REPORT OF THE
DEPARTMENT OF MEDICAL ASSISTANCE SERVICES

EVALUATION OF THE DEPARTMENT OF MEDICAL ASSISTANCE SERVICES PRESCRIPTION DRUG REIMBURSEMENT

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

HOUSE DOCUMENT NO. 2

COMMONWEALTH OF VIRGINIA
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COMMONWEALTH of VIRGINIA

Department of Medical Assistance Services

DENNIS G. SMITH
DIRECTOR

SUITE 1300
600 EAST BROAD STREET
RICHMOND, VA 23219
804/786-7933
804/225-4512 (Fax)
800/343-0634 (TDD)

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TO: The Honorable James S. Gilmore, III

And

The General Assembly of Virginia

The report contained herein is provided pursuant to House Joint Resolution 623, passed by the 1997 General Assembly. This report provides information regarding the adequacy of Medicaid prescription drug reimbursement and compliance with the Pharmacy Freedom of Choice statute. The Department of Personnel and Training submitted a separate report in response to HJR 623. The total cost incurred to DMAS is $58,699.35.

The report is based on research conducted by the School of Pharmacy at Virginia Commonwealth University under an Interagency Agreement with DMAS on the adequacy of Medicaid prescription drug reimbursement. DMAS, however, is solely responsible for the report, including the findings and conclusions.

DMAS asked the Office of the Attorney General for guidance on agency compliance with the Pharmacy Freedom of Choice statute. The Office of the Attorney General advised DMAS that agency regulations and contracts are not in conflict with the Pharmacy Freedom of Choice statute.

Respectfully submitted,

Dennis G. Smith

Dennis G. Smith
Department of Medical Assistance Services

Evaluation of Department of Medical Assistance Services
Prescription Drug Reimbursement (HJR 623)

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Executive Summary

The 1997 session of the Virginia General Assembly passed a resolution (HJR 623) which requested the Departments of Personnel and Training (DPT) and Medical Assistance Services (DMAS) to:

1. "evaluate the level of compensation to participating (pharmacy) providers to provide a payment level which will allow them a reasonable profit," and

2. "evaluate their prescription drug programs to ensure that they comply with the Pharmacy Freedom of Choice statute."

DPT has submitted a separate report and the Office of the Attorney General advised DMAS that the agency is not in conflict with the Pharmacy Freedom of Choice statute. This report focuses solely on the evaluation of DMAS reimbursement for pharmacy services. DMAS contracted with the VCU/MCV School of Pharmacy to estimate the level of compensation required (1) to reimburse pharmacies for their costs in filling a prescription and (2) to provide a reasonable profit. The School of Pharmacy used a literature search to determine the prices at which pharmacists in Virginia purchase prescription drug products and a survey of pharmacies to determine the costs which pharmacies incur in dispensing prescriptions and the amounts they have invested in assets such as inventories, accounts receivables, and fixed assets (such as counters, shelving, and computers) required to dispense prescriptions. The VCU/MCV School of Pharmacy also researched pharmacy reimbursement by other third-party payers.

Given that Virginia Medicaid reimburses Average Wholesale Price (AWP) – 9% for single source drugs (this is higher than the estimated acquisition cost of AWP – 15%) and the Maximum Allowable Cost (MAC) for multiple source drugs, the VCU/MCV School of Pharmacy estimated that a dispensing fee of $5.11 is necessary for pharmacies to cover pharmacy prescription costs and that a dispensing fee of $5.65 is necessary for pharmacies to earn a reasonable profit on prescriptions. In general, however, DMAS does not consider profit in setting reimbursement rates.

Currently DMAS pays a $4.25 dispensing fee for about 80% of prescriptions filled for Medicaid patients or an average dispensing fee of $3.36. On the one hand, this fee is significantly less than the above calculation. On the other hand, DMAS reimbursement for pharmacy services is significantly higher than payments by Virginia Medicaid HMOs, Virginia state employee health plans, and other national plans. DMAS reimbursement is somewhat lower, but similar to reimbursement in other state Medicaid programs. At the current level of reimbursement, recipients also have the maximum possible access to pharmacy providers because virtually all pharmacies in the state participate in the Virginia Medicaid program.

DMAS believes that an increase in Medicaid pharmacy reimbursement is unwarranted. As long as there are enough available pharmacies willing to take Medicaid reimbursement, the Commonwealth should not raise rates, especially since it is one of the more generous payers.

I. Introduction

The 1997 session of the Virginia General Assembly passed a resolution (HJR 623) which requested the Departments of Personnel and Training (DPT) and Medical Assistance Services (DMAS) to:

1. "evaluate the level of compensation to participating (pharmacy) providers to provide a payment level which will allow them a reasonable profit," and

2. "evaluate their prescription drug programs to ensure that they comply with the Pharmacy Freedom of Choice (PFOC) statute."

DPT completed a separate report in response to HJR 623.

This report focuses only on the issue of DMAS compensation to participating pharmacy providers.

The fee-for-service Medicaid program does not use preferred networks, so there is little concern that it would be in violation of the Pharmacy Freedom of Choice Statute. The agency asked the Office of the Attorney General for guidance on agency compliance with the Pharmacy Freedom of Choice Act, particularly in regard to compliance by Medicaid HMO contractors. The Office of the Attorney General indicated it was not aware of any conflicts with the Pharmacy Freedom of Choice Act.

Virginia Medicaid paid $222 million for prescription drugs in SFY 1998 representing 12 percent of the Medicaid budget. Prescription drug expenditures are the only category continuing to grow at double digit rates.

II. Federal and State Requirements for Prescription Reimbursement

The Virginia State Plan for Medical Assistance (Medicaid) must comply with both federal and state law and regulation.

Federal Requirements

In general, federal law and regulation sets parameters for states to follow in administering the Medicaid program. Overall regulatory requirements are contained in 42 CFR 447.201 that "payments for services be consistent with efficiency, economy, and quality of care" and in 42 CFR 447.204 that "The agency's payments must be sufficient to enlist enough providers so that services under the plan are available to recipients at least to the extent that those services are available to the general population."

Federal regulations (42 CFR 447.331-333) also provide for specific upper limits on payment for drugs that varies depending on whether the drug is a multiple source drug or single source drug. In either case, the reimbursement limit is the cost of the drug "plus reasonable dispensing fees established by the agency." If it is a brand name drug, reimbursement must also be no more that the "provider's usual and customary charges to the general public."

State Requirements

The General Assembly specifically asks the Department to "evaluate the level of compensation to participating (pharmacy) providers to provide a payment level which will allow them a reasonable profit." In general, however, DMAS does not consider profit in setting reimbursement rates. Frequently, Medicaid pays less than other private payers, sometimes substantially less, even below cost, but this varies with providers.

Third-party payers, such as DMAS, typically reimburse pharmacies on the basis of acquisition cost plus a fixed dispensing fee. For single source products, DMAS pays the lower of AWP - 9% plus a $4.25 fee or the pharmacy's usual and customary charge. The pharmacy's usual and customary charge is the amount the pharmacy would have charged a cash paying patient for the same prescription. Multiple source products are reimbursed at the lower of AWP - 9% plus a $4.25 fee, the pharmacy's usual and customary charge, or the maximum allowable cost (MAC) plus a $4.25 fee. The MAC price is an estimate of the lowest price at which the generic product is widely and consistently available to pharmacies. The MAC price is typically much lower than AWP - 9%. DMAS limits the dispensing fee to one fee per month for any given product. If a patient has more than one prescription filled for the same product during the same month, the pharmacy receives only one dispensing fee. DMAS estimates that the $4.25 fee is paid on about 80% of Medicaid prescriptions. This would reduce the average dispensing fee paid per prescription to $3.36. Approximately 40 percent of Medicaid patients are asked to pay a $1.00 copay for each prescription dispensed to them. This is deducted from the pharmacy's reimbursement even if the recipient does not pay it.

The most recent action by the General Assembly was to reduce the dispensing fee beginning in fiscal year 1996 from $4.40 to $4.25.

