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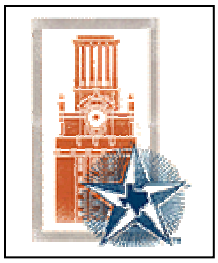

METHODOLOGICAL CONSIDERATIONS FOR CONDUCTING PHARMACY COST OF DISPENSING STUDIES

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Study Methodologies

Surveys have been recently conducted within State Medicaid programs to estimate the pharmacy costs related to dispensing prescriptions to Medicaid recipients.[1,2] Below is a summary of data elements used in collecting data for such studies, in addition to other elements and considerations for measuring and interpreting results. The intent of this paper is to provide guidance to states in designing appropriate survey methodologies to estimate the costs related to dispensing prescription drugs. These elements should serve as a framework for collecting adequate data to develop a sound prescription drug reimbursement policy.

Pharmacy Sampling

In order to derive a representative sample of pharmacies within a state, the survey results should include a sufficient number of pharmacies to allow for statistical comparisons between groups of pharmacies across selected stratifications (pharmacy type, location, etc.) It is suggested that at least **25%** of in-state pharmacies be included in the comparison of results, due to variance in the types of pharmacies that typically participate in Medicaid programs. States with relatively fewer pharmacies participating in the program may require a larger percentage of pharmacies in the final sample to make appropriate comparisons.

Recommended Data Elements

1. Labor Expenses
    a. Salary for sole proprietor;
    b. Salary and wages for staff and relief pharmacists;
    c. Salary and wages for pharmacy technicians, clerks and support staff;
    d. Salary and wages for pharmacy interns;
    e. Salary and wages allocated as a percent of time by areas of responsibility for other employees, including centralized corporate functions (human resources, managed care contract negotiations, etc.) to be allocated across stores on a revenue basis;
    f. Employee benefits, including sign-on bonuses.

2. Operating Expenses (prorated where appropriate between prescription sales and nonprescription sales)
    a. Depreciation;
    b. Taxes;
        i. Personal property taxes
        ii. Real estate taxes
        iii. Payroll taxes (including employees share of FICA)
        iv. Sales taxes
        v. Other taxes
    c. Rent;
        i. Building rent (estimate fair market rate for ownership)
        ii. Equipment
    d. Repairs;
    e. Insurance;
        i. Workman's compensation
        ii. Employee medical premiums
        iii. Other
    f. Interest paid on pharmacy-related debt;
    g. Bad debts;
        i. Uncollected copayments
    h. Accounting, legal and professional fees;
    i. Professional organization dues;
        i. Scientific publications
        ii. Pharmaceutical reference library subscriptions
        iii. Continuing Education
    j. Charitable contributions (corporations only);
    k. Utilities;
        i. Telephone
        ii. Heating
        iii. Water/wastewater
        iv. Electricity
        v. Internet/broadband connection fees
        vi. Garbage disposal

l. Operating and office supplies (no prescription containers or labels);
m. Advertising (including provision of specialized services);
n. Prescription computer services (purchase or lease);
    i. Point of Sale (POS) transaction fees
o. Prescription delivery expenses (not to include labor);
p. Prescription containers and labels;
q. Other business expenses (examples below).
    i. Professional organization dues
    ii. Janitorial services
    iii. Equipment inspections
    iv. Parking space rent

3. Total Pharmacy Sales and Floor Space
    a. Total prescription and non-prescription sales;
    b. Cost of goods sold for prescription and non-prescription sales;
    c. Pharmacy department and counseling areas as a percentage of total pharmacy floor space.

Variables for Comparison

The statewide dispensing cost per prescription should be calculated across the following categories and appropriate statistical comparison of the unweighted means should be made to identify significant differences between categories of pharmacy characteristics. In addition, appropriate statistical models should be developed to determine relationships between costs of dispensing and continuous variables:

1. Independents (1 to 4 pharmacies) vs. Chains (5 or more) vs. Long Term Care
2. Urban (Metropolitan Statistical Areas) vs. Rural (non-Metropolitan Statistical Areas)
3. Sole Proprietors vs. Partnerships vs. Limited Partnerships vs. Corporations
4. Property Ownership (Lease vs. Owner)
5. Total hours of operation per week (continuous variable)
6. Total Medicaid prescription volume (continuous variable)
7. Medicaid prescription volume as a percentage of total volume (continuous variable)
8. Percent of prescriptions dispensed to Long Term Care facilities (continuous variable)
9. Percent of prescriptions dispensed as sterile/non-sterile compounds (continuous variable)
10. Percent of Medicaid prescriptions with non-collected copays (continuous variable)

Additional Considerations

- Overall cost of dispensing per prescription should be reported descriptively as an unweighted median value of all reporting pharmacies (n=number of pharmacies reporting). This allows for determining the middle point of pharmacy's cost of dispensing per the total number of pharmacies.
- Attempts to limit the contribution of owner's salary to overall operating expenses, as well as models that introduce adjustments for this, should be avoided without direct evidence that these do not contribute to daily operations within the pharmacy.
- Attempts to limit the contribution of centralized operational functions provided by corporations should be avoided. This includes operations that centralize the purchase and warehousing of drug products (typically chain pharmacies and larger long term care pharmacies). Reasonable means of including these costs (revenue allocation) should be undertaken.
- Projected growth in costs of dispensing should factor in growth in medical employee wages by including such indexes as the Employment Cost Index, published the US Bureau of Labor Statistics, US Department of Commerce.
- Finally, all methods for extrapolation and assumptions used should be clearly described and, when possible, statistical models used in calculating results should be adequately reported. Reports of means should be reported with accompanying measures of distribution.

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[1] Reeder CE, "Estimation of Average Dispensing Cost and Drug Acquisition Cost for the South Carolina Medicaid Program," Submitted to the South Carolina Department of Health and Human Services, June 15, 2003, University of South Carolina College of Pharmacy.

[2] Myers and Stauffer, LC, "Determination of the Cost of Dispensing Pharmaceutical Prescriptions for the Texas Vendor Drug Program," Prepared for the Texas Health and Human Services Commission, August 2002.