POLICY AND POSITION PAPER

Non-engagement with the pharmaceutical industry

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on behalf of the St Martins Practice Partnership. September 2019

St Martins Practice policy statement

At St Martins Practice we have long followed a policy with regard to our relationship with the pharmaceutical industry. We do not engage or work with pharmaceutical companies. Nor do we accept visits from representatives of such companies, offers of hospitality or offers to pay for participation in courses and conferences.

In addition, joint working with the pharmaceutical industry opens the NHS doors to private companies in ways that give us, and patients, grave cause for concern. While the stated aims of each individual joint project seem worthy and enticing, and while they may enable us better to meet commissioning requirements, they can distract us from the industry's overarching goal: profit.

The way pharmaceutical marketing achieves this goal is by nudging prescribing decisions in the company's favour. The evidence shows that doctors and other health professionals do indeed change their prescribing behaviour as a result of these initiatives. Marketing works.

Furthermore, research shows that decisions doctors make as a result of being exposed to promotional pressure are altered and may not be in the patients' best interests.

This paper outlines these concerns, and others, in detail. We believe that the only way of adequately addressing these concerns is to stay away from any kind of engagement with pharmaceutical companies.

Background

The partnership of St Martins Practice has held a policy of not working with the pharmaceutical industry for many years. In 2019, this feels an increasingly difficult stance to maintain: shifting patterns of pharmaceutical involvement in healthcare, particularly case-finding, are bringing pharmaceutical companies closer to our patients in ways that are harder to avoid.

Primary Care Networks formalise close working with other GP partnerships and organisations. We believe it is important for the network to develop mature, trusting relationships. To do so, we need to be able to understand each other's perspectives, particularly when there might be differences of opinion – for example on working with the pharmaceutical industry. We value our local relationships and our relationships with other partners in health and care across Leeds, including GP representative organisations and the CCG; we recognise that many kinds of collaborative working have the potential to bring benefits for our patients and our practice.

Working with the pharmaceutical industry in any way is, however, not what we want to do. Pharmaceutical involvement in primary care is on the rise and so it feels necessary now, more than ever, to explain our position and set out the evidence underpinning it.

Summary

This paper sets out the evidence base for our policy. This is:

- The interests of pharmaceutical companies are to make a profit and add value for their shareholders (section A).
- Promotional material from pharmaceutical companies makes doctors more likely to ignore guidelines and evidence, and to prescribe more of their medications (section B).
- Joint working arrangements with pharmaceutical companies, which have proliferated in recent years, provoke our concern that there is a lack of transparency about funding sources, failure to obtain adequate patient consent, diversion of resources away from NHS priorities, and over-diagnosis (section C).
- There is evidence that the influence of pharmaceutical industry funding has compromised the educational quality of Continuing Medical Education (CME) (section D).

A. What are the interests of the pharmaceutical industry?

Pharmaceutical industry revenues totaled over £200 billion in 2012 (Comanor 2013), making it one of the world's largest industries. As with any limited company, pharmaceutical companies are primarily accountable to shareholders, with profit as a significant motive (House of Commons Health Committee 2005). Pharmaceutical innovation and productivity is on the wane: fewer drugs are approved each year, and an ever-decreasing fraction of company revenues is allocated to research and development (Scannell et al 2012). External factors are pushing profits downwards and making it harder to develop new drugs. Companies are responding with new marketing techniques to maintain profits (see section B) and prioritise profit. Examples are given below.

The full picture on the efficacy of Tamiflu appears not have been fully available at the time that decisions were having to be made to address the swine flu epidemic. Goldacre (2014) highlights that the pharmaceutical industry routinely and legally withholds information about the clinical trials it conducts. The Cochrane Collaboration later obtained all the relevant information about the Tamiflu trials. Putting the evidence together, it found that Tamiflu has little or no impact on complications of flu infection, such as pneumonia. It might help prevent flu symptoms, but not asymptomatic spread, and the evidence here is mixed. It will take a few hours off the duration of flu symptoms. But all this comes at a significant cost of side-effects (Goldacre 2014 and Jefferson et al 2014). Evans (2010) asserts that "when it comes to policies on pandemic flu, there is an inherent conflict between the pharmaceutical industry, WHO and the global health system". Evans claims this is because they all draw on the same pool of experts and do not properly deal with conflicts of interest. The Public Accounts Committee (2013) found that the NHS had spent £424 million stockpiling Tamiflu between 2006 and 2013.

