IAP

Iowa Association of Pathologists

1001 Grand Avenue – West Des Moines, Iowa 50265

515 223 2816 – 800 728 5398 – Fax 515 223 0590

Comments of the Iowa Association of Pathologists on the Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007

[CMS–1321–P]

The Iowa Association of Pathologists (IAP) is pleased to have the opportunity to comment on the proposed revisions to payment policies under the physician fee schedule for calendar year 2007 (the "Proposed Rule"). 71 Fed. Reg. 48982 (Aug. 22, 2006). The IAP is a professional society of pathologists practicing in the state of Iowa whose members perform a variety of services that are reimbursed under the physician fee schedule. Thus, IAP members will be significantly affected by the changes in the Proposed Rule. IAP's comments on the Proposed Rule focus on the revisions to the reassignment and physician self-referral rules, and changes to the rules governing how anatomic pathology services are billed.

PROVISIONS

REASSIGNMENT AND PHYSICIAN SELF-REFERRAL

The IAP is very pleased that CMS is taking action designed to curb the growth of so-called "pod" or condo laboratories. *Id.* at 49054. These arrangements give referring physicians the opportunity to earn revenues based on their own referrals for services performed by other physicians. The Medicare program has always expressed concern about such arrangements and has numerous provisions in place to curb such abuses. CMS is taking an important step in its revision to the reassignment rules and the Stark self-referral laws as a way of curbing these abusive arrangements. However, IAP believes that in order to be effective in addressing the pod issue, CMS must implement not only the independent contractor reassignment revisions that pertain to the technical and professional components of anatomic pathology, but also measures that would limit the use of part-time employee pathologists in such arrangements.

As CMS recognizes, there are two different, but related, means of curbing these practices: First, CMS should clarify the provisions of the prohibition on reassignment, which is designed specifically to prevent Medicare from paying physicians for work performed by others, except in limited situations and second, modify the Stark self-referral law, which is designed to prevent physicians from profiting by referring business to entities with which they have a financial relationship. As CMS notes, many pod arrangements are established either in

contravention of these requirements or by taking advantage of ambiguities that exist. Generally, IAP is supportive of the changes that CMS is making, but we are aware of additional helpful proposals to clarify or more closely define the requirements set out by CMS, as well as to address the issue of part-time employees.

Changes to the Reassignment Rule

In the area of the changes to the prohibition on reassignment, CMS makes the following proposals:

- • Clarify that physicians acting pursuant to the contractual arrangement exception must still meet the requirements applicable to the purchase of diagnostic testing, with regard to the professional component.

IAP position: **supports** applying current purchased-service limitations in situations of reassignment

- • CMS requests comments on what additional limitations should be put on the purchase of the professional component.

IAP position: **no additional limitations** are necessary on PC purchase, beyond the need to apply the purchased-service rules that already exist and clarifying that they apply in the contracted reassignment setting

- • CMS asks whether all diagnostic testing in the designated health services ("DHS") category should be covered or whether it should apply specifically to pathology; and whether any of the provisions should apply to services performed on the premises of the billing entity, and if so, how to define the premises appropriately.

IAP position: **no comment**

Stark Self Referral Provisions

As CMS recognizes, in order to limit these types of practices in all areas, it is also necessary to further clarify certain specific provisions or exceptions in the Stark self-referral law. The IAP agrees that this is imperative. We are especially concerned that in response to changes in the reassignment rules, discussed above, many pod arrangements will simply restructure and hire pathologists as part-time employees, which could circumvent the purpose of many of these changes. IAP believes that the Stark law may provide the most direct way of curbing these new abuses. Therefore, before discussing the other changes proposed by CMS to the Stark provisions, we wish to make one additional proposal designed to limit part-time pathologists.

Part-Time Employment of Pathologists

IAP is concerned that in response to the provisions in the Proposed Rule, existing and new arrangements may be restructured so that pathologists will be retained as part-time employees rather than independent contractors. For example, a pathologist could become a part-time employee of several different groups under arrangements that potentially satisfy both the reassignment rules and the physician service or in-office ancillary services exceptions to the Stark self-referral provisions. From the standpoint of the group practice and the retained pathologist, the arrangement need not differ significantly from an independent contractor relationship. Thus, IAP considers it to be essential that CMS address both structures in its rulemaking.

The IAP recognizes that some groups may decide to hire their own pathologist, but they should be required to make the same investment in salaries and capital that any other business would have to make in that endeavor and undertake the same type of business risk. They should not be able to avoid that requirement by re-characterizing an "independent contractor" pathologist as a "part-time employee" pathologist, without incurring the additional costs and risk attendant to hiring that person. Without some limitation on this practice, groups will simply restructure without any risk and continue to profit from their own referrals. IAP believes that the part-time employee concern could be addressed through modifications in the "group practice" requirements under the Stark self-referral rules or, potentially, through changes in the employee reassignment provision.

We are aware of, and **support** suggested alternative regulatory proposals that would address this issue through the "substantially all" requirements for group practices under Stark. In essence, they would require that, in addition to the group practice as a whole having to perform at least 75% of its patient care services through the group, each individual member would need to perform at least one-half of its patient care services through the group. Such a provision could be limited to pathology services. Alternatively, CMS could, in the same provision of Stark establish a maximum number of group practices to which any one pathologist could belong. IAP would strongly support this approach. These are more fully described in the comments of the American Clinical Laboratory Association, so they need not be repeated in detail here. Basically, if a pathologist arrangement did not meet this requirement, then the group practice would not be able to bill for pathology services that it refers to the pathologist. We believe that such a provision would limit restructuring that might be anticipated in response to the proposed changes in the contractor reassignment rules.

INDEPENDENT LAB BILLING

In the Proposed Rule, CMS states, "We continue to believe, however, that hospital prospective payment amounts already compensate hospitals for the TC

of physician pathology tests and that additional payment under the PFS is inappropriate." *Id.* Therefore, CMS is proposing to amend § 415.130 to provide that, for services furnished after December 31, 2006, an independent laboratory may not bill the carrier for physician pathology services furnished to a hospital inpatient or outpatient.

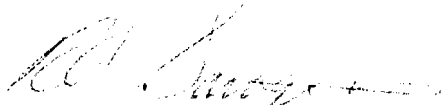
The IAP believes that the proposed rule misstates the intention of the proposal to discontinue the Grandfather provision, where it states "For services furnished after December 31, 2006, an independent laboratory may not bill the carrier for physician pathology services furnished to a hospital inpatient or outpatient." We believe the intent was to state that "For services furnished after December 31, 2006, an independent laboratory may not bill the carrier for the technical component of physician pathology services furnished to a hospital inpatient or outpatient." We urge CMS to correct this language if this concept is to appear in the final rule.

Given this major change to these historical billing rules, we strongly urge CMS to help hospitals understand their new obligations and move forward to address them to ensure that Medicare beneficiaries have full access to necessary clinical laboratory testing services.

CONCLUSION

Thank you for the opportunity to submit these comments. We look forward to working with CMS to finalize and implement the proposed changes to the physician fee schedule. Please do not hesitate to contact us should you have any questions about this information or need any further information.

Respectfully submitted,



Richard A. Savage MD
President, Iowa Association of Pathologists
October 9, 2006

167-D
3

SMITH DRUG COMPANY

A division of J M Smith Corporation

October 5, 2006

The Honorable Mark McClellan, M.D., Ph.D.
Office of the Administrator
Centers for Medicare & Medicaid Services
Department of Health and Human Services
Attn: CMS-1321-P
Room 445-G, Hubert H. Humphrey Building
200 Independence Avenue, SW
Washington, DC 20201

Re: CMS-1321-P (ASP Issues)

Dear Dr. McClellan:

On behalf of Smith Drug Company, I would like to take this opportunity to provide our comments on the Proposed Rule CMS-1321-P, "*Revisions to Payment Policies under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment under Part B*" (the "Proposed Rule"). This rule was published in the *Federal Register* on August 22, 2006.[1]

Smith Drug Company is a full-line pharmaceutical wholesale distributor dedicated to serving independent pharmacies, community hospitals and long term care facilities in 14 states. Most of our 1200 pharmacy customers are located on the corners in the inner cities... and on the Main Streets of small towns in rural America. They are independent business owners, licensed pharmacists, who take a personal interest in their business, their community, and in their patients. The personal attention and level of health care they provide requires a unique level of service and support from their wholesaler, and that's what we have been able to provide over the last 60 years. We believe that this classic and effective business model is good for our communities, and good for our patient-customers, and it needs to be encouraged, not made more difficult.

Smith Drug Company is a member of the Healthcare Distribution Management Association ("HDMA"). As part of our membership activities, we have reviewed the HDMA written comment letter to the Centers for Medicare and Medicaid Services (CMS), on the proposed rule referenced above. Smith Drug Company fully endorses the HDMA comments, and is, by submission of this letter, incorporating the HDMA comments by reference into our written comments for the record.

[1] 71 *Fed. Reg.* 48980 (Aug. 22, 2006).

PO Box 1779 Spartanburg, SC 29304 (864) 582-1216 (864) 591-0333 FAX
9098 Fairforest Road Spartanburg, SC 29301 www.smithdrug.com

While we fully agree with all of the points raised in the HDMA letter, we wish to place special emphasis on two items addressed in the HDMA comment letter regarding Average Sales Price (ASP) Issues. First, Smith Drug Company especially encourages CMS to reconsider its opinion that prompt pay discounts should continue as a type of price concession that manufacturers must include in their ASP calculation. We urge CMS to reverse its position, and inform manufacturers that customary prompt pay discounts should not be applied to wholesalers when they calculate ASP. We believe that manufacturers could continue to deduct any prompt pay discounts extended directly to end customers on sales that do not go through a wholesaler, but those that are not passed along to the customer are not appropriately included in the ASP. This revision is consistent with recent congressional directives that prompt pay discounts should be excluded from the Average Manufacturer's Price (AMP) calculation.

Secondly, Smith Drug Company strongly endorses CMS' proposal to codify the definition of bona fide services, to treat fees paid to wholesalers the same as fees paid to third party logistics providers, and not to deduct those bona fide service fees when ASP is determined.

Thank you for this opportunity to provide our comments on Proposed Rule CMS-1321-P, and to endorse the comments of the HDMA as written. We hope these comments are constructive in your deliberation of developing an Average Sales Price calculation that represents an equitable and reasonable approach to reimbursement for the products that we distribute.

Sincerely,

Kenneth R Couch

Kenneth R. Couch, RPh

President
Smith Drug Company

168

Genesis HealthCare℠

101 East State Street
Kennett Square, PA 19348
Tel 610 444 6350

October 9, 2006

Centers for Medicare and Medicaid Services
Department of Health and Human Services
Attention CMS-1321-P
Mail Stop C4-26-05
7500 Security Boulevard
Baltimore, Maryland 21244-1850

Re: Revisions to Payment Policies under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment under Part B: Proposed Rules

On behalf of Genesis HealthCare Corporation, a leading provider of healthcare and support services to the elderly, we submit the following comments on the proposed revision to payment policies under the physician fee schedules published in the Federal Register, August 22, 2006.

Genesis HealthCare Corporation owns/operates approximately 23,000 skilled nursing facility certified beds and 2,000 assisted living units in twelve states stretching from North Carolina/West Virginia through New Hampshire and Vermont. We provide over a million days of Medicare SNF services, about 2% of total annual Medicare SNF covered days. A core component of our services is organized medical direction structured through **Genesis Physician Services.** While the specific business organization of these practices vary from state-to-state based upon practice acts, the affiliation assures responsive, accountable medical support for our skilled nursing centers under the direction of employee physicians. In addition, Genesis HealthCare Corporation operates two of the larger specialized eldercare rehabilitation companies: **Genesis Rehabilitation Services,** supporting the delivery of physical therapy, speech-language pathology and occupation therapy services, and **Respiratory Health Services,** managing a range of supportive respiratory therapy programs. These two companies provide contract services in over 500 nursing centers.

Three overriding concerns drive our comments on the proposed rules.

- **First, if these rules are implemented without actions to ameliorate the projected negative update of the conversion factor access to required medical services - - especially for the most frail and vulnerable - - will be disrupted.**

- **Second, if the arbitrary Medicare Part B therapy caps are implemented, those most impacted will be residents of skilled nursing centers requiring non-Part-A restorative rehabilitation therapies.**

- **Third, the proposed restrictions on blood glucose monitoring for residents of skilled nursing centers undermines the provision of clinically necessary services.**

While the first two overriding concerns require Congressional action, the agency cannot be absolved of responsibility because the law is flawed. The challenge is for the agency to help secure the necessary corrections of statutes to assure that beneficiaries are not put at risk. With regard to the third issue, the proposed regulatory changes run counter to appropriate clinical practices for diabetes prevention and monitoring. An alternative proposal developed by physicians who serve beneficiaries in nursing home settings offers a realistic alternative approach.

The following are our detailed comments:

Issue #1: Payment Formula: [Reference: BACKGROUND]

It is most surprising that the preamble does not provide a more detailed analysis of the projected negative update. The CMS press release issued on August 8, 2006 and the "Fact Sheet on the Effect of the Medicare Economic Index (MEI) on the Physician Update" provide more detail than the text of the proposed rules. OACT-CMS estimates that absent Congressional intervention the CY07 conversion factor will be **negative 5.1%** with negative increases projected for future years.

We cannot over-emphasize **the disruptive impact** that would come from a reduction in the physician fee schedules. **This forced reduction in Medicare fee schedules will have significant impact on all aspects of care delivery for nursing home residents.** At the same time that CMS is enforcing new survey and certification requirements for medical direction in skilled nursing facilities, the agency is proposing to reduce payment. The attending physician is responsible for assisting in care planning, for ordering appropriate services, and for overseeing medical delivery. It is the facility's physician staff that is providing leadership to improve the quality of care.We struggle to attract and retain qualified, responsive professionals to meet the needs of our nursing facility residents. In all markets, practice costs are rising – especially malpractice and general liability costs which are skyrocketing. The supply of physicians specializing in geriatrics is limited and trade-offs are being made between preferred settings and preferred patient load is occurring.

It should be noted, that the RBRVS fee codes extends to non-physician services including an array of therapy services, SLP, OT, PT and RT. Historic flaws in the underlying data are magnified in the projected reductions in per unit delivery of these services. Both our rehabilitation and respiratory therapy companies struggle to attract qualified professionals. The current payment formula undervalues the complexity of these services in the skilled nursing setting and under pays for their delivery to Medicare beneficiaries.

Recommendation: ***CMS should assume leadership in pushing the Congress to enact legislation preventing a negative conversion factor and the agency should pressure the Congress to enact the correction adjustment before the end of this year.***

Issue #2: Medicare Part B Therapy Cap: [Reference: DRA Provisions: THERAPY CAP]

Effective January 1, 2006, a financial limitation (therapy cap) was placed on outpatient Medicare Part B therapy services. In February, 2006, the Deficit Reduction Act (DRA) was signed into law directing CMS to implement an exceptions process for medically necessary services (Section 1833(g)(5) of the Social Security Act). Working collaboratively with clinical experts from the stakeholders' community, the agency implemented the exceptions process in a timely manner. While initially there were some computer glitches and payment delays, the general assessment has been that the exceptions process has worked well especially in making sure that medically

necessary rehabilitation services have been delivered when appropriate. However, as indicated in the proposed rules, we once more confront the expiration of statutory intervention ameliorating the arbitrary therapy limitations. Unless Congress acts to extend the current exceptions process, the Medicare Part B therapy caps will be reinstated January 1, 2007. This set of proposed rules affirms the intentions of CMS to implement the caps. Interestingly, while the preamble to the proposed rules indicates there will be two separate caps: one for occupational therapy; and one for combined physical therapy and speech language pathology, it does not estimate the specific CY07 limitation. Given the potential negative adjustment for the RBRVS conversion factor, and the less than accurate discussion of the Medicare Economic Impact (CMS Fact Sheet, August 8, 2006), there are anxieties that the caps may be lower than those that were in place during 2006.

The therapy caps are particularly cruel policy for nursing home residents. For skilled nursing facilities, Part B therapy services are secondary to Part A coverage. A high percentage of our facility admissions are Part A Medicare. Approximately 4 out of 5 new admissions are in RUG-53 rehabilitation categories. About half of these individuals are discharged within 45 days; for those not discharged, a high proportion become eligible for Medicare Part B therapy services because the intensity of services decrease below the thresholds required for Part A coverage. It is critical to emphasize that for nursing facilities, the volume of Part B therapy services is dependent on the admission and discharge patterns and case mix of the facility. It is clinically difficult, and cost prohibitive for nursing facility residents to avail themselves to the therapy caps safety value of out-patient hospital services.

Recommendation: ***CMS should be aggressive in pressuring the Congress to intervene to alter the current law. To assure rehabilitation services for nursing home residents, the agency should separately address the therapy caps impact for these beneficiaries protecting their access to clinically necessary services. We strongly support developing a condition-based payment as a viable alternative to the arbitrary therapy caps implemented by 1/1/09. While that system is being developed, Congress should extend the existing therapy caps exceptions process.***

Issue #3: Blood Glucose Monitoring in SNFs (Reference: CLINICAL DIAGNOSTIC LAB TESTS – Other Laboratory Issues)

CMS has buried in the fine print of this proposed regulation language that undermines the provisions of clinically necessary tests for nursing home residents with diabetes. For many nursing home residents, frequent blood glucose testing is imperative for effective disease management. Clearly prevention should be the clinical behaviors that CMS promotes; instead the agency proposes unworkable requirements undermining payment for delivered services and thwarting best clinical practices.

Five years ago, when CMS first expressed concerns that there was the potential for wrongful billing of blood glucose billing for nursing home inpatients, the American Health Care Association in conjunction with the American Medical Directors Association advanced a realistic clinical protocol balancing resident access to medically necessary tests and CMS's concerns for policing the benefit. The agency choose to ignore this professional assistance. Subsequent Administrative Law Judge (ALJ) decisions have ruled against CMS and its questionable interpretation, Memorandum AB-00-108 (transmittal was issued without consultation and in potential violation of the Administrative Procedures Act). Rather than to work cooperatively with caregivers to address concerns, the agency appears to be attempting to ram through its preferred approach regardless of impact on beneficiaries or practitioners.

A detailed discussion outlining the statutory, regulatory and clinical issues raised by CMS in its proposed regulatory provision will be submitted jointly by the American Health Care Association (AHCA) and the Alliance for Quality Nursing Home Care (Alliance). Furthermore, we understand the American Medical Directors Association will submit comments challenging the proposed rules. Genesis HealthCare Corporation endorses these observations and recommendations.

Recommendation: ***The proposed regulatory language should be stricken and Transmittal AB-00-108 rescinded. As proposed in the formal comments of AHCA, the Alliance and AMDA, CMS should work collaboratively with professionals from the provider community to establish a clinical protocol which achieves the right public policy: quality diabetes management for nursing home residents.***

Changes in calculation of practice expenses: [Reference: RESOURCE BASED PRACTICE EXPENSES – Payment for Splints and Cast Supplies]

The proposed rules recommend continuing the current practices of excluding payment for splints and cast supplies from the resource based practice expense. This appears to be reasonable. However, it was not clear from the preamble whether this separation applied to the rehabilitation non-physician service codes. This should be clarified.

Recommendation: ***CMS should exclude payment for splints and cast supplies from the resource based practice expenses for non-physician rehabilitation service codes.***

Issue #4: Procedure Relative Values: (Reference: ADDENDUM B]

Addendum B of the proposed rules sets forth the relative value units (RVUs) for the 7,000+ procedure codes (CPT/HCPCS). It appears as if there are few significant changes with the **rehab therapy services codes** (97000 series and assorted 92500/92600 SLP codes). The proposed calculations appear to continue the restricted weights for PT and OT evaluation and re-evaluation codes (97001-97004). Given the importance of evaluations and re-evaluations in the process of patient selection, we believe CMS should examine the reasons why these specific codes are suppressed. The **respiratory therapy service** codes (G0238/G0239) continue to have a limited recognition of malpractice costs. These are legitimate costs of delivery and should be recognized in the calculations. **Physician visits for nursing facility care, rest homes and home care codes** (99300-99350) continue to be suppressed. Given the new directives of Medical Direction and the efforts to expand the important role of physicians in nursing homes, they should be appropriately rewarded.

Recommendation: ***CMS should evaluate the identified codes to assure there are no errors in the calculations. In particular, the weights for evaluation and re-evaluation codes for physical and occupation therapy and the weights for physician visits to nursing home residents need to be adjusted upward.***

Issue #5: Medical Nutrition Therapy Services: [Reference: MEDICAL NUTRITION]

CMS proposes to tweak the proposed rules to assure that the targeted 85% parity for non-physician nutrition professionals is achieved. Registered Dietitians and related non-physician nutritional professional are important to the delivery of quality nursing home care and we applaud CMS for working to assure adequate payment for these valued services.

Recommendation: ***Genesis HealthCare supports the CMS proposal to strengthen reimbursement for non-physician nutritional professionals.***

Issue #6: Telehealth: [Reference: TELEHEALTH]

The preamble to the proposed rules rejects the proposed expansion of Telehealth Services to include skilled nursing facility and speech-language pathology services. In both instances, CMS cites technical problems with the statute as limiting the agency's discretion. In the Preamble, the agency does mention that a report to Congress on how to expand Telehealth Services is being prepared. The agency does not identify a completion and delivery data for this review. We urge CMS to expedite this review.

Recommendation: ***Genesis HealthCare supports the expansion of telehealth consultations and we promote the use of SNFs as an originating site.***

Issue #8: Clinical Labor for G Codes Related to Home Health and Hospice Physician Supervision, Certification and Recertification: [Reference: PRACTICE EXPENSES]

CMS proposes to correct the labor and practice expense calculations for certain G codes to make them consistent with CPT codes for related services. This change appears to be a necessary technical correction.

Recommendation: ***We support the technical revision proposed by CMS.***

Summary:

There is a growing disconnect between what CMS mandates under its regulatory dictates and what it pays for under its reimbursement authorities. This reality comes into sharp focus as one examines these technical rules. CMS wants to revise its requirements for nursing facility medical direction; yet, the agency wants to reduce its payment for physician services. CMS wants to enforce requirements to assure all nursing home residents achieve their optimum function; yet the agency wants to contain outlays for rehabilitation and cap access to cover therapy services. CMS wants to promote the management of diabetes, but the rules propose to shortchange care providers who are meeting that requirement. CMS wants to expand specialty programs for respiratory, for renal dialysis, for medical nutrition to meet the needs of those most at risk; yet, the agency issues proposed rules that restrict resources and assumes a one-size fits all needs approach. **CMS is quick to add new survey and certification requirements promoting quality caring for nursing home residents; but seems reluctant to take the lead in advocating for necessary resources to stimulate an active, engaged involvement of physicians in the day-to-day medical delivery for these residents.**

We are deeply concerned that CMS has so compartmentalized its views of where and how services are provided to Medicare beneficiaries, that many of the successful programs that focus on the most clinically complex and medically need populations are threatened. The mere fact that CMS uses the shorthand phrase "physician fee schedules" without referencing the reality that these rules affect almost all of the Medicare Part B medical support and professional services, suggests the silos have tightened to marginalize input. **These are more than technical rules for doctor payments; for the resident for whom we care, these rules define the availability of and access to a full range of clinically necessary, medical supportive services.**

We hope our comments will help stimulate the agency to re-examine the impact of its rule-making on special needs populations residing in specialized settings. Our doctors, physician assistants, nurse practitioners, therapist, nutritionists, social workers and geriatric nurse practitioners stand ready to help in re-focusing these rules to support effective clinical caring.

Sincerely,

Laurence F. Lane
VP Government Relations

Daniel A. Hirschfeld
Sr. VP of Operations for
Genesis Rehabilitation Services

David F. Polakoff
Sr. VP & Chief Medical Officer

169

PresGar Companies, LLC
14025 Riveredge Drive, Suite 600
Tampa, Florida 33637

October 9, 2006

The Honorable Mark McClellan, M.D., Ph.D.
Centers for Medicare & Medicaid Services
Department of Health and Human services
Rook 445-G, Hubert H. Humphrey Building
200 Independence Avenue, SW
Washington, DC 20201

RE: CMS-1321-P

Dear Dr. McClellan:

PresGar Companies, LLC ("PresGar"), a multi-state provider of diagnostic imaging services, would like to thank you for the opportunity to comment on the Proposed Rule CMS-1321-P, "Revisions to Payment Policies under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment under Part B (the "Proposed Rule") published in the *Federal Register* on August 22, 2006. Specifically, PresGar is commenting on certain provisions under the *Proposed Performance Standards for IDTFs* found at 71 FR 49061.

IDTF ISSUES

The second bullet of section 2 under *II, L. Independent Diagnostic Testing Facility (IDTF) Issues* states the following:

> At §410.33, we are proposing to revise the regulation to specify that the IDTF would be required to –
>
> - Provide complete and accurate information on its enrollment application as stated in the "Requirements for Providers and Suppliers to Establish and Maintain Enrollment final rule"(April 21, 2006 (42 FR 20754)) [sic]. Any change in enrollment information would be required to be reported to the designated fee-for-service contractor on the Medicare enrollment application **within 30 calendar days.**

(Please note that the edition of the *Federal Register* cited in this provision is **71 FR 20754** rather than "42" as printed.)

This provision conflicts with the final rule published in the April 21, 2006 *Federal Register* where the following is stated.

> **"§ [42 CFR] 424.520 Additional provider and supplier requirements for enrolling and maintaining active enrollment status in the Medicare program.**

(b) *Reporting requirements.* Following enrollment, a provider or supplier must report to CMS any changes to the information furnished on the enrollment application and furnish supporting documentation **within 90 calendar days** of the change, with the exception of DMEPOS suppliers which are required to report changes of information within 30 days as specified in § 424.57(c)(2), or a change in ownership or control of the provider or supplier that must also be reported within 30 calendar days."

In accordance with the April 21, 2006 publication cited above, an IDTF would only be required to report a change in ownership within the 30 day time frame specified in the Proposed Rule. The vast majority of the routine operational changes that an IDTF must report to keep its Medicare enrollment information current would be classified under changes that fall under the 90 reporting time frame under 42 CFR 424.520(b). The proposed changes to 410.33 would be in direct conflict with 42 CFR 424.520(b).

In the commentary to the April 21, 2006 Final Rule, CMS stated the following:

> *For this reason, we proposed to require at §424.520(b), that individuals and organizations are responsible for updating their CMS 855 application in a timely manner. We would define timely as meaning within90 days, with the exception of a change in ownership or control of the provider which must be reported within 30 days.*

We would request that CMS revise its proposed changes to 42CFR 410.33 to be in agreement with the provisions of 42 CFR 424.520(b) and provide a 90 day period for reporting any change to an IDTF provider's enrollment information other than a change in ownership.

PresGar thanks CMS for the opportunity to submit formal comments on the Proposed Rule.

Sincerely,

L. Scott Garrett
Corporate Compliance Officer
PresGar Companies, LLC

170

October 9, 2006

BY HAND DELIVERY
Centers for Medicare and Medicaid Services
Department of Health and Human Services
Attention: CMS-1321-P, Mail Stop C4-26-05
7500 Security Boulevard
Baltimore, MD 21244-1850

Re: Federal Register Vol. 71, No. 162/August 22, 2006/Proposed Rules GPCI Provisions

Dear Sir or Madam:

The Puerto Rico Radiological Society appreciates the opportunity to comment upon certain aspects of the above-referenced proposed rule which directly impact reimbursement for radiological services furnished to Medicare beneficiaries residing in Puerto Rico. Our comments are largely based on the attached report prepared by two economists specific to cost of living calculations in Puerto Rico. We believe that the proposed adjustments to the GPCI's for Puerto Rico are not aligned with the economic reality of the cost of delivering quality and timely care to Medicare beneficiaries. Therefore, the Radiological Society, in conjunction with the Puerto Rico College of Physicians and Surgeons, commissioned the referenced study, focusing on work and practice expense GPCI components.

We believe that the both the Work and Practice Expense components of the GPCI calculations should be revised for Puerto Rico-based services, as follows:

1. Adjustments to the Practice Component of the GPCI for Puerto Rico

We suggest that the suggested practice component for the GPCI be revised and updated due to the following operational cost increases: mandated nurse salaries, increased transportation costs into Puerto Rico, and the recent increases in utilities cost (water and electricity).

a) Nurse Wage Cost:

Law Number 27, enacted on July 20, 2005, regulates nurse salaries in both the public and private sectors, excepting locations that only employ one nurse. The law has a three year phase-in period, commencing in October 2006. Prior to the mandated wage increases, the median nurse salary in Puerto Rico was approximately half of that in the U.S. After adjusting for the mandated increases, the wage index increases from .5 to .593. The vast majority of nurses in Puerto Rico qualify for the mandated increase, because of educational and work experience. The employee wage index represents 39.1% of the practice cost GPCI, therefore the practice cost GPCI should increase by .036. The current practice cost index for Puerto Rico is .699, and with the proposed adjustment, it should increase to .735. Minimum wage increases tend to have an inflationary effect upon other practice expense costs such as payroll taxes and salaries paid to other office personnel.

b) Utilities Cost:

The costs for both basic utilities in Puerto Rico, water and electricity, have risen dramatically over the last several years.

The Puerto Rico Water Authority, faced with crippling deficits, raised its rates anywhere from 166% percent to 387%. As an example, the base residential charge increased from $8 to $32, or a 300 percent increase, effective July 1, 2006. Given that the increases are of recent implementation, the rent index used for purposes of the Practice Expense GPCI calculation does not reflect this increase. The 2005 reported rent index for Puerto Rico is 0.631, or an 8.3% reduction from the previous reported index of 0.688. No index is reported in the draft regulation for 2006. Based on Census data, water costs represent 5% of gross rent, prior to the rate increase. Rent index represents 27.6% of the Practice Expense GPCI; therefore, the GPCI should be adjusted to reflect the increase. The corresponding increase would be 0.026 (rent index * [1 + (rent index)(% gross rent affected)(% cost increase).

Electricity rates in Puerto Rico are significantly higher than the rates in the U.S. In 2003, the average kilowatt hour in Puerto Rico cost 12.61 cents, while the same kilowatt hour in the U.S. cost 7.42 cents. In 2005, the increase in the power rates for Puerto Rico was 24% while in the US that same increase averaged out to 12%. Therefore, the corresponding GPCI for Puerto Rico should reflect that differential in rates. Using 2000 US Census data, electricity costs account for 10.6% of the median gross rent paid for a two bedroom apartment. Applying the 12% increase to 10.6% of the rent index yields an increase of 0.008. Given that 27.6% of the Practice Expense GPCI is comprised by the rent index, the corresponding increase in the component due to electricity rate cost differentials would be 0.002.

c) Transportation Costs into Puerto Rico:

All the equipment and supplies that are used for furnishing radiological services in Puerto Rico have to be imported, be that by air or maritime cargo. Transportation costs into Puerto Rico are estimated to be approximately 15% higher than in the Continental U.S. Therefore, we recommend that there be an adjustment to the portion of the Practice Expense GPCI in the amount of 0.002, to account for transportation costs. Approximately 4.4% of the total import costs are because of transportation costs.[1] Equipment and supplies cost account for 33.3% of the Practice Expense Index. The transportation cost portion corresponds to 1.5% of the total cost ((.333*.044)*100). Increasing this portion by the 15% add-on for increased transportation costs to Puerto Rico yields a 1.7% share ((0.015*1.15)*100). Hence, the adjustment increased transportation costs would be 0.002 (0.017-0.015).

2. Adjustments to the Work Component of the GPCI for Puerto Rico

Puerto Rico is one of the geographic areas that are directly affected by the proposed elimination of the work floor of 1.000, further decreasing physician reimbursement in addition to the proposed overall negative adjustments. The proposed work GAF for Puerto Rico in CY 2006 is 0.0905 and for CY 2007 is 0.883. Upon adjustment for the median wage for nurses following the legislatively mandated raises, the component should reflect an increase to 0.924 for both years.

Summary:

Total Adjustments suggested for the GPCI Components in Puerto Rico:

Practice Expense GPCI	
Proposed PE GPCI	0.699
Adjustments	
Nurse Wages	0.034

Transportation Cost	0.002
Water Cost	0.026
Electricity Cost	0.002
Adjusted PE GPCI for PR	**0.763**

Work GPCI	
Proposed Work GPCI	0.906
Nurse Wage Adjustment	0.018
Adjusted Work GPCI for PR	**0.924**

We also recognize that there are differences in the cost of malpractice insurance, but at this moment we do not have data that is sufficiently well developed in order to make an appropriate comparison. To that end, we would like the opportunity to, at a later time, submit data for consideration in the revision of the malpractice insurance component, since the current index appears not to reflect the market conditions in Puerto Rico. Medical malpractice insurance coverage in Puerto Rico is mandatory; however, the coverage limits available for purchase are considerably lower than the coverage available in most markets in the US.

In summary, we believe that the proposed negative updates for Puerto Rico, including the elimination of the 1.000 wage index floor, should be suspended for Calendar Year 2007 and that the totality of the impact of any negative updates be thoroughly considered before implementation. We recognize that the amount of real data is scarce and perhaps not as well-developed as necessary in order to present a thorough picture of the cost of running a radiological practice in Puerto Rico. However, we would like to engage in a discussion with CMS staff regarding the availability and accuracy of data, provide additional information, and answer any questions or concerns regarding the comments and suggestions contained in this letter. I am available at 787 269 2250 or by email at rhg2003@prtc.net.

Sincerely,

Rayda Hernández Guasch, M.D.
President
Radiological Society of Puerto Rico

RHG/hgg

Enclosure

Cc: James Kerr, Regional Administrator, Region II
Delia Lasanta, Director, Puerto Rico/USVI District Office
Hon. Luis Fortuño, Resident Commissioner
Eduardo Bhatia, Esq., Director, Puerto Rico Federal Affairs Administration

RECOMMENDATIONS FOR ADJUSTMENTS TO THE GEOGRAPHICAL PRACTICE COST INDEXES FOR PUERTO RICO, FOLLOWING THE PROPOSED RULE PUBLISHED BY THE CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS) IN THE FEDERAL REGISTER, AUGUST 22, 2005

Presented to
Colegio de Médicos y Cirujanos de Puerto Rico

By

Alicia Rodríguez Castro, M.A. Economics
Eileen V. Segarra Alméstica, Ph.D, Economics

October 3, 2006
San Juan, Puerto Rico

I. Adjusting for the effect of legislated changes in the minimum wages for nurses

The **Practice** and **Work** component of the GPCI's for Puerto Rico need to be adjusted by the recent legislated increases in wages and salaries for nurses in the Island. Act No.27 of July 20, 2005, regulates Puerto Rico Nursing Professionals Minimum Wages in the private sector, with the exception of establishments with only one nurse employed, and establishes a system of administrative fines to discourage its violation. The legislated Minimum Wages, which should be adopted fully in a period not less than three years, are:

Licensed Practical Nurse (LPN)	$1,500 monthly ($8.67 hourly)
Registered Nurse (RN)	
Associate Degree	$2,000 monthly ($11.56 hourly)
College Degree (no experience)	$2,350 monthly ($13.58 hourly)
College Degree (Experience)	$2,500 monthly ($14.45 hourly)

Since the Census data used for the calculation of the current GPCI corresponds to the 2000 Census, the effect of the legislation is not reflected in the data. The new legislation affects the calculation of two components of the GPCI, the **Work** and the **Practice** costs components.

We estimated the Work GPCI for Puerto Rico and the Employee Wage Index for the Practical Cost GPCI using the 2000 Census PUMS for Puerto Rico and the Integrated Public Use Microdata for the US, provided by the Minnesota Population Center at the University of Minnesota.

A. Adjustment to the Practice Cost GPCI

The Employee Wages Index used in the calculation of the **Practice** costs GPCI includes the wages for licensed practical nurses and register nurses. We began estimating the wage index for Puerto Rico following the methodology described in "Updating the Geographic Practice Cost Index: The Practice Expense GPCI. Final Report," Health Economics Research, Inc. May 1994 (NTIS PB94161098). Our calculations are shown in **Table 1**

Table 1

	Median Hourly Wage ($)	
Occupation	**US**	**PR**
Clerical	11.34	7.12
Registered Nurses	20.30	8.65
Licensed Practical Nurses	12.98	6.25
Health Technicians	15.39	6.59
Weighted Average	14.56	7.31
Ratio (PR/US)		0.50

We adjusted the hourly wage for licensed practical nurses to 8.67 (the minimum required by law) and the hourly wage for registered nurses to an hourly wage rate of 13.11. To obtain the minimum wage for all registered nurses, we estimated the weighted average of the minimum required by law for each of the three categories of register nurses defined in the law. The weight used corresponds to the percentage of register nurses in each category according to the 2000 Census PUMS data for Puerto Rico.[1] The resulting minimum wage for register nurses is $13.11. The new calculations are shown in **Table 2.**

Table 2

	Median Hourly Wage	
Occupation	**US**	**PR**
Clerical	11.34	7.12
Registered Nurses	20.30	13.11
Licensed Practical Nurses	12.98	**8.67**
Health Technicians	15.39	6.59
Weighted Average	14.56	**8.64**
Index		**0.593**

The employee wage index increases by 0.093, after the adjustment. Given that the employee wage index represents 39.1 percent of Practical Cost GPCI, the adjustment implies that the **Practical** Cost GPCI should increase by 0.036 (0.093*0.391).

B. Adjustment to the Physician Work GPCI

Our estimates for the **Physician Work** GPCI for Puerto Rico are presented in **Table 3.** As shown, our estimate is very close to the proposed Work GPCI for Puerto Rico.

Table 3

	Medium Hourly Wage ($)	
Occupation Category	**US**	**PR**
Engineers, Surveyors and Architects	25.00	19.23
Natural Scientists and Mathematicians	20.83	14.42
Social Scientists, Social Workers and Lawyers	21.13	13.46
Teachers, Counselors and Librarians	20.83	9.09
Registered Nurses and Pharmacists	17.31	11.09
Writers, Artists and Editors	15.07	10.90
Weighted average[2]	20.07	12.79
Ratio (PR/US)		0.64
Quarter GPCI		0.909

[1] The census data does not provide information regarding experience. Therefore, it is assumed that all nurses over the age of 25 has experienced. Since 10.99 per cent of nurses are 26 years or older, the calculation assumes that 90 percent of nurses with a BA has experience.

[2] The weights were taken from "Updating the Geographic Practice Cost Index: The Physician Work GPCI" Health Economics Research, Inc., Walthen MA, May 1994, Table 3.1 page 9.