III. Calculating Pharmacy Prescription Cost

Pharmacy prescription costs consist of two elements: the cost the pharmacy pays for the product and the cost of dispensing the prescription. The cost of the product is generally referred to as the product acquisition cost. The cost of dispensing the prescription is the per prescription average of overhead, administrative, and professional costs such as salaries, rent, depreciation, insurance, and packaging costs.

Acquisition Cost

The most recently published estimate of acquisition cost for prescription drugs in Virginia comes from a report by the Office of the Inspector General (OIG) of the federal Department of Health and Human Services[1]. This report is based on an audit of invoices from a sample of 24 Virginia pharmacies.

The results of the audit are reported as average discounts off of AWP. The AWP of a drug product, according to the OIG report, is "the price assigned to the drug by its manufacturer and listed in either the *Red Book, Medispan*, or the *Blue Book* - publications universally used in the pharmaceutical industry[1]." It is important to remember that the AWP is *not* the average price at which wholesalers sell the drug product to pharmacies. It is a figure assigned to the product by its manufacturer.

The results of the OIG audit indicate that Virginia pharmacies purchase brand name prescription drugs for AWP - 17.2% and generic drugs for AWP - 45.1%. Because these figures are based on a small sample of pharmacies, one cannot have complete confidence in them. To deal with this, the report calculated 90% confidence intervals. The 90% confidence interval for the discount off AWP at which pharmacies could purchase was calculated to be 15.1% to 19.4% for brand name products and 40.7% to 49.5% for generic products.

This is the third time that the OIG has conducted a study of drug acquisition costs[1]. The first two studies estimated that pharmacies could purchase drug products for 15.9% less than AWP (in 1984) and for 15.5% less than AWP (in 1989). These studies did not provide separate estimates for brand name and generic drugs. Further, these are national averages. The comparable national average for the latest OIG study was AWP - 18.3% (for brand name drugs).

DMAS conducted a survey of drug acquisition costs in 1990[2]. This survey analyzed data from the wholesaler invoices of 28 independent pharmacies. Because DMAS sets maximum allowable costs for generic products, only brand name costs were examined. The results indicated that Virginia independent pharmacies purchased brand name prescription products for an average of 13.5% off of AWP.

A study financed by the federal Health Care Financing Administration (HCFA) assessed the adequacy of state Medicaid payments to pharmacies in 1991[3]. The study estimated community pharmacies' costs of dispensing a representative market basket of prescription products and compared these with states' payments for the products. The estimates provided by

the study indicate that in 1991 Virginia pharmacies were purchasing prescription products for AWP - 11%.

There are several reasons to believe that the latest OIG report may not provide the best estimate of pharmacy acquisition costs. First, the discounts estimated by the latest OIG report are substantially different from those of earlier reports. It would be expected that discounts off AWP in later years would be greater than in earlier years because of better purchasing by pharmacies. However, the earlier OIG and HCFA reports grouped generic and brand name products together. Because generic products typically have much larger discounts, this would inflate the earlier estimates. The latest estimate of 17.2% is for brand name products only. It is unclear why this estimate is larger than those of earlier studies. This suggests that caution should be exercised in applying this figure to reimbursement in the Medicaid program. Caution is also necessary because the OIG report was based on a small number of pharmacies and because the sample was under represented by chain and urban pharmacies.

To gain further insight on this issue, the largest community pharmacy buying group and the three major wholesalers serving Virginia pharmacies were contacted and asked to comment on the accuracy of the latest OIG estimate. All were cautious about making estimates because of the multitude of factors that affect pharmacies' acquisition costs. Of the four sources contacted, one could not give an estimate, one said discounts of 16 to 17% might be possible for brand name products, and two said an estimated discount of AWP - 17.2% was unreasonably high.

Taking the information as a whole, and recognizing the potential problems with the latest OIG study, it may be more reasonable to estimate that community pharmacies purchase brand name prescription drugs for AWP - 15%. This figure is consistent with earlier estimates by OIG, DMAS, and HCFA.

If AWP – 15% is the true acquisition cost for brand name drugs, then DMAS reimbursement of AWP – 9% is more than the acquisition cost.

Cost of Dispensing a Prescription

The cost of dispensing a prescription is estimated by taking all of a pharmacy's dispensing-related costs for a year and dividing by the number of prescriptions dispensed during that year. The calculation is complicated by the fact that not all of a pharmacy's costs are related to dispensing prescriptions. A substantial proportion of a pharmacy's costs - such as manager's salary, rent and utilities, and insurance - are necessary both for dispensing of prescriptions and for sales of other merchandise - such as over-the-counter drugs, health and beauty aids, and other "front-end" merchandise - which most pharmacies sell. Calculating a pharmacy's cost of dispensing requires estimating the proportion of each of these other expenses which supports dispensing and the proportion which supports non-dispensing activities. Only the portion of expenses which is specifically related to dispensing prescriptions is included in the cost to dispense calculation. A more detailed explanation of the cost to dispense calculation used in this study is provided in Appendix I.

A mail survey of a random sample of community pharmacies was conducted to gather the data necessary to estimate the cost of dispensing for Virginia pharmacies. Questionnaires were mailed to 189 independent pharmacies and to 18 different chain pharmacy organizations. These organizations included traditional chains, such as CVS and Rite Aid; supermarket pharmacies, such as Kroger and Ukrops; and mass merchandiser pharmacies, such as Wal-Mart and PharMor. (More complete descriptions of the sampling and survey administration methodologies are presented in Appendices II and III. Copies of the questionnaire and cover letters used are included as Appendices IV through VIII.)

Usable information was received from 51 independent pharmacies, two traditional chain pharmacy organizations, three supermarket pharmacy chains, and one mass merchandiser chain pharmacy. The responses represented 161 individual pharmacies from the original sample. The weighted median cost of dispensing was calculated for responding pharmacies. The median, rather than the mean, was used because of the non-normal distribution of estimated pharmacy costs to dispense. Many of the chains had a large number of pharmacies in the initial sample. Revco, for example, had 105 and Rite Aid had 62. Completing cost of dispensing questionnaires for this many pharmacies would have been a large burden on these organizations. To gain the cooperation of these chains, a sample of pharmacies was selected from the initial sample, and the chains were asked to provide cost of dispensing information only for the smaller number of stores. A weighting factor was applied to responses from chain organizations for which the initial number of sampled pharmacies had been reduced. The weighting factor was calculated as the ratio of the number of pharmacies in the original sample to the number of pharmacies for which dispensing cost information was requested. For example, if a chain had 60 pharmacies in the original sample and data were requested and supplied for 20 of these, the weighting factor for each responding pharmacy would be three.

The weighted median cost of dispensing a prescription was $5.90 for independent pharmacies, $7.19 for traditional chain pharmacies, $6.13 for supermarket pharmacies, and $5.18 for pharmacies in mass merchandisers. The costs to dispense in this study range from $13.50 to $3.57. The weighted median cost of dispensing for all pharmacies was initially calculated as $7.19. However, the sample of responding pharmacies consisted of a higher proportion of traditional chain and supermarket pharmacies and a lower proportion of independent and mass merchandiser pharmacies than existed in the Commonwealth. The traditional chain and supermarket pharmacies had the highest estimated costs of dispensing. Thus, the disproportionate distribution of responses biased the estimated cost of dispensing. To correct the bias, an additional weighting factor was used to adjust for the disproportionate representation of the sample. This was done by multiplying the estimated cost of dispensing for each type of pharmacy by the percentage of pharmacies of that type in the population of outpatient pharmacies in Virginia. The median cost to dispense after this weighting was $6.41.

Adjusted Dispensing Fee

Because DMAS pays more than the acquisition cost for single source drugs in general, the dispensing fee calculation was adjusted to determine gross reimbursement needed to cover both the acquisition cost plus the cost to dispense given an acquisition cost reimbursement of AWP – 9% for single source drugs. A reimbursement of AWP - 9% plus $5.11 for single source products and MAC plus $5.11 for multiple source products is equivalent to the original calculation to cover the acquisition cost and the cost to dispense. See Appendix X for the methodology.