Cohen et al (2019) detail that the Japanese drug company Astellas has been reprimanded by regulatory bodies four times in less than three years. Offences included off-label marketing, a subsequent cover-up when the company was investigated, and a failure to mention certain adverse reactions in promotional material. In 2014, Astellas held a meeting that it said was for sharing of scientific information rather than marketing, but leaked documents and emails showed its objectives included both product promotion and targeting opinion leaders.

Goldacre's book (2012) evidences many concerns about the pharmaceutical industry's pursuit of profit. He says that industry-sponsored studies are more likely to produce results that flatter the sponsor's drug. Goldacre also catalogues a number of ways in which trials can be flawed, including: trials in unrepresentative "ideal" patients, trials that compare drugs against something that doesn't work very well, trials that are too short, trials that stop early, trials that stop late, trials that are too small, trials that measure uninformative outcomes, trials that bundle their outcomes up together in questionable ways, trials that ignore drop-outs, trials that change their main outcome after they are finished, subgroup analyses, and more. Goldacre highlights that trials are conducted on "ideal" patients who are young with single diagnoses and fewer health problems. Travers et al (2007) showed that only 6% of randomly selected asthma patients would have been eligible for participation in the major asthma trials on which guidelines were then based. They conclude that the guidelines therefore may have limited validity for the average patient. Another issue is that many 'first in man' drug tests are conducted on homeless people and other vulnerable groups. Historically, drugs have been tested with limited consent e.g. in Nazi prisoner-of-war camps and, until the 1980s

in the USA, on prisoners. Today people are paid to enroll in drug trials. There is ongoing ethical discussion about whether people can give meaningful consent when they are in need of money.

B. Promotional materials / promotion

Bi. Promotion to doctors

The pharmaceutical industry spends between a quarter and a third of its revenues on drug promotion. It spends twice as much on marketing and advertising as on research and development (Goldacre 2012), which equates to tens of billions of pounds every year. In Europe, currently, the industry is not allowed to advertise to consumers, and so all marketing is directed at medical professionals. This takes many forms including sales representatives, journal advertisements and sponsorship of educational events, conferences and specialist professional groups.

How marketing works

The task of any promotional initiative is to influence the target audience – for example by changing knowledge or opinion, raising awareness or boosting understanding. This can be done in all kinds of ways: a leaflet about a gig, a road safety advert, a charity dinner etc. The ultimate goal, however, is for the target to take a **specific action**: buy a ticket, wear a seatbelt, make a donation and so on. The promotional efforts of pharmaceutical companies are designed to influence doctors' opinions, awareness or understanding. The goal is for the target (that doctor) eventually to make a specific treatment decision in the company's favour.

Many of us are convinced that we are immune to marketing, that our professional decision-making is not influenced by the sponsored seminar, the free equipment, the handy leaflet. The evidence, though, suggests otherwise.

Spurling et al (2010) and Dyer (2019) found that doctors' exposure to pharmaceutical sponsored literature is associated with higher prescribing frequency, higher cost, or lower prescribing quality.

Fickweiler et al (2017) performed a systematic review looking at interactions between physicians and the pharmaceutical industry and the impact on physicians' attitude and prescribing habits. It showed that interactions affected physicians' prescribing behaviour and are likely to contribute to irrational prescribing of the company's drug.

Cleymans et al (2017) looked at the impact of frequent contact with pharmaceutical representatives on prescribing and found that it did change prescribing practice (in line with their products). They also found that 41% of the doctors acknowledged that they are influenced by the pharmaceutical industry.

