

MEDICATION ASSISTANCE PROGRAMS: DO ALL IN NEED BENEFIT EQUALLY?

Objective: To determine if medication assistance programs (MAPs) provided by pharmaceutical companies were used differently by African Americans and Whites.

Research Design: A cross-sectional survey was conducted among patients of primary care practices from 2005 to 2007 within the Alabama Nonsteroidal Anti-Inflammatory Drug (NSAID) Patient Safety Study.

Setting: Telephone survey.

Participants: Respondents were 568 African American and White patients reporting annual household incomes <\$50,000.

Main Outcome Measure: Use of MAPs.

Results: Of all patients, 12.8% used MAPs, 39.5% were African American, 75.2% were female, 69.1% were aged >65 years, 79.8% had annual household incomes <\$25,000, and 35.5% indicated that their income was inadequate to meet their basic needs. MAPs were used by 11.2% African-Americans and 14.0% Whites. After multivariable adjustment, MAP use was higher among respondents with incomes not adequate to meet basic needs (odds ratio [OR]: 2.19, 95% confidence interval [CI]: 1.17–4.08) but lower among African Americans than Whites (OR: 0.49, 95% CI: 0.25–0.95). Physician characteristics did not independently predict MAP use.

Conclusions: Overall MAP use was low even among the most vulnerable, and especially among African Americans. As currently used, MAPs may contribute to disparities in medication access. (*Ethn Dis.* 2010;20:339–345)

Key Words: Medication Assistance, Medication Access

From Division of Preventive Medicine (MP, EF) and Division of Continuing Medical Education (KC) and Department of Health Services Administration (MR) and Division of Immunology/Rheumatology, The University of Alabama at Birmingham (KS) and Department of Quantitative Health Sciences, University of Massachusetts Medical School (CIK, JJA) and Education & Special Programs, American Society of Health-System Pharmacists Research and Education Foundation (CL).

Maria Pisu, PhD; Katie Crenshaw, JD, MEd; Ellen Funkhouser, DrPH; Midge Ray, MSN, RN; Catarina I. Kiefe, MD, PhD; Kenneth Saag, MD, MSc; Cynthia LaCivita, PharmD; Jeroan J. Allison, MD, MS

INTRODUCTION

Affordability of prescription drugs is a significant barrier to high-quality health care.¹ Targeting affordability, the pharmaceutical industry has developed medication assistance programs (MAPs) that offer brand-name drugs at no or reduced cost to those in financial need on a recurring basis.² The advocacy group Pharmaceutical Research and Manufacturers of America reports that an estimated 5.5 million patients received prescription medicines through these programs in 2002.³ Furthermore, in 2005, pharmaceutical companies distributed more than \$5 billion in drugs to patients in need.³

Despite promotion efforts, MAP use remains uncommon in the broader population.³ For example, in a survey of Medicare patients, only about 2% reported using discounts available through pharmaceutical companies. Low MAP use stood in contrast to a wider use of free drug samples that were received by 30% of Medicare patients in the previous year.^{4,5} Lack of familiarity with MAPs and the cumbersome application process may outweigh perceived usefulness,^{2,6–9} and patients more likely to need these programs may end up being those less likely to take advantage of them. The current literature does not describe the characteristics of patients

...in a survey of Medicare patients, only about 2% reported using discounts available through pharmaceutical companies.

who use MAPs and does not address whether these programs are used by the most vulnerable patients for whom they are designed.

We hypothesized that those who were more likely to need medications and those who faced economic limitation would be more likely to use MAPs. In addition, since African Americans have historically suffered from lower education, income, and health status, we sought to determine if MAPs use was higher in this population, as MAPs could be viewed as a potential tool for promoting equal medication access. We addressed these important questions using data from a community-based sample of patients receiving primary care in Alabama during 2005–2007. This data source allowed us to examine the predictors of MAPs use while accounting for both patient and clinician characteristics.

