predicted that charge-based weights will more accurately reflect resource use once payers have more accurately coded claims to use in developing weights. Payers that have recalculated weights after experience with the system found the second set differed significantly from the first and was far more accurate, though some adjustments to the calculated weights were still needed to provide weights that appeared reasonable from a clinical practice perspective. Other respondents, including representatives of the American Hospital Association and the Federated Ambulatory Surgery Association, contend that the system inappropriately groups services that require widely different levels of resources, thus increasing the likelihood of producing charge-based weights that will not be consistent with clinical expectations for specific services. (For example, simple procedures and complex procedures included in the same APG are paid the same amount, so a facility that provides a disproportionate amount of the complex procedures will not be adequately compensated for the services covered by the APG.) One respondent also questioned the rationale for grouping within a single APG services that are not substitutable and for which **upcoding** is therefore not an issue.

Procedures That Require Costly Materials or Supplies. Another key issue, raised repeatedly by ASC representatives and less frequently by OPD representatives, is the system's perceived inability to adjust for the variable costs associated with certain **procedures**.⁴ Many complaints about weights focused on the rising costs of materials and equipment used in some procedures.

⁴ASCs may have raised these issues more often because they provide fewer services and are therefore better able to track individual costs.

Respondents pointed out that as better, more expensive materials and technology have become available, the cost of performing certain procedures, including many orthopedic procedures, has risen dramatically over a short period of time, and APG weights have not been recalibrated to account for these higher costs. Facility staff acknowledged that, in some cases, cheaper alternatives are available, but pointed out that physicians, not facilities, generally control decisions regarding materials and equipment. Procedures cited by providers as having high materials costs include laparoscopy, cholecystectomy, appendectomy, most **arthroscopies**, hysteroscopy, and laser surgery.

No systematic mechanism exists to compensate facilities for materials costs that exceed the predicted amount. Some payers allow providers to negotiate supplementary payments to cover excess material and equipment costs on a case-by-case basis through an appeals process that requires a physician to document medical need. Some providers have begun monitoring their caseload to calculate potential losses and avoid costly cases. One payer and some of its contracting **ASCs** reported that some surgery centers have declined to perform procedures for which they expect to be significantly underpaid. (Hospitals are probably less likely to reject cases, because of their obligations to provide care and because their higher patient volume makes it **difficult** to identify individual high-cost cases.)

Some providers proposed carve-outs for at least some materials, such as implants, and some noted that they have been able to negotiate this kind of arrangement with plans that do not use **APGs**. But some payers that use **APGs** contend that carve-outs would defeat the purpose of the prospective payment system by undermining incentives for providers to choose the most cost-effective treatments. One hospital proposed a compromise, in which plans and facilities would jointly bear the excess costs of expensive materials and supplies.

b. Issues Related to Bundling Strategies

The extent to which outpatient services are bundled for the purpose of determining payment depends on several system parameters: the degree to which procedures and ancillary services are consolidated or packaged, if at all; the level of discounting; and the length of the payment window. Providers' complaints about bundling focused on consolidation policies, although some also raised concerns about packaging of ancillary services. Providers generally did not comment on discounting policies.

Consolidation of Significant Procedures. All but one of the payers that were using APGs at the time of our interviews consolidate significant procedures. One payer employs a particularly aggressive consolidation policy, which limits reimbursement for a visit to payment for a single procedure or ancillary service. ASC staff were more likely than OPD staff to complain about consolidation policies, perhaps because, with their smaller patient loads, they are better able to identify cases in which their reimbursement has been significantly reduced because procedures were consolidated. Not surprisingly, ASCs that contract with the most aggressive payer were particularly concerned about the impacts of consolidation. Although none of the ASCs we contacted has quantified its losses under the consolidation policy, some indicated that multiple procedures are performed in half or more of all cases, resulting in a significant revenue loss. One ASC representative observed that the policy of paying for only one procedure or ancillary service assumes that the marginal cost of providing additional services is zero and indicated that providers would be more comfortable with a discounting policy that provided at least some reimbursement for procedures after the first. A few ASC representatives added that, by penalizing facilities for performing multiple procedures in a single visit, consolidation policies create incentives for providers to perform procedures on separate visits, which is more costly and inconvenient for the patient.

