A cross-sectional analysis of pharmaceutical industry-funded events for health professionals in Australia

Alice Fabbri  
*University of Sydney*

Quinn Grundy  
*University of Sydney*

Barbara Mintzes  
*University of Sydney*

Swestika Swandari  
*University of Sydney*

Ray Moynihan  
*Bond University*

*See next page for additional authors*

Follow this and additional works at: [http://epublications.bond.edu.au/hsm_pubs](http://epublications.bond.edu.au/hsm_pubs)

Part of the [Health Services Administration Commons](http://epublications.bond.edu.au/hsm_pubs), [Health Services Research Commons](http://epublications.bond.edu.au/hsm_pubs), and the [Pharmacy Administration, Policy and Regulation Commons](http://epublications.bond.edu.au/hsm_pubs)

**Recommended Citation**


This Journal Article is brought to you by the Faculty of Health Sciences & Medicine at ePublications@bond. It has been accepted for inclusion in Faculty of Health Sciences & Medicine Publications by an authorized administrator of ePublications@bond. For more information, please contact Bond University's Repository Coordinator.
A cross-sectional analysis of pharmaceutical industry-funded events for health professionals in Australia

Alice Fabbri,1,2 Quinn Grundy,2 Barbara Mintzes,2 Swestika Swandari,2 Ray Moynihan,3,4 Emily Walkom,5 Lisa A Bero2

ABSTRACT

Objectives To analyse patterns and characteristics of pharmaceutical industry sponsorship of events for Australian health professionals and to understand the implications of recent changes in transparency provisions that no longer require reporting of payments for food and beverages.

Design Cross-sectional analysis.

Participants and setting 301 publicly available company transparency reports downloaded from the website of Medicines Australia, the pharmaceutical industry trade association, covering the period from October 2011 to September 2015.

Results Forty-two companies sponsored 116 845 events for health professionals, on average 608 per week with 30 attendees per event. Events typically included a broad range of health professionals: 82.0% included medical doctors, including specialists and primary care doctors, and 38.3% trainees. Oncology, surgery and endocrinology were the most frequent clinical areas of focus. Most events (64.2%) were held in a clinical setting. The median cost per event was $A263 (IQR $A153–1195) and over 90% included food and beverages.

Conclusions Over this 4-year period, industry-sponsored events were widespread and pharmaceutical companies maintained a high frequency of contact with health professionals. Most events were held in clinical settings, suggesting a pervasive commercial presence in everyday clinical practice. Food and beverages, known to be associated with changes to prescribing practice, were almost always provided. New Australian transparency provisions explicitly exclude meals from the reporting requirements; thus, a large proportion of potentially influential payments from pharmaceutical companies to health professionals will disappear from public view.

INTRODUCTION

Full disclosure of financial relationships between the pharmaceutical industry and health professionals is a key strategy adopted to make these interactions more transparent. Many jurisdictions have recently introduced transparency provisions, including the USA and the European Union, but the extent of the disclosure obligation varies. For example, meals and drinks fall outside the scope of disclosure obligations under new voluntary transparency provisions introduced by the European Federation of Pharmaceutical Industry Associations.1 At the same time, in the USA, over 100 medical societies recently backed a bill that would exempt pharmaceutical and medical device companies from reporting an entire category of payments to doctors: those related to continuing medical education.2

Australia was one of the first countries to move towards public reporting of these payments. Since 2007, Medicines Australia, the trade association of the prescription medicines industry, has required member companies to provide detailed reports of sponsorship of events for health professionals, which include company-initiated events, sponsored events organised by a third party, trade displays at educational events and sponsorship of healthcare professionals to attend events both in Australia and overseas.3 The reports are published on the Medicines
Australia website and include events for all registered healthcare professionals, making Australia one of the few countries with transparency extending to non-physicians. These disclosure provisions were a condition for approval of Medicines Australia’s Code of Conduct by the Australian Competition and Consumer Commission and were upheld following a legal appeal by industry. Changes to this policy were introduced in 2015, with the focus on events replaced by disclosure of payments to individuals. The reports detailing event sponsorship and aggregate payments to health professionals have been discontinued, and replaced with reports of payments to named individuals, similar to the Open Payments database in the USA. Moreover, the new code no longer requires reporting of payments for food and beverages.