The corresponding adjusted dispensing fees for pharmacy subgroups was $4.60 for independent pharmacies, $5.89 for traditional chain pharmacies, $4.83 for supermarket pharmacies, and $3.88 for pharmacies in mass merchandisers. The adjusted dispensing fees for pharmacy subgroups were arrived at by using a similar methodology as described in Appendix X.

Figure 1 compares the original calculation for the dispensing fee with the adjusted dispensing fee for all pharmacies and for pharmacy provider subgroups.

IV. A Reasonable Per Prescription Profit

The General Assembly specifically asked DMAS to evaluate the level of compensation to provide a payment level which will allow pharmacy providers a reasonable profit even though profit is not usually a consideration in determining Medicaid reimbursement.

To determine a reasonable amount of profit per prescription, the measure of return used for this evaluation by the VCU/MCV School of Pharmacy was the return on prescription-related assets. These included prescription inventory, accounts receivables arising from prescription sales, and fixed assets necessary to dispense prescriptions. This is a conservative estimate because it does not include other assets - such as cash, buildings, and other investments - required to operate a pharmacy. Based on the risks and typical rates of return of community pharmacies, the VCU/MCV School of Pharmacy estimated that a pharmacy should earn a 12% return on prescription-related assets. (The method of making the estimation is explained in Appendix IX).

The weighted median investment in prescription-related assets for responding pharmacies was $177,322. This consisted of $107,078 in inventory, $41,422 in accounts receivables arising from prescription sales, and $28,822 in fixed assets necessary to dispense prescriptions. The typical pharmacy dispensed a median of 39,179 prescriptions per year.

To earn a 12% return on prescription-related assets, the typical pharmacy would have to earn a net profit of (0.12 x 177,322=) $21,279 on prescription sales. Thus, it would need to earn an average net profit of ($21,279 / 39,179 prescriptions =) $0.54 on each prescription dispensed.

V. Comparisons with Other Payers

Comparison with Reimbursement in Virginia Medicaid HMO Plans

Approximately 100,000 of the almost 500,000 Medicaid recipients are enrolled in HMOs. In the HMO program, a patient receives all medical services, including prescription drugs, through an HMO. Pharmacy reimbursement for the managed care program is based on the rates set by the HMO, not by DMAS. Figure 1 shows the reimbursement rates paid by the HMOs in the Medicaid managed care program. These rates are substantially lower than that paid in the fee-for-service Medicaid program. Pharmacy reimbursement information was not available for all Medicaid HMOs.

Comparison with Reimbursement in Virginia State Employee Prescription Plans

The current reimbursement rates paid to pharmacies by the various drug programs offered through the Department of Personnel and Training to state employees are shown in Figure 2. The average reimbursement, excluding Trigon Retail Maintenance Network, for brand drugs was AWP – 14% plus $2. These rates are substantially lower than that paid in the fee-for service Medicaid program. In the case of Trigon's Retail Maintenance Program, total reimbursement (AWP – 18% plus no fee) is less than the pharmacy's product cost.

Comparison with Reimbursement in National Private Prescription Plans

The pharmacy reimbursement rates paid by DMAS were compared with those paid by private third-party prescription programs. Data on private programs were taken from two sources. The first was a national survey of large employers conducted by the Pharmacy Benefit Management Institute in Scottsdale, Arizona[5]. The results with regard to reimbursement are based on responses from 164 employers. The results indicate average reimbursement of AWP less 12.1% plus a dispensing fee of $2.47 for brand name drugs and MAC plus a $2.58 dispensing fee for generic drugs.

The second source was a survey of 60 HMOs having a total enrollment of 10.3 million members. The survey was conducted by the Plymouth Group and reported in the *1997 Novartis Pharmacy Benefit Report*[6]. The results indicate average reimbursement of AWP less 13.9% plus a dispensing fee of $2.23. (No information was provided on whether reimbursement was different for brand name and generic products. However, all plans which provided reimbursement information for state prescription programs used MAC pricing for generic drugs. It would be unusual if the national sample of HMOs surveyed by the Plymouth Group did not also use MAC pricing for generics.)

These sources indicate an average reimbursement of around AWP less 13% plus $2.40 in non-state prescription programs. This is substantially less than the average DMAS fee-for-service reimbursement of AWP-9% plus $3.36.

Comparison with Reimbursement in Other State Medicaid Plans

The total reimbursement, both dispensing fee and acquisition cost, currently paid by DMAS was compared with that paid by other state Medicaid agencies. The analysis used data supplied by the National Association of Chain Drug Stores (NACDS). These data included dispensing fees and acquisition cost reimbursements for 48 states and the District of Columbia. The remaining states, Arizona and Tennessee, operate their Medicaid programs entirely through managed care organizations and, as a result, do not reimburse pharmacies directly.

The NACDS data were used to estimate three amounts. The first was the average dispensing fee paid by other state Medicaid agencies. The second was acquisition cost reimbursement. This was estimated as the average discount off AWP. The final estimate was the average reimbursement a pharmacy would receive on a prescription with an AWP of $26.79. This is the average estimated AWP for a prescription reimbursed by Virginia DMAS. This will be referred to as the typical prescription.

States varied somewhat in their methods of reimbursing pharmacies. Most used AWP less some percent plus a fixed dispensing fee. Some, however, used variable dispensing fees and others based acquisition cost reimbursement on WAC (wholesaler acquisition cost) rather than AWP. One state's method of calculating acquisition costs was unclear from the NACDS data.

Because of the unclear reimbursement formulae for several states, a number of different analyses were used. The first analysis used all data supplied by NACDS and made the following assumptions. First, the wholesale acquisition cost (WAC) was equal to the AWP - 17%. Second, the simple arithmetic average was used as the dispensing fee for states which paid a variable fee. The results of this analysis yielded an average reimbursement of AWP less 9.8% plus a $4.26 dispensing fee. Total reimbursement for the typical prescription across all states averaged $28.43 and ranged from a low of $26.08 to a high of $30.95.

The second analysis used the six states geographically closest to Virginia. They included West Virginia, North Carolina, Maryland, Delaware, Kentucky, and the District of Columbia. The results of this analysis yielded an average reimbursement of AWP less 10.3% plus a $4.20 dispensing fee. Total reimbursement for the typical prescription across these states averaged $28.22 and ranged from $26.98 to $29.12.

The final analysis eliminated the states with the three highest and the three lowest total reimbursements. This was done to ensure that the estimates were not unduly influenced by states with unusually high or low reimbursements. The estimates from this analysis indicated an average reimbursement of AWP less 10% plus a $4.22 fee and reimbursement of $28.32 for the typical prescription.

The three analyses indicate that other state Medicaid programs pay pharmacies at the rate of about AWP - 10% plus a $4.22 dispensing fee. This would yield a total reimbursement for the typical prescription of about $28.33. This compares with a Virginia reimbursement of AWP - 9% plus $3.36 and a total reimbursement for the typical prescription of $27.74.

VI. Beneficiary Access to Pharmacy Providers

In order to determine if DMAS has enough pharmacy providers "so that services under the plan are available to the extent that those services are available to the general population," as required by federal regulation, DMAS evaluated beneficiary access. There are 1619 pharmacy providers registered with the Board of Pharmacy. Currently, 1717 providers actively participate as Medicaid pharmacy providers. Due to enrollment of out-of-state providers, the number of participating providers exceeds the number of in-state pharmacy providers registered with the Board of Pharmacy. DMAS concludes that virtually all pharmacy providers in the state are enrolled as Medicaid pharmacy providers and that Medicaid recipients have the maximum possible access to pharmacy providers.

