



## Memorandum

Date . SEP 4 1996 .  
From June Gibbs Brown  
Inspector General *June G Brown*  
Subject Review of Pharmacy Acquisition Costs for Drugs Reimbursed Under the Medicaid Prescription Drug Program of the North Carolina Department of Human Resources (A-06-95 -00071)  
To

Bruce C. Vladeck  
Administrator  
Health Care Financing Administration

Attached for your information and use is our final report entitled, "Review of Pharmacy Acquisition Costs for Drugs Reimbursed Under the Medicaid Prescription Drug Program of the North Carolina Department of Human Resources." This review was conducted as part of a nationwide audit of pharmacy drug acquisition costs at the Health Care Financing Administration's request. Most States reimburse pharmacies for Medicaid prescriptions using a formula which generally discounts the average wholesale price (AWP) by 10.5 percent. The objective of our review was focused on developing an estimate of the difference between the actual acquisition costs of drugs of pharmacies and AWP for both brand name and generic drugs.

The North Carolina Department of Human Resources (State Agency) was 1 of 11 States randomly selected as part of the nationwide review. North Carolina reported drug expenditures of \$222.5 million in Calendar Year 1994.

Through statistical sampling, we obtained pricing information from 33 North Carolina pharmacies. We obtained 1,109 invoice prices for brand name drugs, and 704 invoice prices for generic drugs. The overall estimate of the extent that AWP exceeded pharmacy purchase invoice prices was 16.9 percent for brand name drugs and 45.2 percent for generic drugs. The national estimates are 18.3 percent and 42.5 percent, respectively. The estimates combine the results for four categories of pharmacies including rural-chain, rural-independent, urban-chain, and urban-independent. The estimates exclude the results obtained from non-traditional pharmacies (nursing home pharmacies, hospital pharmacies, home IV, etc.) because such pharmacies purchase drugs at substantially greater discounts than retail pharmacies, and including them would have inappropriately inflated our percentages.

Page 2- Bruce C. Vladeck

We are recommending that the State Agency consider the results of this review as a factor in any **future** changes to pharmacy reimbursement for Medicaid drugs.

In response to our draft report, the Secretary of the State Agency stated that the method used to determine the sample and calculation of the estimated acquisition cost for drugs is similar to a method used by the State Agency. The Secretary believes this report will be of great use in the State Agency's next review of the drug program. The State Agency's comments are incorporated in our final report.

We welcome any comments you **have** on this North Carolina State report. If you have any questions, call me or have your staff contact George M. Reeb, Assistant Inspector **General** for Health Care Financing Audits, at (410) 786-7104.

To facilitate identification, please refer to Common Identification Number A-06-95 -00071 .

Attachment

Department of Health and Human Services

**OFFICE OF  
INSPECTOR GENERAL**

**REVIEW OF  
PHARMACY ACQUISITION COSTS FOR  
DRUGS REIMBURSED UNDER THE  
MEDICAID PRESCRIPTION DRUG PROGRAM  
OF THE  
NORTH CAROLINA  
DEPARTMENT OF HUMAN SERVICES**



JUNE **GIBBS BROWN**  
**Inspector General**

SEPTEMBER 1996  
A-06-05-00071

## SUMMARY

**A**t the request of the Health Care Financing Administration (HCFA), the Office of Inspector General (OIG) conducted a nationwide review of pharmacy acquisition costs for drugs reimbursed under the Medicaid prescription drug program. Since most States reimburse pharmacies for Medicaid prescriptions using a formula which discounts the average wholesale price (AWP), the objective of our review was to develop an estimate of the difference between the actual acquisition costs of drugs of the pharmacies and AWP for brand name and generic drugs.

To accomplish our objective, we selected a random sample of 11 States from a universe of 48 States and the District of Columbia. Arizona was excluded from the universe of States because the Medicaid drug program is a demonstration project using prepaid cavitation financing and Tennessee was excluded because of a waiver received to implement a statewide managed care program for Medicaid. North Carolina was one of the sample States selected, as well as California, Delaware, District of Columbia, Florida, Maryland, Missouri, Montana, Nebraska, New Jersey, and Virginia.