At a time when disclosure policies are being debated and revised in several settings, Australian data can provide valuable insights into patterns of industry sponsorship and on characteristics of transparency provisions that are needed to capture expenditures of pharmaceutical companies on health professionals. Apart from two analyses of data from the first 6 months of the Australian disclosure scheme and one brief report on events involving nurses, no comprehensive longer term analyses have been conducted.

The objectives of this cross-sectional analysis are to describe the nature and frequency of events for health professionals sponsored by pharmaceutical companies that are members of Medicines Australia; to create an open-access searchable database of these events; and to estimate the information that will be lost under newly introduced reporting standards.

METHODS

Data sources
We downloaded all the available reports from the Medicines Australia website (www.medicinesaustralia.com.au) in PDF format. The 301 PDF reports of approximately 15,000 pages covered the period October 2011 to September 2015. The PDFs had been originally created in Microsoft Excel. We requested the original Excel files from Medicines Australia but were refused on the basis that member companies had not given permission for their release. We converted the PDF files into Excel format using free, online converter programs, cleaned the data to address errors introduced during file conversion, and ensured consistency of reporting in each column.

The reports cover information on the sponsoring company, timing, venue type, number and profession of participants, hospitality and travel for attendees, room rentals and equipment, and speaker honoraria.

Over this 4-year period, 47 pharmaceutical companies issued transparency reports, and we grouped them based on mergers and acquisitions as of 31 March 2016. Therefore our analysis included 42 Medicines Australia member companies; as a frame of reference, there are approximately 140 separate companies listed as suppliers to the Australian Pharmaceutical Benefit Scheme.

Coding
We designed a coding scheme based on the available data and variables of theoretical interest based on the literature on industry–professional interactions and on two previous analyses of data from the first 6 months of the Australian disclosure scheme. The research team iteratively developed a set of keywords to define each variable of interest (see online supplementary file 1). Using Excel’s filter function, we used the keywords to search the unstructured descriptive text and to dichotomously code event features as ‘present/absent’, for the following variables:

- sponsoring companies, grouped based on mergers and acquisitions as of 31 March 2016
- geographical location by Australian state or overseas location
- professional status of attendees (eg, specialists, nurses, trainees)
- clinical focus based on clinical specialty of attendees and event description (eg, oncology, endocrinology, cardiology)
- type of event (eg, journal club, workshop, in-services)
- type of hospitality provided (eg, breakfast, lunch, dinner).

Statistical analysis
We present frequency tables for the characteristics of the events, and median spending levels per event and company. Cost variables are reported in Australian dollars. As the data were not normally distributed, we used Mann-Whitney U tests for the differences between medians. Analyses were performed using SPSS V.22.

RESULTS

General overview
From October 2011 to September 2015, 42 pharmaceutical companies in Australia sponsored 116,845 events involving health professionals. On average, there were 2,434 events per month and 608 events per week. Each year, the number of events sharply decreased in December through February, likely reflecting the holiday season.

Table 1 provides illustrative examples of sponsored events as presented verbatim in the company reports, chosen to reflect variations in reporting and event type. Events varied greatly in scope and intensity, ranging from a half-hour journal club with sandwiches in a hospital meeting room, to a several-day conference with overseas flight, accommodation and hospitality provided. The professional status was sometimes described generically as ‘healthcare professionals’ or contained a list of the professions in attendees. The level of detail companies reported regarding the programme’s content and the extent of explicit product promotion also varied; most of the event descriptions were disease-focused (eg, ‘Journal
Club on Chronic Obstructive Pulmonary Disease’), but in some cases the events mentioned specific drug names (eg, ‘Introducing Zoely and other Emerging Trends in Contraception’).

