

inpatients and outpatients and (2) there is increasing resistance of GNB to the most frequently used antibiotics in hospitalized PV patients.

Because of an impaired response to oral antibiotics, fluid and electrolytic alterations and/or severe sepsis, 10% to 15% of patients with PV are admitted to our service. It is possible that the increasing resistance observed in our study in inpatients is due to an increase in pathogenicity of the bacteria (community-acquired ESBL producers) and/or a decreased response to oral antibiotics (inherent resistance or acquired  $\beta$ -lactamase and/or ESBL related to invasive procedures, mainly catheters, prolonged hospital stay, and confinement in an inpatient unit).<sup>3,4</sup>

Data about the clinical epidemiology of GNB, compared with GP bacteria, are limited. Infections and severe sepsis in PV are frequently due to GP bacteria; however, GNB are emerging as important pathogens among severely ill patients,<sup>5</sup> including those with PV.

The resistance observed in our study can be explained on the basis of the hospital environment, the quality of inpatient care, and the frequency of prescribing antibiotics as outpatients (which is often done on an empiric basis). Antibiotic prescriptions should be justified with microbiological studies; this will lead to the use of specific antibiotics in a given case and is more scientifically sound than empiric prescribing.

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#### REFERENCES

- Hirsch EB, Tam VH. Impact of multidrug-resistant *Pseudomonas aeruginosa* infection on patient outcomes. *Expert Rev Pharmacoecon Outcomes Res* 2010;10:441-51.
- Colsky AS, Kirsner RS, Kerdel FA. Analysis of antibiotic susceptibilities of skin wound flora in hospitalized dermatology patients. The crisis of antibiotic resistance has come to the surface. *Arch Dermatol* 1998;134:1006-9.
- Kallen AJ, Srinivasan A. Current epidemiology of multidrug-resistant gram-negative bacilli in the United States. *Infect Control Hosp Epidemiol* 2010;31:551-4.
- Al Johani SM, Akhter J, Balkhy H, El-Saed A, Younan M, Memish Z. Prevalence of antimicrobial resistance among gram-negative

isolates in an adult intensive care unit at a tertiary care center in Saudi Arabia. *Ann Saudi Med* 2010;30:364-9.

- Sostarich AM, Zolldann D, Haefner H, Lueticken R, Schulze-Roebecke R, Lemmen SW. Impact of multiresistance of gram-negative bacteria in bloodstream infection on mortality rates and length of stay. *Infection* 2008;36:31-5.

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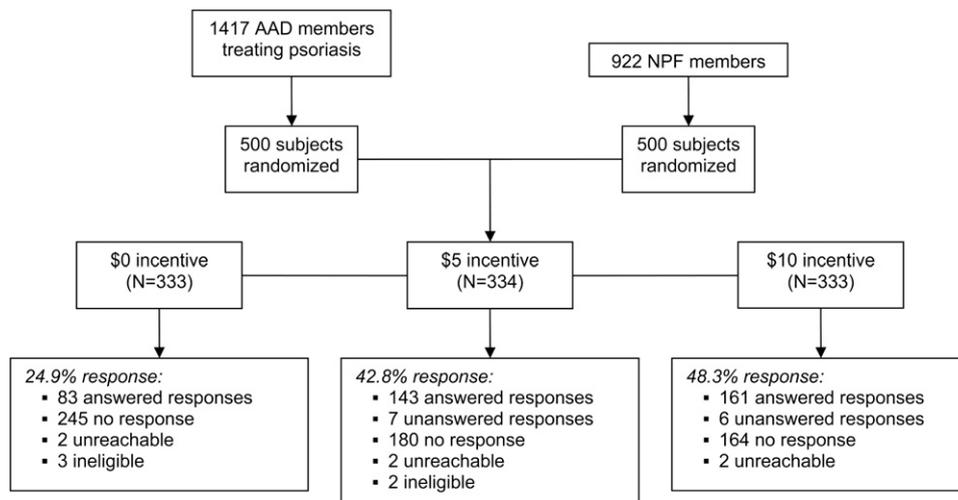
#### **Dermatologist response rates to a mailed questionnaire: A randomized trial of monetary incentives**

*To the Editor:* Although surveys are frequently used to collect data from dermatologists, response rates are often low, limiting the generalizability of results.<sup>1</sup> Monetary incentives have improved physician survey response but have not been tested in dermatologists.<sup>2</sup> Moreover, the effect of incentive size remains unclear.<sup>2</sup> This study examines the effect of cash incentives on dermatologist response to a mailed questionnaire and its cost-effectiveness.