Additionally, we selected a sample of Medicaid pharmacy providers from each State and obtained invoices of their drug purchases. The pharmacies were selected from each of five categories--rural-chain, rural-independent, urban-chain, urban-independent and non-traditional pharmacies (nursing home pharmacies, hospital pharmacies, etc.). We included the non-traditional category so as to be able to exclude those pharmacies from our overall estimates. We believed such pharmacies purchase drugs at substantially greater discounts than retail pharmacies, and including them would have inflated our percentages.

We compared each invoice drug price to AWP for that drug and calculated the percentage, if any, by which AWP exceeded the invoice price. We then projected those differences to the universe of pharmacies in each category for each State and calculated an overall estimate for each State. Additionally, we projected the results from each State to estimate the nationwide difference between AWP and invoice price for each category.

In North Carolina, we obtained pricing information from 33 pharmacies. Specifically, we obtained 1,109 invoice prices for brand name drugs, and 704 invoice prices for generic drugs. For North Carolina, the overall estimate of the extent that AWP exceeded invoice prices was 16.9 percent for brand name drugs and 45.2 percent for generic drugs. The national estimates are 18.3 percent and 42.5 percent, respectively. The estimates combine the results for four categories of pharmacies including rural-chain, rural-independent, urban-chain and urban-independent and exclude the results obtained from non-traditional pharmacies.

We are recommending that the North Carolina Department of Human Resources (State Agency) consider the results of this review as a factor in any **future** changes to pharmacy reimbursement for Medicaid drugs. We will share the information with HCFA from all 11 States in a consolidation report for their use in evaluating the overall Medicaid drug program.

The Secretary of the State Agency responded to our draft report in a letter dated, July 1, 1996. The Secretary stated the State Agency had used a similar methodology in previous reviews of the drug program and that our report would be of great use in the next review of the drug program. The full text of the Secretary's comments are included in Appendix 4.

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## INTRODUCTION

At the request of HCFA, OIG, Office of Audit Services (OAS) conducted a review of pharmacy acquisition costs for drugs reimbursed under the Medicaid prescription drug program of the North Carolina Department of Human Resources (State Agency). The objective of our review was to develop an estimate of the difference between the actual acquisition costs of drugs and AWP. This review was conducted as a part of a nationwide review of pharmacy acquisition costs. North Carolina was 1 of 11 States randomly selected as part of the nationwide review.

### **BACKGROUND**

Medicaid regulations provide for the reimbursement of drugs using two methods. If a drug is a multiple source (generic) drug, then reimbursement is based on the lower of the pharmacist's usual and customary charge to the general public or an upper limit amount plus a dispensing fee. The Federal upper limit amounts are established by HCFA. If a drug is a single source (brand name) drug, or a generic drug for which an upper limit amount has not been established, then the reimbursement is the lower of the pharmacist's usual and customary charge to the general public or the estimated acquisition cost (EAC) plus a reasonable dispensing fee. The State agencies are responsible for determining the EAC and the dispensing fee.

The EAC for most States is calculated by using AWP for a drug less some percentage. The AWP is the price assigned to the drug by its manufacturer and is listed in either the *Red Book*, *Medispan* or the *Blue Book*--publications universally used in the pharmaceutical industry. Prior to 1984, most States used 100 percent of AWP for reimbursement of acquisition costs. However, OIG issued a report in 1984 which stated that, on average, pharmacies purchased drugs for 15.9 percent below AWP. In 1989, OIG issued a follow-up report which concluded that pharmacies were purchasing drugs at discounts of 15.5 percent below AWP. Both the 1984 and 1989 reports combined brand name and generic drugs in calculating the percentage discounts and included a comparison of 3,469 and 4,723 purchases, respectively.

In 1989, HCFA issued a revision to the State Medicaid Manual which pointed out that a preponderance of evidence demonstrated that AWP overstated prices that pharmacies actually paid for drugs by as much as 10 to 20 percent. The Manual further provided that, absent valid documentation to the contrary, it would not be acceptable for a State to make reimbursements using AWP without a significant discount.

In November 1990, the Omnibus Budget Reconciliation Act of 1990 was passed which placed a 4-year moratorium on changes to States' reimbursement policies. The **moratorium** expired on December 31, 1994 and HCFA requested that we, once again, determine the difference between AWP and actual pharmacy acquisition cost.

The State Agency reported drug expenditures of \$222.5 million in Calendar Year (CY) 1994.

## **SCOPE**

Our review was performed in accordance with generally accepted government auditing standards. The objective of our review was to develop an estimate of the difference between AWP and the actual invoice prices of both brand name and generic prescription drugs to Medicaid pharmacy providers. Our objective did not require that we **identify** or review any internal control systems.