Attendees
Over this 4-year period, there were 3 481 750 individual attendances at industry-sponsored events. The median number of event attendees was 18 (IQR 12–25); 97.2% (n=113595) of the events had fewer than 100 attendees and 0.2% (n=210) had more than 1000 participants. Over 40% (n=47084) of events included participants from multiple professions. Table 2 lists the professional status of attendees and the most frequent clinical areas of focus for the events. Events were most frequently oncology-related, while otolaryngology and andrology were least represented.

Location and characteristics of sponsored events
Three-quarters of events were held in the three Australian states with the largest populations — New South Wales (30.7%, n=35888), Victoria (26.9%, n=31448) and Queensland (18.8%, n=21963) — and few were held overseas (1.9%, n=2262). Nearly two-thirds of events (64.2%, n=74998) were held in a clinical setting, such as hospitals, clinics or doctors’ offices. Non-clinical venues included restaurants, hotels and convention centres. One-third of the events were described as a generic ‘meeting’ (37.5%, n=43810), while others were described as journal clubs (28.5%, n=33281), clinical meetings (3%, n=3553), grand rounds (3.8%, n=4472), m-services (2.6%, n=3038) or workshops (2.6%, n=3029). Only 4.2% (n=4290) were described as scientific meetings (eg, conferences or congresses).

Costs and hospitality
Reporting companies spent $A286 117 928 on events for health professionals. On average, companies spent $A2449 per event (SD $A15 020), while the median cost was $A263 (IQR $A153–1195). The median cost per person was $A2449 per event (SD $A15 020), while the median cost for health professionals. On average, companies spent $A286 117 928 on events.