In contrast, a representative of the Association of Iowa Hospitals and Health Systems reported that Iowa hospitals rarely perform multiple procedures during an outpatient visit. This respondent believes the low level of consolidation and discounting under the state's APG system indicates that Iowa Medicaid recipients do not rely on hospital OPDs for primary care.

Packaging of Ancillary Services. Packaging of ancillary services did not appear to be a critical issue, except insofar as it may discourage the use of appropriate, but expensive, technology in procedures. One hospital representative who raised this concern noted that the payer with which it contracts has been willing to provide supplementary payment to cover expensive ancillary services if a physician documents the medical necessity of the service. The only other concern about packaging of ancillary services was raised by providers in Iowa, who noted that the Medicaid program's uniform packaging policy has led to improper denial of payment for some services. (For example, an anesthesia claim was denied because it was submitted without a procedure APG; the claim was assumed to be in error but in fact represented a case in which the procedure was called off after anesthesia was administered.)

c. **Experience With Risk Protection**

Providers did not specifically comment on their experience with outlier provisions or risk corridors. Indeed, several of the Iowa hospitals we visited were not even aware that the state Medicaid program had an outlier policy or that claims for outliers were being paid to hospitals. However, information from payers indicates that these system features have proved more important than they were expected to be and resulted in significant adjustments to payments under APGs. In addition to protecting providers from large losses under the system, risk corridors have acted to limit facilities' gains. In the interest of increasing the potential for gains--and incentives for facilities to increase efficiency--the Iowa hospital association persuaded the state Medicaid program to expand

the risk corridor from 5 percent to 10 percent in year three. The risk corridor was eliminated the following year, with the support of the hospital association, which believes that although the risk corridor was an important protection in the **first** few years under **APGs**, that protection is no longer needed by most **OPDs**, now that APG weights have been recalibrated with better claims **data**.⁵

d. Differing Effects of APGs on OPDs and ASCs.

No clear consensus emerged on whether or how **OPDs**' and **ASCs**' experiences have differed under **APGs**. **ASCs** appear to be more vulnerable than **OPDs** to errors in weighting that systematically result in underpayment, as well as to the effects of a few outlier claims in cases for where the APG weight is correct for the average **ASC**. Several payers and providers noted that the assumption that "wins" will cancel "losses" under **APGs** may not hold for surgery centers. Because **ASCs** tend to have lower volume and to be more specialized than **OPDs**, miscalibrated APG weights and outliers are likely to have a greater impact on these facilities. (In addition, some **ASC** representatives pointed out that the APG weights they are using were based primarily on **OPD** claims data and may not accurately reflect **ASCs**' costs.) **ASC** representatives observed that centers' service mix--and the overhead and capital costs associated with that service mix--is a major determinant of the financial effects of **APGs**. In contrast, some **OPD** representatives contend that hospitals fare less well than surgery centers under **APGs**, because **OPDs** handle more high-risk procedures and more multiple procedures.

All but one of the payers that use **APGs** with both **OPDs** and **ASCs** vary their base rates in some way to account for cost differences between the two. Not surprisingly, many **ASC** representatives questioned why an insurer should pay more for a procedure simply because of where it was performed

⁵**However**, the hospital association representative we interviewed suggested that low-volume **OPDs** may still need this kind of protection.

and argued that insurers should level the playing field between **ASCs** and **OPDs** by making fewer adjustments for historic costs. Hospital representatives, on the other hand, argued that adjustments for hospitals' higher operating costs are justified due to their different circumstances and larger community mission. Hospitals are more highly unionized than **ASCs** and must comply with stricter standards regarding facility maintenance, technical capabilities, and staffing during down times. Hospitals' responsibilities for medical education, charity care, and emergency stand-by capability also substantially increase their operating costs.

3. Effects on Service Delivery

Although some providers expressed concern about the possibility that aggressive bundling and discounting strategies, and the consequent pressure to cut costs, will undermine quality of care, there is little evidence that **APGs** have affected service delivery at all. One of the few changes providers mentioned they made was to encourage physicians to perform in their **offices** minor procedures for which some payers will no longer reimburse **OPDs** and **ASCs**.

