Pharmaceutical industry payments to leaders of professional medical associations in Australia

Focus on cardiovascular disease and diabetes

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Background and objective
Pharmaceutical industry interactions with professional medical associations have come under scrutiny, yet industry ties among the leadership of these associations are often overlooked. The aim of this study was to investigate pharmaceutical industry payments to leaders of Australian diabetes or cardiovascular associations, and general associations serving doctors who manage these conditions.

Methods
Payments were identified using publicly available industry transparency reports (October 2015 to April 2018).

Results
Overall, 48/197 (24.4%) leaders received payments, predominantly for speaker (51.4%) and advisory board (25.3%) engagements. The proportion of paid leaders was higher for diabetes- and cardiovascular-specific associations (72.7% and 41.2%, respectively) than for general associations (7.6%).

Discussion
These findings raise concerns about industry influence on clinical practice and policy.

PROFESSIONAL MEDICAL ASSOCIATIONS (PMAs) shape clinical practice through their role in medical education, clinical guideline development, health policy, advocacy and research.[1] Many PMAs receive pharmaceutical industry funding, generating concern about industry influence on their activities.[1,2] However, the receipt of industry payments by PMA leaders – respected members of their profession involved in defining professional and clinical norms – are often overlooked, despite the potential impact on the direction of the association and practices of its members. Accumulating evidence suggests that financial relationships between pharmaceutical companies and medical practitioners may lead to poorer-quality prescribing, increased healthcare costs and bias within medical education, clinical practice guidelines and research.[3,4] These findings have prompted calls for independence of PMAs and their leaders from the pharmaceutical industry.[1]

Australia's pharmaceutical industry has a self-regulatory system of transparency reporting. Member companies of Medicines Australia, the pharmaceutical industry trade organisation, submit reports identifying healthcare professionals who receive payments for services or in support of medical education, including travel, accommodation and/or conference registration fees. These reports were used to examine payments to leaders of PMAs associated with two prevalent chronic conditions: cardiovascular disease and diabetes.

Methods

An online search was performed for three categories of PMAs: diabetes-focused associations, cardiovascular-focused associations and general professional associations serving medical practitioners who routinely manage these conditions. The authors excluded surgical, paediatric and research-focused associations and those for which medical practitioners comprised ≤50% of the leadership. The authors identified individuals in leadership positions between 2016 and 2018 (executives, board members, relevant special interest group leaders, committee members) from associations' webpages and annual reports (search conducted January 2019). Each leader's medical specialty was determined using the Australian Health Practitioner Regulation Agency's publicly available Register of Practitioners. The authors identified pharmaceutical industry payments to leaders using a database of Medicines Australia reports on Payments to Healthcare Professionals (October 2015 to April 2018; extract available at

http://hdl.handle.net/2123/20945). Payment details were extracted (number, total and median value, purpose). Two researchers independently compared payments against conflict of interest disclosures on the associations' websites. All data used in this study were publicly available; as such, ethical approval was not required.

Results

The researchers identified 197 leaders from 10 PMAs; 48 leaders (24.4%) received industry payments. There were 467 payments totalling $932,270. Payments supported chairing/speaking at meetings (n = 240; 51.4%;), advisory board participation (n = 118; 25.3%), meeting attendance (n = 77; 16.5%) and consulting (n = 32; 6.9%). The three highest-paying companies were AstraZeneca ($175,342; 18.8%), Novo Nordisk ($165,774; 17.8%) and Sanofi ($140,174; 15.0%).

The number and proportion of paid leaders was highest for diabetes associations (24 of 33; 72.7%) and lowest for general associations (10 of 132; 7.6%; Table 1). Leaders of diabetes associations received 57.7% of the total payment value ($537,910 of $932,270). The three highest-paid leadership teams were from diabetes and cardiovascular associations and received between $192,939 and $239,617. The median payment to leaders of diabetes ($10,702; interquartile range [IQR]: $2638–$28,744) and cardiovascular associations ($9892; IQR: $2070–$21,957) was almost double the payment given to leaders of general associations ($5485; IQR: $1820–$15,955).

Across all associations and leaders (both paid and unpaid), the most common medical specialists were general practitioners (GPs; n = 93), endocrinologists (n = 26) and cardiologists

Table 1. Pharmaceutical company payments to leaders of professional medical associations in Australia