As part of a study about preferences for psoriasis treatment, we surveyed 1000 dermatologists,<sup>3</sup> randomizing each to receive an initial questionnaire packet with either \$5 or \$10 (with a note offering this token of appreciation) or no cash (Fig 1). Using a modified Dillman Tailored Design method,<sup>4</sup> we sent postcard reminders and duplicate surveys to non-respondents after the initial mailing. The study was approved by the University of Pennsylvania Institutional Review Board.

We compared survey response with respect to physician characteristics and incentives and performed logistic regression to evaluate interactions among possible predictors of response determined a priori. We calculated cost per response and incremental cost-effectiveness, considering only incentive and material costs (\$1/questionnaire without incentive, \$1.10/questionnaire with incentive, \$0.75/postcard, \$0.50/response postage), and performed sensitivity analysis by maximizing material costs. Confidence intervals (CIs) were calculated by using bootstrap and Fieller's theorem methods.

The overall response rate was 39.1%, with rates of 25%, 43% (odds ratio [OR], 2.26; 95% CI, 1.61-3.16), and 48% (OR, 2.80; 95% CI, 1.99-3.93) in the \$0, \$5, and \$10 groups, respectively (see Fig 1). However, response rates in the \$5 and \$10 groups did not differ significantly ( $P = .17$ , Fisher's exact test). In multivariate logistic regression, National Psoriasis Foundation (NPF) membership (OR, 2.48; 95% CI, 1.89-3.26) and receipt of incentive (OR, 2.63; 95% CI, 1.94-3.55) were significant predictors of survey response, whereas sex and duration of practice were nonsignificant.<sup>3</sup>



**Fig 1.** Flow chart of study design and outcome. One thousand dermatologists were randomly selected from American Academy of Dermatology members who self-identified as treating psoriasis and from active National Psoriasis Foundation members. Dermatologists within both groups were stratified and equally randomized to receive one of 3 incentive amounts. Six subjects were unreachable because of undeliverable mailings, and 5 subjects were considered ineligible because they were non-dermatologists or not currently in practice. Thirteen eligible subjects who returned the survey unanswered were treated as nonrespondents. *AAD*, American Academy of Dermatology; *NPF*, National Psoriasis Foundation.

**Table I.** Cost per completed survey and incremental cost-effectiveness by incentive group

Cost	Incentive		
	\$0	\$5	\$10
Total cost	\$1082.50	\$2719.65	\$4348.55
Cost/response* (95% CI)	\$13.04 (10.87 to 16.20)	\$19.02 (16.85 to 21.79)	\$27.01 (24.15 to 30.60)
Incremental cost-effectiveness† (95% CI)	—	\$27.35 (19.33 to 45.93)	\$88.83 (37.00 to -244.89)
Cost/response at maximal costs‡ (95% CI)	\$41.77 (34.64 to 52.14)	\$34.15 (29.99 to 39.46)	\$39.87 (35.36 to 45.53)
Incremental cost-effectiveness at maximal costs (95% CI)	—	\$23.54 (15.72 to 41.59)	\$84.08 (33.10 to -243.54)

CI, Confidence interval.

\*Cost per response was calculated by dividing the total expenditures per incentive group by the number of returned surveys in that group.

†Incremental cost-effectiveness was calculated by dividing the difference in mean total cost per subject between two incentive groups by the difference in response rate between the two groups.

‡In our sensitivity analysis, maximal costs were calculated by adding \$2 to both the questionnaire and postcard mailing costs per person.

Inclusion of \$5 instead of \$0 or of \$10 rather than \$5 cost \$27.35 (95% CI, 19.33-45.93) and \$88.83 (37.00-(-244.89)) per extra response, respectively (Table I); the latter CI indicates that at an investigator's willingness-to-pay between \$0 and \$37 per extra response, we can be 95% confident that \$10 incentives represent bad value compared with \$5 incentives. In the sensitivity analysis, once questionnaire and postcard costs surpassed \$1.88 and \$1.63, respectively, the cost per response in the \$0 group exceeded that in the \$5 group; at these material costs and higher, the use of \$5 incentives, compared with no incentive, thus represents better value when investigators are concerned with increasing the total number of responses.