In order to estimate the adjustment, we substituted the median wage for registered nurses and pharmacists by the weighted average of the median wage reported for pharmacist in the PUMS and the minimum wage calculated for all registered nurses, as explained in the previous section. The weights correspond to the percentage of workers in each of the two occupational categories. The new estimated median wage for the group is $13.15. As shown in **Table 4**, the Quarter Work GPCI increases to 0.923, after the adjustment.

Table 4

	Adjusted Medium Hourly Wage	
Occupation Category	**US**	**PR**
Engineers, Surveyors and Architects	25.00	19.23
Natural Scientists and Mathematicians	20.83	14.42
Social Scientists, Social Workers and Lawyers	21.13	13.46
Teachers, Counselors and Librarians	20.83	9.09
Register Nurses and Pharmacists	17.31	**13.15**
Writers, Artists and Editors	15.07	10.90
Weighted average[3]	20.07	13.94
Ratio		0.69
Quarter GPCI		**0.923**

II. Adjusment for transportation costs.

The calculation of the Practice Expenses GPCI assumes that equipment and supplies costs are the same across all geographical areas. Nevertheless, Health Economic Research, Inc. estimated that transportation costs in Puerto Rico are 15 percent higher than in the Continental US.[4]

To estimate the percentage of equipment and supplies costs that corresponds to transportation, we divided the total value of imports for Puerto Rico by the sum freights on imports and marine insurance on imports (obtained from Puerto Rico Planning Board, "Balance of Payment 2005"). The percentage was estimated from 1996 to 2005. The average transportation cost accounts for 4.4 percent of import cost, during the 1996 – 2005 period.

The information was used to calculate a transportation cost adjustment for Puerto Rico. According to the 2003 Federal Register, equipment and supplies accounts for 33.3 percent of the Practice Expense Index. Under the assumption that 4.4 percent of that cost belongs to transportation, we estimated that transportation costs correspond to 1.5 percent of the Practice GPCI ((.333 *.044)*100). If we increase this amount by 15 percent the resulting transportation

[3] The weights were taken from "Updating the Geographic Practice Cost Index: The Physician Work GPCI" Health Economics Research, Inc., Walthen MA, May 1994, Table 3.1 page 9.

[4] "Updating the Geographic Practice Cost Index: The Practice Expense GPCI. Final Report and Appendices to Final Report" Health Economics Research, Inc. Waltham, MA, May 1994, pp. III-2-7.

cost share for Puerto Rico is 1.7 percent ((0.015*1.15)*100). This implies that the transportation cost included in the Practice Expense GPCI should increase by 0.002 (0.017-0.015).

III. Adjustment for a new scheme for water utility costs.

Operational expenses for the Puerto Rico Water Authority (PRWA) increased by 273% between 1986 and 2005, while revenues only increased by 38% during the same period. As a result, in fiscal year 2005-2006, the PRWA confronted a $400 millions deficit, which prompted the Authority to implement a dramatic increase in water prices. The estimated increase in residential water cost range from a minimum of 166 percent to a maximum of 387 percent. The lowest water charge increased from $8 to $32, a 300 percent increase; which is representative of the increase for most households.

The rise in water prices represents a large increase in Puerto Rico's utility costs relative to the US. Due to the timing, it is not reflected in the rent index currently used for the calculation of the Practice Expense GPCI. The rent index reported for Puerto Rico for 2005 is 0.631, which represents an 8.3 percent reduction from the previous index of 0.688. The Federal Register update notice for the 2006 GPCI's does not report a new rent index.

Based on 2000 Census PUMS data for Puerto Rico, we estimated the median gross rent for a two bedroom apartment to be $284, while median monthly water cost for two bedrooms apartments was $14.17. This implies that monthly water costs represent 5 percent of gross rent. Therefore, the 300 percent increase in water costs should be applied to 5 percent of the rent index. Accordingly, the rent index should increase from 0.631 to 0.726. This number was estimated as follows:

Rent index *[1 + (rent index)(% of gross rent affected)(% increase in cost)]

= 0.631 * [1 + (0.631)(0.05)(3)] = 0.726

Since the rent index represents 27.6 percent of the Practice Expense GPCI, the increase in the PE GPCI component should be equal to the increase in the rent index multiplied by 0.276. The resulting increase in the Practice Expense GPCI component is:

0.276* [0.726 – 0.631] = 0.026

IV. Adjustment for larger increases in electricity cost

Electricity costs are significantly higher in Puerto Rico than in the US. The Centre for the New Economy reports "On average, the Puerto Rican average customer paid 12.61 cents per kWh in 2003, which equals 169.9 percent of the average rate of 7.42 cents per kWh paid by the average customer in the United

States".[5] In addition, electricity costs have increased more rapidly in Puerto Rico than in the US. As a result, delays in the updating of the GPCI data are more critical for Puerto Rico. For this reason, we propose an adjustment to the rental index to account for larger increases in electricity cost.

In order to take into consideration differences in energy cost between Puerto Rico and the United States, we obtained the historical data (2000 – 2006) for the average electricity cost for residential consumers for both locations. Since the FMR were adjusted in 2005, we estimated the rate of change in the residential retail prices of electricity (average revenue per kWh). Data for the United States was obtained from the Energy Information Administration official publications 2006. Data for Puerto Rico was provided by PREPA (Puerto Rico Electric Power Authority, October 2006). The increase between 2005 and 2006, was 24 percent for Puerto Rico and 12 percent for the US.

Table 5

Average Cost per kWh (¢/kWh)

Fiscal Year	Puerto Rico	US
1999-00	9.92	8.24
2000-01	11.76	8.63
2001-02	10.50	8.46
2002-03	11.92	8.70
2003-04	12.24	8.97
2004-05	14.34	9.08
2005-06	17.72	10.15
Percentage Change	**24%**	**12%**

We adjusted the rent index to account for the 12 percent difference in the increase in electricity costs. According to 2000 Census PUMS data for Puerto Rico, median monthly electricity cost for two bedrooms apartments was $30, which represent 10.6 percent of the median gross rent. This implies that the 12 percent adjustment should apply to 10.6 percent of the rent index. The rent index should be increased by:

(rent index)(% affected by the increase)(% Increase in cost)
=0.631*0.106*0.12= 0.008

Since the rent index represents 27.6 percent of the Practice Expense GPCI, the increased in the PE GPCI component should be equal to the increase in the rent index multiplied by 0.276. The resulting increase in the Practice Expense GPCI component is:

0.276* [0.008] = 0.002

[5] "Reestructuring the Puerto Rican Electricity Sector", Sergio M Marxuach, Center for the New Economy, August 22, 2005.

V. Total Adjustments suggested for the GPCI Components:

Work GPCI	
Proposed Work GPCI	0.906
Nurse Wages Adjustment	0.018
Our suggested Work GPCI for PR	**0.924**
Practice Expense GPCI	
Proposed PE GPCI	0.699
Adjustments	
Nurse Wages	0.034
Transportation Cost	0.002
Water Cost	0.026
Electricity Cost	0.002
Our suggested PE GPCI for PR	**0.763**

VI. Additional Comments

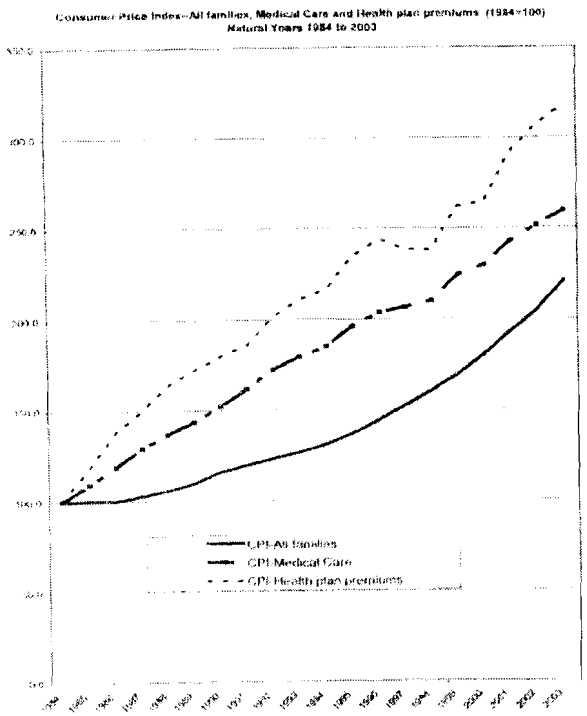
There are other critiques that given the time limitation to meet the deadline and the difficulty in obtaining the data, we have not been able to quantify. Nevertheless, they should be mentioned and take into consideration in future reviews to the Puerto Rican GPCI's.

First, we have not been able to obtain comparable insurances rate for Puerto Rico and the US to evaluated how adequate is the malpractice GPCI component for Puerto Rico. There are two issues that should be addressed. Although it is mandatory, the insurance coverage in Puerto Rico is more limited (from $100,000 to $300,000) than the 1 million to 3 million coverage offered in the US. Therefore any comparison between Puerto Rico and the US should be adjusted and such adjustment should be carefully evaluated. In addition, the growth rate of premiums in Puerto Rico should be compared to those of the US.

Second, The composition of professions that are taken into consideration to calculate the Work GPCI should be reevaluated. Professionals such as teachers and nurses earn a lot less that doctors, and this is especially true in Puerto Rico.

Another concerned is whether or not the Fair Market Rents adequately incorporates the difference in electricity cost between Puerto Rico and the US. In fact, medium monthly electricity cost reported in the PUMS is much lower for Puerto Rico than for the US, even though the average unit rate in Puerto Rico is 70 percent higher than the US average rate.

Finally, price inflation has been higher in Puerto Rico (a double digit rate of inflation for the overall economy) than in the US. Therefore, the fact that most GPCI components are not regularly updated, have a negative impact on Puerto Rico's GPCI components. The following graph presents the historical trend for the 1984-2003 period of the Consumer Price Indexes for All Families, Medical Care and for the Health Plan premiums in Puerto Rico. It can be observed that medical care CPI has been continuously increasing at a higher rate than de overall CPI. Thus, we can state that costs for the medical profession have been increasing at a higher rate than other components of the economy, leading us to recommend a revision of the GPCI's that incorporates inflation differentials between Puerto Rico and the United States.



Presentation of Marissel Velázquez-Vicente, MD
President of Colegio de Médicos Cirujanos de P.R. and Ramón Vidal Fandiño
To The Puerto Rico State Senate Health Commission
Regarding R de S 1327
September 6, 2006

As suggested by the General Accounting Office,[6] with the data from the American Community Survey the GPCI estimations can be updated more often. In fact, from 2005 on the Community Survey is also available for Puerto Rico.

[6] "Medicare Physician Fees: Geographic Adjustment Indices are Valid in Design, but Data and Meteds Need Refinement", General Accounting Office, Report to Congressional Committees, GAO-05-119, March 2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
Importaciones	22028.7	24195.5	26375.2	31921.2	34084.3	37394.7	36740.6	42506.7	44908.9	46386.1	
fletes	1266.9	1235.9	1182.3	1319.7	1378.1	1392.2	1355	1517.5	1533.4	1714.5	
seguros	63.6	71.2	70.1	81.7	89.7	96.4	96.2	111.8	129.1	128	
%	6.0%	5.4%	4.7%	4.4%	4.3%	4.0%	3.9%	3.8%	3.7%	4.0%	4.4%

0.036363

		weight			
employee wage index	15.7	0.390547			
rents	11.1	0.276119			
equipo	13.4	0.333333	0.33555	0.014775	adjustment factor
				0.016991	cost adjustment
		0.016991	0.350324	0.33555	new weight

0.034783

	Salario Mediano		
	US	PR	razon
Ingenieros	25	19.23	0.77
C. Naturales	20.83	14.42	0.69
C. Sociales	21.13	13.46	0.64
NR Farmaceuticos	20.83	9.09	0.44
Maestros	17.31	11.09	0.64
Escritores, Artistas	15.39	10.9	0.71
promedio work	20.07	12.79	0.64
desviacion estandar	3.35	3.59	
Coeficiente de Variacion	0.17	0.28	
Indice	0.909317		

Employee Wages

	Mediam wage (weighted)	Mediam wage (weighted adjusted)
US	14.57	14.71
PR	7.31	7.45
ratio	0.50	0.51

Rent

US	778.12
PR	426.72
ratio	0.63
indice	0.700326899

Simulacion

	US	PR	weights	Adjusted by Law
clerical	11.341	7.121	0.448	
RN	20.299	8.654	0.25	13.10687
lpn	12.981	6.25	0.092	8.67
technicians	15.385	6.587	0.209	
indices	14.565235	7.305391		8.641249
ratio		0.501563552		0.593279
		ajuste a GPCI		0.035861
			nuevo GPCI	0.734861
				0.736861
				0.054164

	US	PR	ratio					
Engineers	25.48	19.41	0.761774	448	0.513173	17269	0.61438	0.563777
Archiquets	20.98	16.35	0.779314	37	0.042383	1909	0.067917	0.05515
Lawyers	32.05	23.08	0.720125	388	0.444444	8930	0.317703	0.381074
				873		28108		
		w aveg	0.74687					
		Quarter GF	0.936717					
			0.030492					

	Salario por hora minimo	
Grado Asoc	11.56	
BA	13.58	
BA exp	14.45	

Distribucion de enfermerasGraduadas en el Censo

Grado Asociado	0.45	
BA	0.049	(10% del 49 % que tiene bachillerato/equiv a 26 anos o mas)
Baexp	0.501	(10% del 49 % que tiene bachillerato/equiv a 26 anos o mas)+ 6% con BA+

Salario minimo promedio RN a utilizarse 13.10687

	Salario Mediano US	PR	razon	peso
Ingenieros	25	19.23	0.77	0.187
C. Naturales	20.83	14.42	0.69	0.101
C. Sociales	21.13	13.46	0.64	0.154
NR Farmaceuticos	20.83	13.15	0.63	0.307
Maestros	17.31	11.09	0.64	0.159
Escritores, Artistas	15.39	10.9	0.71	0.093
promedio work	20.07	13.93933	0.69	
desviacion estandar	3.35	3.04		
Coeficiente de Variacion	0.17	0.22		

Indice	0.923634	0.017634
		0.923634
	0.019463	

Statistics/Data Analysis

Project: CEDOE

      log: **C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\ajuste sept23.smcl**
  log type: **smcl**
 opened on: **23 Sep 2006, 11:05:19**

1 . tab occ6 if RNfarma==1

occ6	Freq.	Percent	Cum.
291051	**124**	**10.99**	**10.99**
291111	**1,004**	**89.01**	**100.00**
Total	**1,128**	**100.00**	

2 . bys occ6: sum hwage, detail if RNfarma==1

-> occ6 = 172
option if not allowed
r(198);

3 . bys occ6: sum hwage if RNfarma==1, detail

-> occ6 = 172

hwage

no observations

-> occ6 = 434

hwage

no observations

-> occ6 = 472

hwage

no observations

-> occ6 = 514

hwage

no observations

-> occ6 = 537

hwage

no observations

-> occ6 = 1311

hwage

no observations

-> occ6 = 1510

hwage

no observations

-> occ6 = 1520

hwage

no observations

-> occ6 = 1721

hwage

no observations

-> occ6 = 1930

hwage

no observations

-> occ6 = 1940

hwage

no observations

-> occ6 = 2590

hwage

no observations

-> occ6 = 2740

hwage

no observations

-> occ6 = 3330

hwage

no observations

-> occ6 = 3590

hwage

no observations

-> occ6 = 4520

hwage

no observations

-> occ6 = 4750

hwage

no observations

-> occ6 = 5170

hwage

no observations

-> occ6 = 5191

hwage

no observations

-> occ6 = 5330

hwage

no observations

-> occ6 = 5340

hwage

no observations

-> occ6 = 5360
--Break--
r(1);

```
4 . tab occ6 if  RNfarma==1
```

occ6	Freq.	Percent	Cum.
291051	124	10.99	10.99
291111	1,004	89.01	100.00
Total	1,128	100.00	

```
5 . sum wage if occ6==291051, detail
variable wage not found
r(111);

6 . sum hwage if occ6==291051, detail
```

hwage

Percentiles		Smallest		
1%	3.75	2.755102		
5%	4.326923	3.75		
10%	5.056818	3.916667	Obs	124
25%	8.37258	4.086538	Sum of Wgt.	124
50%	13.46154		Mean	27.2282
		Largest	Std. Dev.	80.06472
75%	18.75	130.2083		
90%	33.65385	169.5804	Variance	6410.36
95%	78.125	250	Skewness	8.818576
99%	250	840.9091	Kurtosis	88.04609

```
7 . sum hwage if occ6==291111, detail
```

hwage

Percentiles		Smallest		
1%	2.291667	1.020833		
5%	3.846154	1.041667		
10%	5	1.041667	Obs	1004
25%	6.25	1.071429	Sum of Wgt.	1004

50%	8.653846		Mean	12.10606
		Largest	Std. Dev.	20.67504
75%	11.76777	200		
90%	17.30769	233.1731	Variance	427.4572
95%	25.83333	242.7885	Skewness	11.43181
99%	64.10256	404.1667	Kurtosis	172.4526

```
 8 . display (13.46*.1099)+(13.11*.89.01)
01 invalid name
r(198);

 9 . display (13.46*.1099)+(13.11*.8901)
13.148465

10 . sum hwage if occ5==17101, detail
```

hwage

	Percentiles	Smallest		
1%	5.571429	5.571429		
5%	6.25	6.25		
10%	9.615385	7.487179	Obs	37
25%	12.5	9.615385	Sum of Wgt.	37
50%	16.34615		Mean	20.26626
		Largest	Std. Dev.	12.98222
75%	26	33.33333		
90%	33.33333	33.65385	Variance	168.538
95%	33.65385	33.65385	Skewness	2.798146
99%	80.76923	80.76923	Kurtosis	13.76642

```
11 . sum hwage if occ3==172, detail
```

hwage

	Percentiles	Smallest		
1%	3.333333	.6510417		
5%	7.75	1.388889		
10%	9.661836	2.564103	Obs	448
25%	14.42308	3.028846	Sum of Wgt.	448
50%	19.40705		Mean	31.03101
		Largest	Std. Dev.	70.76542
75%	27.88461	505.2083		
90%	40	730	Variance	5007.745
95%	50	750	Skewness	8.401491
99%	480	750	Kurtosis	78.50921

```
12 .
13 . sum hwage if occ3==231, detail
```

hwage

	Percentiles	Smallest		
1%	2.403846	1.682692		
5%	5.244755	1.736111		
10%	8.928572	1.76282	Obs	388
25%	14.42308	2.403846	Sum of Wgt.	388
50%	23.07692		Mean	36.54303
		Largest	Std. Dev.	56.40087
75%	34.61538	240.3846		
90%	63.11637	252.6042	Variance	3181.059
95%	130	525	Skewness	6.307323
99%	240.3846	666.6667	Kurtosis	58.13827

```
14 . clear

15 . use "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\datos2000US\salarioUS.dta", clear

16 . sum hwage if occ5==17101, detail
```

hwage

	Percentiles	Smallest		
1%	2.564103	.0015385		
5%	6.875	.020979		
10%	9.615385	.2788461	Obs	1909
25%	14.52991	.4615385	Sum of Wgt.	1909
50%	20.97902		Mean	28.38312
		Largest	Std. Dev.	49.03382
75%	29.91453	373.3032		
90%	44.64286	415	Variance	2404.316
95%	65	660	Skewness	21.70188
99%	158.1731	1666.667	Kurtosis	673.355

```
17 . sum hwage if occ3==172, detail
```

hwage

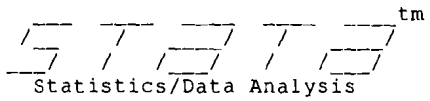
	Percentiles	Smallest		
1%	4.62963	.0333333		
5%	10	.122807		
10%	13.46154	.25	Obs	17269
25%	19.23077	1	Sum of Wgt.	17269
50%	25.48077		Mean	30.3543
		Largest	Std. Dev.	52.9896
75%	33.65385	1200		
90%	43.26923	1557.692	Variance	2807.898
95%	52.69231	2083.333	Skewness	52.69068
99%	146.0623	4892	Kurtosis	4318.781

```
18 . sum hwage if occ3==231, detail
```

hwage

	Percentiles	Smallest		
1%	2.5	.0048077		
5%	7.843137	.0206044		
10%	12.01923	.0252781	Obs	8930
25%	19.58042	.0320513	Sum of Wgt.	8930
50%	32.05128		Mean	51.20039
		Largest	Std. Dev.	140.0284
75%	52.08333	3750		
90%	105.7692	5312.5	Variance	19607.95
95%	129	5777.778	Skewness	28.76399
99%	217.7419	6125	Kurtosis	1055.693

```
19 . clear

20 . exit
```



Project: CEDOE

```
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\ajusteagua oct3.smcl
  log type:  smcl
 opened on:   3 Oct 2006, 16:47:40

1 . log off
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\ajusteagua oct3.smcl
  log type:  smcl
 paused on:   3 Oct 2006, 16:47:46
```

```
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\ajusteagua oct3.smcl
  log type:  smcl
resumed on:   3 Oct 2006, 16:48:52

2 . bys bedrooms: _pctile grent [fweight= hweight], p(40 ,50)
_pctile may not be combined with by
r(190);

3 .  _pctile grent [fweight= hweight] if bedrooms==2, p(40 ,50)

4 . return list

scalars:
                r(r1) =  242
                r(r2) =  284

5 .  _pctile mwater [fweight= hweight] if bedrooms==2 & mwater>0, p(40 ,50)

6 . return list

scalars:
                r(r1) =  10
                r(r2) =  14.16666698455811

7 . display 10/242
.04132231

8 .  _pctile melec [fweight= hweight] if bedrooms==2 & melec>0, p(40 ,50)

9 . return list

scalars:
                r(r1) =  25
                r(r2) =  30

10 . exit
```

Statistics/Data Analysis

Project: CEDOE

```
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\coefvar sept26.smcl
  log type:  smcl
 opened on:  28 Sep 2006, 17:13:28

1 . gen inge=cond(occ3==171| occ3==172,1,0)

2 . tab inge

      inge |      Freq.     Percent        Cum.
-----------+-----------------------------------
         0 |     60,850       99.18       99.18
         1 |        503        0.82      100.00
-----------+-----------------------------------
     Total |     61,353      100.00

3 . gen cnaturales=cond(occ3==191|occ3==192 | occ3==193| occ5==15202,1,0)

4 . tab cnaturales

 cnaturales |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |     61,033       99.48       99.48
          1 |        320        0.52      100.00
------------+-----------------------------------
      Total |     61,353      100.00

5 . gen maestros=cond(occ3==252| occ6==211012| occ5==25402 | occ5==25403,1,0)

6 . tab maestros

   maestros |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |     58,666       95.62       95.62
          1 |      2,687        4.38      100.00
------------+-----------------------------------
      Total |     61,353      100.00

7 . gen csociales=cond(occ3==193| occ5==21102| occ5==23101,1,0)

8 . tab csociales

  csociales |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |     60,491       98.60       98.60
          1 |        862        1.40      100.00
------------+-----------------------------------
      Total |     61,353      100.00

9 . describe

Contains data from C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\datos2000US\salarioso
  obs:        61,353
 vars:            22                          28 Sep 2006 17:12
 size:     5,215,005 (93.8% of memory free)
-------------------------------------------------------------------------------
              storage  display     value
variable name   type   format      label      variable label
-------------------------------------------------------------------------------
rtype           str1   %9s
serialno        long   %12.0g
pweight         float  %9.0g
occsoc          str7   %9s
occ6            long   %10.0g
weeks99         float  %9.0g
hours99         float  %9.0g
earns           long   %12.0g
hwage           float  %9.0g
hwage2          float  %9.0g
occ2            byte   %10.0g
occ3            int    %10.0g
occ4            int    %10.0g
occ5            long   %10.0g
```

```
lpn             float  %9.0g
htech           float  %9.0g
regnurse        float  %9.0g
inge            float  %9.0g
cnaturales      float  %9.0g
maestros        float  %9.0g
csociales       float  %9.0g
-------------------------------------------------------------------------------
Sorted by:
     Note:  dataset has changed since last saved
```

```
10 . clear

11 . use "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\datos2000US\salarioUS.dta", clear

12 . gen inge=cond(occ3==171| occ3==172,1,0)

13 . tab inge
```

inge	Freq.	Percent	Cum.
0	1,063,162	98.19	98.19
1	19,563	1.81	100.00
Total	1,082,725	100.00	

```
14 . gen cnaturales=cond(occ3==191|occ3==192 | occ3==193| occ5==15202,1,0)

15 . tab cnaturales
```

cnaturales	Freq.	Percent	Cum.
0	1,073,264	99.13	99.13
1	9,461	0.87	100.00
Total	1,082,725	100.00	

```
16 . gen maestros=cond(occ3==252| occ6==211012| occ5==25402 | occ5==25403,1,0)

17 . tab maestros
```

maestros	Freq.	Percent	Cum.
0	1,031,612	95.28	95.28
1	51,113	4.72	100.00
Total	1,082,725	100.00	

```
18 . gen csociales=cond(occ3==193| occ5==21102| occ5==23101,1,0)

19 . tab csociales
```

csociales	Freq.	Percent	Cum.
0	1,064,507	98.32	98.32
1	18,218	1.68	100.00
Total	1,082,725	100.00	

```
20 . gen RNfarma=cond(occ5==29111| occ5==29105,1,0)

21 . tab RNfarma
```

RNfarma	Freq.	Percent	Cum.
0	1,056,763	97.60	97.60
1	25,962	2.40	100.00
Total	1,082,725	100.00	

```
22 . gen escritores=cond(occ6==273043| occ6==273041,1,0
too few ')' or ']'
r(132);

23 . gen escritores=cond(occ6==273043| occ6==273041,1,0)

24 . tab escritores
```

escritores	Freq.	Percent	Cum.
0	1,079,286	99.68	99.68
1	3,439	0.32	100.00
Total	1,082,725	100.00	

```
25 . gen artistas=cond(occ5==27101| occ6==272011,1,0)

26 . tab artistas
```

artistas	Freq.	Percent	Cum.
0	1,079,904	99.74	99.74
1	2,821	0.26	100.00
Total	1,082,725	100.00	

```
27 . sum hwage [fweight== perwt] if  inge==1| cnaturales==1| maestros==1| csociales==1| RNfarma==1
> stas==1
invalid syntax
r(198);

28 . sum hwage [fweight== perwt] if  (inge==1| cnaturales==1| maestros==1| csociales==1| RNfarma==
> istas==1), detail
invalid syntax
r(198);

29 . sum hwage [fweight= perwt] if  (inge==1| cnaturales==1| maestros==1| csociales==1| RNfarma==1
> stas==1), detail
```

hwage

Percentiles		Smallest		
1%	2.692308	.0015385		
5%	6.009615	.0019231		
10%	8.5	.0022222	Obs	13157162
25%	13.46154	.0038462	Sum of Wgt.	13157162
50%	19.80769		Mean	26.18334
		Largest	Std. Dev.	71.8746
75%	28.33333	6333.333		
90%	39.42308	6666.667	Variance	5165.958
95%	51.44231	6666.667	Skewness	60.87316
99%	140.4255	8500	Kurtosis	5198.566

```
30 . sca list

31 . return list

scalars:
                  r(N) =  13157162
              r(sum_w) =  13157162
               r(mean) =  26.18334093376645
                r(Var) =  5165.957671262835
                 r(sd) =  71.87459684243686
           r(skewness) =  60.87315701943178
           r(kurtosis) =  5198.565777477074
                r(sum) =  344498458.3667964
                r(min) =  .0015384615398943
                r(max) =  8500
                 r(p1) =  2.692307710647583
                 r(p5) =  6.009615421295166
                r(p10) =  8.5
                r(p25) =  13.46153831481934
                r(p50) =  19.80769157409668
```

```
                r(p75) =  28.33333396911621
                r(p90) =  39.42307662963867
                r(p95) =  51.44230651855469
                r(p99) =  140.425537109375

32 . display r(sd)/r(mean)
2.7450506

33 . save, replace
file C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\datos2000US\salarioUS.dta saved

34 . clear

35 . use "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\salariooccp.dta", clear

36 . sum hwage [fweight=  pweight] if  (inge==1|  cnaturales==1|  maestros==1|  csociales==1|  RNfarma=
> rtistas==1), detail

                            hwage
-------------------------------------------------------------
      Percentiles      Smallest
 1%     2.403846       .6510417
 5%     4.615385       .7327586
10%     5.694445       .8650519       Obs              110077
25%     7.916667              1       Sum of Wgt.      110077

50%        11.25                      Mean            16.86111
                       Largest        Std. Dev.       33.91628
75%     15.68627           730
90%     26.44231           750       Variance        1150.314
95%     38.46154           750       Skewness        13.24283
99%        127.5       840.9091       Kurtosis        236.3913

37 . display r(sd)/r(mean)
2.01151

38 . display 15000/125
120

39 . gen profgroup=cond(inge==1,1,cond( cnaturales==1,2,cond( maestros==1,3,cond( csociales==1,4, cond
>  escritores==1| artistas==1,6,.))))))
(55884 missing values generated)

40 . tab profgroup

  profgroup |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |        503        9.20        9.20
          2 |        320        5.85       15.05
          3 |      2,687       49.13       64.18
          4 |        754       13.79       77.97
          5 |      1,128       20.63       98.59
          6 |         77        1.41      100.00
------------+-----------------------------------
      Total |      5,469      100.00

41 . bysort profgroup: correlate hwage [fweight=pweight ], covariance

-------------------------------------------------------------------------------
-> profgroup = 1
(obs=10124)

             |    hwage
-------------+---------
       hwage |  4312.03


-------------------------------------------------------------------------------
-> profgroup = 2
(obs=6469)
```

	hwage
hwage	**793.327**

-> profgroup = 3
(obs=53849)

	hwage
hwage	**493.473**

-> profgroup = 4
(obs=15334)

	hwage
hwage	**1865.22**

-> profgroup = 5
(obs=22623)

	hwage
hwage	**848.848**

-> profgroup = 6
(obs=1678)

	hwage
hwage	**190.215**

-> profgroup = .
(obs=1138202)

	hwage
hwage	**54655.3**

```
42 .                    display 120*125
   15000

43 . sdtest hwage, by( profgroup )
   more than 2 groups found, only 2 allowed
   r(420);

44 . save, replace
   file C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\salariooccp.dta saved

45 . exit
```

Statistics/Data Analysis

Project: CEDOE

```
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\est renta sept 29.smcl
  log type:  smcl
 opened on:  29 Sep 2006, 09:56:51

1 . infile using "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\rentsPR.dct" if rectype==
> itype==0 & vacstat==0, using("C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\PUM

dictionary
{
_column(1) str1 rectype %1s
_column(2) serialno %7f
_column(124)    bedrooms %1b
invalid %format
r(120);

2 . infile using "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\rentsPR.dct" if rectype==
> itype==0 & vacstat==0, using("C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\PUM

dictionary
{
_column(1) str1 rectype %1s
_column(2) serialno %7f
_column(124)    bedrooms %1f
_column(128)    ckitchen                %1f
_column(126)    plumb           %1f
_column(142)    elec            %4f
_column(147)    gas             %4f
_column(237)    grent           %4f
_column(102)    hweight %4f
_column(157)    oil                     %4f
_column(162)    rent            %4f
_column(122)    rooms   %1f
_column(114)    tenure  %1f
_column(108)    unitype %1f
_column(111)    vacstat %1f
_column(152)    water           %4f
_column(120)    yrmoved %1f
}

(0 observations read)

3 . clear

4 . infile using "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\rentsPR.dct" if rectype==
> itype==0 , using("C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\PUMS5_72.TXT")

dictionary
{
_column(1) str1 rectype %1s
_column(2) serialno %7f
_column(124)    bedrooms %1f
_column(128)    ckitchen                %1f
_column(126)    plumb           %1f
_column(142)    elec            %4f
_column(147)    gas             %4f
_column(237)    grent           %4f
_column(102)    hweight %4f
_column(157)    oil                     %4f
_column(162)    rent            %4f
_column(122)    rooms   %1f
_column(114)    tenure  %1f
_column(108)    unitype %1f
_column(111)    vacstat %1f
_column(152)    water           %4f
_column(120)    yrmoved %1f
}

(0 observations read)
```

```
5 . clear

6 . infile using "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\rentsPR.dct" if rectype=
> uments and Settings\Eileen Segarra\My Documents\PUMS\2000\PUMS5_72.TXT")

dictionary
{
_column(1) strl rectype %1s
_column(2) serialno %7f
_column(124)    bedrooms %1f
_column(128)    ckitchen                %1f
_column(126)    plumb           %1f
_column(142)    elec            %4f
_column(147)    gas             %4f
_column(237)    grent           %4f
_column(102)    hweight %4f
_column(157)    oil                     %4f
_column(162)    rent            %4f
_column(122)    rooms   %1f
_column(114)    tenure  %1f
_column(108)    unitype %1f
_column(111)    vacstat %1f
_column(152)    water           %4f
_column(120)    yrmoved %1f
}

(73259 observations read)

7 . sum
```

Variable	Obs	Mean	Std. Dev.	Min	Max
rectype	0				
serialno	73259	5008058	2881724	159	9999811
bedrooms	70924	2.057738	1.306765	0	5
ckitchen	70924	1.032443	.1771752	1	2
plumb	70924	1.059782	.2370847	1	2
elec	63066	633.3242	660.3723	0	5700
gas	63066	120.0362	256.4841	0	4900
grent	73259	55.74526	161.5945	0	3433
hweight	73259	19.36248	7.263752	0	517
oil	63066	7.180287	86.32458	0	3500
rent	14042	271.4675	236.3675	4	2400
rooms	70924	4.20051	1.633854	1	9
tenure	73259	.0429435	.2027312	0	1
unitype	73259	.0475573	.2768841	0	2
vacstat	73259	.3641327	1.217789	0	6
water	63066	312.729	356.9126	0	2900
yrmoved	63066	3.489535	1.623949	1	6

```
8 . tab tenure
```

tenure	Freq.	Percent	Cum.
0	70,113	95.71	95.71
1	3,146	4.29	100.00
Total	73,259	100.00	

```
 9 . clear

10 . infile using "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\rentsPR.dct" if rectype==
   > itype==0 & vacstat==0, using("C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\PUM

   dictionary
   {
   _column(1) strl rectype %1s
   _column(2) serialno %7f
   _column(124)    bedrooms %1f
   _column(128)    ckitchen                %1f
   _column(126)    plumb           %1f
   _column(142)    elec            %4f
   _column(147)    gas             %4f
   _column(237)    grent           %4f
   _column(102)    hweight %4f
   _column(157)    oil                     %4f
   _column(162)    rent            %4f
   _column(122)    rooms   %1f
   _column(113)    tenure  %1f
   _column(108)    unitype %1f
   _column(111)    vacstat %1f
   _column(152)    water           %4f
   _column(120)    yrmoved %1f
   }

   (12497 observations read)

11 . sum
```

Variable	Obs	Mean	Std. Dev.	Min	Max
rectype	0				
serialno	12497	5021112	2865018	159	9999663
bedrooms	12497	1.774106	1.216724	0	5
ckitchen	12497	1.015844	.124876	1	2
plumb	12497	1.052733	.2235082	1	2
elec	12497	461.7061	568.4263	0	5700
gas	12497	76.62183	210.968	0	4900
grent	12497	326.7858	253.9828	4	3433
hweight	12497	20.05353	5.348073	6	75
oil	12497	5.608226	77.87887	0	3500
rent	12497	262.4057	230.6206	4	2400
rooms	12497	3.714411	1.570264	1	9
tenure	12497	3	0	3	3
unitype	12497	0	0	0	0
vacstat	12497	0	0	0	0
water	12497	229.6966	322.9392	0	2900
yrmoved	12497	2.267504	1.290066	1	6

```
12 . tab bedrooms
```

bedrooms	Freq.	Percent	Cum.
0	2,553	20.43	20.43
1	2,527	20.22	40.65
2	3,323	26.59	67.24
3	3,456	27.65	94.89
4	560	4.48	99.38
5	78	0.62	100.00
Total	12,497	100.00	

```
13 . gen trent=rent +  gas+  elec+ oil + water

14 . sum rent trent
```

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	12497	262.4057	230.6206	4	2400
trent	12497	1036.038	910.8532	6	14800

```
15 . gen trent=rent + (( gas+  elec+ oil + water)/12)
trent already defined
r(110);

16 . replace trent=rent + (( gas+  elec+ oil + water)/12)
(12472 real changes made)

17 . sum rent trent
```

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	12497	262.4057	230.6206	4	2400
trent	12497	326.8751	253.9796	4.166667	3433.333

```
18 . bys bedrooms: sum rent trent
```

-> bedrooms = 0

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	2553	239.5644	220.1272	4	2400
trent	2553	305.959	247.9431	4.166667	3116.833

-> bedrooms = 1

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	2527	240.2802	223.7357	4	2400
trent	2527	294.0317	245.616	4.166667	3433.333

-> bedrooms = 2

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	3323	252.7499	210.008	4	2400
trent	3323	309.9775	224.8767	4.25	2616.833

-> bedrooms = 3

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	3456	289.4763	234.9254	4	2400
trent	3456	362.0386	254.0874	4.166667	2658.5

-> bedrooms = 4

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	560	348.2071	317.0069	4	2400
trent	560	439.9437	358.2815	9.25	2975.167

-> bedrooms = 5

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	78	322.7436	383.3985	4	2400
trent	78	425.6111	469.8759	26.91667	3100.083

19 . bys bedrooms: sum rent trent grent

-> bedrooms = 0

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	2553	239.5644	220.1272	4	2400
trent	2553	305.959	247.9431	4.166667	3116.833
grent	2553	305.8566	247.9497	4	3117

-> bedrooms = 1

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	2527	240.2802	223.7357	4	2400
trent	2527	294.0317	245.616	4.166667	3433.333
grent	2527	293.9232	245.6201	4	3433

-> bedrooms = 2

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	3323	252.7499	210.008	4	2400
trent	3323	309.9775	224.8767	4.25	2616.833
grent	3323	309.8971	224.8741	4	2617

-> bedrooms = 3

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	3456	289.4763	234.9254	4	2400
trent	3456	362.0386	254.0874	4.166667	2658.5
grent	3456	361.967	254.0862	4	2658

-> bedrooms = 4

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	560	348.2071	317.0069	4	2400
trent	560	439.9437	358.2815	9.25	2975.167
grent	560	439.8429	358.2959	9	2975

-> bedrooms = 5

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	78	322.7436	383.3985	4	2400
trent	78	425.6111	469.8759	26.91667	3100.083
grent	78	425.4872	469.895	27	3100