Association*	Leaders			Payments			
	Total n	Receiving payments n (%)	Specialty of leaders receiving payments	Total n	Total value $	Median value per leader $ (IQR)	Highest payment $
General							
G1	28	4 (14.3)	General practice	81	163,909	27,302 (5,903–62,376)	107,894
G2	21	3 (14.3)	Other specialist (various)	7	15,298	3,570 (2,385–7,049)	10,528
G3	21	1 (4.8)	General practice	2	3051	3,051	3,051
G4	68	2 (2.9)	General practice	15	18,582	9,291 (5,055–13,528)	17,764
All general (G1–G4)	132	10 (7.6)	–	105	200,840	5,485 (1,820–15,955)	107,894
Diabetes							
D1	10	9 (90.0)	Endocrinology	82	192,939	15,698 (2,600–42,232)	52,225
D2	11	7 (63.6)	Endocrinology	60	99,308	10,063 (4,945–22,540)	30,783
D3	5	5 (100)	General practice	141	239,617	19,189 (11,451–28,547)	179,583
D4	7	3 (42.9)	Endocrinology	6	6,046	2,487 (1,698–2,560)	2,650
All diabetes (D1–D4)	33	24 (72.7)	–	289	537,910	10,702 (2,638–28,744)	179,583
Cardiovascular							
C1	7	1 (14.3)	Endocrinology	1	280	400	400
C2	26	13 (50.0)	Cardiology†	72	193,120	13,270 (2,279–23,787)	55,022
All cardiovascular (C1–C2)	34	14 (41.2)	–	73	193,520	9,892 (2,070–21,957)	55,022
Total	197‡	48 (24.4)	–	467	932,270	9,861 (2,435–24,033)	179,583

**Individual associations have been anonymised.*
†Twelve of 13 paid leaders were cardiologists; one of 13 was another type of specialist.
‡Totals are less than the sum of individual rows as some leaders contribute to multiple associations (n = 7).
IQR, interquartile range

(n = 23; Table 2). Over three-quarters of endocrinologists (20 of 26; 76.9%) and half of cardiologists (12 of 23; 52.2%) received payments, compared with one-eighth (12 of 93; 12.9%) of GPs.

Only one association (Table 1; D1) disclosed payments to leaders on its website. Of the nine paid leaders, four provided conflict of interest statements; all were incomplete.

Discussion

A substantial proportion of leaders of diabetes- and cardiovascular-specific associations received pharmaceutical industry payments, but payments to leaders of general professional associations were uncommon. These financial ties were inadequately disclosed by the PMA. The difference between GPs and other specialists may reflect the relative return for investment for pharmaceutical companies in increasing sales; payments to endocrinologists and cardiologists have been associated with greater increases in prescribing of marketed diabetes and cardiovascular medicines than payments to other specialties.[5] Payments predominantly supported speaker and advisory board engagements, suggesting that PMA leaders may be particularly valuable to industry as 'key opinion leaders'.[6] The highest-paying companies – AstraZeneca, Novo Nordisk and Sanofi – cite diabetes and/or cardiovascular disease as primary therapeutic interests on their websites. These are highly profitable areas, with a number of newly approved and/or subsidised medicines, large and increasing patient populations, chronic treatment regimens and expanding diagnostic categories.[7,8]

In a recent study of payments from 71 pharmaceutical companies to leaders of Japanese PMAs from a diverse range of medical specialties, over 85% of leaders received payments, compared with 24% in the current study of 35 companies.[9] Differences in included companies, therapeutic focus and medical specialties may underlie this discrepancy. The present study likely underestimates industry payments to leaders. The current data do not capture medical device manufacturers, the primary source of industry payments to cardiologists in the USA,[10] payments by non-member pharmaceutical companies or research-related payments. Regardless, these findings show that undisclosed pharmaceutical industry ties are common among PMA leaders within the specialties of diabetes and cardiovascular disease, raising concerns about industry influence on clinical practice and policy. Medical organisations and their leadership have a responsibility to ensure conflicts of interests are disclosed, minimised and managed responsibly.

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Table 2. Pharmaceutical company payments to leaders of professional medical associations in Australia, by medical specialty

Specialty	Leaders		Payments		
	Total n	Receiving payments n (%)	Total n	Total value $	Median value per leader $ (IQR)
Endocrinologists	26	20 (76.9)	149	298,694	7,493 (2,572–20,534)
Diabetes associations	24	19 (79.2)	148	298,294	9,661 (2,625–23,469)
Cardiovascular associations	2	1 (50.0)	1	400	400
Cardiologists*	23	12 (52.2)	71	191,120	14,810 (3,875–24,033)
General practitioners	93	12 (12.9)	239	425,159	14,533 (2,641–33,211)
General associations	87	7 (8.0)	98	185,542	7,401 (2,230–32,484)
Diabetes associations	6	5 (83.3)	141	239,617	19,189 (11,341–28,547)
Other specialists	31	4 (12.9)	8	17,298	2,785 (1800–5,310)
General associations	20	3 (15.0)	7	3,570	3,570 (2385–7,049)
Diabetes associations	3	0 (0.0)	0	0	0
Cardiovascular associations	8	1 (12.5)	1	2,000	2,000
Non-specialists†	24	0 (0.0)	0	0	0

**All from cardiovascular associations*
†All from general associations
IQR, interquartile range

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