Our review was limited to ingredient acquisition costs and did not address other areas such as: the effect of Medicaid business as a contribution to other store sales; the cost to provide professional services other than dispensing a prescription such as therapeutic interventions, patient education, and physician consultation; and the cost of dispensing which includes costs for computers, multi-part labels, containers, **technical** staff, transaction fees, Medicaid specific administrative costs, and general overhead. We also did not take into consideration the effect of Federal upper limit amounts on generic drug reimbursements or usual and customary charge limitations. We plan to evaluate the effect of the Federal upper limit amounts on generic drug reimbursements in a subsequent review.

We obtained a listing of all Medicaid pharmacy providers from the State Agency. The State Agency was responsible for **classifying** each pharmacy as chain, independent or non-traditional. For purposes of this review, a chain was defined as four or more pharmacies with common ownership. We determined whether each pharmacy was rural or urban by comparing the county location for each pharmacy to a December 31, 1992 listing of metropolitan areas and their components. We selected a stratified random sample of 60 pharmacies with 12 pharmacies selected from each of 5 strata--rural-chain, rural-independent, urban-chain, urban-independent, and non-traditional (nursing home pharmacies, hospital pharmacies, home IV, etc.). We included the non-traditional category so as to be able to exclude those pharmacies from our estimates. We believed that such pharmacies are able to purchase drugs at substantially greater discounts than a retail pharmacy and would inflate our estimate.

We requested, from each pharmacy selected, the largest invoice from each different source of supply for a specified month in CY 1994. We identified the sources of supply as wholesalers, chain warehouse distribution centers, generic distributors, and direct manufacturer purchases. Each pharmacy was initially assigned a month **from** January through September in order to provide a cross-section of this 9-month time period. However, we permitted some pharmacies to provide invoices from November as invoices were not available from the earlier period.

We reviewed every line item on the invoices supplied by the sample pharmacies to ensure that the invoices contained the information necessary for our review. We eliminated over-the-counter

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items. Some invoices did not include National Drug Codes (NDC), which were needed to obtain AWP for the drug. We attempted to obtain NDCS in those instances. We used the 1994 *Red Book*, a nationally recognized reference for drug product and pricing information, to obtain NDCS or **identify** over-the-counter items. One prominent wholesaler, whose invoices contained that wholesaler's item number rather than NDCS, provided us with a listing that converted their item number to an NDC. If we were unable to identify the NDC for a drug, we eliminated the drug. This was a common occurrence for generic drugs where there was no indication on the invoice as to the manufacturer of the drug.

We obtained a listing from HCFA that indicated whether a drug is a brand name or generic drug. We used that listing to **classify** each drug on the invoices as brand or generic. If a drug was not on the HCFA listing, we used the *Red Book* to determine whether the drug was brand or generic. Additionally, we obtained drug expenditure information from HCFA-64 Reports.

The State of Missouri provided us with a pricing file for the purpose of obtaining the AWP for each drug. We compared the invoice drug price to AWP for each drug and calculated the percentage, if any, by which AWP exceeded the invoice price. If a drug from an invoice was not on the pricing file we eliminated that drug.

An initial meeting was held in Richmond, Virginia on August 30-31, 1994, with Medicaid pharmacy representatives **from** the sample States. At this meeting, we presented a methodology for performing the review and the methodology was refined with input from the State representatives. At a follow-up meeting held in Richmond, Virginia, on September 27-28, 1995, we presented the results of our review with the sample States.