20 . sum elec

Variable	Obs	Mean	Std. Dev.	Min	Max
elec	12497	461.7061	568.4263	0	5700

```
21 . sum elec if elec~=0
```

Variable	Obs	Mean	Std. Dev.	Min	Max
elec	11445	504.1451	575.6849	1	5700

```
22 . bys bedrooms: sum rent trent grent elec [fweight= hweight]
```

-> bedrooms = 0

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	51551	244.1597	222.2188	4	2400
trent	51551	309.7677	249.5849	4.166667	3116.833
grent	51551	309.6616	249.5917	4	3117
elec	51551	471.1786	659.1685	0	5700

-> bedrooms = 1

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	51372	247.0612	232.0307	4	2400
trent	51372	301.0008	253.9247	4.166667	3433.333
grent	51372	300.8903	253.9262	4	3433
elec	51372	394.9793	572.4407	0	5700

-> bedrooms = 2

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	66376	255.6933	213.7072	4	2400
trent	66376	313.3368	228.7938	4.25	2616.833
grent	66376	313.2574	228.7918	4	2617
elec	66376	405.8739	473.5616	0	5700

-> bedrooms = 3

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	68510	294.3579	244.2018	4	2400
trent	68510	367.2846	263.1361	4.166667	2658.5
grent	68510	367.2141	263.1344	4	2658
elec	68510	528.0581	525.1634	0	5700

-> bedrooms = 4

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	11221	353.2222	319.2602	4	2400
trent	11221	443.6057	356.0019	9.25	2975.167
grent	11221	443.5112	356.0168	9	2975
elec	11221	645.5676	660.5536	0	5700

-> bedrooms = 5

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	1579	339.7834	389.5932	4	2400
trent	1579	448.899	481.1963	26.91667	3100.083
grent	1579	448.791	481.2174	27	3100
elec	1579	795.4832	1102.068	0	5700

```
23 . gen melec=elec/12

24 . bys bedrooms: sum rent trent grent melec [fweight= hweight]
```

-> bedrooms = 0

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	51551	244.1597	222.2188	4	2400
trent	51551	309.7677	249.5849	4.166667	3116.833
grent	51551	309.6616	249.5917	4	3117
melec	51551	39.26488	54.93071	0	475

-> bedrooms = 1

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	51372	247.0612	232.0307	4	2400
trent	51372	301.0008	253.9247	4.166667	3433.333
grent	51372	300.8903	253.9262	4	3433
melec	51372	32.91494	47.70339	0	475

-> bedrooms = 2

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	66376	255.6933	213.7072	4	2400
trent	66376	313.3368	228.7938	4.25	2616.833
grent	66376	313.2574	228.7918	4	2617
melec	66376	33.82282	39.46347	0	475

-> bedrooms = 3

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	68510	294.3579	244.2018	4	2400
trent	68510	367.2846	263.1361	4.166667	2658.5
grent	68510	367.2141	263.1344	4	2658
melec	68510	44.00484	43.76362	0	475

-> bedrooms = 4

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	11221	353.2222	319.2602	4	2400
trent	11221	443.6057	356.0019	9.25	2975.167
grent	11221	443.5112	356.0168	9	2975
melec	11221	53.7973	55.04613	0	475

-> bedrooms = 5

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	1579	339.7834	389.5932	4	2400
trent	1579	448.899	481.1963	26.91667	3100.083
grent	1579	448.791	481.2174	27	3100
melec	1579	66.29027	91.839	0	475

```
25 . bys bedrooms: sum rent trent grent melec [fweight= hweight] if elec>0
```

-> bedrooms = 0

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	46084	237.0141	228.2625	4	2400
trent	46084	309.6533	258.8918	4.333333	3116.833
grent	46084	309.5485	258.8988	4	3117
melec	46084	43.92293	56.30939	.0833333	475

-> bedrooms = 1

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	44921	238.6539	241.3783	4	2400
trent	44921	299.6067	266.49	4.333333	3433.333
grent	44921	299.4929	266.4916	4	3433
melec	44921	37.64178	49.23907	.0833333	475

-> bedrooms = 2

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	60198	248.4148	215.4181	4	2400
trent	60198	311.1994	233.1431	4.333333	2616.833
grent	60198	311.1186	233.1416	4	2617
melec	60198	37.29399	39.84647	.0833333	475

-> bedrooms = 3

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	65437	290.0162	240.9042	4	2400
trent	65437	365.9801	261.7588	4.333333	2658.5
grent	65437	365.9112	261.7577	4	2658
melec	65437	46.07136	43.70342	.0833333	475

-> bedrooms = 4

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	10698	355.5072	324.159	4	2400
trent	10698	450.0962	360.9888	9.25	2975.167
grent	10698	450.0039	361.0034	9	2975
melec	10698	56.42732	55.04366	.0833333	475

-> bedrooms = 5

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	1418	348.3977	409.6608	4	2400
trent	1418	468.5267	503.3572	26.91667	3100.083
grent	1418	468.4041	503.3856	27	3100
melec	1418	73.81688	94.00393	.0833333	475

```
26 . display 37.29/311.12
.11985729

27 . save "C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\rentasPR.dta"
file C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\rentasPR.dta saved

28 . gen mwater=water/12

29 . bys bedrooms: sum rent trent grent mwater [fweight= hweight] if water>0
```

-> bedrooms = 0

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	42038	233.5398	231.3548	4	2400
trent	42038	308.8717	263.509	4.333333	3116.833
grent	42038	308.764	263.5198	4	3117
mwater	42038	23.30485	32.82629	.0833333	241.6667

-> bedrooms = 1

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	39933	230.0118	233.589	4	2400
trent	39933	292.9499	260.5853	4.333333	3433.333
grent	39933	292.8352	260.5837	4	3433
mwater	39933	19.79007	28.62394	.0833333	241.6667

-> bedrooms = 2

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	56621	242.994	210.7866	4	2400
trent	56621	307.0403	229.8702	4.25	2616.833
grent	56621	306.9585	229.8726	4	2617
mwater	56621	20.21109	24.65534	.0833333	241.6667

-> bedrooms = 3

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	61860	286.2955	236.9743	4	2400
trent	61860	363.4586	258.7774	4.333333	2658.5
grent	61860	363.3889	258.7758	4	2658
mwater	61860	24.3814	24.70455	.0833333	241.6667

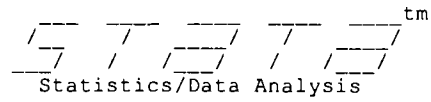
-> bedrooms = 4

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	10435	356.3705	326.9456	4	2400
trent	10435	451.7053	364.2341	9.25	2975.167
grent	10435	451.6101	364.2499	9	2975
mwater	10435	29.87056	29.82893	.0833333	241.6667

-> bedrooms = 5

Variable	Obs	Mean	Std. Dev.	Min	Max
rent	1376	344.9549	414.9776	4	2400
trent	1376	462.9903	509.1692	26.91667	3100.083
grent	1376	462.8815	509.1956	27	3100
mwater	1376	39.2454	56.98668	.0833333	241.6667

```
30 . save, replace
   file C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\rentasPR.dta saved

31 . clear

32 . cd "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\renta US"
   C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\renta US

33 . do "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\renta US\evsegarra_earthlink_net_0(

34 . /* Important: you need to put the .dat and .do files in one folder/
   >    directory and then set the working folder to that folder. */
35 .
36 . set more off

37 .
38 . clear

39 . infix ///
   >  byte   year          1-2 ///
   >  long   serial        3-10 ///
   >  int    hhwt         11-14 ///
   >  byte   stateicp     15-16 ///
   >  byte   gq           17 ///
   >  byte   ownershp     18 ///
   >  int    rent         19-22 ///
   >  int    rentgrs      23-26 ///
   >  int    costelec     27-30 ///
   >  int    costgas      31-34 ///
   >  int    costwatr     35-38 ///
   >  int    costfuel     39-42 ///
   >  byte   vacancy      43 ///
   >  byte   kitchen      44 ///
   >  byte   rooms        45 ///
   >  byte   plumbing     46-47 ///
   >  byte   bedrooms     48 ///
   >  int    perwt        49-52 ///
   >  using evsegarra_earthlink_net_003.dat
   (2467235 observations read)
   no room to add more observations
       An attempt was made to increase the number of observations beyond what is currently possible.
       following alternatives:

        1.  Store your variables more efficiently; see help compress.  (Think of Stata's data area as
            rectangle; Stata can trade off width and length.)

        2.  Drop some variables or observations; see help drop.

        3.  Increase the amount of memory allocated to the data area using the set memory command; see
   r(901);

   end of do-file
   r(901);

40 . tab serialno
   variable serialno not found
   r(111);

41 . clear

42 . exit
```



Project: CEDOE

Using the Viewer manual: **[GS**
[GS
[GS

In the Viewer, you can

see help for contents or help for any Stata command
search help files, documentation, and FAQs (advice on using search)

find and install SJ, STB, and user-written programs from the net
review, manage, and uninstall user-written programs

check for and optionally install official updates

view your logs or any file

launch your browser

see the latest news from www.stata.com

Details on using the Viewer

When the Viewer is doing one thing, you can switch to have it do something else. Obviously, yo
clicking, but you can also type Viewer commands in the Viewer's edit window.

The Viewer commands are:

see help for contents or help for any Stata command
help contents
help *command-name*

search help files, documentation, and FAQs
search *keyword(s)*

find and install SJ, STB, and user-written programs from the net
net search *keyword(s)*
net from *http://www.stata.com*

review, manage, and uninstall user-written programs
ado

check for and optionally install official updates
update query

view your logs or any file
view *filename*.**smcl**
view *anyfilename* or **view** "*anyfilename*"

launch your browser
browse *url*

see the latest news from www.stata.com
news

Also see

Manual: **[GSM] 3 Using the Viewer,**
[GSU] 3 Using the Viewer,
[GSW] 3 Using the Viewer

Online: help for help, net, net mnu, news, search, searchadvice, update, view

Statistics/Data Analysis

Project: CEDOE

log: **C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17**
log type: **smcl**
opened on: **17 Sep 2006, 18:01:16**

```
1 . gen hwage2=cond(hwage<3.5 | (hwage>350 & hours99<10)
too few ')' or ']'
r(132);

2 . gen hwage2=cond(hwage<3.5 | (hwage>350 & hours99<10),.,hwage)
(5345 missing values generated)

3 . sum hwage hwage2, detail
```

hwage

Percentiles		Smallest		
1%	1.315789	.0022727		
5%	2.8125	.0096154		
10%	3.75	.0096154	Obs	61353
25%	5.042017	.01	Sum of Wgt.	61353
50%	7.211538		Mean	14.50865
		Largest	Std. Dev.	181.4177
75%	12.23404	6062.5		
90%	22.11539	6062.5	Variance	32912.37
95%	32.5	30000	Skewness	149.3147
99%	105.7692	30000	Kurtosis	24386.65

hwage2

Percentiles		Smallest		
1%	3.701923	3.5		
5%	4.134615	3.5		
10%	4.615385	3.5	Obs	56008
25%	5.512821	3.5	Sum of Wgt.	56008
50%	7.747253		Mean	14.27127
		Largest	Std. Dev.	56.14362
75%	12.98077	4041.667		
90%	23.41346	4275	Variance	3152.106
95%	33.85417	6062.5	Skewness	64.86035
99%	113.75	6062.5	Kurtosis	6038.485

```
4 . gen clerical=cond(occ2==43,1,0)
occ2 not found
r(111);

5 . gen regnurse=cond(occ6==29-1111,1,0)
occ6 not found
r(111);

6 . gen occ2=substr(occsoc,1,2)

7 . destring occ2, replace
occ2 has all characters numeric; replaced as byte

8 . gen occ3=substr(occsoc,1,4)

9 . destring occ3, ig("-") replace
occ3: characters - removed; replaced as int
```

```
10 . gen occ4=substr(occsoc,1,5)

11 . destring occ4, ig("-", "X","Y") replace
occ4: characters - X removed; replaced as int

12 . gen occ5=substr(occsoc,1,7)

13 . replace occ5=substr(occsoc,1,6)
(61353 real changes made)

14 . destring occ5, ig("-", "X","Y") replace
occ5: characters - X Y removed; replaced as long

15 . destring occsoc, ig("-", "X","Y") gen(occ6)
occsoc: characters - X Y removed; occ6 generated as long

16 . gen clerical=cond(occ2==43,1,0)

17 . gen regnurse=cond(occ6==29-1111,1,0)

18 . gen lpn=cond(occ6==292061,1,0)

19 . gen htech=cond(occ6==292012| occ6==292021 | occ6==292031| occ6==292032| occ6==292034| occ6==29204
> ==292052| occ6==292053| occ6==292054 | occ6==292091|  occ6==292099|  occ6==292081| occ6==299012|

20 . tab1  clerical regnurse lpn htech

-> tabulation of clerical

  clerical |      Freq.     Percent        Cum.
-----------+-----------------------------------
         0 |     52,108       84.93       84.93
         1 |      9,245       15.07      100.00
-----------+-----------------------------------
     Total |     61,353      100.00

-> tabulation of regnurse

  regnurse |      Freq.     Percent        Cum.
-----------+-----------------------------------
         0 |     61,353      100.00      100.00
-----------+-----------------------------------
     Total |     61,353      100.00

-> tabulation of lpn

       lpn |      Freq.     Percent        Cum.
-----------+-----------------------------------
         0 |     61,091       99.57       99.57
         1 |        262        0.43      100.00
-----------+-----------------------------------
     Total |     61,353      100.00

-> tabulation of htech

     htech |      Freq.     Percent        Cum.
-----------+-----------------------------------
         0 |     61,248       99.83       99.83
         1 |        105        0.17      100.00
-----------+-----------------------------------
     Total |     61,353      100.00
```

```
21 . gen regnurse=cond(occ6==291111,1,0)
regnurse already defined
r(110);

22 . drop  regnurse

23 . gen regnurse=cond(occ6==291111,1,0)

24 . tab regnurse
```

regnurse	Freq.	Percent	Cum.
0	60,349	98.36	98.36
1	1,004	1.64	100.00
Total	61,353	100.00	

```
25 . save "C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\salariooccp.dta", replace
file C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\salariooccp.dta saved

26 . save "E:\GPCI\salariooccp.dta"
file E:\GPCI\salariooccp.dta saved

27 . log off
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
 paused on:  17 Sep 2006, 19:28:48
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
resumed on:  17 Sep 2006, 19:31:29

28 . sum hwage
```

Variable	Obs	Mean	Std. Dev.	Min	Max
hwage	61353	14.50865	181.4177	.0022727	30000

```
29 . sum hwage, detail
```

hwage

Percentiles		Smallest		
1%	1.315789	.0022727		
5%	2.8125	.0096154		
10%	3.75	.0096154	Obs	61353
25%	5.042017	.01	Sum of Wgt.	61353
50%	7.211538		Mean	14.50865
		Largest	Std. Dev.	181.4177
75%	12.23404	6062.5		
90%	22.11539	6062.5	Variance	32912.37
95%	32.5	30000	Skewness	149.3147
99%	105.7692	30000	Kurtosis	24386.65

```
30 . return list

scalars:
                  r(N) =  61353
              r(sum_w) =  61353
               r(mean) =  14.50865401595369
                r(Var) =  32912.37206186162
                 r(sd) =  181.4176729590081
           r(skewness) =  149.3147293563043
           r(kurtosis) =  24386.64689632748
                r(sum) =  890149.4498408067
                r(min) =  .0022727272007614
                r(max) =  30000
                 r(p1) =  1.315789461135864
                 r(p5) =  2.8125
                r(p10) =  3.75
                r(p25) =  5.042016983032227
                r(p50) =  7.211538314819336
```

```
                r(p75) =  12.23404216766357
                r(p90) =  22.11538505554199
                r(p95) =  32.5
                r(p99) =  105.7692337036133

31 . log off
       log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
 paused on:  17 Sep 2006, 19:32:01
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
       log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
resumed on:  17 Sep 2006, 19:32:34

32 . sum hwage if  clerical=1, detail
invalid syntax
r(198);

33 . sum hwage [fweight=pweight] if crerical==1, detail
crerical not found
r(111);

34 . sum hwage [fweight=pweight] if clerical==1, detail

                            hwage
-------------------------------------------------------------
      Percentiles      Smallest
 1%       1.875       .3703704
 5%    3.333333       .4807692
10%    4.230769       .5208333       Obs              187441
25%    5.288462       .6944444       Sum of Wgt.      187441

50%    7.120743                      Mean             11.9512
                      Largest        Std. Dev.       79.89341
75%    11.05769       683.3333
90%    18.51852       1010.417       Variance        6382.957
95%    25.96154           2425       Skewness        67.55061
99%    54.42177         6062.5       Kurtosis        4987.529

35 . sca medclerical1=r(p50)

36 . display medclerical1
7.1207428

37 . sum hwage [fweight=pweight] if  regnurse==1, detail

                            hwage
-------------------------------------------------------------
      Percentiles      Smallest
 1%     2.307692       1.020833
 5%     3.846154       1.041667
10%            5       1.041667       Obs               20245
25%         6.25       1.071429       Sum of Wgt.       20245

50%     8.653846                      Mean            12.06144
                      Largest        Std. Dev.       19.44229
75%     11.82432           200
90%     17.30769       233.1731       Variance        378.0025
95%     25.83333       242.7885       Skewness        10.63223
99%         83.5       404.1667       Kurtosis        154.5294
```

```
38 . sca medRN1=r(p50)

39 . display medRN1
8.6538458

40 . sum hwage [fweight=pweight] if  lpn==1, detail
```

hwage

Percentiles		Smallest		
1%	1.142857	.8203125		
5%	2.604167	.9722222		
10%	3.75	1.142857	Obs	5209
25%	5	1.734694	Sum of Wgt.	5209
50%	6.25		Mean	11.52914
		Largest	Std. Dev.	52.00985
75%	7.932693	50		
90%	14.58333	127.5	Variance	2705.025
95%	23.07692	233.1731	Skewness	16.30556
99%	50	932.6923	Kurtosis	284.6843

```
41 . sca medlpn1=r(p50)

42 . display medlpn1
6.25

43 . sum hwage [fweight=pweight] if  htech==1, detail
```

hwage

Percentiles		Smallest		
1%	1.75	1.75		
5%	4.0625	3.125		
10%	4.5	3.333333	Obs	2169
25%	5.263158	3.461539	Sum of Wgt.	2169
50%	6.586538		Mean	8.242511
		Largest	Std. Dev.	6.530827
75%	8.75	25		
90%	12.29396	32	Variance	42.65171
95%	18.36735	33.65385	Skewness	4.595165
99%	54.6875	54.6875	Kurtosis	29.31431

```
44 . sca medhtech1=r(p50)

45 . display medhtech1
6.5865383

46 . sca indpractical=(.448*medclerical11) + (.25*medRN1) + (.092*medlpn1) + (20.9*medhtech1)

47 . display indpractical
143.5872

48 . replace sca indpractical=(.448*medclerical11) + (.25*medRN1) + (.092*medlpn1) + (.209*medhtech1)
variable sca not found
r(111);

49 . drop indpractical
variable indpractical not found
r(111);
```

```
50 . delete indpractical1
unrecognized command:  delete
r(199);

51 . list sca
variable sca not found
r(111);

52 . sca list
indpractical1 =   143.5872
 medhtech1 =  6.5865383
   medlpn1 =       6.25
    medRN1 =  8.6538458
medclerical1 =  7.1207428

53 . drop indpractical1
variable indpractical1 not found
r(111);

54 . remove indpractical1
unrecognized command:  remove
r(199);

55 . delete indpractical1
unrecognized command:  delete
r(199);

56 . log off
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
 paused on:  17 Sep 2006, 19:52:30
-------------------------------------------------------------------------------

      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
resumed on:  17 Sep 2006, 19:52:43

57 . sca drop indpractical1

58 . sca medpractical1=(.448*medclerical11) + (.25*medRN1) + (.092*medlpn1) + (.209*medhtech1)

59 . display medpractical1
7.3051407

60 . sum hwage2 [fweight=pweight] if clerical==1, detail

                          hwage2
-------------------------------------------------------------
      Percentiles      Smallest
 1%         3.75          3.5
 5%     4.326923          3.5
10%     4.807693          3.5       Obs              176372
25%     5.717256     3.509615       Sum of Wgt.      176372

50%     7.361111                    Mean           12.54099
                        Largest     Std. Dev.      82.32636
75%     11.53846     683.3333
90%     19.19643     1010.417       Variance       6777.629
95%     27.24359         2425       Skewness        65.5902
99%     57.69231       6062.5       Kurtosis       4699.322

61 . sca medclerical2=r(p50)
```

```
62 . display medclerical2
   7.3611112

63 . sum hwage2 [fweight=pweight] if  regnurse==1, detail

                            hwage2
-------------------------------------------------------------
      Percentiles      Smallest
 1%     3.846154           3.5
 5%     4.807693      3.525641
10%     5.480769      3.548387       Obs                19451
25%     6.614583      3.605769       Sum of Wgt.        19451

50%     8.798077                     Mean            12.44914
                        Largest      Std. Dev.       19.73779
75%     12.01923           200
90%     17.78846      233.1731       Variance        389.5804
95%     27.77778      242.7885       Skewness        10.52233
99%           90      404.1667       Kurtosis        150.5888

64 . sca medRN2=r(p50)

65 . display medRN2
   8.7980766

66 . sum hwage2 [fweight=pweight] if  lpn==1, detail

                            hwage2
-------------------------------------------------------------
      Percentiles      Smallest
 1%     3.717949           3.5
 5%     3.846154      3.692308
10%     4.186047      3.717949       Obs                 4763
25%     5.208333          3.75       Sum of Wgt.         4763

50%     6.302083                     Mean            12.37303
                        Largest      Std. Dev.       54.31392
75%     8.173077            50
90%       14.875         127.5       Variance        2950.001
95%     23.69792      233.1731       Skewness        15.61212
99%        127.5      932.6923       Kurtosis        260.8169

67 . sca medlpn2=r(p50)

68 . display medlpn2
   6.3020835

69 . sum hwage2 [fweight=pweight] if  htech==1, detail

                            hwage2
-------------------------------------------------------------
      Percentiles      Smallest
 1%     4.038462      3.894231
 5%        4.375      4.038462
10%     4.615385        4.0625       Obs                 2097
25%     5.288462      4.090909       Sum of Wgt.         2097

50%     6.586538                     Mean             8.42877
                        Largest      Std. Dev.       6.561521
75%     8.942307            25
90%     12.40385            32       Variance        43.05355
95%     18.36735      33.65385       Skewness        4.621929
99%      54.6875       54.6875       Kurtosis        29.21075
```

```
70 . sca medhtech2=r(p50)

71 . log off
       log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
 paused on:  17 Sep 2006, 19:55:39
-------------------------------------------------------------------------------

-------------------------------------------------------------------------------
       log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
resumed on:  17 Sep 2006, 19:55:41

72 . display medhtech2
6.5865383

73 . sca medpractica2=(.448*medclerical2) + (.25*medRN2) + (.092*medlpn2) + (.209*medhtech2)

74 . display medpractica2
7.4536751

75 . gen inge=cond(occ3==171| occ3==172,1,0)

76 . tab inge

      inge |      Freq.     Percent        Cum.
-----------+-----------------------------------
         0 |     60,850       99.18       99.18
         1 |        503        0.82      100.00
-----------+-----------------------------------
     Total |     61,353      100.00

77 . gen cnaturales=cond(occ3==191|occ3==192 | occ3==193| occ5==15202,1,0)

78 . tab cnaturales

 cnaturales |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |     61,033       99.48       99.48
          1 |        320        0.52      100.00
------------+-----------------------------------
      Total |     61,353      100.00

79 . gen maestros=cond(occ3==252| occ6==211012| occ5==25402 | occ5==25403,1,0)

80 . tab maestross
variable maestross not found
r(111);

81 . tab maestros

    maestros |      Freq.     Percent        Cum.
-------------+-----------------------------------
           0 |     58,666       95.62       95.62
           1 |      2,687        4.38      100.00
-------------+-----------------------------------
       Total |     61,353      100.00

82 . gen csociales=cond(occ3==193| occ5==21102| occ5==23101,1,0)

83 . tab csociales

   csociales |      Freq.     Percent        Cum.
-------------+-----------------------------------
           0 |     60,491       98.60       98.60
           1 |        862        1.40      100.00
-------------+-----------------------------------
       Total |     61,353      100.00
```

```
84 . gen RNfarma=cond(occ5==29111| occ5==29105,1,0)

85 . tab RNfarm
```

RNfarma	Freq.	Percent	Cum.
0	60,225	98.16	98.16
1	1,128	1.84	100.00
Total	61,353	100.00	

```
86 . gen escritores=cond(occ6==273043| occ6==273041,1,0)

87 . gen artistas=cond(occ5==27101| occ6==272011,1,0)

88 . tab artistas
```

artistas	Freq.	Percent	Cum.
0	61,301	99.92	99.92
1	52	0.08	100.00
Total	61,353	100.00	

```
89 . gen atletas=cond(occ6==272021,1,0)

90 . tab atletas
```

atletas	Freq.	Percent	Cum.
0	61,353	100.00	100.00
Total	61,353	100.00	

```
91 . drop atletas

92 . sum hwage [fweight==pweight] if inge==1, detail
invalid syntax
r(198);

93 . sum hwage [fweight=pweight] if inge==1, detail
```

hwage

Percentiles		Smallest		
1%	2.564103	.6510417		
5%	7.222222	1.388889		
10%	9.6	1.90625	Obs	10124
25%	14.05	1.90625	Sum of Wgt.	10124
50%	19.23077		Mean	29.62526
		Largest	Std. Dev.	65.66606
75%	27.88461	505.2083		
90%	40	730	Variance	4312.031
95%	55.55556	750	Skewness	9.135822
99%	355	750	Kurtosis	93.58866

```
94 . sca medinge1=r(p50)

95 . display medinge1
19.23077
```

```
 96 . sum hwage [fweight=pweight] if cnaturales==1, detail
```

hwage

Percentiles		Smallest		
1%	2.782931	1.604278		
5%	5	2.5		
10%	6.410256	2.5	Obs	6469
25%	9.109312	2.782931	Sum of Wgt.	6469
50%	13.90625		Mean	19.09021
		Largest	Std. Dev.	28.16607
75%	19.80392	186.5385		
90%	29.22078	228.3654	Variance	793.3274
95%	33.92857	263.5869	Skewness	7.124809
99%	186.5385	300	Kurtosis	60.72002

```
 97 . sca medcnaturales1=r(p50)

 98 . display medcnaturales1
13.90625

 99 . sum hwage [fweight=pweight] if csociales==1, detail
```

hwage

Percentiles		Smallest		
1%	2.403846	1.682692		
5%	4.615385	1.736111		
10%	5.913462	1.76282	Obs	17573
25%	7.98913	2.283654	Sum of Wgt.	17573
50%	12.98077		Mean	23.37412
		Largest	Std. Dev.	42.33104
75%	23.87153	300		
90%	40.27778	520	Variance	1791.917
95%	64.0625	525	Skewness	7.946538
99%	186.5385	666.6667	Kurtosis	92.18935

```
100 . sca medcsociales1=r(p50)

101 . display medcsociales1
12.980769

102 . sum hwage [fweight=pweight] if RNfarma==1, detail
```

hwage

Percentiles		Smallest		
1%	2.307692	1.020833		
5%	4.038462	1.041667		
10%	5	1.041667	Obs	22623
25%	6.346154	1.071429	Sum of Wgt.	22623
50%	8.894231		Mean	13.46625
		Largest	Std. Dev.	29.13499
75%	12.5	242.7885		
90%	19.23077	250	Variance	848.8477
95%	30.20833	404.1667	Skewness	16.68362
99%	127.5	840.9091	Kurtosis	405.7063

```
103 . sca medRNfarma1=r(p50)
```

```
104 . display medRNfarmal
    8.8942308

105 . sum hwage [fweight=pweight] if  maestros==1, detail

                            hwage
-------------------------------------------------------------
      Percentiles      Smallest
 1%           2.5       .7327586
 5%       4.74359       .8650519
10%          5.75              1       Obs                53849
25%      8.571428           1.05       Sum of Wgt.        53849

50%      11.03365                      Mean           13.77795
                        Largest       Std. Dev.      22.21425
75%       14.0625       404.1667
90%      18.08333        407.563       Variance        493.473
95%            25       505.2083       Skewness       14.29276
99%      76.42857       505.2083       Kurtosis       263.9054

106 . log off
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
 paused on:  17 Sep 2006, 20:14:09
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
resumed on:  17 Sep 2006, 20:14:18

107 . sca medmaestros1=r(p50)

108 . display med maestros1
    med not found
    r(111);

109 . display medmaestros1
    .

110 . sum hwage [fweight=pweight] if  maestros==1, detail

                            hwage
-------------------------------------------------------------
      Percentiles      Smallest
 1%           2.5       .7327586
 5%       4.74359       .8650519
10%          5.75              1       Obs                53849
25%      8.571428           1.05       Sum of Wgt.        53849

50%      11.03365                      Mean           13.77795
                        Largest       Std. Dev.      22.21425
75%       14.0625       404.1667
90%      18.08333        407.563       Variance        493.473
95%            25       505.2083       Skewness       14.29276
99%      76.42857       505.2083       Kurtosis       263.9054

111 . sca medmaestros1=r(p50)

112 . display medmaestros1
    11.033654

113 . sum hwage [fweight=pweight] if  escritores==1|  artistas==1, detail

                            hwage
-------------------------------------------------------------
      Percentiles      Smallest
 1%      1.041667       1.041667
 5%      2.083333       1.730769
10%         3.875          1.875       Obs                 1678
25%      5.555555              2       Sum of Wgt.         1678
```

50%	10.70234		Mean	14.86711
		Largest	Std. Dev.	13.79184
75%	18.26923	50		
90%	34.26574	50	Variance	190.2147
95%	50	57.87037	Skewness	1.827248
99%	63.63636	63.63636	Kurtosis	5.937615

```
114 . sca medescritores=r(p50)

115 . display medescritores
    10.702341

116 . sum hwage [fweight=pweight] if   artistas==1, detail
```

hwage

	Percentiles	Smallest		
1%	1.041667	1.041667		
5%	2.083333	1.730769		
10%	3.75	2	Obs	1137
25%	5.555555	2.083333	Sum of Wgt.	1137
50%	8.571428		Mean	14.96373
		Largest	Std. Dev.	14.90302
75%	19.79167	48.07692		
90%	28.125	50	Variance	222.0999
95%	50	57.87037	Skewness	1.848712
99%	63.63636	63.63636	Kurtosis	5.708939

```
117 . sca medwork1=(.187*medinge1) + (.101*medcnaturales1) + (.154*medcsociales1) + (.307*medmaestros1)
    > + (.093*medescritores)

118 . display medwork1
    12.787662

119 . sum hwage2 [fweight=pweight] if inge==1, detail
```

hwage2

	Percentiles	Smallest		
1%	4.615385	3.846154		
5%	8.205129	4.038462		
10%	10	4.273504	Obs	9977
25%	14.42308	4.28125	Sum of Wgt.	9977
50%	19.23077		Mean	30.03125
		Largest	Std. Dev.	66.06214
75%	28.04487	505.2083		
90%	40	730	Variance	4364.206
95%	55.55556	750	Skewness	9.087336
99%	355	750	Kurtosis	92.48663

```
120 . sca medinge2=r(p50)

121 . display medinge2
    19.23077

122 . sum hwage2 [fweight=pweight] if cnaturales==1, detail
```

hwage2

	Percentiles	Smallest		
1%	4.285714	3.557692		
5%	5.769231	3.90625		
10%	6.923077	4.166667	Obs	6339
25%	9.375	4.285714	Sum of Wgt.	6339
50%	14.42308		Mean	19.42974
		Largest	Std. Dev.	28.35238
75%	20	186.5385		
90%	29.48718	228.3654	Variance	803.8573
95%	35.09615	263.5869	Skewness	7.096726
99%	186.5385	300	Kurtosis	60.00965

```
123 . sca medcnaturales2=r(p50)

124 . display medcnaturales2
14.423077

125 . sum hwage2 [fweight=pweight] if csociales==1, detail
```

hwage2

Percentiles		Smallest		
1%	4.120879	3.571429		
5%	5.494505	3.671875		
10%	6.442307	3.701923	Obs	17002
25%	8.241758	3.846154	Sum of Wgt.	17002
50%	13.46154		Mean	24.06852
		Largest	Std. Dev.	42.86317
75%	24.03846	300		
90%	40.86538	520	Variance	1837.252
95%	66.66666	525	Skewness	7.866489
99%	186.5385	666.6667	Kurtosis	90.12826

```
126 . sca medcsociales2=r(p50)

127 . display medcsociales2
13.461538

128 . sum hwage2 [fweight=pweight] if RNfarma==1, detail
```

hwage2

Percentiles		Smallest		
1%	3.846154	3.5		
5%	4.807693	3.525641		
10%	5.416667	3.548387	Obs	21808
25%	6.6875	3.605769	Sum of Wgt.	21808
50%	9.086538		Mean	13.87351
		Largest	Std. Dev.	29.59645
75%	12.5	242.7885		
90%	19.75961	250	Variance	875.9496
95%	31.25	404.1667	Skewness	16.47078
99%	127.5	840.9091	Kurtosis	394.3206

```
129 . sca medRNfarma2=r(p50)

130 . display medRNfarma2
9.0865383

131 . sum hwage2 [fweight=pweight] if  maestros==1, detail
```

hwage2

Percentiles		Smallest		
1%	3.947368	3.5		
5%	5.192307	3.509615		
10%	5.961538	3.509615	Obs	52653
25%	8.653846	3.513514	Sum of Wgt.	52653
50%	11.09375		Mean	14.03532
		Largest	Std. Dev.	22.39832
75%	14.10256	404.1667		
90%	18.25	407.563	Variance	501.6849
95%	25	505.2083	Skewness	14.22851
99%	78.57143	505.2083	Kurtosis	260.4803

```
132 . sca medmaestros2=r(p50)

133 . display medmaestros2
    11.09375

134 . sum hwage2 [fweight=pweight] if  escritores==1|  artistas==1, detail
```

hwage2

Percentiles		Smallest		
1%	3.625	3.571429		
5%	3.990385	3.625		
10%	5	3.75	Obs	1574
25%	6.25	3.875	Sum of Wgt.	1574
50%	10.89744		Mean	15.7363
		Largest	Std. Dev.	13.80519
75%	19.79167	50		
90%	34.26574	50	Variance	190.5832
95%	50	57.87037	Skewness	1.810634
99%	63.63636	63.63636	Kurtosis	5.771171

```
135 . sca medescritores2=r(p50)

136 . display medescritores2
    10.897436

137 . sum hwage2 [fweight=pweight] if   artistas==1, detail
```

hwage2

Percentiles		Smallest		
1%	3.571429	3.571429		
5%	3.75	3.625		
10%	5.159705	3.75	Obs	1061
25%	6	3.875	Sum of Wgt.	1061
50%	10.76923		Mean	15.91725
		Largest	Std. Dev.	14.97982
75%	21.44231	48.07692		
90%	48.07692	50	Variance	224.3951
95%	57.87037	57.87037	Skewness	1.810201
99%	63.63636	63.63636	Kurtosis	5.463596

```
138 . sca medwork2=(.187*medinge2) + (.101*medcnaturales2) + (.154*medcsociales2) + (.307*medmaestros2)
    > + (.093*medescritores2)

139 . display medwork2
    12.980878

140 . display medpractical medpractica2 medwork1 medwork2
    7.30514077.453675112.78766212.980878

141 . display "medpractical"==  medpractical
    medpractica17.3051407

142 . display "medpractica2  "==  medpractica2
    medpractica2  7.4536751

143 . display "medpractical  "==  medpractical
    medpractica1  7.3051407
```

```
144 . display "medwork1  "==  medwork1
medwork1  12.787662

145 . display "medwork3  "==  medwork3
medwork3  medwork3 not found
r(111);

146 . display "medwork2  "==  medwork2
medwork2  12.980878

147 . log off
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
 paused on:  17 Sep 2006, 20:26:17
-------------------------------------------------------------------------------
-------------------------------------------------------------------------------
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indice salario sept.17
  log type:  smcl
resumed on:  17 Sep 2006, 20:26:19

148 . save "E:\GPCI\salariooccp.dta", replace
file E:\GPCI\salariooccp.dta saved

149 . save "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\salariooccp.dta"
file C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\salariooccp.dta saved

150 . exit
```

Statistics/Data Analysis

Project: CEDOE

```
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indices salario.smcl
  log type:  smcl
 opened on:  16 Sep 2006, 15:22:03

1 . clear

2 . infile using "E:\GPCI\dicperpums00.dct" if earns>0 & earns~=., using("C:\Documents and Settings\E:
> ments\PUMS\2000\PUMS5_72.TXT")

dictionary
{

_column(1)      str1    rtype           %1s
_column(2)      long serialno   %7f
_column(13)             pweight         %4f
_column(227)    str7 occsoc     %7s
_column(238)    weeks99  %2f
_column(241)    hours99 %2f
_column(244)    long earns      %6f
        }

(120525 observations read)

3 . sum

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       rtype |         0
    serialno |    120525     5004919     2885557         159    9999811
     pweight |    120525    4725.962    4491.592           0       9026
      occsoc |         0
    weeks99 |    120525     23.9441    23.71171           0         99
-------------+--------------------------------------------------------
    hours99 |    120525    17.94378    19.65985           0         99
      earns |    120525      124078    103565.2           4     485000

4 . count if weeks==99
  4

5 . count if hours==99
  20

6 . drop if hours99=99
=exp not allowed
r(101);

7 . drop if hours99==99
(20 observations deleted)

8 . drop if hours99==99
(0 observations deleted)

9 . save, replaces
invalid file specification
r(198);

10 . save "C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\salariooccp.dta"
file C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\salariooccp.dta saved

11 . gen earnhour=earns/(hours99*weeks99)
(52682 missing values generated)
```

```
12 . count if hours99==0
   52664

13 . count if weeks99==0
   50664

14 . drop if earnhour==0
   (0 observations deleted)

15 . drop if earnhours==.
   earnhours not found
   r(111);

16 . drop if earnhour==.
   (52682 observations deleted)

17 . tab occsoc1
   variable occsoc1 not found
   r(111);

18 . tab occsoc
```

occsoc	Freq.	Percent	Cum.
0000000	10,384	15.31	15.31
11-1011	242	0.36	15.67
11-1021	307	0.45	16.12
11-1031	13	0.02	16.14
11-2011	10	0.01	16.15
11-2020	137	0.20	16.36
11-2031	18	0.03	16.38
11-3011	13	0.02	16.40
11-3021	30	0.04	16.45
11-3031	284	0.42	16.86
11-3040	119	0.18	17.04
11-3051	43	0.06	17.10
11-3061	20	0.03	17.13
11-3071	47	0.07	17.20
11-9011	85	0.13	17.33
11-9012	7	0.01	17.34
11-9021	90	0.13	17.47
11-9030	370	0.55	18.02
11-9041	10	0.01	18.03
11-9051	220	0.32	18.36
11-9061	22	0.03	18.39
11-9071	6	0.01	18.40
11-9081	31	0.05	18.44
11-9111	143	0.21	18.65
11-9121	1	0.00	18.65
11-9131	7	0.01	18.66
11-9141	84	0.12	18.79
11-9151	57	0.08	18.87
11-9199	665	0.98	19.85
13-1011	21	0.03	19.88
13-1021	3	0.00	19.89
13-1022	75	0.11	20.00
13-1023	98	0.14	20.14
13-1030	92	0.14	20.28
13-1041	54	0.08	20.36
13-1051	14	0.02	20.38
13-1070	386	0.57	20.95
13-1081	13	0.02	20.97
13-1111	29	0.04	21.01
13-1121	1	0.00	21.01
13-11XX	44	0.06	21.08
13-2011	1,076	1.59	22.66
13-2021	28	0.04	22.70
13-2031	18	0.03	22.73
13-2041	13	0.02	22.75
13-2051	10	0.01	22.77
13-2052	29	0.04	22.81
13-2053	3	0.00	22.81
13-2061	15	0.02	22.83
13-2070	77	0.11	22.95