Although dermatologists have generally low response rates to surveys, they respond just as positively to monetary incentives as other specialists.<sup>2</sup> The higher response among NPF members also supports previous findings that topical salience influences survey response.<sup>2,5</sup> Moreover, financial incentives can be cost effective, particularly when survey costs are high. However, increasing incentive size leads to diminishing returns and amounts over \$5 may be less cost effective.<sup>5</sup>

To engage dermatologists in survey-based research, investigators should consider using small financial incentives. Future studies should investigate response rates in other surveys of dermatologists to further assess the generalizability of our results.

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#### REFERENCES

1. Resneck JS Jr, Tierney EP, Kimball AB. Challenges facing academic dermatology: survey data on the faculty workforce. *J Am Acad Dermatol* 2006;54:211-6.
2. Edwards PJ, Roberts I, Clarke MJ, Diguseppi C, Wentz R, Kwan I, et al. Methods to increase response to postal and electronic questionnaires. *Cochrane Database Syst Rev*: MR000008.
3. Wan J, Abuabara K, Troxel AB, Shin DB, Van Voorhees AS, Bebo BF Jr, et al. Dermatologist preferences for first-line therapy of moderate-to-severe psoriasis in healthy adult patients. *J Am Acad Dermatol* doi: 10.1016/j.jaad.2011.03.012. Published online August 22, 2011.
4. Dillman DA. *Mail and Internet surveys: the tailored design method*. New York: J. Wiley; 2000.
5. Halpern SD, Ubel PA, Berlin JA, Asch DA. Randomized trial of 5 dollars versus 10 dollars monetary incentives, envelope size, and candy to increase physician response rates to mailed questionnaires. *Med Care* 2002;40:834-9.

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#### Conflict of interest and disclosure: Analysis of American Academy of Dermatology Annual Meetings

To the Editor: When individuals have both a financial relationship with a commercial interest and the opportunity to affect the content of continuing medical education (CME) about the products or services of that commercial interest, conflicts of interest (COI) exist. Faculty, planners, and speakers at national dermatology CME meetings often have

**Table I.** Reminder systems by AAD annual meeting year

	2005	2007	2008
Lead time for e-mailing slide templates	16 days	50 days	100 days
Speaker packet reminder format	Paper	Paper	Electronic
Disclosure slide reminder sign in speaker ready room	No	Yes	Yes
Disclosure slide template available on computer desktop in speaker ready room	No	Yes	Yes
Including disclosure slides in faculty presentations	Encouraged	Required	Required

COI. It is the job of CME providers like the American Academy of Dermatology (AAD) to resolve COI to avoid commercial bias.<sup>1</sup> Disclosure of these relationships is an important first step in the process to identify COI. Disclosure slides at the beginning of presentations also remind speakers and audiences of these relationships and allow audiences to decide whether commercial bias exists.<sup>1</sup> The study's objectives were to determine usage rates of speaker disclosure slides in large audience sessions at the AAD annual meeting before and after implementation of various reminder systems and to identify rates of COI disclosed over a 4-year period.

Submitted electronic slides from faculty presentations at large sessions (courses, symposia, and forums) at the 2005, 2006, and 2008 AAD Annual Meetings were reviewed. For each presentation, the first 6 slides were reviewed. Educational session type, presence of disclosure slide, slide type (AAD-provided disclosure template or faculty-created slide), and disclosure content (a statement of no COI or of one or more industry relationships) were recorded for each. Four speaker disclosure reminder systems were identified including e-mail reminders from AAD to speakers with standardized PowerPoint disclosure slide templates, mailed or e-mailed instructions reminding speakers to include disclosure slides, an eye-level 3-foot printed reminder sign in the entryway of the speaker-ready room, and a downloadable disclosure slide template located on the speaker-ready room computer desktops for disclosure slide insertion on site. The timing of these reminders for the years studied is shown in Table I.