VII. Budget Impact of Increasing Pharmacy Reimbursement

In fiscal year 1996, DMAS reimbursed pharmacies $220,586,184 for 7,954,353 prescriptions. The current dispensing fee, which a pharmacy receives on a Medicaid fee-for-service prescription, averages $3.36. If the fee were increased to $5.11 to cover pharmacy costs, pharmacy expenditures would be increased by $13,920,118. If the fee were increased to $5.65 so as to provide a "payment level which will allow (pharmacy providers) a reasonable profit," pharmacy expenditures would be increased by $18,215,468. This would have been an 8.3% increase in the DMAS drug budget for Medicaid in fiscal year 1996.

VIII. Discussion and Conclusions

This study estimated that a reimbursement of AWP – 9% plus $5.11 for single source drugs and MAC plus $5.11 for multiple source drugs is necessary for pharmacies to cover pharmacy prescription costs and that a reimbursement of AWP - 9% plus $5.65 for single source drugs and MAC plus $5.65 for multiple source products is necessary for pharmacies to earn a reasonable profit on prescriptions. This is substantially more than is paid to pharmacies by DMAS. An increase in pharmacy reimbursement of this magnitude would increase the DMAS drug budget 6- 8%.

DMAS, however, believes that an increase is unwarranted. As long as there are enough available pharmacies willing to take Medicaid reimbursement, the Commonwealth should not raise reimbursement rates especially since it is one of the more generous payers.

First, an increase is unwarranted by market economics. Many would question why DMAS is paying as much as it is. DMAS is already one of the most generous third-party payers in the state, even after the recent reduction in the dispensing fee. Medicaid fee-for-service reimbursement substantially exceeds the reimbursement of Virginia Medicaid HMO plans and plans that participate in the state employees health insurance program. Reimbursement also exceeds reimbursement in two samples of national plans and reimbursement is somewhat lower, but comparable to Medicaid reimbursement in other states.

Second, an increase is unwarranted because there is no access problem for recipients. Virtually all pharmacies in the state participate as Medicaid providers. Medicaid recipients arguably have better access than many in the general population who have health insurance plans that do not have all pharmacies in their network.

While this study focuses on median costs, an analysis of the range of observations shows that costs vary significantly among pharmacies. More economically run pharmacies do better than the median pharmacy. At the high end of the range, one chain pharmacy in the sample reported an unadjusted cost to dispense of $13.50, more than double the median cost to dispense. At the low end of the range, three independent pharmacies in the sample had a cost to dispense low enough that Medicaid reimbursement would cover their cost.

If the pharmacy cost estimates in this study are accurate, many pharmacies lose money on filling prescriptions. They lose less from Medicaid fee-for-service reimbursement, however, than from reimbursement by other third parties. But this study has not evaluated overall business costs and profits for pharmacies. Presumably, there are external benefits of filling prescriptions that motivate the pharmacy business.

The results from the VCU/MCV School of Pharmacy 1997 survey are consistent with earlier studies in Virginia, Georgia and North Carolina. However, the results are somewhat at odds with the 1998 NCPA-Searle Digest report that indicates that independent pharmacies on average earned a 15.5% "net profit to total assets" in 1997. The "net profit to total assets" calculation in the NCPA-Searle report is similar to the "reasonable rate of return" on investment calculation used in this study (Appendix IX).

These studies cannot be compared directly. The profit calculation in the NCPA-Searle Digest is for a national sample of independent pharmacies, not just Virginia pharmacies, and the data includes reimbursements from all payers, not just third-party payers, even though two-thirds of the total prescription volume is related to third-party payers. The profit calculation in the NCPA-Searle report also is not limited to prescription sales but includes all sales, 20 percent of which are non-prescription related. The DMAS report also does not calculate an actual rate of return on investment for the surveyed pharmacies.

Despite the differences in the two studies, the rate of return on investment for Virginia pharmacies must be negative on average for prescriptions paid for by DMAS and other third-party payers if reimbursement is significantly lower than the pharmacy prescription cost according to the VCU/MCV School of Pharmacy survey. This seems unlikely, however, if all Virginia pharmacies on average had a positive net profit to total assets similar to the national sample in the NCPA-Searle report. More study would be needed to reconcile the two reports.

Some concern was expressed in the resolution for the fate of independent pharmacies, which disproportionately serve consumers in rural and inner city areas. A report commissioned by the Joint Commission on Health Care found that 96 independent pharmacies went out of business between 1989 and 1994[8]. Data from the Virginia Board of Pharmacy indicate that an additional 38 have gone out of business since the end of 1994. This study, however, indicates that independent pharmacies as a group have dispensing costs that are 8 percent lower than the median dispensing cost and therefore should fare better than many other pharmacies. On the other hand, independent pharmacies reportedly are far more dependent on prescription sales than other pharmacies. Higher reimbursement would certainly help independent pharmacies, but higher reimbursement would be a de facto taxpayer subsidy for all pharmacies.

References

1. Office of the Inspector General. *Review of Pharmacy Acquisition Costs for Drugs Reimbursed Under the Medicaid Prescription Drug Program for the Virginia Department of Medical Assistance Services*, Washington, D.C. Department of Health and Human Services, 1996.

2. Carroll, N.V., Murawski, M., and Miller, S.R. *State EAC Report*, submitted to Department of Medical Assistance Services, October 3, 1990.

3. Adams, E.K., Kreling, D.H., and Gondek, K. State Medicaid pharmacy payments and their relation to estimated costs. *Health Care Financing Review* 15:25-42, 1994.

4. Rollings, M., Program Operations, Department of Medical Assistance Services. Personal communication, September 9, 1997.

5. *The 1996 Prescription Drug Benefit Cost and Plan Design Survey*, Scottsdale Arizona, Pharmacy Benefit Management Institute, 1997.

6. Navarro, R.P., ed. *Novartis Pharmacy Benefit Report, Facts and Figures, 1997 Edition*, East Hanover NJ, Novartis Pharmaceuticals Corporation, 1997.

7. Carroll, N.V., Miederhoff, P.A., and Waters, L.W. Profitability, Third-Party Reimbursement, and Access to Community Pharmacies. *Clinical Therapeutics* 18:703-715, 1996.

8. Swad, R. Discount and Capitalization Rates in Business Valuations. *The CPA Journal*. October 1994, p. 40-44.

9. *Stocks, Bonds, Bills and Inflation: 1997 Yearbook*. Chicago, Illinois, Ibbotson Associates, 1997.

10. *The Value Line Investment Survey*. New York, N.Y., Value Line Publishing, July 11, 1997.

11. Muirhead, G. There's Room for Managed Care to Cut Drug Costs. *Drug Topics* 140:19, June 24, 1996.

12. Slezak, M. Riding the Generic Wave. *American Druggist* 213:36-40, September 1996.

13. Epstein, D. Utilization of Generics: A Managed Care Failure? *Managed Care Pharmacy Practice*, p 24-26, May/June 1996.

14. Epstein, D. Why Some Brands Are Favored Over Generics in Formularies. *Drug Topics* Supplement, p 21s-22s, 1995.

Figures and Appendices

Figure 1. Equivalent Reimbursement for Cost of Pharmacy Services

	AWP – 15% or MAC plus dispensing fee of	AWP – 9% or MAC plus dispensing fee of
All Pharmacies	$6.41	$5.11
Independent Pharmacies	$5.90	$4.60
Traditional Chain Pharmacies	$7.19	$5.89
Supermarket Pharmacies	$6.13	$4.83
Mass Merchandiser Pharmacies	$5.18	$3.88

Figure 2. Current Reimbursement Rates in the Medicaid Program *

		Acquisition Cost	Dispensing Fee
Medicaid fee for service			
	- brand name	AWP - 9%	$3.36**
	- generic	lower of AWP - 9% or MAC	$3.36**
Medicaid managed care:			
Sentara	- brand name	AWP - 15%	$1.35
	- generic	AWP - 15%	$2.35
HealthKeepers	- brand name	AWP - 15%	$1.50
	- generic	AWP - 30%	$1.50
Optimum Choice		not provided	
Chartered		not provided	

* For all plans, reimbursement is the lower of the figure shown above or the pharmacy's usual and customary charge. In addition, the pharmacy pays the costs of electronically submitting the claim to the insurance company or its agent. This cost averages 10 to 15 cents per submission.