13-2081	35	0.05	23.00
13-2082	3	0.00	23.00
13-2099	96	0.14	23.15
15-1021	143	0.21	23.36
15-1030	29	0.04	23.40
15-1041	15	0.02	23.42
15-1061	5	0.01	23.43
15-1071	23	0.03	23.46
15-1081	23	0.03	23.50
15-10XX	98	0.14	23.64
15-2011	1	0.00	23.64
15-2031	34	0.05	23.69
15-20XX	25	0.04	23.73
17-1010	30	0.04	23.77
17-1020	14	0.02	23.79
17-2011	2	0.00	23.80
17-2041	46	0.07	23.87
17-2051	143	0.21	24.08
17-2061	5	0.01	24.08
17-2070	43	0.06	24.15
17-2081	19	0.03	24.17
17-2110	61	0.09	24.26
17-2121	2	0.00	24.27
17-2131	5	0.01	24.27
17-2141	21	0.03	24.31
17-21XX	2	0.00	24.31
17-2XXX	79	0.12	24.43
17-3010	63	0.09	24.52
17-3020	204	0.30	24.82
17-3031	39	0.06	24.88
19-1010	35	0.05	24.93
19-1020	32	0.05	24.98
19-1030	5	0.01	24.98
19-1040	7	0.01	24.99
19-2021	6	0.01	25.00
19-2030	92	0.14	25.14
19-2040	23	0.03	25.17
19-2099	10	0.01	25.19
19-3011	20	0.03	25.22
19-3020	18	0.03	25.24
19-3030	43	0.06	25.31
19-3051	7	0.01	25.32
19-30XX	12	0.02	25.33
19-4011	16	0.02	25.36
19-4021	4	0.01	25.36
19-4031	63	0.09	25.46
19-4041	4	0.01	25.46
19-40XX	29	0.04	25.50
21-1010	162	0.24	25.74
21-1020	397	0.59	26.33
21-1090	159	0.23	26.56
21-2011	90	0.13	26.70
21-2021	5	0.01	26.70
21-2099	20	0.03	26.73
23-1011	239	0.35	27.09
23-1020	32	0.05	27.13
23-2011	29	0.04	27.18
23-2090	34	0.05	27.23
25-1000	461	0.68	27.90
25-2010	89	0.13	28.04
25-2020	1,956	2.88	30.92
25-2030	462	0.68	31.60
25-2040	68	0.10	31.70
25-3000	270	0.40	32.10
25-4010	4	0.01	32.11
25-4021	95	0.14	32.25
25-4031	16	0.02	32.27
25-9041	236	0.35	32.62
25-90XX	22	0.03	32.65
27-1010	39	0.06	32.71
27-1020	142	0.21	32.92
27-2011	3	0.00	32.92
27-2012	30	0.04	32.97
27-2020	30	0.04	33.01

27-2030	5	0.01	33.02
27-2040	49	0.07	33.09
27-2099	8	0.01	33.10
27-3010	37	0.05	33.16
27-3020	40	0.06	33.21
27-3031	75	0.11	33.32
27-3041	19	0.03	33.35
27-3042	2	0.00	33.36
27-3043	5	0.01	33.36
27-3090	15	0.02	33.39
27-4021	16	0.02	33.41
27-4030	11	0.02	33.43
27-40XX	46	0.07	33.49
29-1011	2	0.00	33.50
29-1020	38	0.06	33.55
29-1031	47	0.07	33.62
29-1041	13	0.02	33.64
29-1051	118	0.17	33.81
29-1060	314	0.46	34.28
29-1071	31	0.05	34.32
29-1081	1	0.00	34.32
29-1111	993	1.46	35.79
29-1121	7	0.01	35.80
29-1122	15	0.02	35.82
29-1123	34	0.05	35.87
29-1124	3	0.00	35.88
29-1125	3	0.00	35.88
29-1126	29	0.04	35.92
29-1127	18	0.03	35.95
29-1129	39	0.06	36.01
29-1131	6	0.01	36.02
29-1199	2	0.00	36.02
29-2010	168	0.25	36.27
29-2021	7	0.01	36.28
29-2030	103	0.15	36.43
29-2041	76	0.11	36.54
29-2050	34	0.05	36.59
29-2061	259	0.38	36.97
29-2071	47	0.07	37.04
29-2081	20	0.03	37.07
29-2090	18	0.03	37.10
29-9000	27	0.04	37.14
31-1010	345	0.51	37.65
31-2010	9	0.01	37.66
31-2020	16	0.02	37.68
31-9011	4	0.01	37.69
31-9091	113	0.17	37.86
31-909X	262	0.39	38.24
33-1011	22	0.03	38.27
33-1012	71	0.10	38.38
33-1021	6	0.01	38.39
33-1099	80	0.12	38.51
33-2011	62	0.09	38.60
33-2020	4	0.01	38.60
33-3010	294	0.43	39.04
33-3021	247	0.36	39.40
33-3050	674	0.99	40.39
33-30XX	3	0.00	40.40
33-9011	2	0.00	40.40
33-9021	30	0.04	40.45
33-9030	1,212	1.79	42.23
33-9091	4	0.01	42.24
33-909X	27	0.04	42.28
35-1011	40	0.06	42.34
35-1012	273	0.40	42.74
35-2010	948	1.40	44.14
35-2021	281	0.41	44.55
35-3011	121	0.18	44.73
35-3021	106	0.16	44.89
35-3022	43	0.06	44.95
35-3031	405	0.60	45.55
35-3041	42	0.06	45.61
35-9021	24	0.04	45.65
35-9031	14	0.02	45.67

35-90XX	128	0.19	45.85
37-1011	77	0.11	45.97
37-1012	20	0.03	46.00
37-2012	345	0.51	46.51
37-201X	1,923	2.84	49.34
37-2021	34	0.05	49.39
37-3010	379	0.56	49.95
39-1010	16	0.02	49.97
39-1021	32	0.05	50.02
39-2011	10	0.01	50.04
39-2021	19	0.03	50.06
39-3010	53	0.08	50.14
39-3021	9	0.01	50.16
39-3031	9	0.01	50.17
39-3090	32	0.05	50.22
39-4000	11	0.02	50.23
39-5011	74	0.11	50.34
39-5012	202	0.30	50.64
39-5090	54	0.08	50.72
39-6010	20	0.03	50.75
39-6020	40	0.06	50.81
39-6030	28	0.04	50.85
39-9011	185	0.27	51.12
39-9021	46	0.07	51.19
39-9030	105	0.15	51.34
39-9099	6	0.01	51.35
41-1011	1,060	1.56	52.92
41-1012	546	0.81	53.72
41-2010	1,985	2.93	56.65
41-2021	46	0.07	56.72
41-2022	51	0.08	56.79
41-2031	1,657	2.44	59.23
41-3011	77	0.11	59.35
41-3021	166	0.24	59.59
41-3031	40	0.06	59.65
41-3041	47	0.07	59.72
41-3099	161	0.24	59.96
41-4010	853	1.26	61.22
41-9010	40	0.06	61.27
41-9020	74	0.11	61.38
41-9031	1	0.00	61.38
41-9041	27	0.04	61.42
41-9091	94	0.14	61.56
41-9099	100	0.15	61.71
43-1011	846	1.25	62.96
43-2011	27	0.04	63.00
43-2021	38	0.06	63.05
43-2099	15	0.02	63.08
43-3011	111	0.16	63.24
43-3021	156	0.23	63.47
43-3031	261	0.38	63.85
43-3041	6	0.01	63.86
43-3051	51	0.08	63.94
43-3061	5	0.01	63.95
43-3071	119	0.18	64.12
43-4031	23	0.03	64.16
43-4041	38	0.06	64.21
43-4051	421	0.62	64.83
43-4061	48	0.07	64.90
43-4071	135	0.20	65.10
43-4081	36	0.05	65.15
43-4111	118	0.17	65.33
43-4121	25	0.04	65.37
43-4131	35	0.05	65.42
43-4141	7	0.01	65.43
43-4161	14	0.02	65.45
43-4171	282	0.42	65.86
43-4181	75	0.11	65.97
43-4199	37	0.05	66.03
43-4XXX	65	0.10	66.13
43-5011	9	0.01	66.14
43-5021	198	0.29	66.43
43-5030	36	0.05	66.48
43-5041	27	0.04	66.52

43-5051	54	0.08	66.60
43-5052	68	0.10	66.70
43-5053	31	0.05	66.75
43-5061	69	0.10	66.85
43-5071	153	0.23	67.08
43-5081	484	0.71	67.79
43-5111	24	0.04	67.83
43-6010	3,114	4.59	72.42
43-9011	72	0.11	72.52
43-9021	251	0.37	72.89
43-9022	63	0.09	72.99
43-9041	39	0.06	73.04
43-9051	16	0.02	73.07
43-9061	1,181	1.74	74.81
43-9071	19	0.03	74.84
43-9081	1	0.00	74.84
43-9111	16	0.02	74.86
43-9199	271	0.40	75.26
45-1010	40	0.06	75.32
45-2011	17	0.03	75.34
45-2041	9	0.01	75.36
45-20XX	605	0.89	76.25
45-3000	11	0.02	76.27
45-4011	8	0.01	76.28
45-4020	3	0.00	76.28
47-1011	348	0.51	76.80
47-2011	1	0.00	76.80
47-2020	380	0.56	77.36
47-2031	643	0.95	78.31
47-2040	28	0.04	78.35
47-2050	24	0.04	78.38
47-2061	950	1.40	79.78
47-2071	7	0.01	79.79
47-207X	353	0.52	80.31
47-2080	6	0.01	80.32
47-2111	241	0.36	80.68
47-2121	18	0.03	80.70
47-2130	14	0.02	80.72
47-2141	171	0.25	80.98
47-2142	2	0.00	80.98
47-2150	151	0.22	81.20
47-2161	19	0.03	81.23
47-2181	45	0.07	81.30
47-2211	8	0.01	81.31
47-2XXX	84	0.12	81.43
47-3010	423	0.62	82.06
47-4011	40	0.06	82.12
47-4021	16	0.02	82.14
47-4031	2	0.00	82.14
47-4041	9	0.01	82.16
47-4051	39	0.06	82.21
47-4061	1	0.00	82.21
47-4071	1	0.00	82.22
47-4090	10	0.01	82.23
47-5021	1	0.00	82.23
47-5031	4	0.01	82.24
47-5040	6	0.01	82.25
47-50XX	2	0.00	82.25
47-50YY	1	0.00	82.25
49-1011	139	0.20	82.46
49-2011	94	0.14	82.59
49-2020	137	0.20	82.80
49-2091	10	0.01	82.81
49-2092	28	0.04	82.85
49-2096	6	0.01	82.86
49-2097	25	0.04	82.90
49-2098	20	0.03	82.93
49-209X	13	0.02	82.95
49-3011	51	0.08	83.02
49-3021	109	0.16	83.18
49-3022	5	0.01	83.19
49-3023	606	0.89	84.08
49-3031	73	0.11	84.19
49-3040	67	0.10	84.29

49-3050	5	0.01	84.30
49-3090	36	0.05	84.35
49-9010	12	0.02	84.37
49-9021	139	0.20	84.57
49-9031	16	0.02	84.60
49-9042	196	0.29	84.89
49-9043	15	0.02	84.91
49-9044	2	0.00	84.91
49-904X	283	0.42	85.33
49-9051	78	0.12	85.44
49-9052	107	0.16	85.60
49-9060	44	0.06	85.67
49-9091	3	0.00	85.67
49-9094	5	0.01	85.68
49-9098	57	0.08	85.76
49-909X	111	0.16	85.93
51-1011	628	0.93	86.85
51-2011	2	0.00	86.85
51-2020	167	0.25	87.10
51-2031	2	0.00	87.10
51-2041	1	0.00	87.10
51-2090	491	0.72	87.83
51-3011	118	0.17	88.00
51-3020	207	0.31	88.31
51-3092	33	0.05	88.36
51-3093	2	0.00	88.36
51-4010	2	0.00	88.36
51-4021	1	0.00	88.36
51-4022	1	0.00	88.37
51-4023	1	0.00	88.37
51-4031	5	0.01	88.37
51-4033	10	0.01	88.39
51-4034	16	0.02	88.41
51-4041	10	0.01	88.43
51-4050	1	0.00	88.43
51-4060	1	0.00	88.43
51-4070	26	0.04	88.47
51-4111	16	0.02	88.49
51-4120	236	0.35	88.84
51-4193	6	0.01	88.85
51-4XXX	329	0.49	89.33
51-5010	9	0.01	89.35
51-5021	23	0.03	89.38
51-5022	29	0.04	89.42
51-5023	37	0.05	89.48
51-6011	39	0.06	89.54
51-6021	53	0.08	89.61
51-6031	790	1.16	90.78
51-6041	14	0.02	90.80
51-6042	102	0.15	90.95
51-6050	34	0.05	91.00
51-6061	1	0.00	91.00
51-6062	11	0.02	91.02
51-6063	8	0.01	91.03
51-6093	28	0.04	91.07
51-609X	7	0.01	91.08
51-7011	59	0.09	91.17
51-7021	10	0.01	91.18
51-7041	5	0.01	91.19
51-7042	4	0.01	91.20
51-70XX	2	0.00	91.20
51-8010	19	0.03	91.23
51-8021	22	0.03	91.26
51-8031	62	0.09	91.35
51-8090	35	0.05	91.40
51-9010	104	0.15	91.56
51-9020	40	0.06	91.61
51-9030	28	0.04	91.66
51-9041	24	0.04	91.69
51-9051	11	0.02	91.71
51-9061	437	0.64	92.35
51-9071	16	0.02	92.38
51-9080	50	0.07	92.45
51-9111	304	0.45	92.90

51-9120	48	0.07	92.97
51-9130	24	0.04	93.00
51-9191	11	0.02	93.02
51-9192	6	0.01	93.03
51-9194	2	0.00	93.03
51-9195	7	0.01	93.04
51-9196	4	0.01	93.05
51-9197	3	0.00	93.05
51-9198	63	0.09	93.15
51-91XX	1,282	1.89	95.04
53-1000	125	0.18	95.22
53-2010	21	0.03	95.25
53-2020	12	0.02	95.27
53-3020	126	0.19	95.45
53-3030	1,219	1.80	97.25
53-3041	244	0.36	97.61
53-30XX	28	0.04	97.65
53-4021	1	0.00	97.65
53-4031	1	0.00	97.66
53-40XX	2	0.00	97.66
53-5011	12	0.02	97.68
53-5020	14	0.02	97.70
53-6021	31	0.05	97.74
53-6031	121	0.18	97.92
53-6051	18	0.03	97.95
53-60XX	28	0.04	97.99
53-7021	13	0.02	98.01
53-7030	1	0.00	98.01
53-7041	1	0.00	98.01
53-7051	85	0.13	98.14
53-7061	90	0.13	98.27
53-7062	731	1.08	99.35
53-7063	25	0.04	99.38
53-7064	179	0.26	99.65
53-7081	105	0.15	99.80
53-7XXX	54	0.08	99.88
55-1010	9	0.01	99.90
55-2010	8	0.01	99.91
55-3010	13	0.02	99.93
55-9830	50	0.07	100.00
Total	67,823	100.00	

```
19 . gen occ2=substring(occsoc, 1,2)
Unknown function substring()
r(133);

20 . gen occ2=substr(occsoc, 1,2)

21 . tab occ2
```

occ2	Freq.	Percent	Cum.
00	10,384	15.31	15.31
11	3,081	4.54	19.85
13	2,233	3.29	23.15
15	396	0.58	23.73
17	778	1.15	24.88
19	426	0.63	25.50
21	833	1.23	26.73
23	334	0.49	27.23
25	3,679	5.42	32.65
27	572	0.84	33.49
29	2,472	3.64	37.14
31	749	1.10	38.24
33	2,738	4.04	42.28
35	2,425	3.58	45.85
37	2,778	4.10	49.95
39	951	1.40	51.35
41	7,025	10.36	61.71
43	9,190	13.55	75.26
45	693	1.02	76.28
47	4,048	5.97	82.25
49	2,492	3.67	85.93

51	6,179	9.11	95.04
53	3,287	4.85	99.88
55	80	0.12	100.00
Total	67,823	100.00	

```
22 . destring occ2, replace
occ2 has all characters numeric; replaced as byte

23 . gen occ3=substr(occsoc, 1,4)

24 . destring occ3, ig("-") replace
occ3: characters - removed; replaced as int

25 . tab occ3
```

occ3	Freq.	Percent	Cum.
0	10,384	15.31	15.31
111	562	0.83	16.14
112	165	0.24	16.38
113	556	0.82	17.20
119	1,798	2.65	19.85
131	830	1.22	21.08
132	1,403	2.07	23.15
151	336	0.50	23.64
152	60	0.09	23.73
171	44	0.06	23.79
172	428	0.63	24.43
173	306	0.45	24.88
191	79	0.12	24.99
192	131	0.19	25.19
193	100	0.15	25.33
194	116	0.17	25.50
211	718	1.06	26.56
212	115	0.17	26.73
231	271	0.40	27.13
232	63	0.09	27.23
251	461	0.68	27.90
252	2,575	3.80	31.70
253	270	0.40	32.10
254	115	0.17	32.27
259	258	0.38	32.65
271	181	0.27	32.92
272	125	0.18	33.10
273	193	0.28	33.39
274	73	0.11	33.49
291	1,713	2.53	36.02
292	732	1.08	37.10
299	27	0.04	37.14
311	345	0.51	37.65
312	25	0.04	37.68
319	379	0.56	38.24
331	179	0.26	38.51
332	66	0.10	38.60
333	1,218	1.80	40.40
339	1,275	1.88	42.28
351	313	0.46	42.74
352	1,229	1.81	44.55
353	717	1.06	45.61
359	166	0.24	45.85
371	97	0.14	46.00
372	2,302	3.39	49.39
373	379	0.56	49.95
391	48	0.07	50.02
392	29	0.04	50.06
393	103	0.15	50.22
394	11	0.02	50.23
395	330	0.49	50.72
396	88	0.13	50.85
399	342	0.50	51.35
411	1,606	2.37	53.72
412	3,739	5.51	59.23
413	491	0.72	59.96

414	853	1.26	61.22
419	336	0.50	61.71
431	846	1.25	62.96
432	80	0.12	63.08
433	709	1.05	64.12
434	1,359	2.00	66.13
435	1,153	1.70	67.83
436	3,114	4.59	72.42
439	1,929	2.84	75.26
451	40	0.06	75.32
452	631	0.93	76.25
453	11	0.02	76.27
454	11	0.02	76.28
471	348	0.51	76.80
472	3,145	4.64	81.43
473	423	0.62	82.06
474	118	0.17	82.23
475	14	0.02	82.25
491	139	0.20	82.46
492	333	0.49	82.95
493	952	1.40	84.35
499	1,068	1.57	85.93
511	628	0.93	86.85
512	663	0.98	87.83
513	360	0.53	88.36
514	661	0.97	89.33
515	98	0.14	89.48
516	1,087	1.60	91.08
517	80	0.12	91.20
518	138	0.20	91.40
519	2,464	3.63	95.04
531	125	0.18	95.22
532	33	0.05	95.27
533	1,617	2.38	97.65
534	4	0.01	97.66
535	26	0.04	97.70
536	198	0.29	97.99
537	1,284	1.89	99.88
551	9	0.01	99.90
552	8	0.01	99.91
553	13	0.02	99.93
559	50	0.07	100.00
Total	67,823	100.00	

```
26 . gen occ4=substring(occsoc, 1,5)
   Unknown function substring()
   r(133);

27 . gen occ4=substr(occsoc, 1,5)

28 . destring occ4, ig("-") replace
   occ4 contains characters not specified in ignore(); no replace

29 . tab occ4
```

occ4	Freq.	Percent	Cum.
00000	10,384	15.31	15.31
11-10	562	0.83	16.14
11-20	165	0.24	16.38
11-30	556	0.82	17.20
11-90	841	1.24	18.44
11-91	957	1.41	19.85
13-10	756	1.11	20.97
13-11	74	0.11	21.08
13-20	1,403	2.07	23.15
15-10	336	0.50	23.64
15-20	60	0.09	23.73
17-10	44	0.06	23.79
17-20	258	0.38	24.17
17-21	91	0.13	24.31
17-2X	79	0.12	24.43
17-30	306	0.45	24.88

19-10	79	0.12	24.99
19-20	131	0.19	25.19
19-30	100	0.15	25.33
19-40	116	0.17	25.50
21-10	718	1.06	26.56
21-20	115	0.17	26.73
23-10	271	0.40	27.13
23-20	63	0.09	27.23
25-10	461	0.68	27.90
25-20	2,575	3.80	31.70
25-30	270	0.40	32.10
25-40	115	0.17	32.27
25-90	258	0.38	32.65
27-10	181	0.27	32.92
27-20	125	0.18	33.10
27-30	193	0.28	33.39
27-40	73	0.11	33.49
29-10	564	0.83	34.32
29-11	1,149	1.69	36.02
29-20	732	1.08	37.10
29-90	27	0.04	37.14
31-10	345	0.51	37.65
31-20	25	0.04	37.68
31-90	379	0.56	38.24
33-10	179	0.26	38.51
33-20	66	0.10	38.60
33-30	1,218	1.80	40.40
33-90	1,275	1.88	42.28
35-10	313	0.46	42.74
35-20	1,229	1.81	44.55
35-30	717	1.06	45.61
35-90	166	0.24	45.85
37-10	97	0.14	46.00
37-20	2,302	3.39	49.39
37-30	379	0.56	49.95
39-10	48	0.07	50.02
39-20	29	0.04	50.06
39-30	103	0.15	50.22
39-40	11	0.02	50.23
39-50	330	0.49	50.72
39-60	88	0.13	50.85
39-90	342	0.50	51.35
41-10	1,606	2.37	53.72
41-20	3,739	5.51	59.23
41-30	491	0.72	59.96
41-40	853	1.26	61.22
41-90	336	0.50	61.71
43-10	846	1.25	62.96
43-20	80	0.12	63.08
43-30	709	1.05	64.12
43-40	701	1.03	65.15
43-41	593	0.87	66.03
43-4X	65	0.10	66.13
43-50	1,129	1.66	67.79
43-51	24	0.04	67.83
43-60	3,114	4.59	72.42
43-90	1,642	2.42	74.84
43-91	287	0.42	75.26
45-10	40	0.06	75.32
45-20	631	0.93	76.25
45-30	11	0.02	76.27
45-40	11	0.02	76.28
47-10	348	0.51	76.80
47-20	2,392	3.53	80.32
47-21	661	0.97	81.30
47-22	8	0.01	81.31
47-2X	84	0.12	81.43
47-30	423	0.62	82.06
47-40	118	0.17	82.23
47-50	14	0.02	82.25
49-10	139	0.20	82.46
49-20	333	0.49	82.95
49-30	952	1.40	84.35
49-90	1,068	1.57	85.93

51-10	628	0.93	86.85
51-20	663	0.98	87.83
51-30	360	0.53	88.36
51-40	74	0.11	88.47
51-41	258	0.38	88.85
51-4X	329	0.49	89.33
51-50	98	0.14	89.48
51-60	1,087	1.60	91.08
51-70	80	0.12	91.20
51-80	138	0.20	91.40
51-90	710	1.05	92.45
51-91	1,754	2.59	95.04
53-10	125	0.18	95.22
53-20	33	0.05	95.27
53-30	1,617	2.38	97.65
53-40	4	0.01	97.66
53-50	26	0.04	97.70
53-60	198	0.29	97.99
53-70	1,230	1.81	99.80
53-7X	54	0.08	99.88
55-10	9	0.01	99.90
55-20	8	0.01	99.91
55-30	13	0.02	99.93
55-98	50	0.07	100.00
Total	67,823	100.00	

30 . log off
log: C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indices salario.smcl
log type: smcl
paused on: 16 Sep 2006, 15:36:13

log: C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indices salario.smcl
log type: smcl
resumed on: 16 Sep 2006, 15:45:32

31 . gen clerical=cond(occ2==43,1,0)

32 . gen regnurse=cond(occ6==29-1111,1,0)

33 . tab clerical

clerical	Freq.	Percent	Cum.
0	58,633	86.45	86.45
1	9,190	13.55	100.00
Total	67,823	100.00	

34 . tab regnurse

regnurse	Freq.	Percent	Cum.
0	67,823	100.00	100.00
Total	67,823	100.00	

35 . replace regnurse=cond(occ6==291111,1,0)
(993 real changes made)

36 . tab regnurse

regnurse	Freq.	Percent	Cum.
0	66,830	98.54	98.54
1	993	1.46	100.00
Total	67,823	100.00	

```
37 . gen lpn=cond(occ6==292061,1,0)

38 . tab lpn
```

lpn	Freq.	Percent	Cum.
0	67,564	99.62	99.62
1	259	0.38	100.00
Total	67,823	100.00	

```
39 . gen htech=cond(occ6==292012| occ6==292021 | occ6==292031| occ6==292032| occ6==292034| occ6==29204
> =292052| occ6==292053| occ6==292054 | occ6==292091|  occ6==292099|  occ6==292081| occ6==299012|  (
occ6=292051 invalid name
r(198);

40 . gen htech=cond(occ6==292012| occ6==292021 | occ6==292031| occ6==292032| occ6==292034| occ6==29204
> ==292052| occ6==292053| occ6==292054 | occ6==292091|  occ6==292099|  occ6==292081| occ6==299012|

41 . tab htech
```

htech	Freq.	Percent	Cum.
0	67,720	99.85	99.85
1	103	0.15	100.00
Total	67,823	100.00	

```
42 . log off
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indices salario.smcl
  log type:  smcl
 paused on:  16 Sep 2006, 16:11:43
-------------------------------------------------------------------------------

-------------------------------------------------------------------------------
      log:  C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\indices salario.smcl
  log type:  smcl
resumed on:  16 Sep 2006, 16:12:56

43 . sum  earnhour
```

Variable	Obs	Mean	Std. Dev.	Min	Max
earnhour	67823	1122.045	7084.669	.0096154	222281

```
44 . histogram earnhour if regnurse==1 | clerical==1 | lpn==1 | htech==1
(bin=40, start=.09615385, width=151.5601)

45 . histogram earnhour if regnurse==1 | clerical==1 | lpn==1 | htech==1
(bin=40, start=.09615385, width=151.5601)

46 . sum earnhour if regnurse==1 | clerical==1 | lpn==1 | htech==1
```

Variable	Obs	Mean	Std. Dev.	Min	Max
earnhour	10545	11.71381	67.47881	.0961538	6062.5

```
47 . histogram earnhour if regnurse==1 | clerical==1 | lpn==1 | htech==1, fraction
(bin=40, start=.09615385, width=151.5601)

48 . count if earnhours<5
earnhours not found
r(111);
```

```
49 . count if earnhour<5
  12542

50 . count if earnhour>100
  10896

51 . sum earn weeks99 hours99
  earn ambiguous abbreviation
  r(111);

52 . sum  weeks99 hours99 earns, detail
```

weeks99

Percentiles		Smallest		
1%	3	1		
5%	8	1		
10%	16	1	Obs	67823
25%	33	1	Sum of Wgt.	67823
50%	50		Mean	41.92805
		Largest	Std. Dev.	15.3865
75%	52	99		
90%	52	99	Variance	236.7443
95%	52	99	Skewness	-1.073074
99%	64	99	Kurtosis	3.400234

hours99

Percentiles		Smallest		
1%	1	1		
5%	2	1		
10%	4	1	Obs	67823
25%	20	1	Sum of Wgt.	67823
50%	40		Mean	31.85677
		Largest	Std. Dev.	15.53282
75%	40	98		
90%	40	98	Variance	241.2686
95%	50	98	Skewness	-.6446931
99%	64	98	Kurtosis	3.146511

earns

Percentiles		Smallest		
1%	320	4		
5%	1500	10		
10%	3500	10	Obs	67823
25%	8700	10	Sum of Wgt.	67823
50%	14400		Mean	49168.99
		Largest	Std. Dev.	78714.93
75%	30800	485000		
90%	221340	485000	Variance	6.20e+09
95%	222220	485000	Skewness	2.014897
99%	222330	485000	Kurtosis	6.339563

```
53 . log on
  (log already on)

54 . drop if weeks99>52
  (1424 observations deleted)
```

```
55 .  drop if hours<10
(10121 observations deleted)

56 . sum earnhour

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
    earnhour |     56278    32.73096    259.0352   .0096154      22200

57 . drop earnhour

58 . gen hwage=(earns/(hours99*weeks99))

59 . sum hwage

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
       hwage |     56278    32.73096    259.0352   .0096154      22200

60 . clear

61 . use "C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\salariooccp.dta", clear

62 . gen occ2=substring(occsoc, 1,2)
Unknown function substring()
r(133);

63 . gen occ2=substr(occsoc, 1,2)

64 . destring occ2, replace
occ2 has all characters numeric; replaced as byte

65 . gen occ3=substr(occsoc, 1,4)

66 . destring occ3, ig("-") replace
occ3: characters - removed; replaced as int

67 . gen occ4=substr(occsoc, 1,5)

68 . destring occ4, ig("-") replace
occ4 contains characters not specified in ignore(); no replace

69 . destring occ4, ig("-", "X") replace
occ4: characters - X removed; replaced as int

70 . gen occ5=substr(occsoc, 1,6)

71 . destring occ5, ig("-", "X") replace
occ5 contains characters not specified in ignore(); no replace

72 . destring occsoc, ig("-", "X") gen(occ6)
occsoc contains characters not specified in ignore(); no generate

73 . destring occ5, ig("-", "X","Y") replace
occ5: characters - X Y removed; replaced as long

74 . destring occsoc, ig("-", "X", "Y") gen(occ6)
occsoc: characters - X Y removed; occ6 generated as long

75 . gen clerical=cond(occ2==43,1,0)

76 . gen regnurse=cond(occ6==29-1111,1,0)
```

```
77 . tab clerical
```

clerical	Freq.	Percent	Cum.
0	111,315	92.37	92.37
1	9,190	7.63	100.00
Total	120,505	100.00	

```
78 . tab regnurse
```

regnurse	Freq.	Percent	Cum.
0	120,505	100.00	100.00
Total	120,505	100.00	

```
79 . replace regnurse=cond(occ6==291111,1,0)
(993 real changes made)

80 . tab regnurse
```

regnurse	Freq.	Percent	Cum.
0	119,512	99.18	99.18
1	993	0.82	100.00
Total	120,505	100.00	

```
81 . gen lpn=cond(occ6==292061,1,0)

82 . tab lpn
```

lpn	Freq.	Percent	Cum.
0	120,246	99.79	99.79
1	259	0.21	100.00
Total	120,505	100.00	

```
83 . gen htech=cond(occ6==292012| occ6==292021 | occ6==292031| occ6==292032| occ6==292034| occ6==29204:
> ==292052| occ6==292053| occ6==292054 | occ6==292091| occ6==292099| occ6==292081| occ6==299012|

84 . tab htech
```

htech	Freq.	Percent	Cum.
0	120,402	99.91	99.91
1	103	0.09	100.00
Total	120,505	100.00	

```
85 . gen hwage=(earns/(hours99*weeks99))
(52682 missing values generated)

86 . tab weeks99
```

weeks99	Freq.	Percent	Cum.
0	50,664	42.04	42.04
1	319	0.26	42.31
2	573	0.48	42.78
3	517	0.43	43.21
4	1,067	0.89	44.10
5	405	0.34	44.43
6	405	0.34	44.77
7	273	0.23	45.00
8	896	0.74	45.74
9	256	0.21	45.95
10	500	0.41	46.37
11	200	0.17	46.53
12	1,359	1.13	47.66
13	264	0.22	47.88
14	297	0.25	48.13

15	392	0.33	48.45
16	888	0.74	49.19
17	275	0.23	49.42
18	372	0.31	49.73
19	216	0.18	49.90
20	1,361	1.13	51.03
21	338	0.28	51.31
22	348	0.29	51.60
23	295	0.24	51.85
24	1,286	1.07	52.92
25	609	0.51	53.42
26	1,047	0.87	54.29
27	304	0.25	54.54
28	734	0.61	55.15
29	326	0.27	55.42
30	1,141	0.95	56.37
31	256	0.21	56.58
32	902	0.75	57.33
33	337	0.28	57.61
34	331	0.27	57.88
35	536	0.44	58.33
36	840	0.70	59.03
37	268	0.22	59.25
38	409	0.34	59.59
39	234	0.19	59.78
40	2,393	1.99	61.77
41	226	0.19	61.96
42	504	0.42	62.37
43	272	0.23	62.60
44	782	0.65	63.25
45	616	0.51	63.76
46	569	0.47	64.23
47	308	0.26	64.49
48	6,047	5.02	69.50
49	579	0.48	69.99
50	2,439	2.02	72.01
51	349	0.29	72.30
52	31,823	26.41	98.71
53	87	0.07	98.78
54	66	0.05	98.83
55	110	0.09	98.93
56	77	0.06	98.99
57	78	0.06	99.05
58	64	0.05	99.11
59	64	0.05	99.16
60	77	0.06	99.22
61	47	0.04	99.26
62	47	0.04	99.30
63	57	0.05	99.35
64	47	0.04	99.39
65	42	0.03	99.42
66	48	0.04	99.46
67	55	0.05	99.51
68	42	0.03	99.54
69	33	0.03	99.57
70	47	0.04	99.61
71	27	0.02	99.63
72	32	0.03	99.66
73	20	0.02	99.68
74	21	0.02	99.69
75	25	0.02	99.71
76	23	0.02	99.73
77	23	0.02	99.75
78	18	0.01	99.77
79	14	0.01	99.78
80	21	0.02	99.80
81	21	0.02	99.81
82	11	0.01	99.82
83	15	0.01	99.83
84	17	0.01	99.85
85	19	0.02	99.86
86	18	0.01	99.88
87	19	0.02	99.90
88	13	0.01	99.91

89	15	0.01	99.92
90	17	0.01	99.93
91	12	0.01	99.94
92	8	0.01	99.95
93	16	0.01	99.96
94	10	0.01	99.97
95	11	0.01	99.98
96	6	0.00	99.99
97	7	0.01	99.99
98	7	0.01	100.00
99	4	0.00	100.00
Total	120,505	100.00	

```
87 .
88 . sum hwage, detail
```

hwage

Percentiles		Smallest		
1%	1.666667	.0096154		
5%	3.15	.0142857		
10%	4.05	.0362319	Obs	67823
25%	5.364583	.0384615	Sum of Wgt.	67823
50%	8.605769		Mean	1122.045
		Largest	Std. Dev.	7084.669
75%	19.23077	222181		
90%	1818.966	222181	Variance	5.02e+07
95%	5029.773	222181	Skewness	18.01637
99%	20210	222281	Kurtosis	457.2288

```
89 . save "C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\salariooccp.dta", replace
   file C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\salariooccp.dta saved

90 . count if hwage<3
    2893

91 . count if hwage>300
   63110

92 . count if hwage>3000 & hwage~=.
    5035

93 . count if hwage>300 & hwage~=.
   10428

94 . count if hwage>500 & hwage~=.
    9968

95 . list earns weeks99 hours99 if hwage>500
```

	earns	weeks99	hours99
1.	222220	0	0
3.	222281	0	0
5.	222181	0	0
6.	222000	0	0
7.	222140	0	0
8.	221171	32	1
10.	221220	0	0
12.	221310	0	0
15.	221320	0	0
18.	222220	13	1
20.	222240	0	0
22.	222271	0	0
24.	221340	0	0
26.	222220	0	0
28.	222000	0	0
29.	211181	0	0

30.	211120	0	0
31.	222000	0	1
32.	222000	0	0
33.	222220	0	0
35.	222140	24	3
36.	221140	0	0
37.	221320	0	0
41.	222140	0	0
42.	222140	0	0
43.	222240	0	0
45.	222000	8	2
46.	222271	0	0
48.	222181	0	0
49.	211240	0	0
51.	222140	0	0
52.	222281	0	0
55.	221000	0	0
57.	222140	0	0
58.	222181	0	0
59.	222220	0	0
61.	222251	0	0
63.	222220	0	0

—Break—

r(1);

```
96 . replace hwage=. if weeks99==0 | hours99==0
== invalid name
r(198);

97 . replace hwage=cond(weeks99==0 | hours99==0, .,hwage)
(0 real changes made)

98 . list hwage earns weeks99 hours99 if hwage>500 & hwage~=.
```

	hwage	earns	weeks99	hours99
8.	6911.594	221171	32	1
18.	17093.85	222220	13	1
35.	3085.278	222140	24	3
45.	13875	222000	8	2
73.	6321.743	221261	35	1
77.	1763.341	222181	14	9
81.	19267.5	231210	12	1
87.	30142.86	211000	7	1
88.	74073.34	222220	3	1
92.	111090.5	222181	2	1
93.	884.52	221130	25	10
117.	3689.683	221381	30	2
137.	6342.857	222000	35	1
153.	2646.202	222281	28	3
161.	1418.846	221340	39	4
164.	55500	222000	4	1
169.	1160.549	211220	26	7
175.	2922.895	222140	19	4
230.	2645.476	222220	28	3
244.	2346.456	211181	15	6
249.	7043.667	211310	30	1
271.	15857.14	222000	14	1
278.	6171.417	222171	9	4
282.	4706.809	221220	47	1
292.	44400	222000	5	1
300.	1684.167	222310	33	4
305.	3174.572	222220	35	2
311.	1708.931	222161	26	5