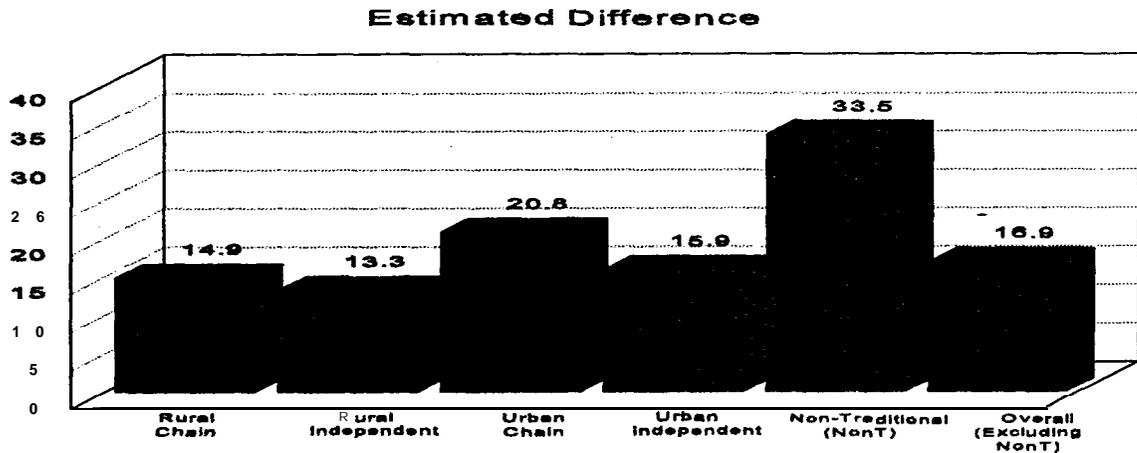
We used OAS statistical computer software to calculate all estimates as well as to generate all random numbers. We did not independently verify any information obtained from third party sources. Our review was conducted by our Little Rock, Arkansas OAS field office with assistance from our OAS field offices in Baton Rouge, Louisiana, and Austin, Texas from September 1994 to September 1995.

## FINDINGS AND RECOMMENDATIONS

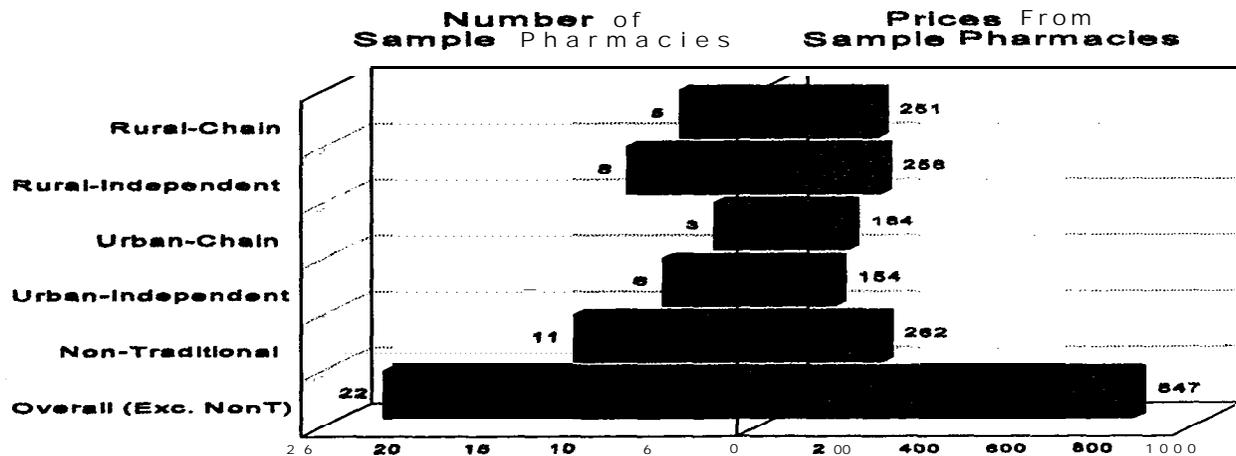
### ***BRAND NAME DRUGS***

We estimate that AWP exceeded invoice prices for *brand name drugs* by 16.9 percent. The estimate combined all pharmacy categories except non-traditional pharmacies and was based on the comparison to AWP of 847 invoice prices received from 22 pharmacies. The standard deviation for this estimate was 1.25 percent (see Appendix 2).

The estimates that AWP exceeded invoice prices by for *brand name drugs* are summarized in the following table:



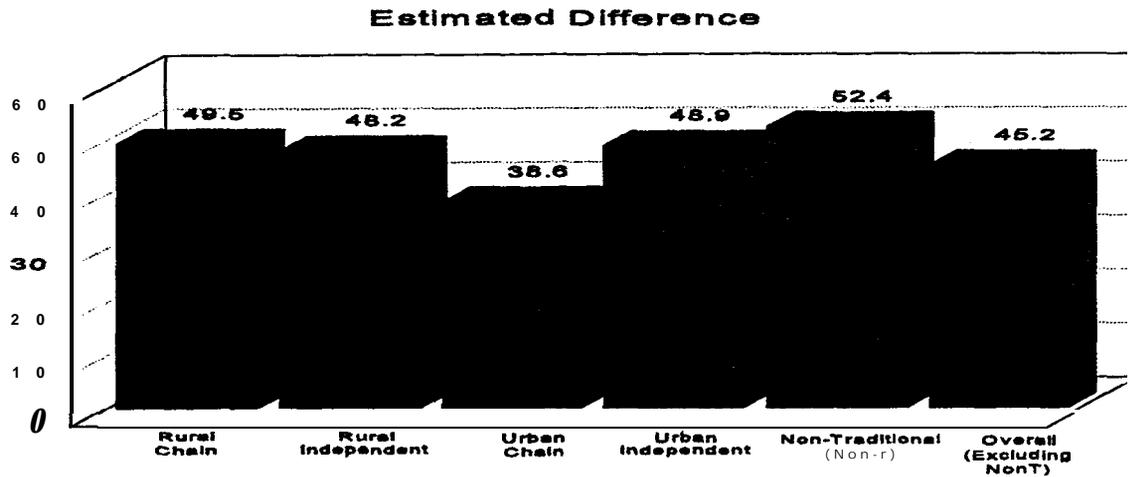
The following table shows the number of pharmacies sampled and the number of prices reviewed by individual category for *brand name drugs*.



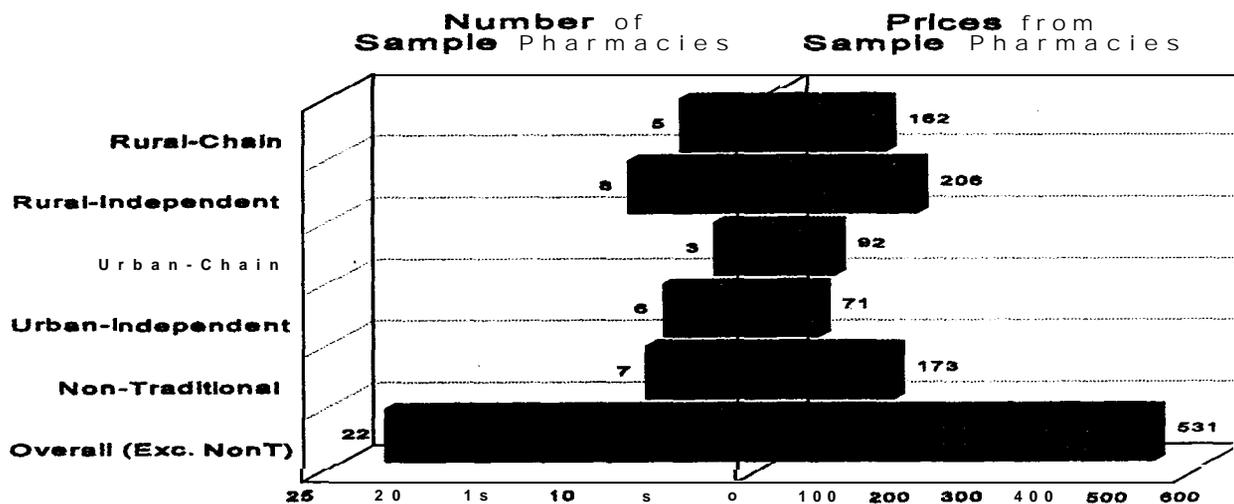
## GENERIC DRUGS

We estimate that AWP exceeded invoice prices for *generic drugs* by 45.2 percent. Once again the estimate combined all pharmacy categories except non-traditional pharmacies. The estimate was based on the comparison to AWP of 531 invoice prices received from 22 pharmacies. The standard deviation for this estimate was 2.00 percent (see Appendix 2).

The estimates that AWP exceeded invoice prices for *generic drugs* are summarized by individual categories in the following table:



The following table shows the number of pharmacies sampled and the number of prices reviewed by individual category for the *generic drugs*.



## CONCLUSIONS AND RECOMMENDATION

Based on our review, we have determined that there is a significant difference between AWP and pharmacy acquisition costs. The difference between AWP and pharmacy acquisition costs is significantly greater for generic drugs than for brand name drugs. In general, State representatives believed that the review supported current State practices to establish pharmacy reimbursement for ingredient cost at levels below AWP.