The analysable data set in CSV file format we have created is available at (http://dx.doi.org/10.4227/11/592631edbd-9d5) (Direct link to the dataset: https://research-data.sydney.edu.au/index.php/s/npi79P4NhVQ0XB)
<table>
<thead>
<tr>
<th>Company</th>
<th>Date</th>
<th>Event content</th>
<th>Venue</th>
<th>Professional status of attendees</th>
<th>Hospitality provided</th>
<th>Total cost of hospitality</th>
<th>Number of attendees</th>
<th>Total costs of function</th>
</tr>
</thead>
<tbody>
<tr>
<td>AstraZeneca</td>
<td>Sep. −15</td>
<td>Educational Event - Dinner meeting</td>
<td>Hotel Realm Barton, ACT</td>
<td>General Practice Nursing Endocrinology</td>
<td>Dinner with Alcoholic and Non-Alcoholic Beverages</td>
<td>$2087.27</td>
<td>32</td>
<td>$3305.45 includes 1 speaker fee for $1218.18</td>
</tr>
<tr>
<td>AstraZeneca</td>
<td>Mar. −15</td>
<td>Educational Event - Lunch meeting Restless Legs, 1 hour educational content</td>
<td>The Golden Horse Footscray, VIC</td>
<td>General Practice Respiratory Medicine</td>
<td>Lunch</td>
<td>$248.82</td>
<td>10</td>
<td>$848.82 includes speaker fee for $600</td>
</tr>
<tr>
<td>Novartis</td>
<td>Feb. −15</td>
<td>Sponsorship of Journal Club on: Chronic Obstructive Pulmonary Disease 1 hour educational content</td>
<td>Gold Coast University Hospital Southport, QLD</td>
<td>Medical Students, Nurses, Pharmacists</td>
<td>Afternoon Tea</td>
<td>$184 includes Food &amp; Beverages for 20 delegates $184</td>
<td>20</td>
<td>$184 includes Total Hospitality: $184</td>
</tr>
<tr>
<td>Novartis</td>
<td>Mar. −14</td>
<td>Sponsorship of Day Seminar on: Immunosuppressant 8 hours educational content</td>
<td>Alfred Health Melbourne, VIC</td>
<td>Cardiologists, Nurses, Registrars, Renal Physicians, Surgeons, Transplant Physicians</td>
<td>Breakfast, Coffee, Lunch, Afternoon Tea, Light Refreshments, Morning Tea, Non-Alcoholic Beverages</td>
<td>$2498 includes Food &amp; Beverages for 120 delegates: $2498</td>
<td>120</td>
<td>$2,498 includes Total Hospitality: $2,498 Speaker Costs: Meal (for 8 speakers): $167</td>
</tr>
<tr>
<td>Merck Sharp &amp; Dohme Australia</td>
<td>Oct. −11</td>
<td>Oncology Journal Club [hours of education=1]</td>
<td>Mercy Women’s Hospital, Heidelberg, VIC</td>
<td>Oncologists, Nurses</td>
<td>Food &amp; beverages</td>
<td>food &amp; bev 19.64, Total Hospital: 19.64</td>
<td>5</td>
<td>$19.64</td>
</tr>
<tr>
<td>Merck Sharp &amp; Dohme Australia</td>
<td>Oct. −11</td>
<td>Evening educational meeting 'Introducing Zoely and other Emerging Trends in Contraception' [hours of education=2.5]</td>
<td>Boathouse by the Lake, Barton, ACT</td>
<td>Obstetricians and Gynaecologist</td>
<td>Food &amp; beverages</td>
<td>food &amp; bev 1432.72, Total Hospital: 1432.72</td>
<td>25</td>
<td>speaker fee 688.36, speaker food &amp; bev $59.07, Total Cost $2180.15</td>
</tr>
<tr>
<td>Roche Products</td>
<td>Apr. −14</td>
<td>Multi Disciplinary Breast Cancer Clinical Review Meeting Educational Content=1 hour</td>
<td>Royal Adelaide Hospital North Terrace Adelaide, SA</td>
<td>Surgery Doctor Oncology Doctor Oncology Nurse Pathology Doctor</td>
<td>Lunch</td>
<td>247</td>
<td>13</td>
<td>247</td>
</tr>
<tr>
<td>Roche Products</td>
<td>Jan. −13</td>
<td>Grand Rounds Educational Content=1 hour 15 mins</td>
<td>Bunbury Regional Hospital Bussell Highway, Bunbury, WA</td>
<td>Hospital Healthcare Professionals</td>
<td>Lunch</td>
<td>$272</td>
<td>20</td>
<td>$272</td>
</tr>
<tr>
<td>Pfizer Australia</td>
<td>Apr. −13</td>
<td>Pfizer Australia provided Sponsorship for Healthcare Professional to attend The European Congress of Clinical Microbiology and Infectious Disease (ECCMID) 2013. Educational Content - 33.75 hour(s).</td>
<td>International Congress Centrum, Berlin, Germany</td>
<td>Infectious Disease Specialist</td>
<td>Registration Fee (1 attendee $878), Travel (Flights $8,196, Transfers $219), Accommodation (6 Room Nights $1,562)</td>
<td>$10855</td>
<td>1</td>
<td>$10855.00</td>
</tr>
</tbody>
</table>
More recently, analyses of the Open Payments database in the USA have shown that payments for educational training and even the provision of low-cost free meals, commonly provided at sponsored events, are associated...
Table 3  Characteristics of events and median cost per person

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of events n=116845, n (%)</th>
<th>Median total cost per person* (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overseas</td>
<td>2262 (1.9%)</td>
<td>$A710 (91–7300)</td>
</tr>
<tr>
<td>Within Australia</td>
<td>114583 (98.1%)</td>
<td>$A14 (10–62)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Setting</th>
<th>Median total cost per person* (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical setting</td>
<td>$A12 (9–15)</td>
</tr>
<tr>
<td>Non-clinical setting</td>
<td>$A91 (28–154)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event type</th>
<th>Median total cost per person* (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific meeting</td>
<td>$A93 (33–659)</td>
</tr>
<tr>
<td>Other types of events</td>
<td>$A14 (10–60)</td>
</tr>
</tbody>
</table>

*Includes hospitality as well as other costs (eg, venue hire, speaker honoraria, audiovisual hire).