322.	3969.125	222271	28	2
330.	31753	222271	7	1
332.	4254.231	221220	26	2
359.	7287.586	211340	29	1
377.	5045.455	222000	22	2
421.	3969.822	222310	28	2
424.	1542.639	222140	18	8
427.	5267.143	221220	21	2
431.	24696.78	222271	9	1
433.	5550	222000	20	2
444.	2222.51	222251	50	2
466.	12341.11	222140	9	2
507.	18500	222000	4	3
519.	6706.364	221310	33	1
586.	3368.333	222310	33	2
591.	621.7949	485000	52	15
596.	1585.714	222000	28	5
612.	2469.111	222220	30	3
619.	22218.1	222181	10	1
626.	2312.5	222000	24	4
645.	4911.111	221000	15	3
653.	6003.784	222140	37	1
655.	1348.604	221171	41	4
682.	1569.298	221271	47	3
684.	3473.75	222320	32	2
704.	6174.194	222271	18	2
711.	1500	222000	37	4
728.	1933.13	222310	23	5
732.	3468.75	222000	16	4
734.	2137.221	222271	26	4
747.	7823.704	211240	27	1
791.	1058.005	222181	35	6
812.	817.0588	222240	34	8
822.	1585.714	222000	14	10
823.	44436.2	222181	5	1
830.	514.4651	221220	86	5
840.	9624.826	221371	23	1
864.	4811.522	221330	46	1
875.	17090.85	222181	13	1
877.	1769.76	221220	25	5
878.	2002.441	222271	37	3
895.	3510.81	221181	21	3
896.	2634.178	221271	42	2
915.	4255.404	221281	13	4
922.	1461.908	222210	38	4
929.	3641.896	211230	29	2
953.	7410.667	222320	30	1
962.	7659.311	222120	29	1
965.	6539.118	222330	34	1
979.	10533.81	221210	21	1
986.	1009.636	222120	22	10
1003.	2639.762	211181	40	2
1015.	3107.073	211281	34	2
1017.	11698.47	222271	19	1
1037.	15874.29	222240	7	2
1064.	12343.39	222181	6	3
1086.	1004.545	221000	55	4
1092.	5289.048	222140	21	2
1101.	526.7143	221220	42	10
1105.	9608.695	221000	23	1
1120.	1852.258	222271	30	4
1135.	6008.378	222310	37	1

1175.	2306.563	221430	48	2
1194.	2468.678	222181	9	10
1196.	18518.33	222220	12	1
1198.	3220.58	222220	23	3
1205.	6402.455	211281	33	1
1214.	55567.75	222271	4	1
1224.	1851.75	222210	30	4
1229.	949.4487	222171	26	9
1241.	1418.654	221310	39	4
1245.	1227.778	221000	36	5
1246.	3703.667	222220	30	2
1254.	2347.111	211240	45	2
1257.	4424.2	221210	25	2
1321.	2304.583	221240	24	4
1334.	1221.648	222340	91	2
1345.	2338.747	222181	19	5
1368.	52750	211000	4	1
1370.	12287.83	221181	9	2
1383.	740.57	222171	30	10
1392.	2176.471	222000	34	3
1405.	55555	222220	4	1
1409.	3881.947	221271	19	3
1428.	6706.667	221320	33	1
1431.	1850	222000	40	3
1439.	2571.872	221181	43	2
1459.	6944.063	222210	16	2
1461.	1110	222000	20	10
1464.	1850	222000	20	6
1470.	2583.953	222220	43	2
1487.	10581.43	222210	21	1
1503.	31740.14	222181	7	1
1505.	740	222000	30	10
1507.	9661.305	222210	23	1
1534.	1778.168	222271	25	5
1549.	5045.455	222000	22	2
1554.	7928.571	222000	14	2
1567.	8538.462	222000	26	1
1571.	2525.92	222281	22	4
1573.	26402.5	211220	8	1
1575.	1941.061	221281	38	3
1577.	7400	222000	15	2
1599.	2220	222000	25	4
1604.	1306.947	222181	34	5
1606.	737.27	221181	30	10
1610.	1637.037	221000	27	5
1613.	5842.105	222000	19	2
1639.	2551.724	222000	29	3
1650.	6142.778	221140	18	2
1653.	1626.544	221210	34	4
1655.	2020.182	222220	11	10
1679.	1587.65	222271	35	4
1690.	2645.714	222240	28	3
1692.	7928.571	222000	28	1
1696.	881.631	222171	28	9
1697.	13888.13	222210	16	1
1708.	6942.844	222171	16	2
1713.	2524.67	222171	22	4
1732.	4807.391	221140	23	2
1742.	5281.775	211271	20	2
1752.	11117.55	222351	20	1
1764.	12333.33	222000	9	2

1765.	74000	222000	3	1
1767.	2346.456	211181	9	10
1768.	12292.83	221271	18	1
1780.	9257.542	222181	8	3
1784.	17016.92	221220	13	1
1786.	1157.396	222220	32	6
1820.	6321.143	221240	35	1
1822.	1320.25	211240	40	4
1849.	2711.098	222310	41	2
1852.	2199.375	211140	16	6
1898.	7042.033	211261	10	3
1904.	2775	222000	20	4
1905.	2106.857	221220	35	3
1926.	22200	222000	5	2
1934.	4631.458	222310	24	2
1940.	22217.1	222171	5	2
1956.	2425.287	211000	29	3
1966.	2221.71	222171	20	5
1971.	74036.66	222110	3	1
1977.	5556.775	222271	20	2
1984.	2850.513	222340	26	3
1994.	1132.653	222000	28	7
2033.	823.226	222271	27	10
2038.	74060.34	222181	3	1
2044.	6593.75	211000	32	1
2055.	5845.79	222140	19	2
2061.	1543.549	222271	36	4
2064.	913.5803	222000	27	9
2091.	1269.886	222230	35	5
2110.	4117.037	222320	27	2
2120.	1174.603	222000	27	7
2125.	5294.548	222371	21	2
2149.	44454.2	222271	5	1
2151.	10564.05	211281	10	2
2157.	9257.125	222171	12	2
2169.	3815.69	221310	29	2
2172.	635.0575	221000	87	4
2212.	6512.941	221440	34	1
2220.	42254.2	211271	5	1
2235.	1083.231	211230	39	5
2270.	526.6214	221181	42	10
2288.	1077.862	211261	28	7
2290.	222000	222000	1	1
2295.	2117.114	241351	57	2
2300.	27750	222000	8	1
2301.	15869.36	222171	7	2
2320.	14748	221220	15	1
2330.	1175.238	222120	21	9
2354.	6351.714	222310	35	1
2363.	3687.85	221271	12	5
2417.	2946.667	221000	25	3
2425.	3456.719	221230	32	2
2432.	2020.182	222220	11	10
2460.	1284.884	221000	43	4
2467.	505.2083	485000	24	40
2483.	8543.846	222140	26	1
2507.	2921.053	222000	38	2
2509.	6944.375	222220	16	2
2520.	3175.014	222251	35	2
2528.	3365.758	222140	33	2
2534.	4809.565	221240	23	2
2545.	4515.531	221261	49	1

2548.	11100	222000	10	2
2557.	544.6569	222220	51	8
2572.	7939.643	222310	28	1
2625.	2339.053	222210	19	5
2641.	5279.525	211181	4	10
2649.	2055.556	222000	36	3
2667.	5532.75	221310	20	2
2680.	4116.129	222271	27	2
2699.	1852.342	222281	24	5
2702.	1714.264	221140	43	3
2706.	3702.333	222140	6	10
2717.	1063.99	221310	52	4
2735.	2210	221000	10	10
2736.	44400	222000	5	1
2738.	3814.138	221220	29	2
2797.	812.2346	211181	26	10
2801.	7377	221310	30	1
2811.	3161.714	221320	35	2
2821.	4830.87	222220	23	2
2824.	5162.791	222000	43	1
2837.	1632.353	222000	17	8
2838.	3700	222000	15	4
2841.	3086.25	222210	24	3
2851.	8511.923	221310	26	1
2873.	7939.643	222310	28	1
2880.	55500	222000	2	2
2881.	14754.67	221320	15	1
2916.	1899.231	222210	39	3
2918.	5030	221320	22	2
2929.	55542.75	222171	2	2
2933.	5692.308	222000	13	3
2946.	37023.33	222140	6	1
2986.	3365.758	222140	22	3
2993.	3268.235	222240	34	2
3006.	2960	222000	25	3
3017.	3814.672	221251	29	2
3022.	4444.4	222220	25	2
3034.	3912.426	211271	27	2
3036.	3968.572	222240	28	2
3041.	3585.016	222271	31	2
3060.	3253.235	221220	34	2
3097.	14811.4	222171	5	3
3108.	2524.318	222140	44	2
3111.	5825.816	221381	19	2
3139.	7373.667	221210	15	2
3153.	4592.848	211271	23	2
3160.	3472.188	222220	16	4
3171.	37000	222000	6	1
3186.	2468.678	222181	18	5
3197.	672.7273	222000	33	10
3209.	8550.385	222310	26	1
3239.	7409.033	222271	30	1
3243.	2056.852	222140	36	3
3244.	1953.704	211000	27	4
3260.	74060.34	222181	3	1
3264.	2485.618	221220	89	1
3281.	8546.923	222220	26	1
3284.	17597.58	211171	6	2
3291.	9217.083	221210	6	4
3297.	7410.667	222320	30	1
3304.	6706.364	221310	33	1
3327.	1851.75	222210	20	6

3361.	111090.5	222181	2	1
3364.	1585.714	222000	35	4
3371.	1480	222000	15	10
3373.	1010.323	222271	22	10
3399.	613.8889	221000	36	10
3401.	10099.14	222181	22	1
3411.	10053.68	221181	11	2
3428.	4095.944	221181	18	3
3437.	4254.615	221240	26	2
3455.	3814.138	221220	29	2
3457.	2873.464	241371	84	1
3464.	74000	222000	1	3
3476.	2743.457	222220	27	3
3481.	7400	222000	30	1
3493.	1670.534	222181	19	7
3496.	3969.125	222271	28	2
3498.	4356.49	222181	17	3
3522.	1759.842	211181	12	10
3528.	27777.5	222220	8	1
3530.	7405.7	222171	15	2
3547.	2315.323	222271	32	3
3569.	6173.056	222230	18	2
3571.	22218.1	222181	10	1
3575.	1843.417	221210	30	4
3585.	27767.5	222140	4	2
3591.	2116.572	222240	21	5
3593.	111000	222000	1	2
3617.	9187.826	211320	23	1
3624.	3269.265	222310	34	2
3642.	1072.464	222000	23	9
3648.	6323.143	221310	35	1
3655.	3206.826	221271	23	3
3661.	10055.91	221230	22	1
3664.	2058.157	222281	36	3
3670.	3952.5	221340	28	2
3673.	653.4735	222181	34	10
3674.	6342.857	222000	5	7
3686.	1700	221000	13	10
3722.	1089.227	211310	97	2
3726.	8198.186	221351	27	1
3737.	2220	222000	25	4
3750.	2166.667	221000	34	3
3760.	2106.952	221230	35	3
3762.	4832.826	222310	23	2
3765.	949.3162	222140	39	6
3771.	1111.05	222210	20	10
3779.	1277.42	222271	29	6
3808.	10534.29	221220	21	1
3810.	15798.64	221181	14	1
3843.	3456.563	221220	32	2
3883.	4830.87	222220	23	2
3900.	27660.13	221281	4	2
3907.	1579.571	221140	28	5
3916.	12333.33	222000	18	1
3920.	616.6667	222000	36	10
3922.	6505.324	221181	17	2
3939.	1442.734	222181	22	7
3950.	55500	222000	2	2
3981.	1807.976	222381	41	3
3985.	1851.167	222140	40	3
3990.	2302.083	221000	48	2

4001.	1450.98	222000	51	3
4003.	10584.33	222271	21	1
4010.	3457.359	221271	32	2
4021.	2836.026	221210	26	3
4045.	2113.3	211330	50	2
4059.	796.3118	222171	31	9
4061.	2168.922	221230	34	3
4065.	2242.424	222000	33	3
4070.	4357.059	222210	17	3
4074.	6346.857	222140	35	1
4075.	1709.008	222171	13	10
4086.	3253.985	221271	34	2
4109.	505.2083	485000	24	40
4127.	672.7273	222000	33	10
4142.	3217.391	222000	23	3
4147.	1157.714	222281	24	8
4149.	1676.295	221271	33	4
4173.	44436.2	222181	5	1
4174.	5532.75	221310	40	1
4192.	31734.29	222140	7	1
4200.	750	60000	2	40
4214.	1784.032	221220	31	4
4215.	792.8571	222000	28	10
4233.	9264.167	222340	24	1
4256.	653.7382	222271	34	10
4266.	14747.33	221210	15	1
4298.	3368.788	222340	33	2
4321.	7939.643	222310	28	1
4324.	14748.67	221230	15	1
4341.	2778.387	222271	40	2
4382.	789.2857	221000	28	10
4383.	4586.957	211000	23	2
4389.	14814.67	222220	15	1
4396.	3685.667	221140	12	5
4397.	5554.525	222181	20	2
4405.	1010.368	222281	22	10
4407.	2777.262	222181	20	4
4418.	4916.444	221240	45	1
4420.	11100	222000	5	4
4424.	37046.83	222281	6	1
4426.	1053.243	221181	21	10
4427.	966.0043	222181	23	10
4431.	632.2029	221271	35	10
4444.	2312.5	222000	32	3
4446.	9219.625	221271	24	1
4468.	4444.4	222220	10	5
4478.	1480	222000	15	10
4486.	4116.852	222310	27	2
4518.	2001.892	222210	37	3
4521.	4710.851	221410	47	1
4527.	10105	222310	22	1
4544.	8551.154	222330	26	1
4555.	970.443	221261	38	6
4566.	1851.75	222210	30	4
4568.	1234.5	222210	36	5
4586.	711.5385	222000	52	6
4587.	8231.111	222240	27	1
4590.	2106.095	221140	35	3
4615.	965.2174	222000	23	10
4665.	1466.396	211161	24	6
4674.	8550.385	222310	26	1
4684.	11109.05	222181	10	2

4685.	3913.148	211310	27	2
4703.	1005.777	221271	22	10
4717.	966.0043	222181	23	10
4725.	8888.8	222220	25	1
4744.	809.1226	211181	29	9
4756.	11065.5	221310	20	1
4763.	44236.2	221181	5	1
4767.	3531.444	222481	21	3
4805.	766.1414	222181	29	10
4807.	1689.68	211210	25	5
4833.	6703.333	221210	33	1
4857.	3948.572	221120	14	4
4858.	4440	222000	25	2
4887.	1382.944	221271	80	2
4896.	10586.19	222310	21	1
4898.	2846.154	222000	26	3
4900.	5285.714	222000	21	2
4911.	7904.286	221320	28	1
4957.	4425.42	221271	25	2
4973.	789.8964	221171	28	10
4996.	1236.276	242310	49	4
5004.	8548.885	222271	13	2
5013.	15879.29	222310	14	1
5017.	15870.07	222181	7	2
5071.	7135.807	221210	31	1
5076.	5822.921	221271	38	1
5081.	10105	222310	22	1
5103.	3966.786	222140	28	2
5104.	7161.291	222000	31	1
5110.	6910.313	221130	32	1
5122.	3951.964	221310	28	2
5131.	603.6413	222140	46	8
5132.	1850	222000	30	4
5153.	1850	222000	12	10
5160.	9620.913	221281	23	1
5162.	1194.468	222171	31	6
5167.	2222.2	222220	25	4
5173.	961.6565	221181	23	10
5201.	7928.571	222000	28	1
5205.	1053.429	221220	35	6
5252.	2379.043	221251	31	3
5254.	510.3164	211271	46	9
5260.	1305.882	222000	17	10
5267.	1646.304	222251	45	3
5270.	27655	221240	8	1
5283.	12295	221310	18	1
5286.	1603.485	221281	23	6
5309.	1009.868	222171	22	10
5326.	9257.125	222171	8	3
5367.	2765.25	221220	40	2
5377.	10096.36	222120	11	2
5378.	12277.78	221000	9	2
5400.	2168.922	221230	34	3
5434.	2235.556	221320	33	3
5440.	687.5	110000	4	40
5455.	1941.316	221310	38	3
5463.	18517.5	222210	12	1
5470.	7377.667	221330	30	1
5484.	1322.857	222240	56	3
5507.	7374.667	221240	30	1
5518.	2932.5	211140	18	4
5532.	4604.167	221000	16	3

5548.	1756.119	221271	42	3
5550.	13187.5	211000	16	1
5569.	1291.977	222220	43	4
5579.	1207.717	222220	23	8
5583.	5283	211320	40	1
5587.	10100.91	222220	11	2
5598.	3950.357	221220	28	2
5622.	21126.1	211261	5	2
5665.	737.2367	221171	30	10
5666.	5560.79	211310	38	1
5701.	541.4634	222000	41	10
5704.	3253.691	221251	34	2
5716.	14814.67	222220	15	1
5736.	10586.19	222310	21	1
5742.	1234.339	222181	18	10
5778.	8511.923	221310	26	1
5781.	4604.167	221000	24	2
5783.	4255.961	221310	52	1
5817.	5847.631	222210	19	2
5824.	2962.8	222210	25	3
5842.	2135.162	211381	33	3
5850.	6511.206	221381	34	1
5854.	1709.385	222220	26	5
5858.	1055.905	211181	25	8
5866.	2387.097	222000	31	3
5870.	1194.301	222140	31	6
5876.	1000.631	222140	37	6
5893.	2058.065	222271	36	3
5916.	1305.882	222000	17	10
5918.	55295.25	221181	4	1
5930.	6736.667	222310	33	1
5936.	2963.613	222271	15	5
5945.	3703.667	222220	12	5
5954.	1585.714	222000	35	4
5994.	3688.5	221310	30	2
6000.	5285.714	222000	21	2
6015.	4835.217	222420	46	1
6019.	1219.78	222000	26	7
6035.	3950.178	221210	28	2
6037.	7668.311	222381	29	1
6041.	1683.409	222210	33	4
6049.	3206.087	221220	23	3
6094.	2634.762	221320	21	4
6103.	1843.417	221210	40	3
6113.	8233.704	222310	27	1
6117.	5848.421	222240	38	1
6124.	2271.839	211281	31	3
6131.	2709.878	222210	41	2
6169.	1474.267	221140	30	5
6180.	9217.083	221210	24	1
6194.	3516.667	211000	20	3
6206.	7404	222120	10	3
6207.	13891.94	222271	16	1
6209.	1670.534	222181	19	7
6217.	3526.032	222140	21	3
6224.	3254.132	221281	17	4
6226.	1764.135	222281	42	3
6234.	1093.596	222000	29	7
6238.	7400	222000	3	10
6239.	973.7788	211310	31	7
6243.	6174.194	222271	12	3

6259.	2836.41	221240	26	3
6278.	2646.083	222271	28	3
6302.	2767.137	221371	40	2
6322.	17000	221000	13	1
6330.	2907.895	221000	38	2
6333.	7933.571	222140	14	2
6334.	1084.221	221181	51	4
6335.	6173.056	222230	18	2
6348.	2177.843	222140	34	3
6363.	11061	221220	20	1
6380.	18435	221220	12	1
6396.	3897.193	222140	19	3
6405.	4591.739	211220	23	2
6407.	1949.298	222220	38	3
6438.	3206.681	221261	23	3
6441.	634.2857	222000	35	10
6450.	762.069	221000	29	10
6457.	10538.57	221310	21	1
6463.	10581.9	222220	21	1
6489.	1932.009	222181	23	5
6497.	1418.077	221220	26	6
6499.	2646.083	222271	21	4
6505.	754.3571	211220	28	10
6513.	8196.667	221310	27	1
6526.	2303.542	221140	16	6
6562.	6537.382	222271	34	1
6570.	716.7129	222181	31	10
6588.	1173.444	211220	18	10
6608.	8233.704	222310	27	1
6611.	2314.792	222220	24	4
6640.	17076.92	222000	13	1
6653.	4269.231	222000	13	4
6659.	8550.385	222310	26	1
6686.	6171.694	222181	18	2
6691.	4444.4	222220	50	1
6721.	1632.353	222000	34	4
6769.	3366.227	222171	33	2
6780.	535.6417	221220	59	7
6786.	1009.591	222110	22	10
6790.	1388.25	222120	16	10
6803.	7173.581	222381	31	1
6809.	7139.032	221310	31	1
6818.	5557.75	222310	20	2
6825.	7628.276	221220	29	1
6834.	4444.2	222210	25	2
6850.	55527.5	222110	4	1
6852.	5847.895	222220	19	2
6871.	6172.5	222210	36	1
6886.	1234.894	222281	18	10
6906.	4730	222310	47	1
6929.	4113.704	222140	18	3
6934.	2314.792	222220	32	3
6936.	4115.371	222230	27	2
6954.	3901.07	222361	19	3
6984.	782.3704	211240	45	6
7013.	7410.333	222310	30	1
7024.	3964.286	222000	28	2
7037.	1886.071	211240	28	4
7041.	37000	222000	6	1

—Break—

r(1);

```
 99 . sum hwage, detail
```

hwage

Percentiles		Smallest		
1%	1.666667	.0096154		
5%	3.15	.0142857		
10%	4.05	.0362319	Obs	67823
25%	5.364583	.0384615	Sum of Wgt.	67823
50%	8.605769		Mean	1122.045
		Largest	Std. Dev.	7084.669
75%	19.23077	222181		
90%	1818.966	222181	Variance	5.02e+07
95%	5029.773	222181	Skewness	18.01637
99%	20210	222281	Kurtosis	457.2288

```
100 . save, replace
    file C:\Documents and Settings\Eileen Segarra\My Documents\PUMS\2000\salariooccp.dta saved

101 . exit
```

Statistics/Data Analysis

Project: CEDOE

---

      log: **C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\RNeduc.smcl**
  log type: **smcl**
 opened on: **19 Sep 2006, 16:46:44**

```
1 . infile using "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\persons00b.dct" if rtype=
> ments and Settings\Eileen Segarra\My Documents\PUMS\2000\PUMS5_72.TXT")

dictionary
{

_column(1)      str1    rtype           %1s
_column(2)      long serialno   %7f
_column(13)             pweight         %4f
_column(        25)     age     %2f
_column(53)             educ    %2f      _column(227)   str7 occsoc     %7s
_column(238)    weeks99  %2f
_column(241)    hours99 %2f
_column(305)    long earns      %7f
        }

(189828 observations read)

2 . sum
```

Variable	Obs	Mean	Std. Dev.	Min	Max
rtype	0				
serialno	189828	4994658	2887582	159	9999811
pweight	189828	20.06348	7.09606	0	118
age	189828	34.28707	22.5603	0	93
educ	189828	6.676296	4.298192	0	16
occsoc	0				
weeks99	189828	14.12434	21.9085	0	52
hours99	189828	11.97113	18.40842	0	99
earns	144539	7942.375	24525.79	-10000	852000

```
3 . drop if earns<0| earns==0
(83186 observations deleted)

4 . gen hwage=earns/( weeks99 *hours99)
(45289 missing values generated)

5 . sum hwage
```

Variable	Obs	Mean	Std. Dev.	Min	Max
hwage	61353	14.50865	181.4177	.0022727	30000

```
6 . destring occsoc, ig("-", "X","Y") gen(occ6)
occsoc: characters - X Y removed; occ6 generated as long

7 . gen regnurse=cond(occ6==29-1111,1,0)

8 . gen lpn=cond(occ6==292061,1,0)

9 . tab educ if regnurse==1
no observations

10 . replace regnurse=cond(occ6==291111,1,0)
(1004 real changes made)
```

11 . tab educ if regnurse==1

educ	Freq.	Percent	Cum.
3	1	0.10	0.10
5	1	0.10	0.20
6	3	0.30	0.50
8	1	0.10	0.60
9	28	2.79	3.39
10	10	1.00	4.38
11	36	3.59	7.97
12	369	36.75	44.72
13	495	49.30	94.02
14	30	2.99	97.01
15	29	2.89	99.90
16	1	0.10	100.00
Total	1,004	100.00	

12 . tab age if educ>12& regnurse==1

age	Freq.	Percent	Cum.
21	1	0.18	0.18
22	5	0.90	1.08
23	9	1.62	2.70
24	14	2.52	5.23
25	14	2.52	7.75
26	18	3.24	10.99
27	14	2.52	13.51
28	12	2.16	15.68
29	10	1.80	17.48
30	18	3.24	20.72
31	15	2.70	23.42
32	17	3.06	26.49
33	14	2.52	29.01
34	25	4.50	33.51
35	21	3.78	37.30
36	27	4.86	42.16
37	24	4.32	46.49
38	29	5.23	51.71
39	25	4.50	56.22
40	11	1.98	58.20
41	23	4.14	62.34
42	20	3.60	65.95
43	21	3.78	69.73
44	20	3.60	73.33
45	11	1.98	75.32
46	14	2.52	77.84
47	17	3.06	80.90
48	14	2.52	83.42
49	17	3.06	86.49
50	11	1.98	88.47
51	9	1.62	90.09
52	7	1.26	91.35
53	9	1.62	92.97
54	7	1.26	94.23
55	8	1.44	95.68
56	6	1.08	96.76
57	2	0.36	97.12
58	3	0.54	97.66
59	2	0.36	98.02
60	1	0.18	98.20
61	4	0.72	98.92
62	1	0.18	99.10
63	1	0.18	99.28
64	1	0.18	99.46
65	1	0.18	99.64
70	1	0.18	99.82
71	1	0.18	100.00
Total	555	100.00	

```
13 . save "C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\educ.dta", replace
   file C:\Documents and Settings\Eileen Segarra\My Documents\Gpci\educ.dta saved

14 . exit
```

171

Atlanta
Denver
Los Angeles
Philadelphia

McKenna Long & Aldridge LLP
Attorneys at Law

1900 K Street, NW • Washington, DC 20006
202.496.7500 • Fax: 202.496.7756
www.mckennalong.com

San Diego
San Francisco
Washington, DC
Brussels

DONNA LEE YESNER
(202) 496-7917

EMAIL ADDRESS
dyesner@mckennalong.com

October 10, 2006

BY HAND DELIVERY

Centers for Medicare and Medicaid Services
Department of Health and Human Services
Room 445-G Hubert H. Humphrey Building
200 Independence Ave. SW
Washington, DC 20201

Attn: Catherine Jansto

Re: Comments on Proposed Rule CMS-1321-P, Payment for Covered Drugs and Biologicals (ASP Issues)

Dear Ms. Jansto:

The following comments to the Centers for Medicare and Medicaid Services (CMS) are submitted in response to CMS' proposed rule to revise the Average Sales Price (ASP) required by the Medicare Modernization Act, which is Section F of the proposed physician fee schedule rule (CMS-1321-P) that was published in the Federal Register on August 22, 2006 (71 Fed. Reg. 48981-49030). We represent numerous pharmaceutical manufacturers who calculate and report prices to CMS pursuant to Medicaid and Medicare program requirements and regularly counsel them on compliance with their price reporting obligations. We welcome the opportunity to address the specific proposals in the proposed rule affecting the methodology by which ASP is calculated. In addition, we have included suggestions that the ASP methodology address bundled sales, and discounts to parties who are not providers of health care services reimbursed by Medicare. As CMS has previously indicated that it is interested in consistency between the treatment of certain transactions in the calculation of ASP and Average Manufacturer Price (AMP), some of these issues are doubly important as they may affect the development of CMS' proposed rule for calculating AMP.

1. Administrative Fees and Service Fees]

The proposed rule appears to differentiate between administrative fees paid to entities, such as group purchasing organizations and pharmacy benefit managers, who negotiate prices and administer contracts on behalf of purchasers, and service fees paid to entities who also purchase pharmaceutical products from manufacturers. This distinction is consistent with the separate "safe harbor" regulations for administrative fees paid to GPOs and other service fees issued by the Department of Health and Human Services. We believe both types of fees should be excluded from ASP if they are not paid to providers/claimants who are reimbursed on the basis of ASP. Inclusion in ASP would unfairly reduce the basis for their reimbursement.

Historically, administrative fees have been paid primarily to entities that used combined purchasing power to negotiate discount or rebate agreements on behalf of providers and health plans but did not themselves purchase drugs for resale or treatment. Typically, these fees are a fixed percentage of the manufacturer's list price paid on each unit purchased under the negotiated agreement. Because these fees were paid to the negotiator and did not impact the price paid by its clients, they were not covered by CMS' guidance in Medicaid Drug Program Release #14 to include in AMP and Best Price fees paid to a purchaser that adjusted the purchaser's price.

In its proposed rule, CMS acknowledges that it has provided guidance to manufacturers that these type of administrative fees would be excluded from ASP if they are not passed on to purchasers. Moreover, these fees are covered by the administrative fee safe harbor, which permits manufacturers to pay fees to GPOs based on a percentage of the purchase price. Additional guidance is needed, however, as to whether fees paid to entities that negotiate contract prices on behalf of others are categorically exempt from ASP and, if not, the circumstances under which a manufacturer should treat such fees as price concessions. Of particular concern is whether CMS would consider a payment of dividends or similar profit-sharing with members to be a pass through of fees, if the fee is not intended to be passed on. We believe such fees should be excluded from all price calculations if there is no direct correlation between the fee paid and the distribution of profit.

Fees paid to purchasers for services provided by the purchaser raise different issues. Until recently, wholesaler and specialty distributors who purchased brand drugs from manufacturers in bulk and resold them to health care providers purchased drugs at list price and made a profit principally from the 2% discount they received for prompt cash payment and the practice of purchasing in advance of price increases. They routinely provided at no cost such services as distributing drugs to manufacturers' contract customers and processing chargebacks, inventory management reports, customer service, and special handling. In recent years, however, wholesalers have changed this model and begun charging fees for services they provide to

manufacturers. Because drug manufacturers today generally do not take orders from and distribute drugs directly to health care providers, they depend on resellers to move their product in the marketplace, giving these distributors considerable negotiating leverage. Thus, pharmaceutical distributors have used their leverage with manufacturers to demand a fee for distribution-related services as a condition of purchasing their products.

CMS has informally advised manufacturers that service fees paid to purchasers such as wholesalers and distributors may be excluded from ASP if the they are paid for bona fide services for fair market value and are not passed on to their customers. The latter qualification presents a similar problem as administrative fees. Paying a fee to a wholesaler may enable the wholesaler to reduce its resale price if it chooses to, but that occurrence should not be considered passing through the fee. With respect to the first criteria, we believe manufacturers must have the discretion to decide whether a particular service is one the manufacturer needs or whether it is in reality a price concession.

In the proposed rule, CMS is seeking to develop standards for determining fair market value, and in particular whether service fees to purchasers can be based on a percentage of the purchase price. Although manufacturers unquestionably would have to incur costs if they processed orders from institutions and pharmacies and delivered product themselves, and there is some value to the inventory management services that wholesalers provide to prevent volatility in the market, the value of these services is difficult to assess, particularly when quantified as a percentage of the purchase price. The issue is also problematic because the service fee safe harbor – unlike the administrative fee safe harbor - does not protect payment of fees for services based on business generated. This conflict must be resolved.

As most wholesalers have been using their leverage to demand fees quantified on this basis, and manufacturers need wholesalers to distribute their product, and as the distribution and inventory management fees paid are relatively modest, in the range of GPO administrative fees, we believe manufacturers should be able to exclude such fees even if they are based on business generated, and even if the company's books account for the fee as a reduction in cost of sales, provided the recipient is not a claimant. Such a qualification would not affect the requirement for determining FMV for fees paid to physicians and other health care providers for consulting and other services. As noted, however, if CMS concurs, it is imperative that the safe harbor be narrowly amended to permit payment of fees to wholesalers and distributors quantified as a percentage of the purchase price.

2. <u>Nominal Price</u>

ASP excludes those prices that are exempt from Best Price as nominal in amount. Prior to the DRA, the rebate statute did not specify which particular sales

qualified for the nominal price exemption. Rather, the Rebate Agreement executed by manufacturers of covered drugs defines "nominal price" for purposes of excluding prices from the best price calculation as "any price less than 10% of the AMP in the same quarter for which AMP is computed." Although the DRA allows continued use of the mathematical computation to determine what is nominal, it placed strict limitations on the exclusion of nominal price from the determination of best price. Commencing January 1, 2007, prices that compute at less than 10% of AMP may only be excluded if the sale is to one of three classes of safety net providers, and any additional safety net providers that CMS determines qualify for the nominal price exclusion taking into consideration the factors specified in the statute. For consistency, the new nominal price reporting requirements were likewise limited to those transactions that qualified for the Best Price exclusion.

CMS is soliciting comments on whether the exclusion from ASP should continue to use AMP as the basis for the mathematical threshold or whether an alternative, such as 10% of ASP for the quarter should be used to determine the exclusion from ASP. We urge CMS to retain the current formula rather than require use of ASP to determine which prices to safety net providers qualify as nominal for purposes of excluding them from the ASP calculation. First, it would necessitate a separate calculation and would increase quarterly reporting obligations if both AMP-based and ASP-based nominal prices must be reported, thereby creating confusion and unnecessarily increasing manufacturers' administrative burden. Second, there would be inconsistency in the application of the exclusion to the same customer for the same drug for purposes of Medicare payment and Medicaid price. For example, a qualified safety net provider receiving a discount on a Part B drug which computes at less than 10% of AMP will not trigger a best price, but the same discount to the same customer might have to be included in ASP if ASP computes at a lower price than AMP for the quarter. As a result, reimbursement of physicians could be affected.

3. Lagged Discounts on Exempted Sales

In its prior rule on calculation of ASP, CMS required manufacturers to use a specified "smoothing" formula for reducing gross sales by lagged discounts on non-exempt sales based on actual historic data, in order to eliminate the need to adjust prior period calculations. CMS' formula applies a percentage of gross sales over the prior four quarters against current quarter sales net of exempt sales. Similarly, the VA has, since inception of its program under the Veterans Health Care Act, permitted use of a formula to smooth chargebacks in calculating the Non-Federal Average Manufacturer Price (NFAMP) in order to reduce volatility in quarterly pricing. We believe smoothing lagged discounts is essential when an average price is used for pricing or reimbursement, because it is not feasible to adjust the basis for payment retroactively when lagged discounts applicable to sales in the quarter become known. However, smoothing Best Price exempt sales on which chargeback credits or rebates are paid for purposes of removing them from the ASP calculation is ill advised.

The proposed rule would require exclusion of units sold indirectly to exempt health care providers (*e.g.*, VA medical facilities and 340B hospitals) *combined with* units sold to commercial providers and dispensed by them to beneficiaries of exempt plans using a quarterly average of exempt units. In addition, the proposed rule provides that manufacturers must make a corresponding adjustment to sales dollars in both the numerator and denominator of the ASP ratio to ensure the total dollars for the quarter and the year do not include revenue from the excluded sales units, although it does not specify how that adjustment should be valued. This calculation is unnecessary and burdensome, and will result in an artificially low ASP to the detriment of providers.

In the calculation of NFAMP and AMP, the common practice is to remove indirect exempt sales units valued at the wholesaler acquisition price and apply the prompt pay discount to wholesalers to the remaining non-exempt sales. These wholesaler sales are then further reduced by non-exempt chargeback or rebate credits or a formulaic price reduction based on an approved smoothing mechanism. As the chargebacks associated with the exempt sales are not included in the calculation, there is no need to smooth them.

Rebates paid to health plans that reimburse providers are different. Even though the imputed price from rebates paid under federal and state plans are exempt from Best Price, these reimbursed units should not be removed from the calculation. Because the prices paid for drugs by the providers whom the Government reimburses are not necessarily the same as the standard price paid by wholesalers, in the absence of a uniform price paid by providers, it is impossible to assign a standard value to these units for purposes of removing the sales from gross revenue. Both the NFAMP and AMP calculations treat all sales of drugs to wholesalers as eligible sales (except for units the wholesalers distribute to exempt classes of trade), regardless of whether the wholesaler's customer ultimately provides units of the drug to patients of federal or state health plans to which rebates are paid. The reimbursed units are not excluded from the calculation at any value and the gross sales are not reduced to reflect the excluded units. In its June 1, 2006 report to CMS and Congress, the OIG opposed a practice of excluding reimbursed units from gross sales in the calculation of AMP. We concur with the OIG and believe the same principle should apply to ASP, whether or not the exempt transactions are smoothed.

Unlike the chargeback system which provides data on sales by wholesalers to exempt classes of trade, manufacturers lack data on which providers are reimbursed by state plans, Medicare Part D Plans, or other exempt plans, and cannot tie the unit on which a rebate payment is made to a particular customer. In short, it is impossible to ascertain the actual price the manufacturer received for particular reimbursed units in order to exclude them. Accordingly, even if a ratio of exempt units to total units can be determined, there is no accurate way to assign a value to the percentage of exempt units excluded in the quarter. The alternative in which the reimbursed units are

removed from the calculation at WAC can artificially lower the average price for the remaining units because it removes them at a standard price that is likely higher than the price at which they were actually sold. We are also concerned with inconsistency in the application of the concept. Since manufacturers pay rebates to Medicaid on Part B drugs, and the imputed price from the rebate is not considered in Best Price, logically, units sold to physicians and reimbursed by Medicaid should be removed the same as units sold to pharmacies and reimbursed by exempt pharmacy benefit plans, even though this would likely exacerbate the burden and effect of trying to place a value on the excluded units.

Finally, the proposed rule also does not address conversion of reimbursed units to the package units used to compute ASP or what to do with fractional package units. Having to perform this additional calculation is an unnecessary complication and threatens the accuracy of the calculation. In this regard, we note that the pricing errors recently identified by the HHS OIG in its review of the 340B program were caused primarily by similar conversion problems. In sum, there is simply no need to make the ASP calculation more difficult and burdensome for manufacturers. Likewise, if CMS adopts a smoothing technique for monthly AMP, which is recommended due to the prospective use of those calculations, we are concerned that extension of this rule to Medicaid will create an enormous administrative burden.