** The Medicaid dispensing fee is $4.25. However, the fee is only paid on about 80% of prescriptions dispensed. Thus, the average fee which pharmacies receive on a Medicaid fee-for-service prescription is about $3.36.

Figure 3. Reimbursement Rates in State Employee Prescription Plans *

	Brand-name	Generic
Southern Health	AWP - 15% + $2.00	Lesser of MAC or AWP - 15% + $2.50
Trigon Retail Network	AWP - 12% + $2.75	Lesser of MAC or AWP - 40% + $2.75
Trigon Retail Maintenance Network	AWP - 18% + 0	Lesser of MAC or AWP - 40% + 0
QualChoice	AWP - 10 to 12% + $2.00 to $2.50	MAC + $2.00 to $2.50
Kaiser Permanente	not provided	not provided
Partners	AWP - 14% + $2.00	AWP - 14% or MAC + $2.00
Sentara	AWP - 15% + $1.35	Lesser of MAC or AWP - 15% +$2.35
Prudential	AWP - 16% + $1.75	Lesser of MAC or AWP - 40 to 50% + $1.75

* Notes:

1. For all plans, reimbursement is the lower of the figure shown above or the pharmacy's usual and customary charge.
2. On most plans, the pharmacy pays the costs of electronically submitting the claim to the insurance company or its agent. This cost averages 10 to 15 cents per submission.
3. Reimbursement rates may differ across geographic regions and do change over time.

Appendix I. Cost of Dispensing Calculation

A pharmacy's cost to dispense is the average per prescription expense which it incurs in operating the prescription department. It includes those costs directly incurred in dispensing prescriptions - such as pharmacists' salaries and container costs - and a fair share of costs incurred indirectly - such as rent, utilities, and manager's salary. The following procedure was used to estimate a pharmacy's cost of dispensing for this study.

Each of the pharmacy's operating costs, as reported on the cost of dispensing questionnaire, was classified into one of four categories: direct costs, salary expense, housing related costs, and other indirect costs. Direct costs were those which resulted directly from dispensing prescriptions. These included dues, publications, and continuing education expenses related to prescription related functions; costs incurred in transmitting third-party prescription claims; and the costs of labels and containers for prescriptions. The salary expense included all salaries, fringe benefits, and payroll taxes paid by the employer for each employee. Housing-related indirect costs included rent which was paid as a fixed dollar amount, repairs and maintenance on buildings and fixtures, and utilities. Other indirect costs included all other expenses. They included such costs as advertising, bad debt, supplies, and rent which was paid as a percentage of sales.

All direct costs were charged to the prescription function. Salary expenses were charged to the prescription function based on time spent performing dispensing related duties. The portion of each employee's salary expense which was charged to the prescription function was found by multiplying each employee's salary - including fringe benefits and payroll taxes - by the ratio of hours worked in dispensing related functions to total hours worked. Dispensing related functions include not only receiving and processing prescriptions, but also such tasks as ordering, stocking and maintaining the inventory of prescriptions drugs; management of the prescription department; filing third party prescription claims; and counseling patients. A calculation was made separately for each employee. The amounts allocated to the prescription department for each employee were then summed to find the total salary expense for the prescription department. Housing-related indirect costs were charged to the prescription function based on the ratio of the floor space (in square feet) of the prescription department to the floor space of the total store. Other indirect costs were charged to the prescription function based on the ratio of prescription sales to total sales.

In addition to the store-level costs discussed above, chain pharmacies (including traditional chains, supermarket pharmacies, and mass merchandiser pharmacies) had expenses related to the costs of maintaining a central office. Central office expenses were allocated to the prescription function in the following way. First, the average central office expense per store was calculated by dividing total central office expenses by the number of stores in the chain. Next, the proportion related to the prescription function was calculated by multiplying the average central office expense per store by the ratio of prescription sales to total sales for the store. A number of chains reported warehousing costs. We considered warehousing costs as a part of acquisition costs and so they were not included as part of the cost of dispensing.

After classifying all costs and allocating them to the prescription function, the cost to dispense was calculated. The total cost of operating the prescription department was the sum of allocated costs in each of the five categories (direct costs, salary costs, housing-related indirect costs, other indirect costs, and central office expense). The cost to dispense a prescription was found by dividing the total cost of operating the prescription department by the total number of prescriptions filled during the year.

Appendix II. Sampling Methodology for Cost of Dispensing Survey

An initial sample of 503 outpatient pharmacies was selected from the list of all outpatient, community pharmacies in the Commonwealth. The list of all outpatient, community pharmacies was developed from a list of all pharmacies in the Commonwealth. This list was purchased from the Virginia Board of Pharmacy. Outpatient pharmacies, as used in this procedure, included independent, traditional chain, supermarket, and mass merchandiser pharmacies. The following types of pharmacies were excluded from the sample: in-house HMO pharmacies, hospital outpatient pharmacies, public health or clinic pharmacies, long-term care pharmacies, or home health care pharmacies. The sample of outpatient pharmacies was selected by randomly choosing a starting point on the list of all outpatient pharmacies, then selecting every third pharmacy on the list until about 500 pharmacies had been selected. The sample consisted of 189 independent and 314 chain pharmacies.

Of the 189 independent pharmacies, 4 were determined to be no longer in business. Thus, questionnaires were mailed to 185 independent pharmacies. The 314 chain pharmacies represented 18 different chain organizations. Many of these organizations had a large number of pharmacies in the initial sample. Revco, for example, had 105 and Rite Aid had 62. Completing cost of dispensing questionnaires for this many pharmacies would have been a large burden on these organizations. To gain the cooperation of these organizations, a sample of pharmacies was selected from the initial sample, and the organizations were asked to provide cost of dispensing information only for the smaller number of stores. As a result, 104 questionnaires were mailed to 16 chain organizations. (The other two chains refused to participate in the study.)

Figure 4 shows the number of pharmacies from each chain organization in the initial sample, the number of pharmacies from each chain organization after the second phase of sampling (this is the number from which information was actually requested), and the number of pharmacies for which data were provided by the chain organizations.

Figure 4. Chain Pharmacy Sample for Cost of Dispensing Study

Chain	No. of Pharmacies		
	in initial sample	to whom questionnaires were mailed	for whom cost of dispensing information was provided
Revco	105	25	0*
Rite-Aid	61	1**	161**
CVS	35	20	20
Giant	22	1	44**
Wal-Mart	21	7	0
K-Mart	19	7	0
Farmco	14	7	0
Safeway	12	12	0
Others	25	25	11
Total	314		

* Just prior to the time of the study, Revco was acquired by CVS. Shortly thereafter, part of the (formerly) Revco pharmacies in Virginia were sold to Eckerds. Neither CVS nor Eckerds was able to supply the cost of dispensing data for Revco.

** These chain organizations provided aggregate data representing averages for all of their pharmacies operating in Virginia.

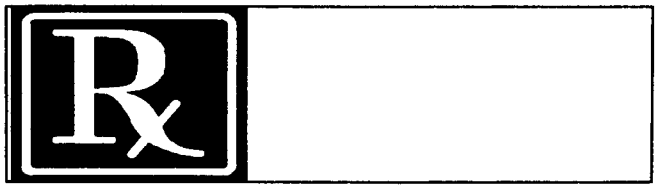
Appendix III. Survey Administration Procedure

A questionnaire (shown in Appendix IV), business-reply envelope, and cover letter (Appendix V) explaining the study were mailed to the owners of selected independent pharmacies. Questionnaires, a form for indicating central office and warehouse expenses (shown in Appendix VI), and a list of sampled pharmacies were mailed to the appropriate individual at each of the chain organizations. These materials were mailed on July 7, 1997. A follow-up postcard (Appendix VII) urging independent pharmacy owners to participate in the survey was mailed one week later. Another copy of the questionnaire, another business reply envelope, and a cover letter (Appendix VIII) urging participation in the study were mailed to each independent pharmacy three weeks after the initial mailing. The contacts within each chain organization were phoned approximately two weeks after the initial mail out, urged to participate, and asked whether they had questions about the study. In addition, representatives from the Virginia Pharmacists Association called independent pharmacists and representatives from the Virginia and National Associations of Chain Pharmacy called chain pharmacies to urge them to complete and return the questionnaire.