Table 4  The top 20 companies in terms of number of sponsored events

<table>
<thead>
<tr>
<th>Company</th>
<th>Number of events</th>
<th>Number of attendees</th>
<th>Total cost of food and beverage ($A)</th>
<th>Total cost of function* ($A)</th>
<th>Median total cost per event (IQR) ($A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GlaxoSmithKline</td>
<td>3706</td>
<td>103331</td>
<td>2 993 037</td>
<td>6 292 242</td>
<td>254 (161–1645)</td>
</tr>
<tr>
<td>CSL</td>
<td>3285</td>
<td>138 070</td>
<td>1 337 909</td>
<td>6 000 501</td>
<td>288 (179–1427)</td>
</tr>
<tr>
<td>Bristol Myers Squibb</td>
<td>3151</td>
<td>138 446</td>
<td>2 492 290</td>
<td>12 755 630</td>
<td>245 (82–1900)</td>
</tr>
<tr>
<td>Bayer</td>
<td>2964</td>
<td>151 084</td>
<td>1 417 055</td>
<td>8 146 292</td>
<td>396 (194–1500)</td>
</tr>
<tr>
<td>IPSEN</td>
<td>2802</td>
<td>85 475</td>
<td>984 477</td>
<td>5 163 600</td>
<td>254 (169–454)</td>
</tr>
<tr>
<td>Abbott/AbbVie</td>
<td>2774</td>
<td>59 793</td>
<td>3 291 305</td>
<td>6 437 623</td>
<td>255 (157–1037)</td>
</tr>
<tr>
<td>Boehringer Ingelheim</td>
<td>2223</td>
<td>56 204</td>
<td>6 050 143</td>
<td>8 724 933</td>
<td>207 (1308–2654)</td>
</tr>
<tr>
<td>Gilead Sciences</td>
<td>2049</td>
<td>45 510</td>
<td>990 419</td>
<td>7 061 338</td>
<td>245 (160–540)</td>
</tr>
<tr>
<td>Merck Serono</td>
<td>1841</td>
<td>41 809</td>
<td>1 376 023</td>
<td>4 237 372</td>
<td>229 (145–626)</td>
</tr>
<tr>
<td>Total – Top 20</td>
<td>102592</td>
<td>3 016 313</td>
<td>72 810 634</td>
<td>247 843 635</td>
<td>262 (152–1199)</td>
</tr>
<tr>
<td>All companies</td>
<td>116845</td>
<td>3 481 750</td>
<td>84 862 792</td>
<td>286 117 928</td>
<td>263 (153–1195)</td>
</tr>
</tbody>
</table>

*Includes food and drink, as well as other costs (eg, venue hire, speaker honoraria, audiovisual hire).
Medicines Australia, the available reports likely underestimate the true extent of industry sponsorship of events for health professionals. Our analysis included only 42 Medicines Australia member companies; as a frame of reference, approximately 140 manufacturers are listed as suppliers to the Australian Pharmaceutical Benefit Scheme. Moreover, non-member manufacturers of branded prescription medicines, generic medicines, over-the-counter medicines and medical devices are not covered by the Medicines Australia Code. Third, with regard to the coding scheme, the research team identified a set of keywords to define each variable of interest, and it is possible that some synonyms were missed due to variability in the data provided. Fourth, we did not assess the content of events due to the unstructured and variable nature of reporting. Fifth, our analysis focuses on industry sponsorship of events and did not examine differences in how event organisers manage potential influences. Finally, costs were not adjusted for inflation as these would likely have a limited impact on the Australian dollar over such a short time period. Notwithstanding these limitations, we have conducted a cross-sectional analysis of the only publicly available data on industry-sponsored events for health professionals.