METHODS

We analyzed patient survey data collected in the context of the larger Alabama Nonsteroidal Anti-Inflammatory Drug (NSAID) Patient Safety Study, a group-randomized trial.¹⁰ Alabama primary care physicians in private, community-based practice were invited to participate in a study that addressed

the safety of prescribed NSAIDs. Family practitioners, general practitioners and general internal medicine physicians who practiced within 100 miles of Birmingham, Alabama and were from practices with less than 5 physicians ($N=471$) were identified through a vendor physician list, the Alabama Practice Based CME Network database and American Medical Association (AMA) database. Forty-nine physicians representing 40 of the 67 counties in Alabama agreed to participate. Patients were recruited from their practices for a survey to assess NSAID use patterns. The study was approved by the University of Alabama at Birmingham Institutional Review Board.

Recruitment for the NSAID Patient Safety Study and Patient Eligibility

Consecutive patients presenting to the office of a participating primary care physician during a six-month period were given the opportunity to complete a study screening form. The form ascertained interest in a subsequent telephone survey along with contact information. Screening forms were deposited into sealed data collection boxes and returned to the coordinating center by physician office personnel.

Based on the returned screening forms, eligible patients were those who met these criteria: 1) self-identification as a patient of a participating primary care physician (generalist, family practitioner, or internist); 2) aged ≥ 50 years; 3) currently taking prescription NSAIDs; 4) willing to provide contact information, informed consent, and complete a telephone interview; and 5) self-reported race/ethnicity of African American or White (98% of the respondents). The surveys required about 30 minutes to complete and were administered between June 2005 and February 2007.

Data Collection

All eligible patients were contacted by telephone and offered participation

in this study. Patients completing the survey were sent a \$20 gift card as reimbursement for their time and effort. All study data were obtained using computer-assisted telephone interview (CATI) protocols. The computer software contained checks for logical consistency and out-of-range errors. Interviewers underwent formal training with certification of competency prior to data collection.

The patient survey asked if respondents knew that some drug companies have programs to make medicines more affordable and if they ever used one of these programs. In addition, the survey ascertained race/ethnicity and sociodemographic information. Health status was represented by the Physical Component Score (PCS) and the Mental Component Score (MCS) calculated from the SF-12.¹¹ We also ascertained participants' self-reported annual household income, whether they believed their income to be adequate to meet basic needs for food, housing, clothing, and medical care (reported inadequate income), and whether they did not fill a prescription because of cost within the preceding year.

Furthermore, insurance status was ascertained by asking participants to describe their current insurance plan, referring to cards or other documentation when necessary for clarification. Insurance status was then summarized in three categories: private insurance, Medicare without supplemental insurance or no insurance, and Medicaid. In addition, participants interviewed before 2006 were asked whether they had a Medicare drug discount card or other drug insurance coverage. Participants interviewed in 2006 and 2007 were asked whether they enrolled in Medicare part D or had other drug insurance coverage. We created a variable indicating no drug insurance coverage if participants reported having no Medicare drug discount card, no Medicare part D, no Medicaid, or no other drug coverage.

Of 962 eligible patients, 761 (79%) completed the survey. In the present study, we included the 568 respondents who reported incomes $< \$50,000$ to more closely reflect the socioeconomic range of patients eligible for MAPs. Thus, we did not include 91 respondents with incomes $\geq \$50,000$ and 102 respondents who did not report income. The respondents included were patients from the practices of 49 participating physicians. Patient responses were merged with data describing physician characteristics obtained from the AMA physician master file; data were successfully linked for 41 physicians and 482 participants.

Statistical Analysis

We first examined differences between African American and White respondents; statistical significance was assessed with the chi-square test. We then obtained unadjusted odds ratio for the association between MAP use and participants' characteristics. We also examined the association of physician characteristics with the mean number of patients using MAPs. Because the outcome was continuous after aggregating at the physician level, we used the two-tailed *t*-test to assess statistical significance for the physician-level analyses.

