Financial Payments to Teaching Hospitals by Companies Marketing Opioids

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Amid the national opioid overdose crisis, media reports and ongoing litigation have shed light on financial relationships between companies marketing opioid medications and teaching hospitals. Financial relationships between teaching hospitals and pharmaceutical companies may influence the education of trainees and physician prescribing practices, creating institutional conflicts of interest which can undermine public trust.¹

While prior research indicates financial payments to physicians related to marketing of opioids are widespread and may contribute to increased prescribing frequency² and dosing,³ little is known about opioid-related payments to academic teaching hospitals. Thus, we examined the prevalence and characteristics of publicly reported payments from companies marketing opioids to US teaching hospitals.

METHODS

We examined all non-research payments made by companies marketing opioids to teaching hospitals reported in the Centers for Medicare and Medicaid Services (CMS) Open Payments database.⁴ Data were available for payments occurring between August 1, 2013, and December 31, 2018. We identified companies marketing opioids as those reporting any payments related to opioids in the Open Payments database and those listed in the Food and Drug Administration National Drug Codes database as manufacture ring or distributing opioid products.⁵ We examined all opioids approved for pain management, excluding methadone and buprenorphine/naloxone which are also approved for the treatment of opioid use

disorder. Teaching hospitals were identified by CMS certification number. We calculated descriptive statistics on the number, dollar amount, and nature of payments related to opioid products and payments made by companies marketing opioids that were not linked to any product.

RESULTS

During the study period, 31 companies marketing opioids reported making payments to teaching hospitals, of which 18 companies reported making payments specifically linked to the marketing of opioid products (median value of opioid-related payments per company \$194,977; interquartile range [IQR] \$14,993 to \$561,250). Overall, there were 444 payments linked to opioid products totaling \$7,023,140 (median value of individual payment \$1348; IQR \$245 to \$20,291). Five opioids accounted for the majority of payments: oxycodone, morphine, buprenorphine, oxycodone, and fentanyl (Table 1).

Fifty-eight teaching hospitals (58/1282, 4.5%) received opioid-related payments (median total value of payments received per teaching hospital \$1725; IQR \$675 to \$3500). The majority of payments to teaching hospitals were made for services rendered including consulting, participating in unaccredited education, and services other than consulting (Table 2).

In addition to payments linked to opioids, we identified 5168 payments made by 22 companies marketing opioids which were not linked to any opioid or non-opioid product; the total value of these payments was \$120.0 million.

DISCUSSION

Between 2013 and 2018, US teaching hospitals received over \$7 million in payments related to opioid products, primarily for providing consulting and speaking services. These findings add to prior studies of industry marketing of opioid products, which have focused exclusively on payments made to individual physicians.^{2, 3}

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Table 1 Payments by Companies Marketing Opioids to Teaching Hospitals, August 2013–December 2018

	Payment amount, \$	No. payments	No. hospitals ^a	No. companies	Product names
All opioid products	7,023,140	444	58	18	
Oxymorphone	1,883,204	74	3	2	Opana
Morphine sulfate	1,843,534	137	20	8	Oxymorphone Embeda Arymo
Buprenorphine ^b	1,336,899	88	24	7	Morphine sulfate Belbuca Butrans Buprenorphine
Oxycodone	1,243,320	54	11	5	Oxecta Oxycontin Xartemis Oxycodone
Fentanyl	589,688	48	18	3	Ionsys Fentanyl
Hydrocodone	118,894	36	2	4	Zohydro Hysingla
Tapentadol	4000	4	3	2	Nucynta
Hydromorphone	1850	2	2	1	Exalgo
Tramadol	1750	1	1	1	Tramadol

^aAs defined by Open Payments reporting requirements, teaching hospitals include those receiving payment for Medicare direct graduate medical education, inpatient prospective payment system indirect medical education, or psychiatric hospital indirect medical education

^bBuprenorphine medications exclude those formulated with naloxone which are FDA-approved for treatment of opioid use disorder

As a result of Open Payments database limitations which include reliance on company self-report⁶ and a high frequency of companies not reporting which product payments were linked to, our analyses may underestimate payments related to opioids made to teaching hospitals. As Open Payments provides limited information on reasons for payments beyond broadly defined categories, some payments may be related to improving education on safe prescribing or risk evaluation programs. To meet the stated goals of the Open Payments program, CMS should consider requiring manufacturers to provide contextual information on payments made to teaching hospitals, particularly those related to controlled substances.

Given the unique role teaching hospitals play in training clinicians to prescribe and critically evaluate new medical evidence, these institutions should consider voluntarily prohibiting payments related to marketing of opioids and restriction of other financial relationships related to opioids.¹

Government entities and accreditation bodies should consider formal limits on the nature of financial relationships permissible between manufacturers of controlled medications and teaching hospitals.

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Author Contributions Dr. Anderson had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Study concept and design: Anderson, Hadland

Acquisition, analysis, or interpretation of data: All authors

Drafting of the manuscript: Anderson

Critical revision of the manuscript for important intellectual content: All authors

Statistical analysis: Anderson, Krieger

Table 2 Payments from Companies Marketing Opioids to Teaching Hospitals, By Nature of Payment

Nature of payment	Payment amount, \$	No. payments	No. hospitals	No. companies
Consulting fee	3,777,644	175	7	11
Compensation for services other than consulting ^a	2,432,324	99	1	7
Unaccredited and non-certified continuing education program ^b	684,286	20	1	1
Space rental or facility fees	96,905	83	40	6
Education	17,724	18	18	2
Honoraria	12,322	2	1	1
Travel and lodging	1805	39	2	3
Food and beverage	130	8	3	4
Non-research grant	0	0	0	0
Royalty or license	0	0	0	0
Charitable contribution	0	0	0	0
Gift	0	0	0	0

^aFull definition from Open Payments: Compensation for services other than consulting, including serving as faculty or as a speaker at an event other than a continuing education program

^bFull definition from Open Payments: Compensation for serving as faculty or as a speaker for an unaccredited and non-certified continuing education program

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