We recognize that acquisition cost is just one factor in pharmacy reimbursement policy and that any change to that policy should also consider the other factors discussed in the Scope section of our report. Additionally, the effect of Federal upper limit amounts on generic drug reimbursements or usual and customary charge limitations should be taken into consideration. However, a change in any of the factors affecting pharmacy reimbursement could have a significant impact on expenditures because of the size of the program (\$222.5 million) in North Carolina. We believe that the difference between AWP and pharmacy acquisition costs as determined by our review is significant enough to warrant consideration by the State in any evaluation of the drug program. Therefore, we recommend that the State Agency consider the results of this review in determining any **future** changes to pharmacy reimbursement for Medicaid drugs.

### ***STATE AGENCY'S COMMENTS***

The Secretary of the State Agency responded to our draft report in a letter dated, July 1, 1996. The Secretary stated the State Agency had used a similar methodology in previous reviews of the drug program and that our report would be of great use in the next review of the drug program. The full text of the Secretary's comments are included in Appendix 4.

# ***APPENDICES***

## ***SAMPLE DESCRIPTION***

### ***Sample Objectives:***

Develop an estimate of the extent that Average Wholesale Prices (AWP) exceed actual invoice prices to Medicaid pharmacies in North Carolina for brand name drugs and for generic drugs.

### ***Population:***

The sampling population was pharmacy providers participating in the Medicaid prescription drug program of the State Agency.

### ***Sampling Frame:***

The sampling frame was a listing of all pharmacy providers participating in the Medicaid prescription drug program.

### ***Sample Design:***

A sample of 12 pharmacies was randomly selected from each of 5 strata. The five strata of pharmacies were rural-chain, rural-independent, urban-chain, urban-independent, and non-traditional (nursing home pharmacies, hospital pharmacies, home IV, etc.). Each pharmacy was assigned a month from 1994 for which to provide invoices. All pharmacies were initially assigned a month from January through September in a method designed to provide a cross-section of the 9-month period. However, some pharmacies were permitted to submit invoices **from** November as invoices were not available for the month originally assigned. The largest invoice **from** each of four different sources of supply was requested. The sources of supply were identified as wholesalers, chain warehouse distribution centers, generic distributors, and direct manufacturer purchases. All invoice prices were compared to AWP.

### ***Sample Size:***

Twelve pharmacies were selected from each stratum for a total of 60 pharmacies.

### ***Source of Random Numbers:***

OAS statistical sampling software was used to generate the random numbers.

***Characteristics to be Measured:***

From our review of the pharmacy invoices, we calculated the percentage that AWP exceeded actual invoice prices for all drugs on the invoices submitted.

***Treatment of Missing Sample Items:***

No spare was substituted for a pharmacy that did not provide **information**. If a pharmacy did not send an invoice for a particular type of supplier, we assumed that the pharmacy did not purchase drugs from that type of supplier during the month assigned to the pharmacy.

***Estimation Methodology:***

We used OAS Statistical Software to project the percentage difference between AWP and actual invoice prices for each stratum, as well as an overall percentage difference. The overall percentage difference excluded the non-traditional pharmacies. The projections were done separately for brand name drugs and generics.

***Other Evidence:***

We obtained AWP from First DataBank.

**NORTH CAROLINA SAMPLE RESULTS  
BRAND NAME AND GENERIC DRUGS**

CATEGORY	SAMPLE UNIVERSE	SAMPLE SIZE	DRUG PRICES REVIEWED	POINT ESTIMATE	STANDARD DEVIATION	90 PERCENT CONFIDENCE LEVEL		
						LOWER LIMIT	UPPER LIMIT	
B R A N D	RURAL-CHAIN	379	4	251	14.9	6.82	9.91	19.85
	RURAL-INDEPENDENT	451	8	258	13.3	6.63	9.45	17.10
	URBAN-CHAIN	745	7	184	20.8	3.38	17.63	24.04
	URBAN-INDEPENDENT	502	6	154	15.9	7.36	40.94	20.76
	NON-TRADITIONAL	142	11	262	33.5	17.84	24.96	41.96
	OVERALL (EXCL. NON-TRAD)	2,077	22	847	16.9	1.25	14.84	18.97
G E N E R I C	RURAL-CHAIN	379	5	167	49.5	14.31	39.08	60.00
	RURAL-INDEPENDENT	451	8	206	48.2	7.72	43.70	52.60
	URBAN-CHAIN	745	7	97	38.6	4.40	34.43	42.77
	URBAN-INDEPENDENT	502	6	71	48.9	12.36	40.67	57.13
	NON-TRADITIONAL	142	11	173	52.4	7.88	47.59	57.15
	OVERALL (EXCL. NON-TRAD)	2,077	22	531	45.2	2.00	41.88	48.45