Logistic regressions were used to examine the independent associations of race/ethnicity with MAP use. For these analyses, the outcome was a dichotomous indicator of MAP use at the patient level. Choice of covariates was guided by Behavioral Model of Access to Care developed by Andersen and colleagues.¹² Based on this model, we included several important covariates that are linked to patient medication access. We considered MAPs as an enabling factor that facilitated access to prescription drugs by reducing economic barriers. Other enabling factors such as insurance make acquisition of prescriptions more affordable and likely result in less MAP use. Because MAP

Table 1. Patient characteristics and medication assistance program (MAP) knowledge and use by race/ethnicity, 2005–2007 Alabama NSAIDs Patient Safety Study

	% Respondents			P
	All (N=568)	African American (n=223)	White (n=342)	
Sex (%)				
Female	75.2	78.7	73.2	.14
Age (%)				
≥65 years	69.1	61.9	73.5	.003
Health Status				
SF-12 Physical component				
Lowest quartile	28.0	27.8	28.1	.94
SF-12 Mental component				
Lowest quartile	27.6	26.0	28.6	.49
Education				
Any college experience	29.6	29.1	29.8	.86
Income				
<\$25,000	79.8	86.1	75.7	.003
Income not adequate to meet basic needs				
Yes	35.1	54.5	22.6	<.001
Not filled prescription because of cost				
Yes	33.9	46.1	26.0	<.001
Insurance				.002
Private	45.2	35.0	52.6	
Medicare only	32.6	37.7	28.6	
Medicaid	14.3	18.4	11.7	
No insurance	3.0	3.1	2.9	
No drug insurance coverage				
Yes	52.3	52.9	52.3	.19
Timing of survey				.01
2005	53.3	57.6	46.6	
2006/07	46.7	42.4	53.4	
Know about MAPs	61.2	48.9	69.3	<.001
Used MAPs (%)	12.8	11.2	14.0	.33

forms are usually completed in the physician office, we also considered physician and practice characteristics as enabling factors.

We used the generalized linear latent and mixed model (GLLAMM) procedure as implemented by STATA to account for the clustering of patients within physicians. The model also allowed us to decompose the overall variability in MAP use into patient-level and physician-level variability. We examined several markers of model quality, including the c-statistic. No important multicollinearity among our

independent variables was found when examining variance inflation factors and using variance decomposition procedures. We also found no important interaction between race/ethnicity, socioeconomic variables, and MAP use when tested in the full multivariable model.

RESULTS

Of all respondents (N=568), 39.5% were African American, 75.2% were female, 69.1% were aged ≥65 years,

and 79.8% had annual household incomes <\$25,000 (Table 1). About 53% of the surveys were conducted in 2005 and African Americans were more likely to have been surveyed that year (Table 1).

Overall, 12.8% of respondents reported MAP use. In unadjusted comparisons, although the proportion of patients reporting MAP use was lower for African Americans (11.2%) than Whites (14.9%), this difference was not statistically significant.

African Americans differed from White respondents on a number of variables, especially variables related to their socioeconomic status (income <\$25,000, income inadequate to meet basic needs, not filled a prescription because of cost). African Americans were also more likely to have Medicaid; however, they were not more likely than Whites to have no drug insurance coverage (Table 1). Of those interviewed in 2006–2007, only about 21% reported having enrolled in Medicare part D with no differences between African Americans and Whites (P=.43).

Differences in use of MAPs were more pronounced among individuals who were most vulnerable as determined by whether they had an income adequate to meet their basic needs. Figure 1 reports racial differences in the use of MAPs among 199 individuals who reported they had incomes inadequate to meet their basic needs and among the 364 who reported adequate incomes. In unadjusted analyses, among respondents with inadequate incomes, African Americans were significantly less likely to use MAPs (P=.02). The difference in use of MAPs among individuals with adequate incomes was more modest and not statistically significant (P=.34).