4. Price Concessions to Distributors and Health Plans

CMS should take this opportunity to rule that price concessions paid to distributors like prompt payment and those paid to consumers and third party payers like coupons and rebates should not be included in ASP, as it unfairly reduces the average price used to reimburse physicians by price concessions the physicians do not receive. The same logic applicable to AMP now that it will be used as a basis for reimbursing retail pharmacies should apply to ASP.

5. Bundled Sales

The proposed rule does not offer guidance on how manufacturers should apportion discounts in bundled sales arrangements. Rather, it is seeking information on bundled deals and how they affect the ASP calculation. We welcome guidance on how to treat a discount where the criteria for earning it is based on purchase levels covering multiple products, since the current CMS guidance on how to apportion the discount in a purchase situation is not very clear. More importantly, guidance is needed on whether the requirement to apportion bundled discounts applies to managed care performance rebates based on market share if prescriptions of multiple products meet the performance criteria. For example, if a prescription rebate is paid to a health plan on a drug for achieving a 25% share of the market in its therapeutic class and the market share is based on prescription utilization of that drug and/or a new formulation of that drug, there are no purchase prices involved. The concept of bundled sales does not

seem to apply to market share arrangements. It would be very helpful if CMS made it clear the circumstances that necessitate allocation of discounts on market basket contracts and application to rebates for market share covering a family of products. Obviously, if rebates paid to third party payers were excluded from ASP because they do not affect the prices paid by physicians, the issue of apportioning market share rebates would largely disappear.

We hope the information provided in this letter is useful to you and that you will consider it in preparing your final rule.

Sincerely,

Donna Lee Yesner

172

AmerisourceBergen
Specialty Group

4006 Belt Line Road, Suite 115
Addison, TX 75001

Phone 972.387.7000
Fax 972.387.7002
www.absg.com

October 10, 2006

Leslie Norwalk
Acting Administrator
Centers for Medicare & Medicaid Services
Department of Health and Human Services
Attention: CMS-1321-P
Room 445-G
Hubert H. Humphrey Building
200 Independence Avenue, SW
Washington, DC 20201

Re: Proposed Payment for Covered Outpatient Drugs and Biologicals (ASP Issues)

Dear Ms. Norwalk:

AmerisourceBergen Specialty Group (ABSG) is pleased to submit the following comments regarding the proposed rule, "Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment Under Part B," published in the *Federal Register* on August 22, 2006. Specifically, ABSG commends the Centers for Medicare & Medicaid Services (CMS) for proposing to exclude "bona fide service fees" from the calculation of the average sales price (ASP) for Medicare Part B drugs. We also urge CMS to exclude customary prompt pay discounts from the ASP calculation.

ABSG, as one of the nation's largest specialty pharmaceutical services provider, works with primary care physicians, group purchasing organizations, physician practice management companies and large group practices to fulfill their need for specialty products. Nine specialty pharmaceutical services companies comprise ABSG, a division of AmerisourceBergen Corporation. As a result of these relationships, ABSG is able to bring its clients significantly greater access to the resources, processes and strategic relationships they need to succeed.

ABSG and other specialty distributors play a vital role in ensuring that critical drugs reach physicians and patients in an efficient, safe, and effective manner. Specialty distributors provide tremendous value and efficiency to the Medicare program. Specialty distributors manage the increasingly complex handling and delivery requirements of drugs and costly new biologics for virtually all physician offices in the country. These distributors perform important services, such as warehousing products, providing specialty handling and shipping services (such as packaging, refrigeration, or customized dosing), and ensuring the timely delivery of drugs and biologics to physicians and providers.

Excluding bona fide service fees from the calculation of ASP through rulemaking will provide ABSG the necessary payment framework to be reimbursed in an equitable manner for the important services it provides on behalf of manufacturers and for new services, such as pedigree, that are critical to keeping the supply chain more secure and efficient. As CMS contemplates potential changes in this area, we urge the agency not to include bona fide service fees in the ASP calculation, nor create any additional regulatory burdens. Specialty distributors currently operate on very low margins, and regulatory changes that tighten the margins even further or create obstacles in the reimbursement stream could jeopardize timely access to needed drugs for patients. In addition, by paying specialty distributors on a fee-for-service basis for the expertise and efficiencies they offer, manufacturers can invest their resources in what they do best—the research and development of life-saving products.

ABSG offers the following suggestions and guidance regarding the treatment of bona fide service fees and prompt pay discounts for purposes of the ASP calculation.

I. BONA FIDE SERVICE FEES

Bona Fide Service Fees Should Not be Considered Price Concessions

ABSG endorses CMS' proposal to clarify in the final ASP reporting rule that bona fide service fees that are paid by a manufacturer to a distributor are not considered price concessions under § 414.804(a)(2). Manufacturers pay fees to ABSG for the performance of bona fide, commercially reasonable services. Due to the very nature of the services provided by ABSG, the fees do not represent price concessions. Therefore, bona fide service fees should be excluded from the calculation of ASP.

Bona fide service fees are fees paid by a manufacturer to a distributor. These fees are not paid to the end purchaser of the products—the

physician; and therefore could not represent a price concession. Further, in many cases, the price a physician pays for a drug is often determined by a contract directly between the manufacturer and physician independent and unrelated to what service fees may or may not be paid by the manufacturer to a given distributor.

As CMS finalizes this rulemaking, ABSG encourages CMS to maintain its position that bona fide service fees should be excluded from the calculation of ASP whether or not an entity takes title to a drug. Fundamentally, if an entity provides any value-added services to a manufacturer that cannot be considered overt or disguised price concessions, it does not matter whether the entity takes title to the drug: the value of the services earned do not affect the price actually realized by the manufacturer. Therefore, the fees earned through the performance of such services should be outside the calculation of ASP. Possession of title by a distributor does not affect a manufacturer's desire to contract for data management, to coordinate third party logistics, to ensure compliance monitoring, to reward purchasers for the time value of money, credit risk and financing and to reimburse for a host of other activities that add value to the safe and effective distribution of drugs.

Excluding bona fide service fees from the calculation of ASP will also ensure that physicians' reimbursement rates are appropriate and consistent with their actual costs to acquire drugs. For example, if service fees equivalent to two percent of a transaction are treated as price concessions, the reimbursement rate for a drug is effectively reduced from 106 percent of the ASP for a product, which is the reimbursement rate established by the Medicare Prescription Drug, Improvement, and Modernization Act for Part B drugs, to 104 percent of the ASP. This anomaly would exist because the ASP formula would be incorporating contractual terms into the calculation that do not correlate with the acquisition costs of purchasers in the marketplace. This reduction in reimbursement could result in diminished patient access to needed drugs. Such an outcome could be harmful to beneficiaries and prove costly to the Medicare Program.

Another potential consequence of the inclusion of bona fide service fees in the ASP calculation may be that manufacturers would opt to distribute their products directly to physicians. Under this scenario, the tangible value added by distributors in the form of scale efficiencies, aggregation, and risk mitigation would be lost. Therefore, manufacturers might have to raise prices in order to cover their increased costs to safely distribute their product. ASPs would thereby increase, which would lead to increased costs to the Medicare program with no additional gain in product safety, supply chain efficiency, patient access or quality of care.

Definition of Bona Fide Service Fees

The proposed definition under § 414.802 states that bona fide service fees are "fees paid by a manufacturer to an entity that represent fair market value for a bona fide, itemized service actually performed on behalf of the manufacturer that the manufacturer would otherwise perform (or contract for) in the absence of the service arrangement, and that are not passed on, in whole or in part, to a client or customer of an entity, whether or not the entity takes title to the drug." ABSG supports this definition of bona fide service fees and believes that CMS should maintain its guidance that these fees refer to "expenses that would have generally been paid for by the manufacturer at the same rate had these services been performed by other entities."

According to the proposed rule, CMS is considering providing guidance on the types of services that may qualify as bona fide services and seeking comments on the specific types of services entities perform on behalf of manufacturers that a manufacturer would otherwise perform and the necessity of those services in the sufficient distribution of drugs. ABSG appreciates CMS' desire to better understand bona fide services and the role they play in the distribution of products. However, ABSG strongly encourages CMS to maintain the proposed definition (above), and urges the agency to avoid the creation of an exhaustive list of services that would qualify as bona fide services.

The creation of a definitive list of bona fide services would fail to recognize the evolving nature of specialty products and the unique handling and distribution functions that they often require. For example, the FDA, ABSG and the entire industry are currently much focused on product pedigree. Over the last eighteen months, ABSG and the industry have invested millions of dollars to implement product pedigree tracking systems to enhance the integrity of the supply chain and the products in it. These systems and capabilities continue to evolve and improve, although they were not contemplated in their operational form as recently as only three years ago. Pedigree is now considered by all parties in the supply chain, as well as the FDA, to be a critical and valuable service, even though it would not have been included on a list of bona fide services written three years ago.

For CMS to gain a better understanding of ABSG's business and the broad array of bona fide services we provide, we thought it would be helpful to provide some current examples. We do not intend for CMS to use these examples for the purposes of creating a list of permissible services. Any list, no matter how general or flexible, would, by its existence, create regulatory constraints that would potentially inhibit ABSG from engaging in current and developing services. The outline

below is in no fashion exhaustive and is strictly illustrative of some bona fide services:

1. Data Management and Reporting Services

Distributors provide vital data and information to assist manufacturers to develop their production schedules. Typically, this is done through systems to computerize inventory tracking; that is, quantities of the drugs that have been sold and quantities that remain in the distributors' warehouses. It also includes the ancillary processes needed to help ensure that the data tracking is efficient and accurate, so that information about the products in the warehouses make their way into the appropriate databases rapidly and completely (e.g., product bar coding, storage shelf labeling, electronic entry, etc.). Production efficiencies result in lower drug prices.

Data management services include, but are not limited to:

- Data management (IT systems, data entry, data tracking, data quality control);
- Data to track product returns;
- Submission of product inventory and sales data to the manufacturer;
- Data on product levels in morgue (dated product, damaged product, etc.); and
- Ad hoc data and reports as requested by individual manufacturers.

Additional Background Information:

A distributor supplies the data to manufacturers periodically (e.g., daily, weekly, monthly), as agreed upon. Manufacturers use this data to forecast demand and establish production schedules to estimate the volume of product needed to re-supply the warehouses. Ultimately, this helps ensure that product in the supply channel is in line with true customer demand.

In addition to supporting manufacturers' production scheduling, these data are critically important for the manufacturer's reporting requirements under the Sarbanes-Oxley Act, which requires corporate officers of publicly-traded companies to personally verify financial statements and reporting required by the Securities and Exchange Commission.

2. Inventory Management

Distributors work closely with manufacturers to closely manage inventories to help ensure that there is sufficient supply of product in the supply chain to meet customer demand. These products are stored in PDMA-compliant facilities and every effort is made to ensure supply chain integrity and meet all regulatory requirements. Inventory management services help ensure patient access to drugs and also optimize manufacturer inventory carrying costs resulting in lower drug costs.

Inventory Management services include, but are not limited to:

- Inventory management services;
- Product integrity and security; and
- Managing demand/ordering variability, resulting in additional control over the supply chain and allowing for a smooth "just-in-time" manufacturing process.

3. Financial Management Services

Manufacturers sell large quantities of product to the distributor. The distributor then accepts orders for the products from individual physicians. The distributor is able to aggregate product across multiple manufacturers and, as a result, provide one bill to the physician-customer covering all products ordered from multiple manufacturers and, thus, is able to operate more efficiently. Further, each manufacturer only bills the distributor for the product rather than each manufacturer billing each physician. As an aggregator, the distributor is able to leverage scale and efficiency to administer the flow of product in the supply chain in an extremely cost-effective manner, reducing the overall cost of pharmaceuticals.

Financial services include but are not limited to:

- Managing "chargebacks" for contract pricing differential;
- Aggregating billing across all manufacturers for customers, significantly increasing efficiency;
- Returning payment processing on behalf of the manufacturer (e.g., when a product is misordered, damaged, or otherwise unsuitable);
- Providing seamless billing and collection services;
- Managing customer credit aggregating pharmacy receivables risk for the manufacturer – deferring customer credit risk away from the supplier to the distributor;

- Managing performance guaranty, extension of credit, insurance and other risk management;
- Actively managing the manufacturer/distributor transactions, including deductions for incorrect quantities, pricing, chargebacks or orders of drugs shipped to the distributors; and
- Maintaining $9 billion in working inventories.

Additional Background Information:

These financial management services simplify arrangements for the pharmacies, which have contractual arrangements usually with one (or only a few) distributors rather than hundreds of manufacturers. These financial arrangements result in other efficiencies. For example, members of the supply chain are able to simplify their working capital arrangements by using "Just in Time" shipments, so that they do not need to pay for any more storage space than is needed at any one time.

4. Order Processing Services

Aggregation of customer orders reduces order-processing costs for manufacturers, pharmacies, and physicians. Typically, pharmacies/physicians need to order from only one or two distributors, as opposed to hundreds of manufacturers that supply prescription drugs (branded and generic), over-the-counter (OTC), medical supplies, and health and beauty care products. Aggregation of orders significantly reduces order management costs for pharmacies, physicians, and manufacturers. As a result, the cost of drugs is reduced.

Order processing services include but are not limited to:

- Ensuring rapid product availability to over 143,000 points of sale to the patient when the patient needs the product;
- Account management establishing a single point for customer service support handling over 40 million calls per year;
- Contract administration and chargeback management services exceeding $36 billion/year;
- Administration of purchasing contracts on behalf of manufacturers;
- Providing sophisticated hardware/software for customer ordering systems; and
- Issuing recall notices and providing administrative services and logistics in handling of manufacturer recalled or withdrawn product.

5. Logistic Support Services

Continuous improvement in the logistics management of common carrier shipments, receiving, pick/pack, and customer delivery operations over the last several years has resulted in enhanced operational efficiencies for distributors and their customers. The implementation of logistic support services programs enables the warehousing of a broad assortment of branded and generic prescription drugs, next day or same day delivery, the aggregation of shipments into customer stores and warehouses, product repackaging and relabeling, and the special handling of certain controlled substances. Aggregation of delivery volume reduces shipping and delivery costs; therefore, marginal delivery cost per item declines with increased delivery size. It is important to note that, in general, the distributor fully absorbs the cost to ship product. This cost is not reimbursed by the manufacturer or the distributor's physician-customers.

The development of industry logistical support services has also led to the rapid distribution of new products when they are introduced into the marketplace. Emergency logistic support permits the reallocation of scarce inventory during crises.

The distributor also protects the integrity of the supply channel by ensuring that while in its possession all drugs are stored in facilities that are licensed by the states in which they are located and, in certain cases, the federal government. In addition, the distributor must have each of its facilities licensed as out of state wholesale distributors in all other states, and comply with the rules and regulations of all fifty states, in order to deliver drugs to customers throughout the United States. To maintain such compliance, the distributor must develop and monitor operating policies and procedures, including disaster recovery planning, for all its warehouse facilities. Moreover, when the drugs leave its facilities, the distributor is responsible for ensuring the drugs are shipped only to physicians, hospitals, pharmacies and other healthcare providers that are licensed to purchase and receive drugs. The distributor must review and confirm that each such provider holds the appropriate license – be it a medical or pharmacy license – that is valid at the time of shipment under the state in which the provider is located. The distributor has invested substantial sums in developing the infrastructure necessary to carry out these logistics functions, all of which are paid for by manufacturers through bona fide services fees. In the absence of such fees, this infrastructure would have to be duplicated at great cost to manufacturers and ultimately by payors, including Medicare.

Distributors also provide valuable logistic support related to ensuring patient safety. In addition to fulfilling stringent licensure requirements and satisfying a variety of disclosure requirements mandated by the Prescription Drug Marketing Act and other FDA rules intended to ensure the integrity of pharmaceutical products, distributors have initiated measures, including the implementation of product pedigree tracking systems, to enhance patient safety. Distributors also engage in efforts to protect patients by verifying the licensure of pharmacies prior to providing them pharmaceutical products to be dispensed to patients. These patient-related logistical services are a critical element of the business arrangement between pharmaceutical manufacturers and distributors. The fact that distributors perform these patient safety functions is a significant benefit to pharmaceutical manufacturers, and more importantly, to the patients who utilize their products on a daily basis.

Logistic support services include but are not limited to:

- Distribution - fulfillment/shipping and handling;
- Pick, Pack, and Ship;
- Single Destination Shipping to over 143,000 points of care on a daily basis;
- Specialty Product Care and Handling for refrigerated and frozen drugs, biologics, controlled substances, etc.;
- Managed Distribution Systems for items in short supply; and
- Logistics / 3PL Support.

6. Sales and Marketing Services

The role of distributors includes providing product sales and promotional materials on behalf of its customers. In-store displays and marketing materials, marketing programs, product promotions, and promotional material distribution are some of the services available to customers.

Sales and Marketing services include but are not limited to:

- Providing marketing programs, custom reports, materials, displays, promotional services, sales/profit analysis, cooperative advertising, logo identity programs, etc.;
- Making sales calls for suppliers' products, e.g., 1.8 million pharmacy calls / year (source: HDMA Vital Link);
- New product launch support, ensuring that pharmacies have access to newly FDA-approved drugs within 24 hours;
- Contract compliance; and

- Providing rapid and efficient industry information to customers regarding product announcements, recalls, notices, etc.

ABSG hopes the preceding summary of a few of the many services provided by distributors demonstrates the diverse and complex services that the specialty and biotech distribution industry provides and how those services result in tangible cost savings within the supply chain and to Medicare. It is important to note that the services listed represent a general grouping based on the nature of services, including some specific examples. The types of services provided for manufacturers and physicians may vary based on the complexity and frequency of the drug treatment, the cost of the drug, and changes in handling requirements.

The specialty and biotech distribution industry will continue to evolve over time to allow for the distribution of more sophisticated drug products and for the implementation of new technology in the distribution field. Attempts to narrowly define activities that may be treated as bona fide service fees, rather than evaluating each service based on the proposed definition for these fees, will restrict innovation and growth in the industry. Furthermore, efficiencies and savings may be jeopardized if CMS defines bona fide services based on a designated list of qualifying activities. Therefore, we urge CMS to define bona fide services solely based on the proposed definition at § 414.802, rather than create a list of activities that would qualify as bona fide services.

Fees Paid to GPOs or PBMs Should Be Excluded from ASP

CMS proposes to clarify that in the final ASP reporting rule that fees paid to GPOs and PBMs, such as service fees, administrative fees, and other fees are not price concessions within the meaning of Section 414.804(a)(2), provided that they meet the definition set forth above for bona fide service fees. We agree that these fee arrangements, specifically the administrative fees paid to GPOs, should be excluded from the calculation of ASP because GPOs are not end-users of manufacturer products. Therefore, the payments they receive cannot be considered price concessions for ASP calculation purposes. In fact, given that the primary purpose of the ASP rule was to identify and establish the price that manufacturers receive from purchasers, we believe that CMS should not consider manufacturer arrangements involving payments to GPO service providers in the ASP methodology. Instead, the relationships between manufacturers and GPOs should be governed by the applicable regulatory guidelines and industry standards, especially in light of the fact that CMS itself has recognized the value of group purchasing arrangements and encouraged physicians to join GPOs to obtain lower prices for the products they prescribe to their patients. See, e.g. CMS:

Revisions to Payment Policies Under Medicare, 69 Fed. Reg. at 66300-66301 (November 15, 2004)

In the event CMS continues to consider payments to GPOs as a possible component of the ASP calculation methodology, we urge CMS to further clarify that it is appropriate to determine the fair market value of such arrangements based on revenue generated from product sales. CMS should provide this additional clarification to recognize that fixed fees and/or fees based on revenue generated by product sales can represent fair market value to ensure that payments made to GPOs under typical group purchasing arrangements satisfy the stated definition of bona fide service fees. If CMS does not provide this additional clarification, GPOs could endure significant costs and operational burdens related to justifying and calculating a fee methodology that is typical throughout the group purchasing industry. This clarification also would be consistent with long-standing statutory and regulatory oversight of health care group purchasing arrangements which permit the calculation of GPO fees based on percentages of units sold to a GPO's members. See 42 U.S.C. Sec. 1320a-7(b) (b) (3) (C) and 42 C.F.R. Sec. 1001.952(j). One of the ABSG companies, International Physician Networks, LLC, is submitting separate comments on these issues.

Determining Fair Market Value

ABSG believes that fair market value is best determined by the two parties undertaking the transaction—the manufacturer and the distributor. There are many factors that the parties consider when undertaking a transaction: the goals for each party (revenue growth, cost reduction, customer service, profitability), the internal decision making process (centralized, decentralized, cross functional, parochial), and the data capabilities (nimble and fast, slow and hidebound, cost focused and centralized). Each company has its own business and strategic goals, which necessitate placing various levels of importance on these factors.

Given the wide variety of accepted mechanisms in place for determining fair market value, ABSG requests that CMS clarify that fair market value may be ascertained through any generally accepted methodology, including fixed percentage fees based on revenue generated by product sales. CMS should state clearly that any reasonable and supportable method for determining fair market value is appropriate.

Due to the various services involved and the subjective value each manufacturer and distributor places on the transaction as a whole, it would be imprudent for CMS to create an arbitrary system to assess fair market value. Such a step would only create additional regulatory

burdens that would further hamper the already low margins that exist within the business. In addition, as stated previously, ABSG does not believe any predetermined criteria would accurately measure fair market value on a case-by-case basis, which is needed with these business transactions.

Approach Used to Ensure that Fee is Not Passed on to the Customer

CMS is seeking guidance on the appropriate methods for determining whether a fee is passed on to the customer. ABSG asserts that there is no objective method for determining such a matter. CMS must ascertain the intent of the manufacturer to determine whether a fee is passed on to the customer. We are not aware of any objective criteria or method for determining a manufacturer's subjective intent. In addition, U.S. antitrust laws generally prohibit manufacturers from dictating their distributors' resale prices.

Additional Legal and Policy Justifications Warranting Exclusion of Service Fees from ASP

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA)[1] changed the manner in which physicians and other providers are reimbursed for drugs and biologics. The MMA broadly defines ASP as an average of the final sales prices to "all purchasers . . . in the United States" (excluding certain exempted sales) for a National Drug Code sold by a manufacturer.[2] Most pricing concessions and rebate practices are incorporated within that definition, principally to address concerns about "gaming" the ASP.[3] Absent inclusion of most pricing concessions in the ASP, Congress believes that certain business practices would be tailored to "get around" ASP and indirectly increase Medicare reimbursement rates.

When writing the MMA, Congress specifically did not include service fees in the list of designated price concessions incorporated into the ASP methodology. This policy choice was consistent with Medicaid Rebate Program policies, where bona fide service fees are excluded from consideration of Best Price. Notably, many entities in the pharmaceutical industry distinguish between legitimate service fees and fees that are indirect discounts when calculating "Best Price" under the Medicaid Rebate Statute. The statutory definition of "Best Price"

[1] Pub. L. No. 108-173, 117 Stat. 2066 (2003).
[2] § 1395w-3a(c)(1).
[3] *See* § 1395w-3a(c)(3) (providing that ASP must include "volume discounts, prompt pay discounts, cash discounts, free goods that are contingent on any purchase requirement, chargebacks, and rebates").

includes rebates and discounts but does not specifically include legitimate service fees.[4]

Other government health care programs support this approach of distinguishing between bona fide service fees that do not affect the price ultimately realized on a drug and fees that represent a price concession. For example, in Medicare Part D, Congress spoke very clearly regarding the inclusion of all price concessions within the definition of allowable costs, but did not direct CMS to include "service fees" in the portion of expenditures that would be used to calculate when the Medicare Program would be financially liable for additional costs. Service fees are outside of the Part D calculations.

Furthermore, to the extent that bona fide service fees do not represent rebates or price concessions, many pharmaceutical manufacturers have taken the reasonable position that such legitimate service fees are not discounts to a purchaser and should not be included within the calculation of "Best Price" or the Average Manufacturers Price (AMP). Recently, Congress agreed with that analysis during consideration of the Deficit Reduction Act.

In 2004, CMS articulated its position that bona fide service fees are exempt from the ASP calculation. However, this statement was made in the context of a letter, which lacks the force of a regulation. Although this letter enhanced stakeholders' understanding of CMS' policy regarding the calculation of ASP, a number of entities remain confused about the appropriate treatment of service fees in this calculation and view bona fide services fees as something "optional" to include in or exclude from ASP. Therefore, to clarify its position regarding bona fide service fees under the ASP methodology, CMS should finalize the proposed definition of bona fide service fees as modified by the suggestions outlined above. ABSG urges CMS to undertake this action in the final Physician Fee Schedule rule and not wait until its three year statutory deadline for finalizing the interim ASP rule.

II. PROMPT PAY DISCOUNTS

ABSG would also like to take this opportunity to once again urge CMS to exclude customary prompt pay discounts from the ASP calculation. We believe congressional intent and policy considerations dictate such action by CMS.

[4] § 1396r-8(c)(1)(C). CMS has indicated that "administrative fees" are included within the "Best Price" calculation, but this confirmation was in the context of a discussion of discounts and rebates that ultimately would affect the price of a drug. Bona fide service fees do not ultimately affect the price of a drug.

To meet the policy objective of better matching drug reimbursement with pricing available to retail pharmacies, Congress made a revision in the Deficit Reduction Act (DRA) to the definition of AMP. Specifically, the DRA eliminates the instruction requiring the deduction of customary wholesaler prompt pay discounts when manufacturers calculate AMP. Congress intended for both the ASP and AMP reimbursement systems to reflect actual prices available in the market to providers that will be billing Medicare and Medicaid, regardless of whether these providers are physicians or pharmacies. Therefore, CMS should similarly exclude prompt pay discounts from the calculation of ASP.

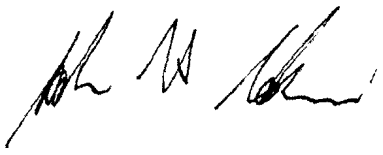
In addition, the position CMS has taken to exclude bona fide service fees from the ASP calculation in the proposed rule supports also excluding customary prompt pay discounts from ASP. Prompt pay discounts compensate wholesalers for the time value of money and for taking on the credit risks that manufacturers would otherwise have to assume if they sold their products directly to the end user. From a policy perspective, it is illogical to treat bona fide service fees and prompt pay discounts differently.

Conclusion

ABSG appreciates the opportunity to comment on the treatment of bona fide service fees and prompt pay discounts. CMS is facing important policy decisions that will affect the distribution of critical medical products and patients' access to them in a timely fashion. ABSG strongly urges CMS to adopt our recommendations outlined above.

ABSG looks forward to working with CMS on these important issues. If you should have any questions, please contact me at (972) 387-7004.

Sincerely,



Steve Collis
President, AmerisourceBergen Specialty Group

173

Federation of American Hospitals®

FEDERATION OF AMERICAN HOSPITALS
40 Years of PROVEN LEADERSHIP
1966 - 2006

Charles N. Kahn III
President

October 10, 2006

VIA HAND DELIVERY
Hon. Mark B. McClellan, M.D., Ph.D.
Administrator
Centers for Medicare & Medicaid Services
Department of Health & Human Services
Attention: CMS-1321-P
445-G Hubert H. Humphrey Building
200 Independence Avenue, S.W.
Washington, DC 20201

Re: Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment Under Part B; Proposed Rule

File Code: CMS-1321-P

Dear Dr. McClellan:

The Federation of American Hospitals ("FAH") is the national representative of privately owned or managed community hospitals and health systems throughout the United States. Our members include teaching and non-teaching, hospitals in urban and rural America, and provide a wide range of ambulatory, acute and post-acute services. We appreciate the opportunity to comment on the Centers for Medicare and Medicaid Services'("CMS") proposed rule regarding changes to the revisions to payment policies under the physician fee schedule for calendar year 2007.

INDEPENDENT DIAGNOSTIC TESTING FACILITIES

The Federation supports the 14 standards outlined for independent diagnostic testing facilities (IDTFs) in the proposed rule and appreciates CMS's efforts regarding these standards. *With respect to the proposal to revise the supervision of IDTF to no more than three sites, the Federation supports this proposal.* However, because IDTFs only represent a portion of the imaging services provided to Medicare beneficiaries, we strongly recommend that CMS apply these standards to all types of entities, e.g., physician practices that are providing imaging services. MedPAC, in its March 2005 Report to Congress, made this very same recommendation. Holding all imaging providers to the same standards will go a long way towards ensuring that beneficiaries receive the same quality of care regardless of where that service is provided. In addition, MedPAC believes that the implementation of standards for all providers will help control the rapid growth of imaging services.

In order to be approved by Medicare, IDTFs must meet several requirements that mirror many of the 14 standards proposed in the rule. They are also subject to a site visit by the carrier. While we recognize that these requirements are incomplete and enforcement may vary by carrier, we believe that most IDTFs are in compliance with the requirements. No such requirements, except for a physician supervision requirement, exist in the Medicare approval process for physician practices that provide imaging services.

Both MedPAC's March 2005 Report to Congress and its June 2004 Report to Congress mentioned numerous problems, particularly in physician offices for several of the standards outlined in the proposed rule, e.g., equipment safety and maintenance, technical quality of images." Citing published studies, as well as information from health plans and experts, MedPAC stated that "providers vary in their ability to perform quality imaging studies. Specifically, MedPAC refers to a study done by Orrison and Levin in 2002 that showed failure rates close to 50% depending on the practitioner operating the entity, for items such as age and improper use of imaging equipment.

It is for these reasons the Federation would urge CMS to hold all imaging providers accountable for the same performance standards and quality of care. It is our belief that if such standards were applied to all imaging providers, they would result in improvements in imaging services just as the mammography standards led to improvements in the quality of mammograms.

The Federation would also like to reiterate MedPAC's suggestion that the CMS seek input from physician specialty groups, as well as organizations such as the American College of Radiology (ACR), the American Institute of Ultrasound in Medicine (AIUM), and the Intersocietal Accreditation Commission (IAC), all of whom have developed accreditation standards for imaging services.

INDEPENDENT LAB BILLING

We do not agree that Medicare is currently paying twice for the technical component (TC) of pathology services provided to hospital inpatients as these services were not included in the base cost for grandfathered hospitals when the DRG system was first established. CMS did include pathology services performed by the hospital laboratory in the base year cost but CMS instructed fiscal intermediaries that where hospitals used an independent laboratory that billed the Part B carrier that "these costs should not be included in the hospital's base period costs". Thus, CMS is not paying twice for laboratory services performed and billed by independent laboratories for grandfathered hospitals (those hospitals that were not permitted to include such costs in their base year).

In addition, discontinuing separate payment to independent laboratories for the TC of pathology services under the Medicare Physician Fee Schedule (MPFS) could significantly impact the revenue to these entities for these services. Currently, independent labs receive, on the average, $40 more per occurrence for these services than outpatient hospitals are paid under the Medicare OPPS. If hospitals are required to pay independent labs for these services, they will be limited to paying Fair Market Value or the Medicare OPPS rate to the independent labs. In many cases, this will equate to a 50% reduction in payment to the independent labs.

Also, hospitals that have historically not had to make payment nor bill for these services, will now incur additional administrative costs related to these functions.

FAH recommends that CMS continue to permit grandfathered hospitals to use independent laboratories and to permit independent laboratories to bill for such services to the Part B carrier.

CLINICAL DIAGNOSTIC LAB TESTS

Blood Glucose Monitoring in SNFs (p. 49065)

We agree that glucose testing in a SNF setting should not be performed based on a standing order; however we do not believe that a physician certification should be required. When a physician provides a specific order for glucose testing in a SNF setting, this alone demonstrates that the physician feels the service is medically necessary.

HEALTH CARE INFORMATION TRANSPARENCY INITATIVE

The proposed rule describes a comprehensive national transparency initiative that CMS and the Department of Health and Human Services will undertake starting in 2006. Although the proposed rule offers some detail regarding the structure of this transparency initiative, CMS does not mention the AQA-HQA Steering Committee, a group comprised

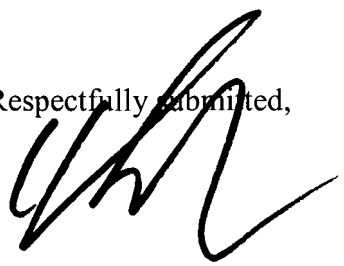
of public and private sector stakeholders which is chaired by CMS and the Agency for Healthcare Research and Quality (AHRQ). The Secretary of Health and Human Services has designated the joint steering committee to oversee the development of a national initiative to provide consumers more comprehensive information on the quality and cost of care.

The FAH strongly supports the role of this steering committee, and believes that the AQA-HQA Steering Committee is the most appropriate vehicle for representing all stakeholders' points of view that should and need to be considered in developing this national transparency initiative. The FAH believes further that such an initiative should strive to create a system whereby all stakeholders have access to uniform and standardized information on provider quality and other types of information that may develop under the initiative.

* * * *

FAH appreciates CMS's review and careful consideration of the comments in this letter, and would be happy to meet, at your convenience, to discuss them. If you have any questions, please feel free to contact Steve Speil, Senior Vice President at 202-624-1529.

Respectfully submitted,



174

The Specialty & Biotech Distributors Association
1501 K Street, NW
Washington, DC 20005

October 10, 2006

Mark B. McClellan, MD, Ph.D.
Administrator
Centers for Medicare and Medicaid Services
Department of Health and Human Services
Room 445–G, Hubert H. Humphrey Building
200 Independence Avenue, SW
Washington, DC 20201

Re: Comments on CMS-1321-P: Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment Under Part B; Proposed Rule

Dear Dr. McClellan:

The Specialty and Biotech Distributors Association ("SBDA") submits the following comments regarding the bona fide service fees provisions in the "Fees Not Considered Price Concessions" section of the Proposed Rule: "CMS-1321-P: Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment Under Part B." We commend the Centers for Medicare and Medicaid Services ("CMS") for proposing to clearly exclude bona fide service fees from the calculation of the average sales price ("ASP") for Medicare Part B drugs and urge CMS to finalize this rulemaking this year.

The proposed rule represents a step forward in the Agency's efforts to provide the public with greater clarity about how various contracting terms should be treated under the ASP system. At the same time, we believe CMS should modify some components of the proposed rule to prevent unintended changes in the distribution industry and in physicians' practice patterns. Accordingly, SBDA offers a number of specific recommendations in response to CMS' request for comments on bona fide service fees.

We are grateful that CMS has avoided the temptation to define bona fide service fees in a prescriptive manner and encourage the Agency not to limit the types of services that should be excluded from the calculation of ASP. The concept of excluding bona fide service fees from the calculation of ASP should be straightforward: if the services provided are bona fide, as defined by the marketplace, and the fees paid for those services are performed at fair market value in an arms-length transaction, then there is no reason to institute a prescriptive regulatory system that

micromanages the contract negotiations between entities in the pharmaceutical supply chain. If the services provided are not disguised or real price concessions, then they must be excluded from ASP.

Background on SBDA

SBDA is comprised of companies dedicated to maintaining the integrity of the specialty distribution system in physician offices and other settings. Our members include AmerisourceBergen Specialty Group, Cardinal Health, Inc., Curascript, Health Coalition, Inc., Oncology Therapeutics Network, and U.S. Oncology. Together, we represent over eighty percent of the physician office specialty distribution volume in the United States. We are committed to the safe, timely, and cost-effective distribution of Part B drugs to Medicare beneficiaries.

Specialty distributors provide tremendous value and efficiency to the Medicare Program. While often not visible to the public, specialty distributors manage the increasingly complex handling and delivery requirements of drugs and costly new biologics for virtually all physician offices in the country. These distributors perform important services, such as warehousing products, providing specialty handling and shipping services (such as packaging, refrigeration, or customized dosing), and ensuring the timely delivery of drugs and biologics to physicians and providers.

Exclusion of Bona Fide Service Fees from the ASP Methodology

CMS proposes to clarify in the final ASP reporting rule that, "beginning with the ASP reporting for sales during the first calendar quarter of 2007, bona fide service fees that are paid by a manufacturer to an entity, whether or not the entity takes title to the drug, are not considered price concessions under § 414.804(a)(2) insofar as, and to the extent that, they satisfy the definition of a bona fide service fee that we are proposing at § 414.802." We agree with the basic intent of CMS' proposal to clarify that bona fide services should not be considered price concessions for the purpose of calculating the ASP for Part B drugs. However, we urge CMS to clarify some provisions in the proposed rule and accommodate the market's current treatment of the contract terms between manufacturers and specialty distributors.

Whether or Not An Entity Takes Title to A Drug

As CMS finalizes this rulemaking, SBDA encourages CMS to maintain its position that bona fide services should be excluded from the calculation of ASP whether or not an entity takes title to a drug. If an entity provides a value-added service to a manufacturer that cannot be considered an overt or disguised price concession, it does not matter whether the entity takes title to the drug because the value of the services earned do not affect the price actually realized by the manufacturer. The fees earned through the performance of such a service, therefore, should be outside the calculation of ASP. A distributor's possession of title has no effect on a manufacturer's desire to contract for data management; to coordinate third-party logistics; to ensure compliance monitoring; to reward purchasers for the time value of money, credit risk and

financing; or to reimburse for a host of other activities that add value to the safe and effective distribution of drugs.

Ensuring Fair Reimbursement to Physicians

Excluding bona fide service fees from the calculation of ASP will ensure that physicians do not receive an artificially reduced reimbursement rate and will allow distributors to continue to operate efficiently within the pharmaceutical supply chain. For example, if service fees that are equivalent to two percent of a transaction are inappropriately treated as price concessions, the reimbursement rate for a drug will be effectively reduced from 106 percent of the ASP for a product, which is the reimbursement rate established by the Medicare Prescription Drug, Improvement, and Modernization Act for Part B drugs, to 104 percent of the ASP. Under this scenario, an anomaly would exist because the ASP formula would be incorporating contractual terms into the calculation that do not correlate with the acquisition costs of purchasers in the marketplace.

Maintaining Distributors' Participation in the Supply Chain

SBDA is concerned that an artificial reduction in reimbursement (resulting from the incorrect treatment of service fees as price concessions) could create untoward pressure to reduce distributors' role in the supply chain. This outcome would prove very costly to the Medicare Program. Ironically, if service fees and other contractual terms between manufacturers and distributors are incorrectly included into the calculation of ASP, physicians would realize a greater payment differential between the acquisition cost and the ASP for a drug product if a manufacturer performs its own distribution services as opposed to a manufacturer utilizing a specialty distributor for the performance of services. While this may serve the short term interest of some manufacturers, it would be inefficient in the long run for manufacturers, physicians, and the Medicare Program.