Some providers contend that the key reason service delivery has not changed under **APGs** is that the system's incentives are inappropriately aimed at facilities rather than physicians, who control many of the decisions the system is intended to influence. Several respondents noted that decisions to order laboratory tests and other ancillary services, as well as choices about such materials as implants are almost exclusively within the purview of physicians and cannot be greatly **influenced** by the facilities.

Another reason **APGs** have yet to have much, if any, effect on service delivery is that providers generally have not incorporated the APG grouper into their management information systems and hence lack the data needed to analyze and change clinical practices. Because APG payments currently represent only a small proportion of revenue, providers that contract with Iowa Medicaid

and Blue Shield of California have had little incentive to reconfigure their management information systems to install the APG grouper, or to conduct the analyses needed to identify inefficiencies. Even in Ohio, where a larger share of providers' reimbursement for outpatient services is APG-based, providers have been unwilling to perform the complete overhaul of their billing systems and procedures that would be necessary to integrate the APG grouper.

To at least some degree, providers have also been shielded from system incentives. Providers that contract with the Iowa Medicaid program, for example, have been largely protected against possible losses under the system. Moreover, payers do not appear to be aggressively auditing claims in a way that might create pressure for changes in service delivery.

C. CONCLUSIONS

The first payers to use **APGs** as the basis for a payment system have successfully implemented their systems without major incident and have tailored the **3M/HIS** system to reflect their priorities and markets. Even so, all the operational systems proved challenging to develop and required an initial period of adjustment. While several payers have operated their systems for three or more years now, there are no data available to allow us to inform HCFA about the impact of different system features or the system as a whole. The dynamic nature of these systems, the administrative (rather than evaluative) focus of the payers, and the existence of concurrent market trends all suggest that we are not likely to have better information about system impacts in the near future. In the absence of good "hard" evidence about system effects, the following conclusions draw on the reports of payers and providers about their experience under the first APG-based payment systems to have been implemented.

1. System Scope

There is no consistent view among payers that certain groups of facilities or services should be excluded from the system. Some payers exempted **rural** hospitals from the APG system because they believed these facilities would have difficulty implementing the system or that they would incur too high a financial risk under it. However, Iowa reported that rural hospitals have neither had more difficulty than other hospitals with this system, nor have they suffered financially **from** it. Some payers have excluded **ASCs from** the system because they thought the financial risk for **ASCs** might be too high because of low service volume. Alternatively, they have been slower to implement the system for **ASCs** because they consider **ASCs** to be a lower priority than hospital **OPDs** for cost savings. But **ASCs** in California and Idaho had little difficulty implementing the system and do not appear to be struggling financially.

Iowa's report that very low volume facilities sometimes experienced erratic financial results under the system for a particular quarter or half-year period raises a note of caution for HCFA, since the financial equity of the system for providers is based on average gains and losses over a reasonably large patient load. Until this year, Iowa has had protections in place for these facilities through an outlier policy and a risk corridor, neither of which are part of HCFA's preliminary plan for a Medicare APG system.

2. Rate Setting

All the payers implementing **APGs** thus far have found that the data available for creating the system was highly limited. As a result, they have given priority to updating the system weights using the improved data generated under the system itself as soon as enough is available. They have universally viewed the data generated under the APG systems as much improved (though still imperfect) in terms of its completeness and the accuracy of CPT coding. Thus, HCFA may want to

consider planning for a second round of weight calculations and rate setting at about 18 months to two years after implementation, or at least analyze the data at that point to assess the need for revision. Experience suggests that the data improve even where CPT codes were previously required, as payment based on these codes draws more attention to them.

A second longer-term rate-setting issue for HCFA is the degree of similarity between rate levels for **ASCs** and **OPDs**. Payers that reimburse both **ASCs** and **OPDs** under **APGs** now generally pay substantially lower rates to **ASCs**. **OPDs** generally argue that their higher operating costs justify rate differentials, while **ASCs** contend that payers should “level the playing field” and let the market determine the type of facility at which procedures are performed.