Table 2 presents data at the physician level, describing the association of physician characteristics with the average use of MAPs among their patient population. Patients of female physicians were almost twice as likely to use

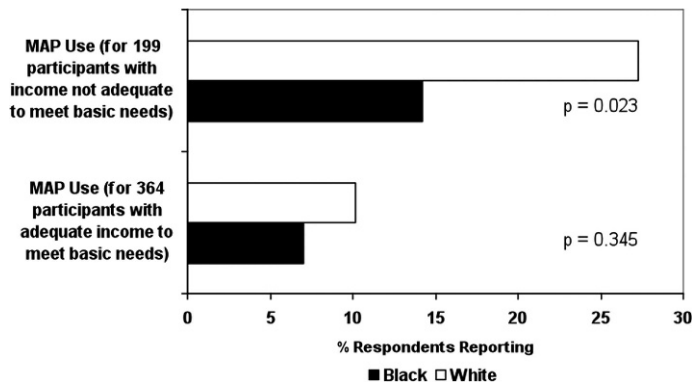


Fig 1. Medication assistance programs (MAPs): Use and adequacy of income to meet basic needs for African American and White respondents (N=568), 2005–2007 Alabama NSAID Patient Safety Study. P is based on unadjusted chi square analyses.

MAPs as patients of male physicians, but otherwise MAP use did not differ by physician characteristics (Table 2).

Table 3 presents bivariate and multivariable odds ratios with the respondent as the unit of analysis. In unadjusted analyses, there were no differences in MAP use by race/ethnicity, sex, age, or SF-12 Physical Component Score (PCS). However, respondents with scores in the lowest quartile for the SF-12 Mental Component Score (MCS) and those who reported incomes inadequate to meet basic needs were more likely to use MAPs. In the multivariable model, African Americans were less likely to use MAPs than White respondents

(odds ratio [OR]: 0.49, 95% confidence interval [CI]: 0.25–0.95), and respondents with inadequate incomes to meet basic needs were more likely to use MAPs than those with adequate incomes (OR: 2.19; 95% CI: 1.17–4.08). Physician characteristics did not independently predict MAP use (Table 3). Only minor variability in the outcome was explained by physician characteristics.

DISCUSSION

In our community-based population of African American and White primary-care patients with low to moderate

income, overall MAP use was less than 13%. As we hypothesized, patients in need of assistance, primarily individuals who perceived their income to be inadequate to meet their basic needs, were more likely to use MAPs than those with perceived adequate income. However, despite being more likely than White patients to report inadequate incomes and to report not filling a prescription because of cost, African American patients were less likely than White patients to use MAPs after adjustment for demographic, clinical, and socioeconomic factors.

In our community-based population of African American and White primary-care patients with low to moderate income, overall MAP use was less than 13%.

The cause of the racial/ethnic differences in MAP use is not apparent from these data, but findings from previous research suggest several possibilities. First, it is possible that low-income African American patients are served by providers who have busy practices and are too overwhelmed to assist their patients with the cumbersome MAP application procedure.² Providers face significant barriers to making MAPs available and enrolling their eligible patients, including allocating the human and financial resource necessary to complete the appropriate forms and conduct proper follow-up.^{2,6–9} A study by Clay et al found that the cost of providing this service to patients at a clinic was \$25.18 per completed and submitted application.⁶ Half of this cost was for time of personnel completing paperwork.⁶ It is

Table 2. Patients using medication assistance programs (MAPs) by physician characteristics (n=41), 2005–2007 Alabama NSAIDs Patient Safety Study

Physician characteristics	n physicians	Mean % (Standard deviation) of patients using MAPs	P
Sex			.045
Female	9	17.8 (11.4)	
Male	31	9.9 (9.7)	
Age			.952
<50 years	19	11.8 (10.2)	
≥50 years	21	11.6 (10.9)	
Race/ethnicity			.556
White	23	10.5 (10.1)	
African American	10	11.7 (11.7)	
Asian	7	15.5 (10.5)	
Specialty			.412
Internal medicine	20	13.1 (8.1)	
Family medicine	20	10.3 (12.4)	