VIRGINIA COST OF DISPENSING SURVEY

The purpose of this study is to determine the cost of dispensing a prescription in a Virginia pharmacy. Please complete and return this questionnaire by August 8, 1997. If you wish to comment on any of the questions, please feel free to use the space in the margins. Your comments will be read and taken into account.

Thank you for your help.



School of Pharmacy
Medical College of Virginia
Virginia Commonwealth University
Box 980533
Richmond, VA 23298

(1) What are the actual fiscal or calendar year dates covered by your most recent income statement?

FROM _____, 199___.

TO _____, 199___.

(2) How many prescriptions did this pharmacy dispense during the fiscal or calendar year covered by the most recent income statement?

TOTAL PRESCRIPTIONS _____

PRIVATE PAY PRESCRIPTIONS _____

MEDICAID PRESCRIPTIONS _____

OTHER 3RD PARTY PRESCRIPTIONS _____

(3) What were the pharmacy's total sales and cost of goods sold in each of the following categories for the fiscal or calendar year covered by the most recent income statement?

	PRESCRIPTION DEPARTMENT	TOTAL STORE INCLUDING RX AND ALL OTHER DEPARTMENTS
NET SALES (EXCLUDING SALES TAX)	$_____	$
COST OF GOODS SOLD	$_____	$

(4) What were the pharmacy's total sales in each of the following categories for the fiscal or calendar year covered by the most recent income statement? For third party sales, where there may be a difference between the amount billed and the amount collected, please record the amount actually collected.

TOTAL PRESCRIPTION SALES $

PRIVATE PAY PRESCRIPTION SALES $

TOTAL THIRD PARTY PRESCRIPTION SALES $

MEDICAID PRESCRIPTION SALES $

OTHER 3RD PARTY RX SALES $

(5) What is the total amount of floor space in your store (Including prescription and all other departments but excluding storage area)?

_____ SQ FT IN TOTAL STORE

(6) What is the total amount of floor space in the prescription department (Including prescription department office and patient counseling areas but excluding storage area)?

_____ SQ FT IN PRESCRIPTION DEPT.

(7) Does the store rent or lease the building in which it is located or does it own (or is it purchasing) the building?

1. RENTS OR LEASES - CONTINUE WITH QUESTION 8

2. OWNS OR IS PURCHASING - SKIP TO QUESTION 9

(8) If the store pays rent as a fixed dollar amount each month, please enter the amount you pay in the "FIXED AMOUNT" space provided below. If the store's rent is based on a percentage of monthly sales, please enter the percentage in the "PERCENTAGE OF SALES" space. If the store's rent is based on a combination of a fixed monthly amount plus some percentage of sales, then enter both the fixed amount and the percentage.

PERCENT OF SALES _____%

FIXED AMOUNT $

(9) If the store owns or is purchasing the building in which it is located, what was the annual depreciation expense for the year?

ANNUAL DEPRECIATION EXPENSE ON BUILDING $

PLEASE CONTINUE WITH THE NEXT PAGE

SECTION II: Personnel Costs: Complete this section only for employees who work at least part of the time in the prescription department. Please record each employee's annual salary, overtime and bonuses for the year covered by your most recent income statement, payroll taxes paid on that employee, and any other benefits, such as profit sharing, pension plans, and medical and dental insurance. Also record the average number of hours that the employee works each week in the total store and in the prescription department (in such duties as dispensing prescriptions, counseling patients, dealing with third-party programs, or other prescription or professional activities).

	Annual salary, overtime, and bonuses	Payroll Taxes	Other Benefits (Pension and profit sharing plans, medical insurance, etc)	Avg. **total** hours worked per week	Avg. weekly hours worked in the **Prescription Dept.**
Store Manager	$ _____	$ _____	$ _____	_____	_____
Pharmacist #1	$ _____	$ _____	$ _____	_____	_____
Pharmacist #2	$ _____	$ _____	$ _____	_____	_____
Pharmacist #3	$ _____	$ _____	$ _____	_____	_____
Pharmacist #4	$ _____	$ _____	$ _____	_____	_____
Intern #1	$ _____	$ _____	$ _____	_____	_____
Intern #2	$ _____	$ _____	$ _____	_____	_____
Technician #1	$ _____	$ _____	$ _____	_____	_____
Technician #2	$ _____	$ _____	$ _____	_____	_____
Technician #3	$ _____	$ _____	$ _____	_____	_____
Clerk #1	$ _____	$ _____	$ _____	_____	_____
Clerk #2	$ _____	$ _____	$ _____	_____	_____
Clerk #3	$ _____	$ _____	$ _____	_____	_____
Bookkeeper	$ _____	$ _____	$ _____	_____	_____
_____	$ _____	$ _____	$ _____	_____	_____

SECTION III: DIRECT EXPENSES OF PRESCRIPTION DEPARTMENT

Please indicate the annual expense for each of the following for the most recent fiscal or calendar year:

(1) Dues, publications and CE expenses (including travel to national meetings and seminars), related to prescription department activities: $_____

(2) Claims forms, switch fees and transmittal fees for third party claims. (Chain pharmacies: Do not include any costs incurred by the corporate office. These will be covered on another form): $_____

(3) Third party enrollment and participation fees (including PSAO or "Prescription Network" fees, etc.): $_____

(4) Prescription containers and labels, prescription bags, prescription tape, prescription blanks, drug and patient information materials: $_____

SECTION IV: STORE EXPENSES

Please indicate the store's **annual expense** for each of the following for the most recent fiscal or calendar year.

(1) Telephone $

(2) Depreciation (other than on building) $

(3) Interest Expense $

(4) Equipment rental (other than computer) $

(5) Bad Debt $_____

(6) Computer software and hardware expenses (other than depreciation) (Do **not** include supplies such as paper and labels) $_____

(7) Insurance expense (other than medical insurance) $

(8) Delivery $

(9) Utilities - heat, light, power and water $

(10) Repairs, maintenance, and housekeeping $

(11) Advertising $

(12) Legal and accounting services $

(13) Supplies (other than those used specifically in dispensing prescriptions) $

(14) Personal Property taxes $

(15)Real estate taxes $

(16) Income taxes (taxes on store profits) $

(17) Licenses, permits, and fees $

(18) Office expense $

(19) Bank charges $

(20) Other non-personnel expenses not listed elsewhere. (Chain pharmacies: Do not include corporate office and warehousing expenses. These will be covered on another form) $

(21) Total, non-personnel operating expenses (Do not include cost of goods sold or corporate or warehousing expenses) $

SECTION V - OTHER COST INFORMATION

Please estimate the percentage of each of the following expenses which is attributable to the prescription department. For example, if 80% of the depreciation expense results from depreciation of equipment - such as a computer - used solely for dispensing and other prescription related tasks then 80% of the depreciation expense is attributable to the prescription department.

Expense	% Attributable to prescription dept.
(1) Telephone	
(2) Depreciation (other than on building)	
(3) Interest Expense	
(4) Equipment rental (other than computer)	
(5) Bad Debt	_____
(6) Computer expenses (other than depreciation)	_____
(7) Insurance expense (other than medical insurance)	
(8) Delivery	

Please indicate the value of each of the following assets:

(1) Prescription-related accounts receivable $_____

(2) Prescription inventory $_____

(3) Fixed assets used for prescription-related activities $_____

SECTION VI: CLASSIFICATION INFORMATION

(1) Which of the following best describes the location of this pharmacy? (Circle your answer)

1. URBAN METROPOLITAN AREA (downtown in a city with a population of 150,000 or more and the pharmacy is within a 3 to 5 mile radius of the center of town).