The costs of distribution and the inefficiencies in the supply chain would rise substantially over time if manufacturers were forced to distribute their own products directly to physicians. Manufacturers would ultimately be forced to increase pricing, thus raising their ASPs, to cover the costs of providing these services and the supply chains' standard safeguards would be fundamentally altered. Taxpayers and beneficiaries would bear the burden of paying for these inefficiencies and face exposure to potential safety risks.

Definition of Bona Fide Service Fees

The proposed definition at Section 414.802 states that bona fide service fees are "fees paid by a manufacturer to an entity that represent fair market value for a bona fide, itemized service actually performed on behalf of the manufacturer that the manufacturer would otherwise perform (or contract for) in the absence of the service arrangement, and that are not passed on, in whole or in part, to a client or customer of an entity, whether or not the entity takes title to the drug." In general, we support this definition of bona fide service fees and believe that CMS should maintain its guidance that these fees refer to "expenses that would have generally been

paid for by the manufacturer at the same rate had these services been performed by other entities."

We do, however, ask CMS to consider several modifications to the current definition (Option 1) outlined in the proposed rule to allow distributors to continue to meet the demands of the pharmaceutical industry and its customers. SBDA believes it is essential that CMS define the rulemaking carefully so that the business practices that meet the definition of a bona fide service may appropriately change over time. Additionally, we request that CMS: (1) more clearly define the term "itemized" in the rulemaking; and (2) delete the proposed "pass-through" language and establish a more effective intent-based test that does not implicate anti-trust concerns.

Facilitating Innovation Through a Broad Definition of Service Fees

To continue facilitating innovative and efficient practices within the pharmaceutical supply chain, SBDA urges CMS to maintain most of its current definition of a bona fide service fee, with several key exceptions. Within the past five years alone, the distribution industry has evolved and the breadth of services provided to manufacturers, physicians, and patients has significantly expanded. Over the next five years, the industry will likely further change in ways that are not anticipated today. Accordingly, the term "bona fide" services must be interpreted in a broad enough fashion to encompass the innovative distribution services of tomorrow. If the Agency finalizes a regulation that locks into place a defined list of services that are excluded from the calculation of ASP, then distributors may be severely limited in their ability to adequately meet the needs of tomorrow's biotech products.

Shipping and handling (typically thought of as "pick, pack, and ship") is just one example of a core, bona fide distribution service that has changed significantly over the past few years. Five years ago, distributors could not have anticipated that they would be purchasing specific types of freezers to support particular products and modifying shipping supplies on a product-specific basis. As the complexity of biotech products has increased, the demand for similarly complex services has also expanded. We are already aware of products that may be approved in the next few years that will possess new requirements as a result of even more limited product life issues and will require centralized vial tracking registries on a patient-specific basis integrated with specialty distribution.

As the Food and Drug Administration ("FDA") establishes more rigorous risk management programs, specialty distributors must continue developing capabilities to provide an expanding array of services to assure drugs' compliance with all applicable FDA rules. Additionally, as health information technology becomes standardized, new services will be required to ensure that manufacturers, distributors and physicians remain in compliance with federal and state privacy laws. To enable distributors to adapt to these changes, service fees must be maintained, along with an appropriate regulatory treatment of those fees.

Clearly Defining the Term "Itemized"

SBDA believes that payment for bona fide services should not have to be "itemized" for each bona fide service performed. In the marketplace, bona fide services are frequently offered together and the fees are aggregated. It should always be appropriate to exclude aggregated, non-itemized services from the calculation of ASP so long as the aggregate value of services being performed is reimbursed at fair market value. If a manufacturer meets a fair market value test for a broad array of services, no need exists to prescriptively determine the itemized "fair market value" for each individual service. Such an approach is completely inconsistent with market based principles.

To that end, SBDA also recommends that the Agency clarify that any reasonable payment system, including fees that are derived from manufacturers based upon a percentage based formula, be deemed appropriate. If the services are bona fide and the fair market value for those services are being excluded from ASP, the form of the payment should not be dictated through the regulatory system (subject, of course, to ensuring that the services are being reimbursed in a manner that complies with fraud and abuse laws).

Revising the Proposed "Pass-Through" Language

SBDA also requests that CMS modify the requirement in the proposed rule that permits entities to exclude the value of bona fide service fees from ASP only if the fees "are not passed on in whole or in part to a client or customer" of the distributor or third party logistics company receiving the fee. While we understand and agree with the Agency's intent behind this stipulation, complying with this requirements will be practically impossible. Given the complexity of the contractual relationships between different entities in the supply chain, neither a manufacturer nor a distributor may truly know when a fee is passed on indirectly to a client or a customer. Thus, vigorous implementation of this requirement will needlessly expose manufacturers and distributors to antitrust liability and other concerns when a less onerous alternative exists to ensure that the government is not subject to higher ASP costs.

We believe that the pass-through requirement is not needed if other provisions of the proposed rule are appropriately enforced. CMS' intent of implementing a no pass-through provision to avoid a "gaming" of the ASP calculation is clear, and can be accomplished through three simple steps: (1) require that the service performed is bona fide; (2) confirm that the fees were paid at fair market value; and (3) ensure that the manufacturer and distributor have not entered into an "explicit or implicit" agreement to pass on the fee in whole or in part. A separate requirement or certification is far too onerous because these transactions cannot be regulated with the particularity that CMS demands. The intent of the parties should be the critical factor in determining whether a violation of the pass-through provision has occurred.

SBDA emphasizes that the fair market value test established under the proposed rule minimizes the need for pass-through language. If a manufacturer and a distributor engage in an arms-length transaction and contract for services at fair market value, then that fee, by definition, is not a price concession. The fair market value test implies that no pass-through will occur yet does not create an onerous liability standard for manufacturers and distributors. It also avoids

the need to establish a prescriptive industry or Agency-based regulatory regime to enforce the pass-through requirement because the federal government is already realizing its maximum financial benefit by limiting the bona fide service fee exclusion to those value-added services that are paid at fair market value. We urge CMS to review its approach to Medicare Part D on this topic for a constructive market-oriented approach that protects the integrity of the program without creating an overly regulated system.

Approach or Methodology to Determine Fair Market Value

SBDA believes that the mechanisms for determining fair market value should be undertaken by the contracting parties, *i.e.* the manufacturer and the distributor. The value that a manufacturer receives from a distributor for the performance of services depends upon a variety of factors, such as the manufacturer's alternatives for obtaining the same services from another entity or performing the services in-house. In either case, the business goals, decision making processes, and data capabilities of each party govern the pricing terms of the contract. Currently, a variety of mechanisms exists to ascertain fair market value, but it would be inappropriate to define or restrict how these tests are performed.

Given the wide variety of accepted mechanisms in place for determining fair market value, SBDA asks CMS to clarify that fair market value may be ascertained through any generally accepted methodology. The Agency should clearly state that any reasonable and supportable method for determining fair market value is appropriate.

Definition of the Types of Activities that Qualify as Bona Fide Services

CMS seeks comments on the types of activities that qualify as bona fide services for the purposes of calculating ASP. Although these services often include contract administration, data purchases, distribution services, and call center support, we believe that CMS should refrain from establishing a detailed, exclusive list of services that may qualify as bona fide services. Establishing a restricted list would significantly harm the distribution industry's ability to innovate and to more effectively meet the demands of manufacturers and Medicare beneficiaries.

Refraining from Establishing a List of Qualifying Services

The specialty and biotech distribution industry is in a state of flux at this time and adapting to a fee-for-service business model. The industry will continue to change over time to allow for the distribution of more sophisticated drug products and for the implementation of new technology in the distribution field. As such, regulatory efforts to narrowly define activities that may be treated as bona fide services, rather than allowing the marketplace to evaluate and establish the value of a bona fide service, will restrict innovation, growth and efficiency in the industry. For this reason, we suggest that CMS require bona fide services to meet the proposed definition at Section 414.802 (with the exceptions outlined above) in order to be excluded from the calculation of ASP, rather than requiring these services to be included in a particular regulatory publication.

SBDA does recognize that the Agency is seeking additional information about the breadth of services currently provided in the marketplace. In order to facilitate that goal, SBDA provides to CMS below an *illustrative* list of bona fide services. This list is not intended to be exhaustive.

- Customer Order Management Services.

Specialty distributors perform a wide variety of services to manage a vast number of orders from customers, many of whom place orders each business day. Performing services properly at the outset of the distribution process is crucial for ensuring "just in time" delivery to customers. Moreover, efficient management of customer orders reduces physicians' costs and working capital. These management services may include, but are not limited to: (1) receiving drugs from manufacturers; (2) performing a Radio Frequency ("RF") scan and double-checking orders with an RF scan; (3) tracking lot numbers; and (4) receiving orders from physicians in multiple formats and means of transmittal, including fax and online orders.

In managing customer orders, distributors must provide a high-level of customer support through the operation of call centers. These services may include, but are not limited to: (1) receiving calls about product availability, adverse events, and other issues; (2) ensuring that calls are referred to the proper sources; and (3) following-up on calls requiring additional services.

On the other end of the order management spectrum, distributors must handle orders that are returned by customers. Returns management services may include, but are not limited to: (1) receiving physician customer calls about returning products that are damaged, expired, or not needed; (2) issuing return authorizations to customers; (3) receiving returns; (4) inspecting returns to determine whether to provide full or partial credit; and (5) issuing the appropriate credit to the physician customer.

- Shipping, Handling, Inventory, and Financing Services.

Specialty distributors ship drugs to thousands of physicians each business day. These deliveries require distributors to manage a vast array of logistical information to ensure that products arrive at the correct customer sites at the proper times. Shipping and handling services may include, but are not limited to: (1) determining the logistics of delivery times and locations; (2) arranging for shipping; (3) providing shipping information to customers; (4) offering express freight service; and (5) validating refrigerated product shipment verification. SBDA members also manage the appropriate flow of inventory to purchasers in the marketplace to ensure that the demand for products is met on a timely basis. Inventory management is essential to maintaining product integrity and maintaining the efficiencies of the supply chain.

With respect to the financial services, our members often perform a wide variety of distribution services relating to customer orders. These services may include, but are not limited to: (1) performing credit checks on physician customers; (2) setting credit limits; (3) monitoring new orders for impact on credit limits; (4) promptly invoicing customers; (5) collecting funds; (6) posting funds to receivables; (7) maintaining minimum new working capital requirements;

and (8) working with customers on billing disputes. Our members mitigate the risk of purchasing products for physicians, a service that allows physicians to continue providing high-quality care to patients while the physicians await reimbursement by the federal government.

To ensure accurate pricing and other terms, distributors are also tasked with managing contracts between manufacturers and physicians. Contract management services may include, but are not limited to: (1) obtaining from the manufacturer the contract for special pricing between the manufacturer and the physician practice; (2) loading the contract into special software to calculate the correct price for each physician customer; (3) resolving price disputes among the physician customer, manufacturer, and distributor; (4) requesting chargebacks from the manufacturer for differences between contract price, which is lower than list price, and the list price that the manufacturer charges the distributor; and (5) resolving chargeback amount disputes between the manufacturer and distributor.

- Compliance Facilitation and Monitoring.

The pharmaceutical supply chain is heavily regulated by federal and state governments. As such, distributors provide numerous services to ensure compliance with regulations and statutes and take a variety of actions to protect the integrity of the products they handle. Compliance facilitation and monitoring services may include, but are not limited to: (1) collecting evidence of the types of pharmaceuticals a physician can purchase (one or more of the following, all of which have expiration dates: a DEA license, state license, or ME license); (2) validating evidence with a third-party source; (3) checking the required licenses (regular pharmaceuticals or controlled substances) for each order placed for the physician; (4) obtaining from physicians copies of new licenses as old ones expire; (5) providing e-Pedigree tracking as required by some states; and (6) ensuring appropriate compliance with federal and state privacy laws and regulations.

Distributors also perform services to protect product integrity and enhance supply chain efficiency. These services may include, but are not limited to: (1) ensuring the correct quantity and correct delivery time of drugs; (2) storing products under the appropriate temperature and light; (3) using facilities with temperature monitoring and alerting mechanisms to ensure appropriate temperature control; and (4) ensuring that products are used prior to their expiration dates.

- Other Services

Distributors also provide a wide variety of other services that are related to order processing and management, such as data management services and marketing and sales support services. On the data management side, services may include, but are not limited to: (1) creating data reports; and (2) building, maintaining, and managing Electronic Data Interface systems and documents required from manufacturers. In terms of marketing support, distributors' services may include, but are not limited to: (1) providing advertisements on web order entry sites; (2) distributing literature in orders; (3) providing customer education services; and (4) including products in communications and offerings.

The aforementioned descriptions are only illustrative. As technology advances, the types of services provided by specialty distributors will continue to grow. SBDA would be pleased to further supplement this illustrative list upon request, although we reiterate that such a list should not be articulated in the rule as doing so will limit the types of activities that distributors can perform. Quite simply, if the service being provided adds value to the manufacturer or the supply chain, then it should be appropriately considered bona fide in nature.

Types of Services Vary By Drug

In the proposed rule, CMS asked about how certain types of services may vary based on the complexity and frequency of the drug treatment and the cost of the drug. Depending upon the drug, a distributor may need to change sizing and repackaging or may need to reconstitute items previously stored in bulk. Products with a short shelf-life require close coordination between physicians, patients, manufacturers, and payors. Innovative drugs require even more complicated delivery systems. The types of services may vary by drug, but the regulatory system is ill-equipped to decide which of these services are bona fide and which are not. That decision should always be left to the marketplace and the commercial transactions between manufacturers and distributors.

Additional Legal and Policy Justifications Warranting Exclusion of Service Fees from ASP

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 ("MMA")[1] changed the manner in which physicians and other providers are reimbursed for drugs and biologics. The MMA broadly defines ASP as an average of the final sales prices to "all purchasers . . . in the United States" (excluding certain exempted sales) for a National Drug Code sold by a manufacturer.[2] Most price concessions and rebate practices are incorporated within that definition, principally to address concerns about "gaming" ASP.[3] Absent inclusion of most price concessions in ASP, Congress believes that certain business practices would be tailored to "get around" ASP and indirectly increase Medicare reimbursement rates.

When writing the MMA, Congress specifically did not include service fees in the list of designated price concessions incorporated into the ASP methodology. This policy choice was consistent with Medicaid Rebate Program policies, where bona fide service fees – while also not statutorily excluded from the calculation of Best Price – were traditionally considered to be outside the calculation of Best Price because they did not function as price concessions. The statutory definition of "Best Price" includes rebates and discounts but does not specifically include legitimate service fees.[4]

Other government health care programs support this approach of distinguishing between bona fide service fees that do not affect the price ultimately realized on a drug and fees that

[1] Pub. L. No. 108-173, 117 Stat. 2066 (2003).
[2] § 1395w-3a(c)(1).
[3] *See* § 1395w-3a(c)(3) (providing that ASP must include "volume discounts, prompt pay discounts, cash discounts, free goods that are contingent on any purchase requirement, chargebacks, and rebates").
[4] § 1396r-8(c)(1)(C). CMS has indicated that "administrative fees" are included within the "Best Price" calculation, but this confirmation was in the context of a discussion of discounts and rebates that ultimately would affect the price of a drug. Bona fide service fees do not ultimately affect the price of a drug.

represent price concessions. For example, in Medicare Part D, Congress spoke very clearly regarding the inclusion of all price concessions within the definition of allowable costs, but did not direct CMS to include "service fees" in the portion of expenditures that would be used to calculate when the Medicare Program would be financially liable for additional costs (because the service fees were not price concessions). CMS did not mandate an onerous regulatory compliance regime for the exclusion of service fees in Part D even though the analytical issues underpinning Part D are identical to those discussed in the Proposed Rule. Accordingly, if CMS does not consider bona fide service fees to be price concessions under Part D simply because they are contracted for at fair market value, then the same approach should be utilized under Part B. The Agency's legal treatment of identical concepts should be consistent throughout all of its programs and parts.

In the past, CMS has clearly articulated its position that bona fide service fees should be excluded from the ASP calculation, but this statement was made in the context of a letter, which lacks the force of a regulation. Although this letter enhanced stakeholders' understanding of CMS' policy regarding the calculation of ASP, a number of entities remain confused about the appropriate treatment of service fees in this calculation and view bona fide service fees as something "optional" to include in or exclude from ASP. Thus, to clarify its position on the treatment of bona fide service fees under the ASP methodology, CMS should finalize the proposed definition of bona fide service fees as modified by the suggestions outlined above. SBDA urges CMS to undertake this action in the final Physician Fee Schedule rulemaking and not wait until its three year statutory deadline for finalizing the interim ASP rule.

Treatment of Prompt Pay Discounts

In the final rulemaking, SBDA also urges CMS to exclude from the calculation of ASP the value of the prompt pay discount earned by distributors. Manufacturers offer prompt pay discounts to specialty biotech and pharmaceutical distributors in nearly all contracting arrangements to recognize the "time value" of money and to assist in reducing a segment of the costs of picking, packing, and shipping drugs. These contracting terms substantially lower the cost of distribution to the physician and provide an incentive to distributors to make timely payments, which enhances the efficiencies within the distribution chain to the benefit of patients, physicians, and the Medicare Program.

Terms governing prompt pay discounts are included in most contractual arrangements between manufacturers and distributors. Specialty biotech distributors and pharmaceutical wholesalers usually are offered a prompt pay discount if terms are met within a certain number of days. These contractual terms have a long-standing history in the industry and are crucial to its viability. Adherence to prompt pay terms increases efficiencies in commercial transactions, reduces bad debt, and provides companies with the added financial flexibility and improved cash-flow to manage their resources.

Given Congress' recent decision to exclude the value of prompt pay discounts from the calculation of the Average Manufacturer Price ("AMP"), the Agency should consider replicating such an approach under the ASP system. Specifically, the Deficit Reduction Act of 2005 revises Section 1927 of the Social Security Act to allow for the deduction of prompt pay discounts from

the calculation of AMP, but requires manufacturers to report to the Secretary the provision of these discounts to wholesalers. By using this language as a model, CMS could exclude prompt pay discounts from the calculation of ASP while instituting safeguards to avoid misuse of these discounts, such as by requiring reports to the Secretary.

Moreover, as SBDA has indicated in previous comments, CMS maintains the legal discretion to exclude prompt pay discounts earned by distributors from the calculation of ASP. As the ASP law was predicated on establishing an accurate net acquisition cost for purchasers of Part B drugs, it is inappropriate for CMS to continue incorporating prompt pay discounts into the calculation of ASP. Most relevant to this issue, Congress vested authority in CMS and the Inspector General to define ASP and other pricing concessions in a manner "that would result in a reduction of the cost to the purchaser." [5] This phrase could be interpreted in a manner to exclude prompt pay discounts from ASP and to establish a consistent reporting regime between Medicaid and Medicare.

SBDA notes that the term "prompt pay discount" has not yet been defined under the ASP law. Accordingly, CMS may still interpret the provision in accordance with the statutory purpose and congressional intent of the ASP provisions: if the prompt pay discount does not result in a "reduction of the cost to the purchaser," it may be excluded from ASP. This would allow CMS to exclude the value of prompt pay discounts earned by distributors because they do not reduce the cost to the purchaser. We reiterate that prompt pay discounts are specific contracting terms between manufacturers and distributors and should not be considered price concessions. Incorporating the value of prompt pay discounts into the calculation of ASP will only lead to an artificial reduction of physician reimbursement and does not serve the interest of the Medicare Program.

The Widely Available Market Price Authority

SBDA also remains concerned about the limited amount of information available concerning widely available market price ("WAMP") determinations. While the Proposed Rule continues to maintain the five percent threshold for both WAMP and the Average Manufacturer Price ("AMP"), we note that it fails to address with any particularity how CMS plans to implement these WAMP determinations.

In these comments, SBDA outlines a number of issues regarding the development of the WAMP determination process. Prior to issuing any WAMP determination, we strongly recommend that CMS publicize a response to the questions raised in these comments. Given the breadth of the Agency's WAMP authority, it is especially critical for CMS to draft this final rulemaking and issue WAMP guidance in a manner that reflects the meaningful input of all interested stakeholders in the price-setting process, including beneficiaries, distributors, manufacturers, and physicians.

[5] Medicare Prescription Drug, Improvement, and Modernization Act of 2003, H.R. REP. NO. 108-391, at 181 (2003).

Frequency and Duration of WAMP Determination

How often will WAMP determinations be made? As ASP reimbursement is modified quarterly, WAMPs should also be reviewed on a quarter-by-quarter basis. Once a manufacturer can demonstrate that it no longer meets the WAMP threshold of five percent maintained under the proposed rule, the WAMP reimbursement amount should be immediately replaced by the product's ASP reimbursement.

Definition of Prudent Physician and Supplier

How should CMS define a "prudent physician or supplier?" As WAMP was created to represent a proxy for prices "widely available" in the marketplace, the prudent physician or supplier must be representative of physicians or suppliers who purchase the vast majority of drugs for a particular product. If even a small number of physicians or suppliers are unable to acquire a drug for a cost under WAMP, then the WAMP number is likely to be set too low and beneficiary access problems may arise. WAMP must not simply capture "outlier" prices.

SBDA believes that CMS possesses independent rulemaking authority to define these terms in a manner that will ensure beneficiary access to care and protection of the integrity of the distribution system. We urge CMS to define these terms carefully after consultation with parties who may be adversely impacted by the application of this authority.

Appeals of WAMP Determinations

How will entities appeal WAMP determinations? As the survey data, which is based upon statistical probability, may be imprecise by several percentage points, providers may be unable to acquire products for an amount lower than the WAMP reimbursement price. CMS should permit a wide array of entities adversely effected by a WAMP determination to formally appeal these decisions and to demonstrate that the market price for a particular product is different from the price determined by the OIG. The statute expressly permits the Department to take into account "other data" when determining WAMP. Specialty distributors (as well as manufacturers and providers) should be provided with the opportunity to submit data to ensure that the survey data obtained by the OIG does not result in a situation where distributors' fees are threatened because the OIG's calculation did not appropriately consider how prompt pay discounts or service fees were being treated.

Appropriate Exclusion of Certain Financial Terms from WAMP

What type of discounts and fees will be included in the calculation of WAMP? If, for example, prompt pay discounts are included in the amount that is netted out of WAMP, providers' costs may be several points higher than the WAMP reimbursement amount. As such, we strongly suggest that both prompt pay discounts and bona fide service fees should be excluded from the calculation of WAMP. Failure to follow this suggestion will have the de facto effect of rendering many physicians unable to purchase WAMP products. It will also pose a significant threat to distributors' core revenue.

Notice of WAMP Determinations

What type of notice will the public have that a WAMP determination will be issued? At a minimum, WAMP determinations should be publicized at the same time ASP data is released to the public. SBDA recognizes that the implementation of WAMP will prove challenging, but we believe CMS must make this process more transparent to Medicare beneficiaries, distributors, physicians and manufacturers. If this tool is used incorrectly, it has the potential to serve as one of the most blunt price-referencing authorities used by CMS and can threaten the integrity of the pharmaceutical supply chain.

Conclusion

SBDA appreciates the opportunity to submit comments to CMS on significant matters affecting the integrity and financial viability of the specialty distribution system. We urge the Agency to finalize this rulemaking in a manner that recognizes the important role that specialty distributors serve in the pharmaceutical supply chain and maintains the dynamic, competitive, and market-oriented features of the current Part B system.

Respectfully Submitted,

John F. Akscin
President
Specialty and Biotech Distributors Association

175

October 10, 2006

Mark B. McClellan, MD, Ph.D.
Administrator
Centers for Medicare and Medicaid Services
Department of Health and Human Services
Room 445–G, Hubert H. Humphrey Building
200 Independence Avenue, SW
Washington, DC 20201

Re: Comments on CMS-1321-P: Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment Under Part B; Proposed Rule

Dear Dr. McClellan:

Centric Health Finance, LLC (CentricHF), a neutral financial intermediary delivering highly efficient and low-cost business process and financial services to members of the health care economic cycle, submits this letter in response to the service fee provisions in the "Fees Not Considered Price Concessions" section of the proposed physician fee schedule rulemaking. CentricHF's programs will enable its customers to achieve increased efficiency in the delivery and administration of high value therapeutics and ancillary services.

Unlike other companies operating in the supply channel, CentricHF has no pecuniary interest in the promotion of any drug. CentricHF does not manufacture, distribute, sell, prescribe, dispense or administer any pharmaceutical products, nor does it directly or indirectly influence utilization. Rather, CentricHF's structure and proprietary business processes were developed specifically to enable it to sit squarely in the middle of the health-economics cycle between the major customer segments in a manner that encourages each channel member to become more efficient and focus on core competencies on a fee-for-service basis.

The Company urges the Centers for Medicare and Medicaid Services (CMS) to clarify the definition of bona fide service fees in a manner that reflects the increasingly complex transactions occurring between pharmaceutical manufacturers, channel entities, third-party payors, physicians, and patients. We note that whenever bona fide services are performed for manufacturers at fair market value, the value of the service should be excluded from the calculation of Average Sales Price (ASP) irrespective of whether the entity providing the service functions as a distributor, a group purchasing organization or a financial intermediary. This is

particulary relevant if the entity providing the service is disconnected from the marketing, sales or pricing of the product to the end customer. As contractual transactions evolve, the regulatory guidelines should continue to facilitate the appropriate financial treatment of the diversity of services performed by entities operating in the marketplace today. Accordingly, we believe the standard for determining fair market value and the definition of a bona fide service need to be sufficiently flexible to take into account the developing efficiencies of newer health care models and business processes.

Background on CentricHF

CentricHF is a recently formed health care financial services limited liability company. The Company offers an innovative combination of business process services and financial products to key entities in the pharmaceutical marketplace, including biotech and pharmaceutical manufacturers, physicians, distributors, payors and third-party payors. As a neutral financial intermediary, CentricHF enhances efficiencies by reducing the unnecessary profits earned on the reselling of pharmaceutical products at multiple levels within the supply channel. By residing in the center of pharmaceutical product financing, focusing solely on our core competencies, and encouraging the other channel members to focus on their core competencies, CentricHF is able to operate under a highly competitive fee structure and leverage efficiencies of scale unmatched in the health care marketplace. The result of these efficiencies is reduced costs for the appropriate delivery of high-cost therapeutics.

CentricHF provides a full suite of business processes and financial services to manufacturers and providers. For example, we accelerate reimbursement to providers on claims only after the provider verifies that such claims are true and accurate, offer claims and billing support, track payments for primary and supplemental payors and facilitate collection efforts. These functions are provided with requisite oversight and claims tracking that encourages appropriate administration by the provider at rates equivalent to or below the fees charged by other third parties that may provide component services in the market today. Moreover, all of CentricHF's services are performed in a manner intended to be fully transparent to any applicable regulatory authorities and in full compliance with all federal and state laws and regulations.

Purpose of Comment Letter

Our comments principally focus on ensuring that CMS recognize the increasingly important role that financial intermediaries serve within the pharmaceutical supply chain and why some of the provisions in the proposed rule may unintentionally discourage innovation and ultimately increase Medicare expenditures. Specifically, we request three changes to the proposed rule: 1) delete the regulatory requirement that the value of the services excluded from the calculation of ASP not be "passed on, in whole or in part, to a client or customer of an entity" provided that the bona fide service is priced at fair market value; 2) stipulate that the exclusion of bona fide service fees from the calculation of ASP applies when a manufacturer contracts with any entities (including financial intermediaries) in the supply chain which are performing bona fide services; and 3) ensure that the definition of fair market value takes into account the business process services and/or financing arrangements of entities within and outside of the pharmaceutical supply chain. A description of each of these issues follows.

Pass-Through Provisions

For a variety of reasons, CentricHF believes that the existing provision governing the direct or indirect pass-through of the value of a service fee to a customer is impractical and may discourage the development of creative and legally permissible financing models that enhance efficiencies in the supply chain when provided by a neutral financial intermediary that is disassociated from those which have an economic interest in promoting the drug. The criteria for excluding bona fide service fees from the calculation of ASP should be limited to the following straightforward tests: first, the service provided must be bona fide, offer value to the manufacturer and represents an activity that the manufacturer could otherwise perform internally; and second, the fee earned is paid by the manufacturer at fair market value. If a manufacturer meets these two tests, then the government will not be exposed to any untoward financial liabilities. Thus, no additional regulatory requirements should be imposed.

The concept of ensuring that the value of a fee is not "passed on, in whole or in part, to a client or customer of an entity" is always superfluous if a manufacturer is contracting for appropriate and necessary services at fair market value. Any fair market value analysis will necessarily review the cost structure of the aggregated services provided by an entity to the manufacturer. If a pass-through is being provided to a physician or customer, then the manufacturer will be unlikely to meet either the fair market value or bona fide services test because the pass-through cannot be appropriately evaluated or categorized.

As CMS finalizes this rulemaking, we urge the Agency to consider how this provision may unintentionally discourage programs that bring efficiencies to the market. The establishment of a pass-through requirement chills the interest of manufacturers to contract with financial intermediaries because it is impossible to track whether a fee is ever passed on indirectly to a customer. As money is fungible, any time a business entity operates between a manufacturer and an end customer, concerns may arise about an ill-defined and impossible-to-quantify pass-through liability. Instead, the Agency should look to the intent of the two parties in the transaction to ensure that there is no implicit or explicit agreement to "get around" the fair market value test. CMS can always vigorously enforce the fair market value standard to ensure that the government is not financially exposed. Moreover, if this standard is met, then there is no need for a duplicative provision which may well increase the likelihood of litigation arising from the inability to certify to the specificity of the "pass-through" requirement.

Treatment of Entities Within the Supply Chain

CentricHF generally applauds CMS' proposal to exclude bona fide service fees from the calculation of ASP. However, we also ask CMS to explicitly recognize that it intends to exclude bona fide services for the calculation of ASP to entities that (1) are not involved in the physical distribution of drugs to providers and (2) have no interest in the promotion of the drug. Indeed, CentricHF believes that excluding bona fide service fees paid to a truly neutral financial intermediary at or below fair market value fits perfectly within the rationale behind the ASP exception. We believe the proposed rulemaking is clear on this point because it references the

term "entity" as opposed to a specific segments within the pharmaceutical supply chain; however, we wish to reiterate the importance of maintaining that language.

As CMS knows, the business practices related to the financing and distribution of drugs are rapidly evolving. Today, the financing of Part B drugs is undertaken by several different types of financial service entities, including distributors, group purchasing organizations, credit card companies, health care financing companies and others. CMS should promote concepts that allow the most efficient entities to perform bona fide services. Moreover, the fees earned for the performance of those services should be treated similarly to other segments of the supply chain and excluded from the calculation of ASP. As noted above, unlike other companies within the chain, this exclusion is especially appropriate when the entity has no pecuniary interest in the promotion or pricing of the drug or to whom the product is delivered.

Fair Market Value

CentricHF supports the Agency's decision to allow manufacturers to exclude the fair market value of services provided to manufacturers from the calculation of ASP. However, the final rulemaking should clarify that manufacturers may demonstrate their compliance with this provision through any appropriate means or financial method. Since CentricHF operates as a health care business process and financial services company and does not distribute, dispense, or take title to drugs, it may be wholly inappropriate to compare the fair market value of the services CentricHF provides to a manufacturer with the services other entities provide within the supply chain. Significantly, CentricHF believes it will be able to structure third party financing arrangements at fees that are at or below market prices as compared to traditional financial services entities and those specifically within the supply chain. Thus, the fair market value definition must be sufficiently broad to capture a broad array of market transactions. Efficient and innovative practices should be rewarded by ensuring that they are appropriately excluded from the calculation of ASP.

Conclusion

CentricHF appreciates the opportunity to comment on the service fee provisions included in the physician fee schedule proposed rule. We strongly support the Agency's efforts to increase the transparency of pharmaceutical pricing and to realize additional efficiencies in the financing and purchasing of prescription drugs. As the financing of Part B drugs changes rapidly, the regulatory system should facilitate innovation and help the federal government develop an even more cost-effective fee-for-service system. Instituting the recommendations outlined in this comment letter will represent an important step toward achieving those goals.

Sincerely,

J. Christopher Barrett

J. Christopher Barrett
President, Centric HF

177

College of American Pathologists
325 Waukegan Road, Northfield, Illinois 60093-2750
800-323-4040 • http://www.cap.org

Advancing Excellence

Direct Response To:
DIVISION OF GOVERNMENT AND PROFESSIONAL AFFAIRS
1350 I Street, NW, Suite 590
Washington, DC 20005-3305
202-354-7100 Fax: 202-354-7155
800-392-9994 • http://www.cap.org

October 10, 2006

Mark B. McClellan, MD, PhD
Administrator
Centers for Medicare and Medicaid Services
Department of Health and Human Services
Hubert H. Humphrey Building
Room 445-G
200 Independence Avenue
Washington, DC 20201 Attention CMS-1321-P

Dear Dr. McClellan:

The College of American Pathologists (CAP) appreciates the opportunity to comment on the proposed rule CMS-1321-P entitled "*Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment Under Part B.*" The CAP is a national medical specialty society representing more than 16,000 physicians who practice anatomic and/or clinical pathology. College members practice their specialty in clinical laboratories, academic medical centers, research laboratories, community hospitals and federal and state health facilities.

The CAP comments in this letter focus on the following issues: 1) provisions of the proposed rule including direct practice expense inputs for surgical pathology codes, flow cytometry, and in situ hybridization; 2) independent lab billing and 3) clinical diagnostic lab tests including the proposed payment for new clinical diagnostic laboratory tests, quality and the proposed date of service for stored specimens. We are also submitting comments addressing the physician reassignment and self-referral section of the proposal in a separate letter.

Provisions of the Proposed Rule

Surgical Pathology Codes:

We request finalization of CMS' proposal to accept the revised equipment times for CPT codes 88304 and 88305 submitted by CAP for use in the agency's practice expense database. All of the six codes in the basic surgical pathology family have been refined by the RUC's Practice Expense Advisory Committee (PEAC), however, the refinement

occurred at four separate PEAC meetings. CPT codes 88304 and 88305 were refined at the first PEAC meeting in 1999 before standards were established for equipment used in the surgical pathology CPT codes. To avoid rank-order anomaly in this code family, CAP reviewed the equipment inputs and time associated with 88304 and 88305 and provided revised equipment lists which reflected standards adopted at subsequent PEAC meetings when 88300, 88302, 88307 and 88309 were reviewed. Again, we appreciate CMS' consideration of our request to revise the equipment list for CPT codes 88304 and 88305 and urge adoption of this proposal.

Other PE Issues: Flow Cytometry:

We support CMS' proposal to revise the practice expense inputs for flow cytometry CPT codes 88184 and 88185. The specific proposed changes include: 1) change the staff type in the service intra period in both codes to cytotechnologists to $0.45 per minute from the current listing of lab technician, at $0.33 per minute; 2) change the antibody costs for both codes to $8.50 (from $3.544); and 3) the addition of a computer, printer, slide strainer, biohazard hood, FACS wash assistant and FACS loader to CPT code 88184, as well as a computer and printer to the equipment for CPT code 88185.

CAP agrees that a more highly trained clinical staff type is typically used for the intra period of this service as this level of expertise is requisite for this high level complexity of testing. We also welcome CMS' acceptance of an updated antibody cost in CMS' practice expense database. Support of the use of additional equipment in the direct inputs for the revised flow cytometry codes is imperative. This is because given the reduced clinical staff from CAP's original proposed clinical staff time, additional automation would be necessary to perform the technical component of flow cytometry services.

Other PE Issues: In Situ Hybridization:

In comments on the final physician fee schedule for calendar year 2005, CAP requested a clarification in the number of DNA probes assigned to the in situ hybridization codes, CPT codes 88365, 88367, and 88368 in CMS' practice expense database. Specifically, we requested that CPT code 88367 be assigned 1.5 probes by CMS and provided background information supporting this request. In this proposed rule CMS proposes to implement the request to change the probe quantity for CPT code 88367 to 1.5, equal to that of the other two codes in the family. CAP supports the agency's proposal and requests the finalization of this request.

Independent Lab Billing

The CAP believes that the technical component (TC) grandfather should be made permanent. Under this provision, hospitals would be "grandfathered" and direct payment made to the laboratory if the hospital had been utilizing the services of an independent laboratory as of July 22, 1999. We believe this change is necessary to ensure that hospitals can continue to rely on independent laboratories for critical pathology services without incurring increased costs and administrative burdens.

As CAP has stated in previous comments, there is a concern that TC costs are included in the DRG as CMS has maintained. In 1983, when DRGs were developed, hospitals were instructed NOT to include TC costs in their base cost report if they were utilizing independent laboratories. This applied to all geographical areas -- urban, suburban and rural. In 1992 when the Medicare physician fee schedule was begun, the agency reiterated that independent laboratories should bill Medicare directly for both the professional and technical components of physician pathology services furnished to hospital inpatients and outpatients. Again, this applied to urban, suburban and rural areas.

For 16 years after the development of DRGs, the agency maintained its policy of direct payment for pathology TC services. On July 22, 1999, the agency proposed changes that would no longer allow independent laboratories to bill Medicare directly for the TC services provided to hospital inpatients. The agency assumed that the DRG now included TC payments because separate urban and rural DRG rates were eliminated in 1995 and urban hospitals were likely to have included these costs in their base period costs that formed the DRGs. However, it's not clear that all urban hospitals provided pathology services in-house when DRGs were developed 1983. The agency itself acknowledged this in the proposed rule.

For outpatients, if Medicare continued to allow independent laboratories to bill Medicare directly for hospital ***outpatient*** pathology TC payments, hospitals would simply **NOT** bill the program for these services and would receive no payment. This is because under outpatient PPS, the hospital bills Medicare a procedure code for each of the services the outpatient receives – e.g. office visit, radiology, surgery, pathology etc. Medicare converts each code to an Ambulatory Procedure Code (APC) that has a determined rate and pays the hospital multiple APCs for each outpatient. In other words, if the laboratory billed for the TC service, the hospital would not. Hence, no issue about CMS "paying twice."

Without a "grandfather," administrative burdens would be costly, especially for rural hospitals, including critical access hospitals. Under direct billing, laboratories submit a single bill to Medicare for both the TCs and the PCs. Without direct billing, laboratories will have to issue two bills – one to Medicare for the PC and another to the hospitals for the TCs, doubling billing costs. Hospitals would be required to set up systems to receive and account for these bills and pay the laboratories once payment has been received from the hospitals' intermediaries. New billing systems and administrative overhead requirements will have to be created that are costly and unnecessary.

