

Internal Medicine Physicians' Financial Relationships with Industry: An Updated National Estimate

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INTRODUCTION

Financial relationships between physicians and prescription drug or medical device manufacturers remain controversial. Recent large national studies have shown such relationships are associated with prescription of brand-name drugs, especially those sold by the sponsoring manufacturer, over equally effective lower-cost generics.^{1, 2}

Since 2013, industry payments and gifts are being publicly reported. Also, some large academic medical centers, physician employers, such as Kaiser Permanente, and states have banned or restricted detailing visits, physician payments, or gifts, and some manufacturers have changed their own practices for certain gifts.³ We conducted a national survey of internal medicine physicians to assess how their financial relationships with industry have changed in this context.

METHODS

We randomly sampled 500 clinically active internists and 1000 internal medicine specialists (500 endocrinologists, 500 cardiologists) from the American Board of Internal Medicine's diplomate list; 84 lacked contact information. We asked 10 yes/no questions about "drug, device, or other medically related company" interactions in the last year: food inside or outside the workplace; free drug samples; pens, notepads, T-shirts; honoraria for speaking; payment for consulting services; payment for service on an advisory board; costs of personal expenses for attending meetings; free tickets to events; subsidized admission to meetings; or conferences for which Continuing Medical Education (CME) credits were awarded. To compare ties by physician characteristics, we used Pearson's chi-square test for categorical variables and two-sample *t* tests for continuous variables. All statistical analyses were performed using SAS 9.4 software (SAS Institute, NC). The Dartmouth College IRB approved the project.

RESULTS

We received 686 surveys (48% response rate). Respondents averaged 44 years old (SD 8)—13 years (SD 8) out of residency—and were 59% male, 72% specialist, and 56% Caucasian (4% Hispanic, 34% Asian, 3% African-American, and 4% other). About three-quarters (72%) reported any financial tie to industry. The most common benefits received were free drug samples (55%) and food or beverage in (48%) and outside (30%) the workplace. Fewer physicians reported receiving small gifts (8%) or payments for consulting (4%) or service on a scientific advisory board (3%).

In 2017, specialists reported more meals than internists (at work, 61% for cardiologists and 53% for endocrinologists vs. 32% [$p < 0.0001$]; outside work, 38% vs. 13% [$p < 0.001$]) as did male than female physicians (at work, 52% vs. 43% [$p = 0.03$]; outside work, 34% vs. 25% [$p = 0.02$]) (Table 1). Specialists and older physicians generally reported more expertise-related payments (honoraria for speaking, consulting services, scientific advisory boards). These differences were similar to those found in a national physician survey in 2009 with similar questions and response rates.⁴

Compared to 2009, fewer internal medicine physicians reported receiving all types of financial payments, with the greatest decrements related to food/beverage or tickets to sporting or cultural events (75% vs 42%) and speakers bureaus/consulting/advisory boards (18% vs 2%) (Table 2). Among cardiology specialists, the only significant differences were for drug samples (82% vs 60%) and speakers bureaus/consulting/advisory boards (33% vs 8%).

DISCUSSION

While financial industry ties have fallen over the past 15 years, a majority of US physicians still reported them in 2017, most prominently, free samples and meals, the latter of which are usually provided during promotional communications related to a brand-name drug or medical device. Free samples are used as a marketing tool⁵ and have been linked to prescribing of high-cost brand-name drugs over lower-cost generic alternatives.⁶

Table 1 Association Between Physician Characteristics and Financial Relationships with Industry (n = 686)