2. SUBURBAN METROPOLITAN AREA (in an outlying suburb or shopping center location in a city with a population of 150,000 or more).

3. SMALL METROPOLITAN AREA (in a city with a population of 10,000 to 149,999).

4. SEMI-RURAL/RURAL AREA (in a city or area with a population of 9,999 or less).

(2) Which of the following best describes the pharmacy type?

1. INDEPENDENT PHARMACY

2. TRADITIONAL CHAIN (such as CVS, Rite Aid, or Revco)

3. SUPERMARKET PHARMACY (such as Safeway, Ukrops, or Hannafords)

4. MASS MERCHANDISER PHARMACY (such as Wal-Mart or K-Mart)

5. OTHER

(3) How long has the store been in operation in its current location?

_____ YEARS STORE AT CURRENT LOCATION

(4) How long has the prescription department in the store been in operation?

_____ YEARS RX DEPT. AT CURRENT LOCATION

(5) How many hours per week is the store open?

_____ HOURS PER WEEK

(6) How many hours per week is the prescription department open?

_____ HOURS PER WEEK

Is there anything else you would like to tell us about your costs of dispensing prescriptions. If so, please use this space for that purpose.

Thank you for assistance in this important project. If you would like a summary of the results, please print your name and address on the back of the return envelope (NOT on this questionnaire). We will mail you a copy of the results when they are available.

Appendix V. Cover Letter Accompanying Initial Mailing of Questionnaire

July 7, 1997

Pharmacist's Name
Pharmacy Name
Pharmacy Address

Dear Pharmacist (name):

The 1997 Session of the Virginia legislature passed a resolution which requests the Departments of Personnel and Training (DPT) and Medical Assistance Services (DMAS) to "evaluate the level of compensation to participating providers to provide a payment level which will allow them a reasonable profit." This provides a unique opportunity to demonstrate the need for equitable reimbursement for pharmaceutical services to legislators and DMAS and DPT officials. DMAS has contracted with the School of Pharmacy to perform the evaluation. As part of this effort, the School is surveying selected Virginia pharmacies to determine how much it costs to dispense a prescription. Please assist the School and the profession in this effort by completing and returning the attached questionnaires.

Included with this letter are the following materials: instructions for completing the questionnaires, a list of pharmacies which have been selected from your chain, a separate questionnaire for each selected pharmacy, a form asking about corporate and warehouse expenses, and a self-addressed, postage-paid envelope for returning the questionnaires. A report of the results of the project is due to DMAS by September 1, 1997 so please return your chain's information by August 8. If you have questions please call me at 804 / 828-2587.

All information which you provide will be treated confidentially. Reports will include only group-level information; no individual pharmacy information will be reported. DMAS will be provided with a final report but will not have access to the information provided by any pharmacy or any chain. As an additional safeguard, do not include identifying information (such as the pharmacy name and address) on the questionnaires when you return them.

Thank you for your help with this important project.

Sincerely,

Norman V. Carroll, R.Ph., Ph.D.
Professor of Pharmacy Administration

Appendix VI. Data Form for Central Office and Warehouse Expenses

Central Administration and Warehouse Expenses

PLEASE RETURN THIS FORM ALONG WITH THE QUESTIONNAIRES FOR INDIVIDUAL PHARMACIES.

(1) What is the total number of all store units nationwide?

TOTAL STORES

(2) What are total sales for all store units nationwide?

TOTAL SALES $

(3) What is the number of stores in line 1 which have a prescription department?

STORES WITH PRESCRIPTION DEPARTMENT

(4) What are total sales for those stores which have a prescription department?

TOTAL SALES FOR STORES WITH PRESCRIPTION DEPARTMENTS $

(5) What is the total number of prescriptions filled in all stores nationwide?

PRESCRIPTIONS FILLED IN ALL STORES

(6) What are total prescription sales in all stores nationwide?

PRESCRIPTION SALES NATIONWIDE $

(7) What is the total number of third party prescriptions filled nationwide?

TOTAL NUMBER OF 3rd PARTY RXS FILLED NATIONWIDE

(8) What is the total dollar volume of third party prescriptions filled nationwide (including copayments collected)?

3rd PARTY PRESCRIPTION SALES NATIONWIDE $

(9) What is the total of central and regional office expenses:

CENTRAL AND REGIONAL OFFICE EXPENSES $

(10) If the chain operates its own warehouse facility, what are the overhead expenses for warehousing and distributing **prescription drugs** to the individual stores? (Include only overhead expenses - - not the cost of the inventory. If there is no warehouse, enter "0".)

WAREHOUSE OVERHEAD FOR RX DRUGS $

Appendix VII. Text of Follow-up Postcard Sent to Pharmacies

July 15, 1997

Last week a questionnaire seeking information about how much it costs to dispense a prescription in your pharmacy was mailed to you. If you have already completed and returned the questionnaire, please accept our sincere thanks. If not, please do so today. It is extremely important that your pharmacy's results be included if the study is to accurately reflect the costs of dispensing a prescription in Virginia.

If you did not receive the questionnaire, or if it has been misplaced, please call me right now (804-828-2587) and I will send you another one today.

Sincerely,

Norman V. Carroll, R.Ph., Ph.D.
Professor of Pharmacy Administration

Appendix VIII. Cover Letter Accompanying Second Mailing of Questionnaire

July 28, 1997

Pharmacy Owner / Manager Name
Pharmacy Name
Address
Address

Dear Pharmacist (name):

About three weeks ago I wrote to you seeking your help in a study of the cost of dispensing a prescription in Virginia. If you have already completed and returned the questionnaire, please accept my sincere thanks. If not, I urge you to do so today.

This is an important study for community pharmacy because it has the potential to improve the reimbursement which your pharmacy receives from the Medicaid program and the state employee prescription programs. Your pharmacy's information is very important to the success of this study. The more pharmacies which provide data, the greater the potential impact of the study on state officials and legislators.

In the event that your questionnaire has been misplaced, I have enclosed a replacement copy.

Your cooperation is greatly appreciated.

Sincerely,

Norman V. Carroll, R.Ph., Ph.D.
Professor of Pharmacy Administration

Appendix IX. Estimation of Reasonable Rate of Return

The estimation of a reasonable rate of return was based on the method suggested by Swad[8]. The method first estimates the rate of return which businesses would earn if they faced no risk (the risk free rate), then adjusts this rate upward according to the amount of risk which the business actually faces. The upward adjustment is referred to as the risk premium.

The rate of return commonly used to estimate the risk free rate is the interest rate on long-term government bonds. As of October 1, 1997 these rates were 6.09% on 10 year Treasury bills and 6.39% on 30 year Treasury bills. Our calculation used the average of the two - 6.2%.

The risk premium is based on the difference between what investors have historically earned in the stock market - which provides an estimate of the return on risky investments - and what investors have historically earned on a risk free investment - as measured by long term government bonds. The average annual return for the stock market (as estimated by the Standard and Poors 500 index) for the period 1926 to 1996 is 12.7%[9]. The average annual return for long term government bonds is 5.4%[9]. The difference is 7.3%.

Not all lines of business are equally risky. Thus, the risk premium for the stock market must be adjusted to yield the risk premium for a particular type of business. The risk premium for pharmacies was estimated using the betas published by *The Value Line Investment Survey* for six large chain drug store organizations[10]. Beta is a measure of deviation. A beta greater than 1 indicates the returns on the business's stock have been more variable than those of the stock market. This is taken to indicate that the business is riskier than the stock market average. A beta less than 1 indicates the returns on the business's stock have been less variable than those of the stock market. This indicates that the business faces less risk than the stock market average. The average beta for the six chain drug organizations was 0.8. The risk premium for pharmacies was estimated as the risk premium for the stock market - 7.3% - multiplied by the beta for pharmacies - 0.8. This gave a pharmacy risk premium of 5.8%. This is a conservative estimate because it is based on the performance of large chain drug store organizations. Independently owned pharmacies probably face a higher level of risk because of their smaller financial resources and more variable management quality.