To date, Iowa is the only public payer to have experience with rate setting for an APG system. That is, it is the only payer having much operational experience with an APG system where an individual facility’s payment depends entirely upon its characteristics and explicit payment system features. Facilities under private-payer APG systems tend to receive negotiated rates largely reflecting market factors, such as the importance of the facility to the payer. (Only one private payer set universal rates.) The success of these payers in using **APGs** to negotiate better rates is thus not directly applicable to **HCFA’s** position as a public payer. Thus, Iowa’s success in estimating and roughly meeting overall expenditure targets is important and may be encouraging for HCFA.

As a public payer, HCFA will need to decide upon an expenditure target that is neutral or that seeks cost savings. Of note, Iowa attributes the relatively smooth implementation of the system in part to its budget-neutral goal, which meant that hospital representatives have cooperated with the state on system design and implementation issues. Private payers’ experience is less relevant here since these payers are not accountable to the public for their decisions.

Four other issues for HCFA to consider related to weights and rates are:

- ***How “batch,” or recurring, services will be paid*** Many of the payers we interviewed reimburse for these--such as physical or speech therapy--using a unit that differs from the “visit” as defined within a time window for other medical and procedural visits. The payers did not report any significant implementation or other problems in incorporating this additional flexibility for recurring services into their systems.
- ***How new procedures will be paid*** Although payers reported that the Version 2.0 is nearly complete in covering the scope of practice at present, further changes may be expected with time, and HCFA--like the payers we interviewed--may need a specific policy on payment and on when and how new procedures will be integrated into the APG system.
- ***Whether facilities will under any circumstances be compensated for excess costs associated with the use of expensive materials and equipment.*** Payers generally argued against such compensation, for example, through an outlier policy or a “carve-out” payment for implants, because they felt it would defeat the purpose of the APG system. But HCFA should be aware that this is a source of many provider complaints, and that the providers were particularly frustrated about the fact that they do not control physician orders and are thus not able to control these costs.
- ***Whether to use a single or multiple base rates*** or otherwise adjust for different costs faced by different groups of facilities. Iowa Medicaid provided an add-on for teaching hospitals to reflect higher costs in this group until an unrelated state policy initiative caused all graduate medical education to be financed differently, and the add-on was then eliminated. Private payers that negotiate individual rates do not face this issue in the same way public payers do, thus their experience is not relevant on this point.

3. Risk Protection and Phase-In

Many providers and some payers believe that risk protection features are necessary-- at least in the first years of an APG system during a phase-in period. The purpose of these features is twofold: (1) to protect providers against losses associated with exceptionally high-cost cases or cases in which the APG weights are inaccurate because of poor data, and (2) to allow less efficient providers time to improve their performance. However, risk protection features also add complexity to the APG system, a drawback noted by many providers and some payers. And by definition, risk protection shields providers from the incentives for efficiency that the system is intended to create.

Experience to date suggests that risk protection may be most important under the following circumstances:

- For very low-volume facilities that may not experience the equity of averages over a reasonable period of time and thus could be hurt financially in any given period while functioning as an efficient provider
- When providers' cooperation is viewed as important by the payer and may be in jeopardy because providers are concerned about data problems and consequently believe risk protection is needed during a phase-in period (as in Iowa)
- Where the payer is uncertain about the accuracy of the data used to calculate weights and rates, since, depending on how risk protection is implemented, it could help protect the payer as well as the provider from initial system mistakes
- Where large cost differences among facilities exist and there is reluctance to change payment dramatically upon initial implementation of a new system

Of the different types of risk protections payers were **using--outlier/inlier** policies, risk corridors, blended rates that included a hospital-specific component--one was not clearly preferred to another, nor were there compelling arguments for or against any of these protections, except where initial system data were very poor. Clearly, HCFA will face a difficult trade-off in making policy about risk protection and phase-in of the system. Medicare accounts for a relatively large share of many hospitals' outpatient business and thus has much more potential than the payers we studied to create relatively larger winners and losers and, if payment changes dramatically, to **affect** some hospitals' viability. (If HCFA has not already conducted simulations, they may be run to examine this potential analytically.) On the other hand, if there is a high level of confidence in the accuracy of the data used to create the system, HCFA may want to avoid risk protections as part of an overall plan for designing the APG system both to be relatively simple to administer and to facilitate providers' calculations of expected payment.