	Food or beverage in the workplace		Free drug samples		A meal outside of campus or hospital		Pens, notepads, T-shirts		Honoraria for speaking		Payment for consulting services		Scientific advisory board or board of directors		Costs for attending meetings		Funding for Continuing Medical Education (CME)	
	Yes (%)	p value	Yes (%)	p value	Yes (%)	p value	Yes (%)	p value	Yes (%)	p value	Yes (%)	p value	Yes (%)	p value	Yes (%)	p value	Yes (%)	p value
Gender																		
Male	52.1	0.03	53.9	0.80	33.8	0.02	8.9	0.15	9.7	0.03	3.9	0.49	4.2	0.05	12.8	0.01	7.1	0.32
Female	43.2		55.0		25.3		5.9		5.1		2.9		1.5		6.2		5.2	
Race																		
Non-White	44.2	0.04	49.7	0.02	27.4	0.18	8.6	0.41	6.2	0.14	3.4	0.93	2.7	0.69	8.9	0.33	7.2	0.36
White	52.2		58.5		32.2		6.8		9.3		3.6		3.3		11.2		5.5	
Age in 2017																		
<35 yo	45.3	0.50	26.7	<0001	32.0	0.97	9.3	0.52	0.0	0.02	0.0	0.01	0.0	0.02	6.7	0.29	2.7	0.38
35-44	48.2		51.1		29.5		6.8		7.2		1.8		1.8		9.0		7.9	
45-54	47.8		62.7		29.9		6.5		11.4		5.5		6.0		13.4		6.0	
≥55	55.9		71.0		31.2		10.8		8.6		7.5		3.2		9.7		5.4	
Years after residency																		
1-5 years	45.8	0.54	31.3	<0001	31.3	0.59	9.9	0.35	1.5	0.02	1.5	0.08	0.8	0.17	7.6	0.04	6.1	0.88
6-10 years	46.2		49.0		25.9		4.9		7.7		2.8		2.1		5.6		4.9	
11-15 years	47.5		60.4		33.1		9.4		10.1		2.2		3.6		15.1		7.2	
≥16 years	52.4		68.2		30.9		6.9		10.3		6.0		4.7		11.2		6.5	
Primary practice area*																		
Internal medicine	31.8	< 0.0001	41.0	< 0.0001	12.8	< 0.0001	11.8	0.02	1.0	< 0.0001	0.5	0.004	1.5	0.44	0.5	< 0.0001	7.2	0.58
Cardiology	60.9		60.3		42.5		5.6		5.6		2.2		3.4		14.0		6.7	
Endocrinology	53.2		66.5		34.3		5.2		16.7		6.4		3.9		15.5		5.2	
Other specialists	45.9		36.1		34.4		13.1		3.3		6.6		4.9		11.5		9.8	

Free tickets to events were too infrequent to analyze according to physician characteristics
 *Internal medicine n = 195; cardiology n = 182; endocrinology n = 233; other specialists n = 76

Table 2 Reduction in Internal Medicine and Cardiology Physician Self-Reported Relationships with Industry between 2009 and 2017

Specialty	Source	N	Free drug sample		Any food/beverage or tickets to cultural/sporting event		Any meeting expenses or CME meeting admissions		Any payment for speaker's bureau, consulting, or advisory board participant	
			Yes (%)	p value	Yes (%)	p value	Yes (%)	p value	Yes (%)	p value
Internal medicine	2009*	249	161 (65)	<0.0001	185 (75)	<0.0001	53 (22)	<0.0001	43 (18)	<0.0001
	2017	195	80 (41)		82 (42)		14 (7)		3 (2)	
Cardiology	2009	218	178 (82)	<0.0001	165 (76)	0.35	44 (21)	0.77	70 (33)	<0.0001
	2017	182	108 (60)		128 (72)		34 (19)		14 (8)	

*Source: 2009 represents results reported by Campbell et al.⁴ Data in 2017 rows derived from current survey

Our study is limited by non-response and possible underreporting of ties, as physicians may be reluctant to acknowledge industry ties given heightened scrutiny. The decline in financial ties may reflect successful regulation by states, academic institutions, and large employers, as well as consolidation of more physician practices under these entities, or a consequence of mandatory disclosure under the Sunshine Act. Yet financial connections between physicians and industry remain a prevalent force affecting prescribing practices and health care costs.

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Compliance with Ethical Standards:

The Dartmouth College IRB approved the project.

Conflict of Interest: Drs. Schwartz and Woloshin were co-founders of Informulary, Inc., a company that provides data about the benefits, harms, and uncertainties of prescription drugs, which ceased operations in December 2016. Dr. Kesselheim reports serving as an expert witness for the plaintiffs in the Multidistrict Opiate Litigation on the subject of pharmaceutical marketing. All other authors declare that they do not have a conflict of interest.

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