Table 3. Odds ratios (95% CI) for medication assistance program (MAP) use, 2005–2007 Alabama NSAIDs Patient Safety Study

	Unadjusted odds ratio (95% CI)	Adjusted odds ratio (95% CI)
Patient characteristics		
African American	.71 (.40–1.25)	.49 (.25–.95)
Age ≥65 years	.94 (.53–1.68)	.89 (.47–1.65)
Female	1.29 (.68–2.43)	1.33 (.68–2.62)
Lower quartile PCS*	1.68 (.97–2.92)	1.31 (.72–2.38)
Lower quartile MCS†	2.07 (1.20–3.58)	1.61 (.89–2.91)
College experience	.65 (.35–1.23)	.80 (.41–1.56)
Income not adequate‡	2.12 (1.24–3.63)	2.19 (1.17–4.08)
No drug insurance coverage§	.69 (.41–1.18)	.74 (.42–1.30)
Physician characteristics		
Female	1.44 (.83–2.52)	1.99 (.86–4.58)
Age <50	.94 (.58–1.52)	.47 (.20–1.11)
Family medicine	1.02 (.60–1.74)	.94 (.51–1.75)
Model characteristics		
N patients	–	468
N physicians	–	40
c-statistic	–	.68 (.60–.77)

* Physical Component Score of the SF-12.

† Mental Component Score of the SF-12.

‡ Income reported to be not adequate to meet basic needs.

§ No Medicare drug discount card, no Medicare part D, no Medicaid or no other drug coverage versus drug insurance coverage.

possible that physicians who serve vulnerable populations have fewer resources and therefore may choose to distribute them in a different manner.^{7,9}

However, we found that little of the variation in MAP use was attributable to the physician. More specifically, the multi-level models indicated that only trivial variability in MAP use was driven by patient clustering within physicians. These results suggest that poor African American patients were less likely than poor White patients to use MAPs no matter what physician they saw. Therefore, while cost at the provider level may be a barrier to participation, it does not satisfactorily explain the disparity in MAPs usage among these study participants.

Another potential explanation for the disparity in MAP use is that physicians may more readily provide free drug samples to their poor African American patients than to their poor White patients, thereby preempting the

need for financial assistance through a MAP. However, recent research has shown that poor and uninsured patients are less likely than wealthy or insured patients to receive free drug samples. In fact, the poorest one-third of respondents to the 2003 Medical Expenditure Panel Survey were less likely to receive drug samples than those with incomes of 400% or more of the federal poverty level.¹³ This suggests that if the disparity in MAPs usage in this study was due to inequitable distribution of free drug samples, it would have been in the opposite direction—to the favor of White patients, who as a group are more likely to have higher incomes and insurance coverage. In addition, distribution of samples would be expected to cluster heavily at the physician level.

Differences in patient-physician communication may also explain our findings. Given the process required to access these programs, complex information must be exchanged at the point

of care. Other published findings from our Alabama NSAID Patient Safety Study have demonstrated disparities in patient-provider communication.^{10,14} Specifically, African Americans are less likely to discuss NSAIDs risks with their doctors or their pharmacists than their White counterparts. If information exchange is lacking around other issues, it would follow that African American patients might not bring their need for financial assistance in acquiring medications to the attention of their physicians or other provider. Consequently, providers may be less likely to talk to their African American patients about MAP eligibility. This speculation is supported by Wilson et al, who found a similar communication failure between Medicare recipients and their physicians. Of those seniors reporting cost-related non-adherence to recommended drug therapies, only 39% had discussed the matter with their physician.¹⁵ This may explain, at least in part, why fewer African Americans than Whites knew about MAPs.