In addition, we believe that language in the proposed rule to terminate this current grandfather is misleading and if finalized, is in need of clarification. Specifically, the proposed rule states the following: "For services furnished after December 31, 2006, an independent laboratory may not bill the carrier for physician pathology services furnished to a hospital inpatient or outpatient." We believe that if this provision is implemented, it should read: "For services furnished after December 31, 2006, an independent laboratory

may not bill the carrier for the technical component of physician pathology services furnished to a hospital inpatient or outpatient." This modification would clarify CMS' intent should the agency finalize this proposal.

Clinical Diagnostic Lab Tests

Proposed Payment for a New Clinical Diagnostic Laboratory Test-Crosswalking and Gap-filling

CAP believes the current policy of determining when a test should be cross-walked versus gap-filled has been effective and quite adequate to ensure that new clinical laboratory codes are appropriately priced. We support the agency's proposal to establish in regulations the current process for cross walking a new test to either an existing test, multiple tests, or a portion of an existing test code. With respect to the gap-fill methodology, we do not support CMS's proposal to prospectively eliminate payment of new gap filled tests at a carrier specific amount after the first year. We believe the current method of allowing gap-filled pricing for the first and second years should be continued. The main concern with the proposed change is the lack of reliable timely data from the carriers after only one year of data collection.

Other Laboratory Issues, Quality

CAP's role in the development and dissemination of quality measures as well as in the clinically appropriate utilization of clinical laboratory services gives us a unique perspective and expertise in this area. In addition, as leaders of clinical laboratories we are uniquely qualified to oversee the medical aspects of laboratories. We believe our participation and input could prove useful as CMS moves forward in the development of quality measures for services provided under the clinical laboratory fee schedule. CAP looks forward to working with CMS as you continue to explore this area.

Other Laboratory Issues-Proposed Clinical Diagnostic Laboratory Date of Service (DOS) for Stored Specimens

We appreciate CMS' proposed clarifications to current archived specimen requirements for situations in which a specimen is taken in a hospital setting, but then later used for a test after the patent has left the hospital. Specifically, to address these concerns, the proposed rule seeks to change current policy so that the date of service would be the date the specimen is obtained from storage, even if the specimen is obtained less than 31 days from the date of collection, without violating the unbundling rules as long as specific conditions are met. CAP supports the existing policy regarding archived specimens, and sees no need for change.

However, if CMS does propose to change this policy CAP would like to propose clarifications to the conditions which must be met for the date of service to be considered

the date the specimen is obtained from storage. The specific conditions we seek to modify are bullet 2) "The test could not reasonably have been ordered while the patient was hospitalized" and bullet 3) "The procedure performed while the beneficiary is a patient of the hospital is for purposes other than collection of the specimen needed for the test." While we agree with the goal to clarify the use of archived specimens to ensure proper cost-effective utilization of expensive testing, we have recommended the following modifications. Specifically, we propose rewording bullets 2) and 3) to read:

- The necessity for the test was not recognized during the hospitalization.

- The specimen obtained while the patient was hospitalized was not procured in order to perform the test.

The rationale for this proposed rewording is to clarify that the focus of these conditions/criteria should logically center on whether or not this new testing reasonably reflects a de novo determination that the post-hospitalization test is indicated and that the test was not necessary to manage the patient during the hospitalization.

* * * * *

The College of American Pathologists is pleased to have the opportunity to comment on these Medicare payment issues and appreciates your consideration of these comments. Any questions regarding the CAP comments should be directed to Pam Johnson at 202-354-7132 (pajohns@cap.org).

Sincerely,

Thomas Sodeman MD FCAP

Thomas M. Sodeman, MD, FCAP
President

178

College of American Pathologists
325 Waukegan Road, Northfield, lllinois 60093-2750
800-323-4040 • http://www.cap.org

Advancing Excellence

Direct Response To:
DIVISION OF GOVERNMENT
AND PROFESSIONAL AFFAIRS
1350 I Street, NW, Suite 590
Washington, DC 20005-3305
202-354-7100 Fax: 202-354-7155
800-392-9994 • http://www.cap.org

October 10, 2006

Mark B. McClellan, MD, PhD
Administrator
Centers for Medicare and Medicaid Services
Department of Health and Human Services
Hubert H. Humphrey Building
Room 445-G
200 Independence Avenue
Washington, DC 20201 Attention CMS-1321-P

Dear Dr. McClellan:

The College of American Pathologists (CAP) appreciates the opportunity to comment on the reassignment and physician self-referral provisions included in the proposed rule CMS-1321-P entitled "*Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment Under Part B.*" We are also submitting comments on other issues contained in the proposed rule in a separate letter. The CAP is a national medical specialty society representing more than 16,000 physicians who practice anatomic and/or clinical pathology. College members practice their specialty in clinical laboratories, academic medical centers, research laboratories, community hospitals and federal and state health facilities.

The CAP applauds CMS for undertaking the initiative to end certain abuses in the billing and payment for diagnostic testing services by amending the regulations on Reassignment and Physician Self-referral in this Notice of Proposed Rulemaking (NPRM). The CAP also welcomes the opportunity to provide comments to CMS on possible additional program safeguards.

Reassignment And Physician Self-Referral

A. Background

The proposed changes in the NPRM are intended by CMS to address its concern that "allowing physician group practices or other suppliers to purchase or otherwise contract for the provision of diagnostic tests and then to realize a profit when billing Medicare may lead to patient and program abuse." We applaud CMS for recognizing "pod" laboratories as one type of questionable business arrangement that is susceptible to this abuse and needs to be prevented.

And while the CAP supports efforts to end pod labs, we also encourage CMS to adopt safeguards to prevent other prevalent abusive arrangements involving diagnostic testing services. Specifically, certain specialty physician groups are being marketed a variety of laboratory models that are designed to take advantage of the Medicare reassignment rule and the in-office ancillary services exception to the physician self-referral law. The sole purpose of these arrangements is for the physician group to profit from their self-referrals for anatomic pathology services.

As an example, certain specialty physician practices, primarily dermatology, gastroenterology and urology, are encouraged to develop captive laboratories to capture the revenue from tests ordered by the group. A typical captive laboratory arrangement involves a group practice that owns or leases the laboratory space and equipment. The physicians order anatomic pathology services for the biopsies and specimens collected from their patients. Because anatomic pathology involves high complexity testing, the laboratory must comply with the requirements of the Clinical Laboratory Improvement Amendments and a pathologist must be engaged to furnish the testing service. While developers of these captive laboratories have maneuvered around the technical requirements of the physician self-referral law, the arrangements represent the precise manipulation that CMS sought to avert by creating rules to prevent "group practices from using the in-office ancillary services exception to operate enterprises that are functionally nothing more than self-referred [designated health services] enterprises." *See* 66 Fed. Reg. 889 (Jan. 4, 2001).

While CMS recognizes the fraud and abuse vulnerabilities from pod labs, captive laboratories are economically indistinguishable and pose the same potential for abuse. Both types of arrangements create the same financial conflict of interest that the physician self-referral law sought to prohibit. In both types of arrangements the physician group is engaging a pathologist to perform services that the other members of the group are not qualified to perform. In both types of arrangements the referring physicians share in the revenue from their self-referrals of pathology services. In both types of arrangements the physician group engages a pathologist on a fractional basis to maximize profits. The CAP urges CMS to incorporate changes in the regulations that will prevent abuses from self-referrals of pathology services, regardless of the structure of the group practice arrangement.

B. Discussion of Proposed Changes

1. Stop the Use of the Reassignment Rules for Services Performed Under a Contractual Arrangement to Circumvent the Rules for Purchased Diagnostic Tests and Interpretations

As CMS notes in the NPRM, current Medicare rules attempt to curb billing abuses for diagnostic services with several program safeguards. Specifically, CMS prohibits markups on claims submitted for payment for purchased diagnostic tests, and requires that those submitting a claim for payment for a purchased interpretation must have performed or supplied the test and must be independent of the physician or medical group that ordered the test. Despite these rules, CMS notes that there is confusion as to whether physicians and groups can avoid the program

safeguards if the testing services are performed under a contractual arrangement with formal reassignment of the right to payment. The CAP concurs with CMS that attempts made by physician groups to circumvent the existing rules for diagnostic tests and interpretations by exploitation of the reassignment exception for services performed under a contractual arrangement are suspect; however, we also caution CMS that some of its proposals will preclude longstanding and legitimate billing practices within the pathology industry.

The CAP is aware of physician groups that order a significant amount of biopsies for their patients and bill for the tests performed by independent pathologists and suppliers. The CAP believes that these physician groups should not be able to circumvent the rules for purchased tests and interpretations by claiming the right to payment as a service performed under a contractual arrangement. However, many pathology groups depend on the reassignment rule to bill for services performed by independent pathologists under a contractual arrangement with the group, but without the specter of abuse because pathology services are generally initiated by a request for a consultation from a referring physician. Because CMS' proposal to incorporate the billing rules for purchased diagnostic tests to all services performed under a contractual arrangement could adversely affect these longstanding and legitimate billing practices among pathologists and pathology groups, the CAP opposes the proposal. In its place the CAP recommends making the rules for purchased services compulsory for a physician or group that bills for a diagnostic test or interpretation that the physician or group ordered if the physician or group is not the supplier of the service and if the physician or the group sees the patient. This alternative will prevent abusive markup practices by referring physicians without unintended consequences against legitimate billing arrangements.

2. Impose an Anti-Markup Rule for Purchased Interpretations and Incorporate Program Safeguards for Purchased Diagnostic Tests

An important program safeguard is the limitation on the amount of payment that can be received by a billing physician or group when submitting a claim for payment for a diagnostic test furnished by an independent physician or supplier. This rule, known as the anti-markup rule, prohibits submitting a claim for payment for the technical component of a purchased test at a markup from the net charge for the test. CMS is soliciting comments on a payment limitation for purchased interpretations. The CAP supports CMS adopting a similar anti-markup rule for purchased interpretations.

In Publication 100-04, Section 20.2.4.2 of the Medicare Claims Processing Manual, CMS expresses its concern with "attempts may be made by the medical diagnostic community to adjust or establish arrangements which continue to allow physicians to profit from other's work." The potential for program abuse exists whether the referring physician or group is purchasing the technical or professional component of the test. Consequently, we recommend a similar test for purchased interpretations that would limit payment to the lower of (1) the net charge to the billing physician or group from the physician or supplier who performed the service, (2) the actual charge of the billing physician or group, or (3) the Physician Fee Schedule for the service had the performing physician or supplier billed directly.

An anti-markup rule removes any financial incentive for a referring physician to order unnecessary tests by eliminating the profit potential in billing for services performed by an outside supplier. Arrangements between physician groups with captive laboratories and pathologists to perform the interpretations may be negotiated on a per diem or other time basis, or on a specimen or per unit charge. Under a per diem or time-charge it is difficult to determine the "net charge" for the purchased service; consequently, it is recommended that CMS require as a condition for reassignment of the right to receive payment for a purchased interpretation that the parties define a net charge for the service. Under this condition, per diem or other time-based arrangements, which are more susceptible to markups, would not be permitted as an exception to the reassignment rule for purchased interpretations. However, a per diem and time-based arrangement may be appropriate as the basis for reassignment as a condition of employment. Because the net charge payment limitation for purchased tests has been an effective program safeguard, a similar requirement for purchased interpretations is likely to be the most effective mechanism to prevent markups. Also, by imposing a bright line test based on a net charge, contractors will have a greater ability to monitor and sanction abusive markup practices.

While the anti-markup rule is needed to prevent referring physicians from profiting from diagnostic testing services that they order, it should not restrain longstanding practice arrangements that do not raise similar concerns for abuse. The CAP also recommends an exception for purchased interpretations billed by an independent laboratory, similar to the existing exception for payment limitations for purchased tests under Section 40.2 of Chapter 16, Laboratory Services in the Medicare Claims Processing Manual. Pathology groups may also engage an independent pathologist to perform professional services for the group and should retain flexibility to structure the arrangement. Because neither the laboratory nor the pathologist is in a position to influence the referrals from ordering physicians, these billing arrangements are not susceptible to the same abuses.

Because of the fraud and abuse vulnerabilities for purchased services, the CAP proposes additional program safeguards. Specifically, the CAP recommends incorporating the program safeguards for services performed under a contractual arrangement into the conditions of payment for purchased diagnostic tests and interpretations. CMS imposes joint and several liability for any overpayments to parties to a contractual arrangement pursuant to which formal reassignment for the right to payment is made. Similarly, we recommend that purchasing physicians and medical groups, and physicians and suppliers of purchased services, would share joint and several liability for overpayments in contravention of the anti-markup rule. The physicians and suppliers of the purchased services would also be granted unrestricted access to billings submitted for the purchased services by the entity receiving reassigned payments. These changes ensure that both parties to the transaction are fiscally accountable to the Medicare program by making both parties liable for overpayments and ensuring that both parties have the ability to monitor for compliance with the billing rules.

3. Protect Against Sham Employment Arrangements

As discussed above, the CAP has learned that physician groups are using part-time employment arrangements to circumvent the program safeguards. Physician groups may engage

an independent pathologist on a part-time basis to perform testing services and rely on the reassignment exception for employment to avoid the billing restrictions for purchased interpretations. Because of this potential manipulation of the rules, the CAP recommends that CMS acknowledge in the regulations that part-time employment arrangements for furnishing diagnostic testing services may be considered the functional equivalent of a purchased service if the billing physician or group that ordered the test is a different medical specialty than the part-time employee who reassigns payment for diagnostic testing services. The CAP does not want to disrupt legitimate part-time employment arrangements among other providers and asks CMS to work with the diagnostic provider community to develop appropriate safeguards against circumvention schemes by referring physicians that order and bill for diagnostic tests performed by other providers. The CAP also asks CMS to implement an audit program with its contractors to investigate suspect employment arrangements between referring physicians and pathologists that circumvent the rules for purchased interpretations. CMS should instruct contractors to consider as suspect part-time arrangements that (1) do not have written agreements between the employer and employee, (2) do not have fixed hours of work, (3) require only "on-call" availability or define hours of work "as needed," and (4) compensate the employee for his or her services on a per unit or charge basis rather than based on intervals of time.

4. Change Physician Self-Referral Definitions to Prevent Abusive Independent Contractor and Employment Arrangements

The CAP shares CMS' concern about the existence of certain arrangements that are not within the intended purpose of our physician self-referral rules, including pod labs in which a "group practice [bills] Medicare for the entire pathology service, typically at a markup from what the group practice paid the pathologist for the professional service and the entity for its services." To stop abusive pod lab arrangements, the CAP supports CMS' proposed change to the definition of a "physician in the group practice" to ensure that the independent contractor arrangements comply with the Medicare reassignment rules, including the anti-markup rule for purchased interpretations, as proposed above.

However, while this and other proposed changes, as further described below, are designed specifically to prevent pod labs, pod labs represent only one type of pathology arrangement that is susceptible to abuse. As described above, another prevalent practice is for physician groups that order a significant amount of biopsies, including dermatologists, gastroenterologists and urologists, to develop captive laboratories to profit from their self-referrals for anatomic pathology services. Captive laboratories raise the same self-referral concerns as pod labs. In both the pod and captive lab models, the physician group controls the amount of pathology services being ordered and, hence, the revenues received by the physician group from self-referrals of diagnostic testing. The arrangements may result in program abuse, whether the group engages a pathologist as an independent contractor or part-time employee. While many of the proposed changes will likely prevent abuses under independent contractor arrangements, the rules will not deter abusive practices that rely on part-time employment to circumvent the rules. Therefore, in addition to addressing abusive independent contractor arrangements as are common in pod labs, the CAP urges CMS to recognize the exploitation of part-time employment arrangements and impose additional program safeguards.

While part-time employment may offer flexibility to pathologists, the arrangement is exploited when a physician group engages a pathologist to perform services on an intermittent basis. By engaging the pathologist as a part-time employee who will perform services for the group for only a few hours or during one day a week, the group practice can minimize costs associated with the service by accumulating patient specimens to be interpreted during a single office visit by the pathologist. These arrangements are even more susceptible to abuse when multiple physician groups share a single pathologist, with each group employing the pathologist on a fractional basis. While each arrangement may be structured to satisfy the requirements of the in-office ancillary services exception, we believe that the structure is not a bona fide employment arrangement, but is an artifice designed solely to avail an exemption in the rules and allow for a markup on a purchased service.

The purpose and intent of the physician self-referral law was to recognize exemptions only for group practices that function as an "integrated whole." Specifically, CMS noted the intent only to protect self-referrals among a group practice "if the group practice is a bona fide group practice and not a loose confederation of individual physicians bound together primarily to profit from [designated health service] referrals." *See* 66 Fed. Reg. at 895 (Jan. 4, 2001). The CAP believes that group practices that rely on part-time, intermittent employees to perform all of the designated health services for which the group practice is seeking an exception are not operating a fully integrated medical practice. In the case of captive laboratories, the group practice is not fully integrating the performance of the anatomic pathology services into the group by furnishing the services on an intermittent basis. To be fully integrated into the medical practice of the group, an ancillary service should be furnished by the group on a full-time basis, or at least as frequently as it provides physician services unrelated to the performance of the designated health services for which an exception to the ban on self-referrals is sought.

To deter abusive fractional time-sharing arrangements we propose a revision to the definition of a "member of the group." Specifically, the CAP recommends limiting the number of group practices that may count a pathologist as a "member of the group" at any one time. While there are some legitimate examples where a pathologist is a part-time employee and member of two group practices, we do not believe that as a practical matter a single pathologist can realistically be considered to be a bona fide member of more than two groups at the same time unless the services are being furnished on an intermittent basis and are not fully integrated into the medical practice of the group. The CAP also recommends that for purposes of meeting the unified business requirements for the in-office ancillary services exception that a group practice must furnish the designated health services, for which the exception is sought, on substantially the same terms as it provides unrelated physician services. This test should also prevent intermittent arrangements and ensure that the ancillary service is fully integrated and not a separate business enterprise.

5. Change Building Requirements for the Performance of In-Office Ancillary Services

The CAP supports CMS' proposal to eliminate pod labs by imposing a variety of restrictions on when group practices can bill for services it furnishes in a "centralized building." Many aspects of the "centralized building" exception were intended to prevent suspect space-sharing arrangements, and we agree with CMS that equipment-sharing arrangements pose the same concerns. The CAP supports CMS' proposed changes to require that a centralized building of a group practice must contain on a permanent basis all of the necessary equipment to perform substantially all of the services to be performed in the space by the group practice. To ensure the highest level of program integrity, we believe that "substantially all" should be defined as no less than 90% of the group's services. Any other services should be furnished under a contractual arrangement, subject to the anti-markup rule and other billing conditions.

CMS also proposes a minimum space requirement to qualify as a centralized building to deter pod labs that typically reside in a subdivided space, or a cubicle, that is part of a larger space that is shared by multiple physician groups. CMS states that the purpose of the square foot minimum "is to prevent abusive arrangements such as pod labs, while not disqualifying legitimate, stand-alone physician offices that are unusually small. While the CAP concurs with a minimum square footage requirement and believes that 350 square feet is a reasonable limitation; the CAP does not agree with CMS' proposal to tie a minimum square foot requirement with time-sharing arrangements.

CMS' is proposing that an office of a group practice in a centralized building must be at least 350 square feet, but would not apply "to space owned or rented in a building in which no more than three group practices own or lease space in the "same building," as defined in §411.351 (that is, in a building with the same street address) and share the same "physician in the group practice" (as defined in §411.351)." This 3-prong test for (1) square footage, (2) same building with multiple groups, and (3) personnel sharing, prevents a typical pod lab arrangement as described by CMS in the NPRM but may not prevent other types of abusive arrangements. To prevent a greater number of abusive referral arrangements, the CAP proposes adopting the minimum square footage requirement as a separate test for qualifying as a centralized building. An exception could be created for "stand-alone physician offices that are unusually small." The exception should be based on the nature of the designated health services provided by the group practice at the centralized building. A legitimate stand-alone physician office of a group practice should be an office at which the group practice furnishes substantially all of the same services as the group practice furnishes at an office at which the group provides physician-patient encounters.

CMS also announced its consideration of a requirement for group practices to engage a non-physician employee or independent contractor who will perform designated health services for the group for at least 35 hours per week. The CAP supports this requirement and also believes that it should apply whether the services are furnished in a location of the group practice under either the "same building" or a "centralized building" option. If a group practice could not satisfy the personnel standards, the group would still have the ability to furnish the services as a purchased diagnostic testing service, subject to the anti-markup rule and other program safeguards.

CMS is also asking for comments on whether a group practice should be allowed to maintain a "centralized building" in a different State from an office at which the group provides physician-patient encounters, and whether space in a different State must be located within a maximum mileage limitation. The CAP believes that a group practice has no legitimate purpose to operate an office at a location that is greater than 25 miles from any other medical office of the group solely to furnish pathology services, whether the centralized building is located in the same State or a different State(s). CAP believes that a 25-mile limitation will comport with typical and reasonable distances in the contemporaneous practice of medicine and would still enable a group to provide adequate supervision and control over the satellite location.

6. Prevent Self-Referral Abuses Through Restrictions on Profit Sharing

As noted above, the anti-markup rule under Medicare reassignment policies prevents abuse by removing the ability of a physician to profit from their self-referrals for services performed by another physician. The ability of physician groups to share in the profits from the furnishing of anatomic pathology services by a pathologist under the in-office ancillary services exception presents the same financial conflict of interest. To remove the conflict, the CAP believes that there must be a restriction on profit sharing in the revenues from anatomic pathology services.

In comments to the final rule for the physician self-referral law, CMS noted that the law only imposes the restrictions on financial relationships and does not regulate the delivery of services. Specifically:

> "The law only imposes restrictions on a physician who makes a referral for a designated health service if he or she has a financial relationship with the ancillary services provider, such as an employment agreement, an office space lease, or an ownership interest. Depending on the structure of the financial relationship, the physician may be able to profit from referring ancillary services, thereby creating a risk that his or her referrals may be motivated, in part, by personal financial considerations... However, nothing in the law prevents physicians from making available convenient ancillary services when the physician has no financial interest in the provision of the services. For example, a physician may arrange for a diagnostic services provider to perform diagnostic tests in the physician's office for which the diagnostic services provider bills." *See* 66 Fed. Reg. 861-862 (Jan. 4, 2001).

A restriction on profit sharing from the revenue for anatomic pathology services strikes the policy balance to constrain potential abuses from financial incentives from the actual delivery of ancillary services for the convenience of patients.

The CAP proposes a 2-prong test that would prevent a physician in a group practice that did not personally perform any of the anatomic pathology services billed by the group from sharing in the revenues if (1) the members of the group belonging to one medical specialty account for at least 75% of the revenues of the group, and (2) at least 75% of the referrals for the

anatomic pathology services involve referrals from the members of the group. The first prong directs the restriction to a single specialty group practice that incorporates pathology as the only other specialty from profiting from their self-referrals; the intent is not to proscribe multidisciplinary practices that offer truly integrated models of patient care. The second prong focuses the restriction on captive laboratories that are more susceptible to abuse because of direct correlation between profit and the group's self-referrals. The CAP proposes making this restriction on profit-sharing specific to anatomic pathology services to avoid any unintended consequences for other diagnostic specialties. The critical issue under the physician self-referral law is that clinical decisions should be free of any financial conflict of interest. The CAP believes that inappropriate financial incentives should be eliminated, so that the clinical decision-making process remains untainted by profit motivation, which is in the best interest of beneficiaries and of program integrity.

7. Exclude Anatomic Pathology from the In-Office Ancillary Services Exception

Pod labs and other abusive referral arrangements discussed above are the result of physician groups structuring their practices around the technical requirements of the in-office ancillary services exception to exploit the ambiguities and retain the revenue from their self-referrals. Even as CMS attempts to close the ambiguities to deter pod labs, physician groups are converting their practice structures to take advantage of other loopholes in the rules. No matter the technical structure of the practice, the intent by physician groups is to create a profit center from anatomic pathology services "that are functionally nothing more than self-referred [designated health services] enterprises," which CMS specifically sought to prevent. *See* 66 Fed. Reg. 889 (Jan. 4, 2001). For this reason CAP supports exclusion of anatomic pathology from protection under the in-office ancillary services exception.

A categorical exclusion would prevent physicians from having a financial interest in the referrals for the excluded services but would not prevent physicians or group practices from furnishing the services for their patients as a purchased service under the program integrity safeguards or under other available statutory exceptions. The CAP believes that the potential for abuse is prevalent only for certain specialty physicians that order anatomic pathology services for the biopsies and specimens collected from their patients but not for multidisciplinary practices that operate under a clinic model offering a wide range of clinical services. We ask CMS to work with the CAP and other members of the diagnostic provider community to develop an exclusion from the in-office ancillary service exception with appropriate exceptions for multidisciplinary practices but that will bar referring physicians from profiting from their self-referrals for anatomic pathology services.

C. Summary of CAP Comments

1. Stop the Use of the Reassignment Rules for Services Performed Under a Contractual Arrangement to Circumvent the Rules for Purchased Diagnostic Tests and Interpretations

The CAP does not support CMS' proposal to incorporate the program safeguards under §414.50 for purchased tests and interpretations into §424.80(d)(2) for reassignment for services performed under a contractual arrangement but does recommend the following changes:

- Clarify under §424.80(d)(2) that reassignment of payment for diagnostic testing services is permitted under this exception if neither the billing nor the performing physician or group ordered the test or sees the patient.

- Clarify under §414.50 that payment for a diagnostic test or interpretation is subject to the payment conditions whether or not the services were performed under a contractual arrangement if the billing physician or group also ordered the test and sees the patient.

- Amend §414.50 to require as a condition for physician billing of a purchased diagnostic test interpretation that (i) the test is ordered by a physician or group that is independent of the person or entity performing the technical component of the test, and also of the physician or medical group performing the interpretation, (ii) the physician or group performing the interpretation does not see the patient, and (iii) the purchaser performs the technical component of the test.

2. Impose an Anti-Markup Rule for Purchased Interpretations and Incorporate Additional Program Safeguards

The CAP proposes amending §414.50 to apply the anti-markup rule to both the technical and professional components of a purchased diagnostic test and to incorporate additional program safeguards as follows:

> (a) General rule. For services covered under section 1861(s)(3) of the Act and paid for under this part 414 subpart A, if a physician bills for a diagnostic test or professional interpretation performed by an outside supplier, the payment to the physician less the applicable deductibles and coinsurance may not exceed the lowest of the following amounts:
>
> (1) The supplier's net charge to the physician.
>
> (2) The physician's actual charge.
>
> (3) The fee schedule amount for the test that would be allowed if the supplier billed directly.
>
> (b) Restriction on payment. The physician must identify the supplier and indicate the supplier's net charge for the purchased test or interpretation. If the physician fails to provide this information, CMS makes no payment to the physician and the physician may not bill the beneficiary.
>
> (c) Conditions and limitations. (1) Liability of the parties. A physician that receives payment under paragraph (a) and the supplier that otherwise receives payment are jointly and severally responsible for any Medicare overpayment. (2) Access to records. The supplier furnishing the service has unrestricted access to claims submitted by a physician for services provided by that supplier.

3. Protect Against Sham Employment Arrangements

The CAP asks CMS to instruct contractors to monitor for and investigate suspect part-time employment arrangements. In Publication 100-04, under Section 30.2.6, Payment to Employer of Physician – Carrier Claims Only, carriers should be instructed to investigate suspect arrangements for the reassignment of payment for diagnostic testing services performed by a part-time employee if the employee, as identified on the 855-R for the billing physician or group, is performing a pathology service and the billing physician or group is identified as a different medical specialty. Reassignment of payment for a diagnostic testing service ordered by the billing physician or group may be considered suspect if (i) there is no written agreement between the employer and employee, (ii) the employment agreement does not set fixed hours of work, (iii) the employment agreement only requires the physician to be available "on-call" or "as needed," and (iv) the employment agreement sets compensation on a per unit or charge basis. For suspect part-time employment agreements, the carrier should treat the claim as a claim for payment for a purchased diagnostic test and apply the requirements under Sections 30.2.9 and 30.2.9.1, and 30.30.7 for payment limitations.

4. Change Physician Self-Referral Definitions to Prevent Abusive Independent Contractor and Employment Arrangements

The CAP supports changes at §411.351 to the definition of a "physician in the group" as proposed by CMS and proposes the following additional definition changes:

> *Member of the group or member of a group practice* ... A physician providing anatomic pathology services for a group practice cannot be considered a physician employee of more than two group practices at any one time for purposes of paragraphs (a) and (b) of Section 411.354.
>
> *Unified business.* (1) the group practice must be a unified business having at least the following features ... (iii) DHS furnished under the group, if performed by members of the group, must be performed on substantially the same terms as physician services unrelated to the DHS are furnished by the group (including by maintenance of substantially similar operating hours for the DHS services as provided by the group for unrelated physician services).

5. Change Building Requirements for the Performance of In-Office Ancillary Services

The CAP also supports changes to the building requirements for in-office ancillary services under §411.355 to require:

- A group practice to maintain a minimum space of 350 square feet for the furnishing of DHS in the same building or a centralized building.

- A group practice to maintain in the space on a permanent basis the necessary equipment to be used exclusively by the group practice to perform substantially all (meaning at least 90%) of the DHS that are performed in the space by the group.
- A group practice to employ a non-physician employee or independent contractor who will perform DHS in the space exclusively for the group for at least 35 hours per week.

- A "centralized building" may not be located more than 25 miles from an office of the group practice that meets the criteria of §411.355(b)(2)(i).

6. Prevent Self-Referral Abuses Through Restrictions on Profit Sharing

The CAP recommends an amendment to §411.352(i) to restrict profit-sharing in profits derived from anatomic pathology services as follows:

> *Special rule for productivity bonuses and profit shares. ... (5)* A physician in a group practice may not be paid a share of the group's profits derived from anatomic pathology services payable by Medicare or Medicaid unless the physician personally performed the services (including services "incident to" those personally performed services as defined in §411.351) if the following conditions apply: (i) the members of the group practice belonging to one medical specialty account for at least 75% of the revenues of the group practice, and (ii) at least 75% of the anatomic pathology services furnished by the group are referrals from the members of the group.

7. Exclusion of Anatomic Pathology from In-Office Ancillary Services Exception

CAP supports exclusion of anatomic pathology services from the description of in-office ancillary services under paragraph (b) of Section 411.355.

The College of American Pathologists is pleased to have the opportunity to comment on these regulations and appreciates your consideration of these comments. Any questions regarding proposed changes should be directed to Donna Meyer at 202-354-7112 (dmeyer@cap.org).

Sincerely,

Thomas Sodeman MD FCAP

Thomas M. Sodeman, MD, FCAP
President

Cc: Lisa M. Ohrin, JD, Centers for Medicare and Medicaid Services
Don Romano, Centers for Medicare and Medicaid Services
David Walczak, Centers for Medicare and Medicaid Services

179

The National Aneurysm Alliance
1501 K Street, NW
Washington, DC 20005

October 10, 2006

Mark McClellan, M.D., Ph.D.
Administrator
Centers for Medicare and Medicaid Services
Hubert H. Humphrey Building, Room 445-G
200 Independence Avenue, SW
Washington, DC 20201

RE: CMS-1321-P: Medicare Program Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment Under Part B

Dear Dr. McClellan:

The National Aneurysm Alliance ("NAA") is pleased to submit comments on the Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2007 and Other Changes to Payment Under Part B Proposed Rule (the "Proposed Rule").[1] We commend the Centers for Medicare and Medicaid Services ("CMS") for proposing to add to Medicare a benefit for abdominal aortic aneurysm ("AAA") ultrasound screenings.

The NAA is a coalition of medical professional organizations, foundations, patient advocates, medical technology manufacturers, and individuals dedicated to reducing the number of needless deaths that occur each year in America as a result of ruptured aortic aneurysms. Last year, we advocated for bipartisan legislation to provide for a one-time ultrasound screening of individuals at high risk for AAA, which became law as part of the Deficit Reduction Act of 2005 ("DRA").[2] We now support CMS' implementation efforts. Our comments focus on the proposed reimbursement for this benefit, the additional steps necessary to ensure its successful implementation, the scope of the benefit's coverage policies and other technical issues.

We support the proposed reimbursement of this benefit as the Agency has appropriately measured the resources and work intensity associated with the proposed code. However, adequate reimbursement is only one component of a successful implementation process. We urge CMS to embark on a targeted educational campaign to inform physicians and beneficiaries about the existence of this new benefit. Absent robust education efforts, the participation rates for this benefit will be dangerously low.

---

[1] 71 Fed. Reg. 48,982 (Aug. 22, 2006).
[2] Pub. L. No. 109-171 (2006).

I. Background on Abdominal Aortic Aneurysms

Every year more than 15,000 people die from ruptured abdominal aortic aneurysms (AAA)—a largely asymptomatic disease that can be prevented through a simple ultrasound test. The SAAAVE Act established a one-time ultrasound screening benefit for those who were most at risk of AAA.

AAA is one of the least recognized killers in America. Rupture typically occurs without warning, and most victims die before they reach the hospital for treatment. Men and women, age 65 and older, especially those with cardiovascular risk factors such as smoking and/or a family history, are at an increased risk of developing this disorder.

AAAs occurs in the aorta, the body's largest blood vessel. The walls of the aorta weaken, and, over a period of years, begin to enlarge, where they may eventually burst and cause potentially fatal internal bleeding.

The American Heart Association estimates that approximately 15,000 people die from ruptured aortic aneurysms annually (AHA, *2003 Heart and Stroke Statistical Update*). However, because death is so sudden, AAA is often misdiagnosed as a heart attack or stroke. It is believed that many thousands of deaths from ruptured AAAs go unreported each year.

II. Reimbursement

CMS proposes to pay for ultrasound screening for AAAs through the use of a new Healthcare Common Procedure Coding System ("HCPCS") code, GXXXX (Ultrasound, B-scan and/or real time with image documentation; for abdominal aortic aneurysm (AAA) screening).[3] The payment for this service will be established at the same level as Current Procedural Terminology ("CPT") code 76775 (Ultrasound, retroperitoneal (*e.g.*, renal, aorta, nodes), B-scan and/or real time with image documentation; limited).[4]

Given that CPT code 76775 describes an ultrasound service when it is provided as a diagnostic test, the NAA agrees that the level of service associated with the new AAA benefit will likely reflect comparable resources and work intensity to CPT code 76775. However, we note that some additional staffing time may be required at the outset of this new benefit to confirm that patients possess the identified risk factors that are a prerequisite to receiving reimbursement under this new benefit.

[3] 71 Fed. Reg. at 48,999.
[4] *Id.*

III. Additional Steps for Successful Implementation

To complement CMS' reimbursement proposal, the agency should consider taking several specific actions to facilitate its implementation in 2007. First, the NAA requests that CMS undertake a national education campaign to ensure that sufficient general practitioners and clinicians administering the Welcome to Medicare Benefit are aware of the AAA benefit. The Agency should ensure that at least fifty percent of eligible beneficiaries receive access to this service within two years and that physician awareness of this benefit is almost universal.

Early diagnosis and treatment are the keys to preventing AAA rupture and the unnecessary resulting deaths. Following publication of a final rule, we encourage CMS to revise Section 80 of Chapter 18 of the Medicare Claims Processing Manual to discuss this new benefit in the section on initial preventive physical examination ("IPPE") and to add a new section titled, "Ultrasound Screening for Abdominal Aortic Aneurysms." We hope that CMS will encourage physicians to identify AAA risk factors as part of their screening "checklist" during the IPPE. Specifically, CMS should promote the inclusion of several questions related to risk factors for AAA in the questionnaire used by a physician when conducting an IPPE. Furthermore, we encourage CMS to incorporate the collection of information about AAA risk factors into any quality or data requirement that CMS creates regarding the IPPE.

The NAA also looks forward to inclusion of the AAA screening benefit in the "Welcome to Medicare" handbook as well as references to this benefit in CMS press releases and related public statements. We would be pleased to assist in any of these efforts, which will supplement our Coalition's ongoing national outreach program.

IV. Definition of "Eligible Beneficiary"

The NAA believes the proposed definition of "eligible beneficiary" is consistent with Congressional intent.[5] The definition includes individuals who manifest "other risk factors that are described in a benefit category recommended by the [United States Preventative Services Task Force ("USPSTF")] regarding an AAA that has been determined by the Secretary through the NCD process".[6]

---

[5] In February of 2005, the USPSTF recommended that screenings be performed in an accredited facility with credentialed technologists. *See* U.S. PREVENTIVE SERVICES TASK FORCE, SCREENING FOR ABDOMINAL AORTIC ANEURYSM: RECOMMENDATION STATEMENT, AHRQ PUBLICATION No. 05-0569-A, (2005), *available at* http://www.ahrq.gov/clinic/ uspstf05/aaascr/aaars.htm. The NAA supports this recommendation and believes CMS also possesses the regulatory authority to require accreditation and/or credentialing for providers performing the ultrasound screening. We invite CMS to consider revising the definition of "ultrasound screening for an Abdominal Aortic Aneurysm" to include new provisions which will improve the quality of the ultrasound screenings provided.

[6] 71 Fed. Reg. at 48,998.

We hope that this definition will facilitate additional research and coverage in the future as medicine and technology continue to evolve. Moreover, as our understanding of AAAs improves, we would welcome the opportunity to bring forth additional evidence to support coverage for other population cohorts who may be at significant risk for AAA. We are also open to establishing new regulatory pathways that will facilitate appropriate utilization of this screening benefit and the use of new screening technologies.

The NAA notes that part of the definition of "eligible beneficiary" requires beneficiaries to receive referrals for ultrasound screenings as a result of IPPEs. However, the Proposed Rule does not provide additional guidance on the meaning of "referral."[7] Based upon its customary usage, we believe that the term "referral" should mean "a direction to receive care from a qualified provider." This referral may be provided orally or in written form during or after the eligible beneficiary receives his/her Welcome to Medicare physical examination.

We would be concerned if CMS used the word "referral" to create an onerous or restrictive coverage process. A burdensome referral process would undoubtedly limit the number of referrals for screenings and fail to serve the best interest of Medicare beneficiaries. Equally important, it would contravene the intent of Congress which sought to facilitate a smooth implementation process and beneficiary access.

V. Conclusion

The NAA appreciates CMS' thorough review of our comments regarding the proposed implementation of ultrasound screening for AAA. We believe the proposed level of reimbursement is appropriate and well-reasoned. At the same time, it is essential for CMS to continue educating physicians and beneficiaries about the existence of this new benefit.

The AAA benefit possesses the ability to save lives and to improve the health of Medicare beneficiaries if it is implemented correctly. Thank you for your consideration of this submission. We would be pleased to follow up with you on any of your implementation efforts.

Respectfully submitted,

Robert Zwolak, M.D.

Chairman, National Aneurysm Alliance

[7] *Id.*