**NATIONWIDE SAMPLE RESULTS  
BRAND NAME AND GENERIC DRUGS**

	NATIONWIDE	SAMPLE UNIVERSE	SAMPLE SIZE	DRUG PRICES REVIEWED	POINT ESTIMATE	STANDARD ERROR	90 PERCENT CONFIDENCE LEVEL	
							LOWER LIMIT	UPPER LIMIT
B R A N D	RURAL-CHAIN	1,095	73	5,723	17.40	1.05	15.67	19.13
	RURAL-INDEPENDENT	1,499	78	3,043	16.39	1.07	14.63	18.15
	URBAN-CHAIN	8,194	73	7,198	18.45	0.52	17.60	19.31
	URBAN-INDEPENDENT	6,242	91	3,009	18.71	0.90	17.22	20.19
	NON-TRADITIONAL	2,026	66	1,762	2752	2.28	23.76	31.27
	OVERALL (EXCL. NON-TRAD)	17,030	315	18,973	18.30	0.60	17.21	19.38
G E N E R I C	RURAL-CHAIN	1,095	73	2,963	4751	1.63	44.82	50.20
	RURAL-INDEPENDENT	1,499	78	1,798	47.38	0.93	45.85	48.92
	URBAN-CHAIN	8,194	72	2,634	37.61	2.82	32.97	42.26
	URBAN-INDEPENDENT	6,242	91	1,680	46.72	2.44	42.70	50.73
	NON-TRADITIONAL	2,026	55	1,262	57.70	1.98	54.43	60.96
	OVERALL (EXCL. NON-TRAD)	17,030	314	9,075	42.45	0.90	40.97	43.93



North Carolina Department of Human Resources  
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James B. Hunt Jr., Governor

C. Robin Britt, Sr., Secretary

July 1, 1996

Ms. June Gibbs Brown  
Inspector General  
Department of Health & Human Services  
Cohen Building  
330 Independence Avenue, S.W.  
Washington, D.C. 20201

RE: Review of Pharmacy Acquisition  
Costs (Draft) A-06-95-00071

Dear Ms. Brown:

Thank you for the opportunity to review and comment on the above referenced **OIG** review. The draft has been reviewed by the appropriate staff within the Division of Medical Assistance (**DMA**), the state agency responsible for the Medicaid program.

The **DMA** staff have noted that the method used to determine the sample and calculation of the Estimated Acquisition Cost (**EAC**) is essentially the same as that used by **DMA** prior to the federal moratorium on States' drug program reimbursement policies. The **DMA review review** of 1990 identified an **EAC** that was approximately 15.5% below the Average Wholesale **Price (AWP)** for brand name drugs. Since the multiple source drug pricing is set by **HCFA** the **DMA** did not review those costs.

The States' Medicaid reimbursement policy for brand named drugs was established at **AWP - 10%**, recognizing that the reimbursement policy needed to be set at a level that permitted access by the Medicaid recipient to a pharmacy provider that is relatively convenient. Based upon a review of the North Carolina sample results obtained by you, the same pattern repeats. The point estimate for the Rural-Independent provider is at **AWP - 13.3%**. The statewide estimate of **AWP - 16.9%** would appear to be an excessive reduction when applied to all provider types.

We have recognized the problems that arise from balancing the appropriate **EAC** against assuring adequate access to providers by the recipient. Towards that end our reimbursement policy was crafted to permit payment of brand named drugs at the lower of the providers billed amount compared to the maximum of the allowed **AWP - 10%** plus a dispensing fee. This policy has consistently generated an average payment for brand named drugs that is below the allowed amount.

Ms. June Gibbs Brown  
July 1, 1996  
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Periodically the **DMA** reviews different provider types to compare industry costs against the payments permitted by the reimbursement policy. Your report will be of great use in the next review that will be done on the drug program.

If we can be of any further assistance please let me know or you may contact Barbara **Matula**, Director, **Division** of Medical Assistance.

Sincerely,

  
C. Robin **Britt, Sr.**

CRBsr/sl