4. Implementation

Provider respondents in particular suggested that payers implementing APG systems--especially HCFA because of its large market share--need to consider the following:

- **Enabling providers to calculate *expected payment*.** Given the difficulties with, and the inability some hospitals have had, calculating expected payment, HCFA may want to consider taking further steps to ensure that related software is accessible if it is needed to calculate payment (e.g., making grouper software available if this is possible).
- **Giving *providers* time to change their computer systems, train *staff on the system*, and improve their coding.** One provider organization stated that facilities need at least a year to prepare.
- **Creating a process for handling inquiries and disputes** related to specific situations that providers encounter, especially in the first few months of implementation.
- **Providing information and facilitating technical assistance** on how the new system will work.

5. Summary

The experience of the 11 private and public payers that have implemented or designed APG systems provide HCFA with a better understanding of the potential benefits and drawbacks of such a system, as well as insight into many design variations and implementation strategies. Overall, payers have found that the APG system can be used to reduce costs, and they believe it works to encourage efficiency (one payer reported having narrowed cost differences among facilities). At the same time, complexity is a recurring complaint or theme about systems implemented to date. In fact, the payer with the most experience with a complex version of the system recommends that other payers keep the system simpler, for example, by avoiding a payment window of longer than 24 hours and by addressing any real problems with “gaming” (if this occurs) by a policy adjustment or, simply, reduced rates in the year after such behavior is documented.

Whether and how facilities can or will respond to the system by influencing the volume of services or patient mix is still an open question. We heard a few isolated rumors of response on a small scale, but for the most part, the payers that have implemented the system to date have accounted for a relatively small portion of facilities' business. Thus, the facilities we interviewed have viewed the system as just another way for payers to reduce payments--they have not attempted to understand or to respond to the incentives built into the system. However, a Medicare APG system, because it would **affect** a much larger share of facilities' **business**, may magnify effects that have been too small to recognize under existing systems; monitoring will certainly be needed to identify any behavioral response and effects on system cost and patient care. Nevertheless, providers' responses suggest that the greatest impact may occur if and when payment incentives related to facility outpatient services are aligned with the payment incentives for physician services.

GLOSSARY

- Ancillary Packaging** The inclusion of certain ancillary services into the APG payment rate for a significant procedure or medical visit. For example, a chest x-ray could be packaged into the payment for a pneumonia visit. The extent of ancillary packaging is a policy decision and can vary from none to the full packaging of all low-cost, routine ancillary tests and procedures.
- Consolidation** The collapsing of multiple related significant procedure **APGs** into a single APG for the purpose of determining payment. If the significant procedures are in different **APGs**, the system refers to a significant procedure consolidation list to determine if multiple **APGs** (for the multiple related procedures) will be used in computing payment. The list identifies, for each significant procedure APG, the other significant procedures that are an integral part of the procedure and can be performed with relatively little additional effort or resource use. If the procedures are all in the same APG, payment is computed only once for that APG.
- Discounting** The reduction in the standard payment rate for an APG when multiple, unrelated significant procedures are performed or when the same ancillary service is performed multiple times. Discounting recognizes that the marginal cost of providing a second procedure to a patient during a single visit is less than the cost of providing the procedure by itself. The use of discounting and the rates at which multiple procedures are discounted are policy decisions and vary across payers.
- Outlier Policy** Outliers are atypical cases that have costs much higher (“high outliers”) or much lower (“low outliers”) than the APG payment amount. Additional payment can be provided to outlier cases. The definition of an outlier (the “outlier threshold”) is a policy decision, as is the formula for augmenting or reducing compensation.
- Payment Window** The specified period of time that defines an outpatient “visit.” All outpatient services that occur during this period of time are bundled by the APG system to determine payment for the visit. Some payers that use the system have specified a 24-hour payment window, while others have opted for longer windows.
- Risk Corridor** A specified threshold or set of thresholds that limit financial risk under a payment system over a specified period of time. For example, a 5 percent risk corridor applied to a one-year reporting period restricts both net gains and losses by a provider under the system to 5 percent or less over the year, with excess gains refunded to the insurer and excess losses compensated by the payer.

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