Our study has important policy implications. MAPs have been described by some as a safety net for those who fall short of the insurance coverage or lack personal funds necessary to pay for their prescriptions.¹⁶ However, our study suggests that this safety net may not be catching all Americans in need and has the potential to introduce health disparities.¹⁷ Even as we encourage equitable distribution of societal resources through specific initiatives, we must recognize that these privately-funded measures may postpone adoption of more comprehensive solutions to the drug affordability dilemma in this country.¹⁸ Although we cannot lose sight of the millions of Americans for whom MAPs may have facilitated more positive health outcomes,^{19–21} we must also consider the effect that MAPs may exert on the overall healthcare system. Along these lines, some suggest that MAPs are more costly than described in the current literature.¹⁶ Others have

expressed concern that MAPs may, in fact, subsidize bad clinical decision-making by persuading physicians to prescribe brand name therapeutics when a generic would work as well and with fewer disruptions in the long-term.²² Although more research is clearly needed, it is urgent that physicians explore the impact of prescription costs on the lives of their patients and their patients' families.

Our study has some limitations. First, our results may not be generalizable to the US population as a whole because of our small sample of respondents and their background. The southern population has some distinct cultural and socioeconomic characteristics that distinguish it from the general US population, including a high prevalence of poverty and a large concentration of African Americans. Second, respondents were asked if they ever used MAPs, and there may have been limited recall of these programs if use did not occur in the immediate past. Therefore, the proportion of individuals who used these programs may be higher than these self-reports indicate. However, we do not expect that African American and White respondents would recall use of these programs differently. Third, we did not collect information on enrollment in other programs developed outside of the pharmaceutical industry to provide medication access at reduced or no cost. Fourth, although we did have basic physician characteristics available for this analysis, we did not collect physician-reported information that may have explained differential use of MAPs. For example, results from another study found that physicians with a high proportion of elderly individuals without drug coverage were less likely to perceive MAPs as useful.²³ Finally, our study did not examine downstream economic or clinical consequences.

In this community-based study of vulnerable primary-care patients, we found MAP use to be low, especially

among African Americans. Although these programs have made medications available to many at low or no cost, assessing their ultimate impact requires a broad societal perspective. Given the low rates of MAP use among economically vulnerable African Americans, we worry that these programs may contribute to widening racial/ethnic health disparities in medication access rather than facilitating equal access for all in need.

ACKNOWLEDGMENTS

The authors are grateful for funding from the Agency for Healthcare Research and Quality (AHRQ) Centers for Education and Research on Therapeutics cooperative agreement (U18-HS010389), from the NIH-funded Diabetes Research and Training Center (P60 DK0769626), and from the NIH-funded Clinical and Translational Science Award (U54 RR024376).