In conclusion, our findings have several international implications for future research and policy initiatives. While Australian transparency reports are difficult to analyse due to their format, we have created an open-access, searchable, world-first database with details of more than 100,000 industry-sponsored events, enabling researchers to analyse the intersection of pharmacetical marketing and medical education. Although the data included in this analysis are from Australia, pharmaceutical companies are transnational corporations whose practices are likely to be similar across different countries. Moreover, individual institutions such as hospitals or universities may use these data to see what industry-sponsored activities are happening within their own backyards, and whether they meet contemporary expectations for transparency and independence.

At the policy level, at a time when new rules are being debated and revised globally, our findings underscore the need for more disclosure, not less. Transparency rules should be as inclusive as possible with regard to the type of companies required to report and also in terms of the scope of payments and categories of health professionals covered. The onus of reporting should not be on the industry only; for example, public sector hospitals as well as universities and professional associations could report meal subsidies from pharmaceutical and device manufacturers. A stronger policy option, already implemented at several academic medical centres in the USA, would be to eliminate the provision of free food by manufacturers. In the long term, ways of expanding funding for independent continuing professional education should be explored. There are already case studies showing that independence from industry sponsorship is achievable. For example the University of Michigan, as well as other major medical institutions in the USA, no longer accepts commercial support for continuing medical education. This sets a valuable example that could become a model for other institutions. In the short term, universities and professional associations should make health professionals more aware of the independent sources of information on drugs that are already available (eg, NPS MedicineWise, the Australian Medicines Handbook and the independent drug bulletins).

Finally, our findings highlight that transparency requirements likely capture only a portion of industry sponsorship of events for health professionals. Changes to the transparency requirements will likely exacerbate this issue by excluding common categories of payments. Thus, decision-makers should be aware of the extent of industry-sponsored activity which will be hidden if ‘free food’ fails to be included in future transparency regimes.

Contributors AF, QG, BM, RM, LAB conceived of the study. AF, QG, BM, RM, EW designed the coding scheme. AF, QG and SS acquired and analysed all data. AF drafted the manuscript. All the authors contributed to the writing of the paper and approved the final version. AF is the guarantor.

Funding The work was partially funded via a University of Sydney Faculty of Pharmacy summer scholarship.

Competing interests All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf (available on request from the corresponding author). BM reports that she was an expert witness on behalf of plaintiffs in a Canadian class action suit concerning cardiovascular risks of a testosterone gel. None of the authors received any payments, funding or other financial support from pharmaceutical manufacturers. The authors declare no other relationships or activities that could appear to have influenced the submitted work.

Patient consent Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

Data sharing statement The analysable dataset in CSV file format is available at: http://dx.doi.org/10.42271/11/592631ed8d95d

Open Access This is an Open Access article distributed in accordance with the Creative Commons Attribution Non-Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/

© Article author(s) (or their employer(s) unless otherwise stated in the text of the article) 2017. All rights reserved. No commercial use permitted unless otherwise expressly granted.

REFERENCES
6. Australian Competition and Consumer Commission. Australian competition tribunal affirms ACCC’s decision on extra reporting for


A cross-sectional analysis of pharmaceutical industry-funded events for health professionals in Australia
Alice Fabbri, Quinn Grundy, Barbara Mintzes, Swestika Swandari, Ray Moynihan, Emily Walkom and Lisa A Bero

BMJ Open 2017 7:
doi: 10.1136/bmjopen-2017-016701

Updated information and services can be found at:
http://bmjopen.bmj.com/content/7/6/e016701

These include:

References
This article cites 13 articles, 2 of which you can access for free at:
http://bmjopen.bmj.com/content/7/6/e016701#BIBL

Open Access
This is an Open Access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections
Public health (2153)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/