The reasonable rate of return is estimated as the sum of the risk free rate - 6.2% - and the pharmacy risk premium - 5.8%. This yields a reasonable rate of return of 12%.

Using this rate to calculate a reasonable profit per prescription is a rough estimate. The return rate should be higher than calculated because the estimate is based only on prescription-related accounts receivables, fixed assets and inventory. In practice, other assets are needed to operate a pharmacy. On the other hand, the reasonable rate of return should apply only to equity. Because pharmacies are financed with some debt, the value of all assets should not be included in the calculation of a reasonable profit.

Appendix X. Calculation of an equivalent fee using higher product reimbursement

This research concludes that a dispensing fee of $6.41 fee covers the pharmacy cost to dispense, given a product cost of AWP-15%. AWP - 15% is a lower drug product reimbursement than DMAS is currently paying. If DMAS continues to pay AWP – 9%, then it is necessary to adjust the dispensing fee of $6.41 downward to an amount which would provide pharmacies with the same gross reimbursement as the AWP-15% plus $6.41 dispensing fee.

If acquisition cost for all products was reimbursed at the rate of AWP-9% then a fee of $4.80 would provide pharmacies with the same reimbursement as AWP-15% plus $6.41. Calculations are shown below.

Current Medicaid Reimbursement:

Average prescription reimbursement in FY 1996	$27.74[4]
Average actual Medicaid dispensing fee	- 3.36[4]
Average Medicaid product reimbursement (AWP-9%)	24.38
Divide by 0.91 to find	
Average AWP of product	26.79

Proposed Medicaid Reimbursement of AWP-15% plus $6.95

Average AWP of product	$26.79
Average Medicaid product reimbursement (AWP-15%)	22.77
Proposed Medicaid fee	+ 6.41
Average prescription reimbursement	$29.18

Fee Required to Yield Equivalent Reimbursement using AWP-9% for product cost

Average prescription reimbursement	$29.18
Average Medicaid product reimbursement (AWP-9%)	- 24.38
Proposed Medicaid fee	$ 4.80

With the originally suggested rate of reimbursement, a pharmacy would receive the amount of the fee - $6.41. With the adjusted reimbursement, a pharmacy would receive both the fee - $4.80 - and the difference between the cost of the product to the pharmacy (about AWP - 15%) and what the pharmacy was reimbursed for the product (AWP-9%). At an average product cost (at AWP) of $26.79, either method would yield $6.41.

This estimation is not completely accurate, however, because a significant percentage of prescriptions are dispensed with multiple source products for which product cost reimbursement is set at the product's maximum allowable cost (MAC) rather than at AWP-9%. Because the MAC is very close to actual acquisition cost, a pharmacy would receive only the fee of $4.80 for MAC products under the adjusted reimbursement system. This is substantially less than the $6.41 they would have received with the originally calculated reimbursement system. So, the revised fee must be adjusted upwards to allow pharmacies to receive the same gross reimbursement, on average, which they would have received under the original calculation.

The amount of adjustment required is based on the following assumptions:

1. Average prescription reimbursement is $27.74[4].
2. 40% of prescriptions are reimbursed at the MAC. (This is based on published estimates of around 50% of prescriptions being dispensed with multiple source products and published estimates that dispensing of multiple source drugs is lower in insurance programs[11-14].)
3. The typical generic product costs 64% less than its brand name counterpart. (This is based on an analysis of the AWP prices of the top-selling generic products and the discounts off AWP commonly provided for generic and brand name products.)

Given these assumptions, the average DMAS reimbursement for ingredient cost for a non-MAC prescription is $32.77. Since reimbursement is at AWP-9%, the average AWP for a non-MAC prescription is $36.01.

The originally proposed reimbursement was AWP-15% + $6.41 for nonMAC prescriptions and MAC + $6.41 for MAC prescriptions. If all prescriptions were nonMAC, a reimbursement of AWP-9% plus $4.80 would yield, on average, the same gross reimbursement. But, 40% of prescriptions may be reimbursed based on MAC. On these prescriptions pharmacies receive only the $4.80 fee because MAC is about equal to their actual acquisition cost. In this situation, a pharmacy's average gross reimbursement on Medicaid prescriptions (both MAC and nonMAC) is only $6.10. This is calculated as follows:

MAC products: Gross reimbursement = fee = $4.80

Non MAC products: Gross reimbursement= fee + (product cost reimbursed - actual product cost)

$$4.80 + (36.01 \times .91 - 36.01 \times .85)$$
$$4.80 + 2.16$$
$$6.96$$

Since 40% of products are MAC and 60% are nonMAC:

Gross reimbursement = .6 (6.96) + .4 (4.80) = $6.10

An upward adjustment of $0.31 ($6.41 - $6.10) is needed to provide pharmacies with equivalent gross reimbursement. Thus, a reimbursement of AWP-9% plus $5.11 for single source products and MAC plus $5.11 for multiple source products should yield the same gross reimbursement for pharmacies, as compared with the originally calculated reimbursement of AWP - 15% plus a $6.41 fee.

A similar calculation was performed to adjust dispensing fees for pharmacy subgroups, using the same assumptions to adjust dispensing fees for all pharmacies.

Appendix XI. House Joint Resolution 623

HOUSE JOINT RESOLUTION NO. 623

Requesting the Department of Personnel and Training and the Department of Medical Assistance Services to evaluate their prescription drug programs to ensure that they comply with the Pharmacy Freedom of Choice statute in the Code of Virginia and evaluate the level of compensation to participating providers to provide a payment level which will allow them a reasonable profit.

Agreed to by the House of Delegates, February 20, 1997
Agreed to by the Senate, February 19, 1997

WHEREAS, the growth of third-party reimbursement for pharmaceuticals has had a significant impact on community pharmacies; and

WHEREAS, in 1972, third-party payers paid for only 18.5 percent of prescriptions dispensed in community pharmacies, they paid for 28.4 percent in 1985, and paid for the majority of prescriptions filled in 1994; and

WHEREAS, in 1994, state Medicaid programs paid for 13 percent of outpatient prescriptions and private third parties paid for 45 percent; and

WHEREAS, a recent study conducted at the Medical College of Virginia/Virginia Commonwealth University has shown that third-party reimbursement appears to have adversely affected the profitability of community pharmacies, and there are indications that pharmacies are tending to close or leave areas with high numbers of poor and elderly; and

WHEREAS, in addition to low reimbursement rates by third-party payers which do not provide adequate profit for pharmacies to stay solvent, many patients are required by their prescription plan to utilize only certain participating provider pharmacies or mail-order operations in order to cut costs; and

WHEREAS, many such plans penalize the patient for having the prescription filled at a non-participating pharmacy or for not using mail order by requiring the patient to pay higher rates for the filled prescription; and

WHEREAS, Virginia Code Section 38.2-3407.7 specifically states that "...no insurer proposing to issue preferred provider policies or contracts shall prohibit any person receiving pharmacy benefits furnished thereunder from selecting, without limitation, the pharmacy of his choice to furnish such benefits. This right of selection extends to and includes pharmacies that are nonpreferred providers and that have previously notified the insurer, by facsimile or otherwise, of their agreement to accept reimbursement for their services at rates applicable to pharmacies that are preferred providers, including any copayment consistently imposed by the insurer, as payment in full ..."; and

WHEREAS, testimony provided to the Joint Subcommittee Studying the Demise of Independent Pharmacies during the 1996 interim attributed the decline in the number of pharmacies and the precarious situation of many others, in part, to the apparent lack of compliance to the freedom-of-choice laws, inadequate reimbursement for services rendered, and a general lack of any type of negotiation with regard to contracts for services which recognize not only good patient care, but also the fluctuating market as well as the total overhead costs incurred by pharmacies in the delivery of their services to the public; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Department of Personnel and Training and the Department of Medical Assistance Services evaluate their prescription drug programs to ensure that they comply with the Pharmacy Freedom of Choice statute in the Code of Virginia and evaluate the level of compensation to participating providers to provide a payment level which will allow them a reasonable profit.