REFERENCES

- Ranji UR, Wyn R, Salganicoff A, et al. Role of health insurance coverage in women's access to prescription medicines. *Womens Health Issues*. 2007;17(6):360-366.
- Choudhry NK, Lee JL, Agnew-Blais J, et al. Drug company-sponsored patient assistance programs: a viable safety net? *Health Aff (Millwood)*. 2009;28(3):827-834.
- Pharmaceutical Research and Manufacturers of America (PhRMA). Pharmaceutical Industry Profile 2007: Pharmaceutical Research and Manufacturers of America (PhRMA); 2007.
- Tseng CW, Brook RH, Keeler E, et al. Impact of an annual dollar limit or "cap" on prescription drug benefits for Medicare patients. *JAMA*. 2003;290(2):222-227.
- Tseng CW, Brook RH, Keeler E, et al. Cost-lowering strategies used by medicare beneficiaries who exceed drug benefit caps and have a gap in drug coverage. *JAMA*. 2004;292(8):952-960.
- Clay P, Vaught E, Glaros A, et al. Costs to physician offices of providing medications to medically indigent patients via pharmaceutical manufacturer prescription assistance programs. *J Manag Care Pharm*. 2007;13(6):506-514.
- Duke KS, Raube K, Lipton HL. Patient-assistance programs: assessment of and use by safety-net clinics. *Am J Health Syst Pharm*. 2005;62(7):726-731.
- Richardson K, Basskin LE. Use of drug manufacturers' patient assistance programs by safety net providers. *Am J Health Syst Pharm*. 2002;59(11):1105-1109.
- Sarrafi-zadeh M, Waite NM, Hobson EH, et al. Pharmacist-facilitated enrollment in medication assistance programs in a private ambulatory care clinic. *Am J Health Syst Pharm*. 2004;61(17):1816-1820.
- Fry RB, Ray MN, Cobaugh DJ, et al. Racial/ethnic disparities in patient-reported nonsteroidal antiinflammatory drug (NSAID) risk awareness, patient-doctor NSAID risk communication, and NSAID risk behavior. *Arthritis Rheum*. 2007;57(8):1539-1545.
- Ware J Jr, Kosinski M, Keller SD. A 12-Item Short-Form Health Survey: construction of scales and preliminary tests of reliability and validity. *Med Care*. 1996;34(3):220-233.
- Andersen R, Davidson P. Improving access to care in America: individual and contextual indicators. In: Andersen R, Rice T, Kominski G, eds. *Changing the U.S. Health Care System: Key Issues in Health Services, Policy, and Management*. San Francisco: Jossey-Bass Health Series; 2001.
- Cutrona SL, Woolhandler S, Lasser KE, et al. Characteristics of recipients of free prescription drug samples: a nationally representative analysis. *Am J Public Health*. 2008;98(2):284-289.
- LaCivita C, Funkhouser E, Miller MJ, et al. Patient-reported communications with pharmacy staff at community pharmacies: The Alabama NSAID Patient Safety Study, 2005-2007. *J Am Pharm Assoc*. 2009;49:e110-e117.
- Wilson IB, Schoen C, Neuman P, et al. Physician-patient communication about prescription medication nonadherence: a 50-state study of America's seniors. *J Gen Intern Med*. 2007;22(1):6-12.
- Chen JT, Summers KH. Pharmaceutical manufacturer prescription assistance programs: are they worth it? *J Manag Care Pharm*. 2007;13(7):611-613.
- Sorensen TD, Song J, Westberg SM. The limitation of good intentions: prescribing medications for the uninsured. *J Health Care Poor Underserved*. 2004;15(2):152-160.
- Carroll NV. Pharmaceutical patient assistance programs: don't look a gift horse in the mouth or there's no such thing as a free lunch. *J Manag Care Pharm*. 2007;13(7):614-616.
- Trompeter JM, Havrda DE. Impact of obtaining medications from pharmaceutical company assistance programs on therapeutic goals. *Ann Pharmacother*. 2009;43(3):469-477.
- Strum MW, Hopkins R, West DS, et al. Effects of a medication assistance program on health outcomes in patients with type 2 diabetes mellitus. *Am J Health Syst Pharm*. 2005;62(10):1048-1052.

21. Schoen MD, DiDomenico RJ, Connor SE, et al. Impact of the cost of prescription drugs on clinical outcomes in indigent patients with heart disease. *Pharmacotherapy*. 2001;21(12):1455–1463.
22. Fairman KA, Curtiss FR. The elephant in the pharmacy: patient choice is the big challenge that no one talks about in affordability of prescription drugs. *J Manag Care Pharm*. 2007;13(7):620–622.

23. Pisu M, Richman J, Allison JJ, et al. Pharmaceuticals companies' medication assistance programs: potentially useful but too burdensome to use? *South Med J*. 2009;102(2):139–144.

AUTHOR CONTRIBUTIONS

Design concept of study: Pisu, Funkhouser, LaCivita, Allison
Acquisition of data: Ray, Allison

Data analysis and interpretation: Pisu, Crenshaw, Funkhouser, Kiefe, LaCivita, Allison

Manuscript draft: Pisu, Crenshaw, Ray, Kiefe, LaCivita, Allison

Statistical expertise: Pisu, Funkhouser, Kiefe, Allison

Acquisition of funding: Allison

Administrative, technical, or material assistance: Ray