'Education'

The pharmaceutical industry claims that its promotion is a good way of informing doctors about new drugs. While this may indeed sometimes be true, it doesn't change the fact that the ultimate goal is not education, but sales. There is an inherent conflict of interest in combining the two.

Even if some promotion does sometimes educate some doctors, a number of studies suggest that promotion can in fact be a source of what could at best be described as 'misinformation'.

Goldacre (2012), sets out how the use of clever statistical techniques may give the impression that the benefits of treatments are greater than they are. When trials bundle up lots of different outcomes to make a big composite outcome, for example, this can dilute harm or make it look as if a whole group of outcomes are improved. An example of this, according to Goldacre, was the UK Prospective Diabetes Study. The trial used three end points. The first two end points, death and diabetes-related death, showed no reduction. The third end point was a composite outcome on which the trial reported a 12% reduction. Many of the outcomes within the composite outcome were important (e.g. heart attack or stroke) but, in fact, most of the reduction was actually due to a decrease in the number of people referred for laser surgery for diabetic eye disease. There was no change in visual loss. In 28 of the 35 diabetes review papers that cited this trial, only one noted that the main improvements was for the number of people referred for laser idea surgery, and only six noted there was no impact on mortality. Goldacre puts forward that "this is an example of how rumours, over-simplications and wishful thinking can spread through academic literature". This study has been extensively referenced and used to create guidelines, support the introduction of treatment targets (Barnett 2004) and inform doctors that diabetes was best managed by tight glucose control. A recent systematic review in the BMJ (Rodriguez-Gutierrez at al 2019) states that now instead of prioritising intensive glycaemic control, a more effective treatment focus would be to ensure access to adequate diabetes care, align glycaemic targets to patients' goals and situations, minimise short term and long term complications, reduce the burden of treatment, and improve quality of life.

In the *Lancet* (Villanueva et al 2003), a study showed that large numbers of the claims made in drug adverts were inaccurate or unsupported. Korenstein et al (2011) showed that over half of journal adverts in the US did not adhere to Food and Drug Administration (FDA) guidelines. They were often found to omit serious adverse effects, or failed to give useful measures of efficacy. Othman et al's (2009) systematic review of the quality of pharmaceutical advertising in medical journals found that low quality of journal advertising is a global issue with low quality evidence being used to support pharmaceutical claims.

Van Leeuwen et al (2016) looked at the content of contraceptive advertising to doctors and found that the way the advertisements linked products and users did not align with medical evidence.

Bii. Promotion to consumers

Given the ban on direct advertising to consumers, drug companies find other ways of exerting influence on both patients and their doctors – by funding patient organisations, for example. (The

UK direct advertising ban is based on the premise that it is doctors, not companies, who are best placed to decide on which medicines should be prescribed to a patient.)

An analysis by Ozieranzi et al (2019) demonstrates that the pharmaceutical industry spends large amounts funding patient organisations. From 2012 to 2016 it donated more than £54m to a small number of UK patient organisations and activities. For example, Astellas gave over £1 million to the Bladder and Bowel Foundation to develop a disease-awareness programme. Ozieranzi et al highlight that industry gave priority to commercially viable conditions; they raise concerns that companies might seek to use patient organisations as 'third parties' to reach other audiences, which could influence the public and policy-makers. They raise concerns that without total transparency about such funding, decision-makers may not be aware that patient organisations have received money from the pharmaceutical industry. In France and Scotland patient organisations are required to declare their interest and funders; however in England they are not required to do so. When NICE works with individuals to appraise drugs and medical devices, it requires them to declare any interests, but when it works with patient organisations, there is no such requirement. Of the technology appraisals which patient organisations contributed to in 2015 and 2016, the organisation had a specific interest (that is, funding either from the manufacturer(s) of a technology under appraisal or a manufacturer of competitor products) in the technology being reviewed on 79% of the occasions (Mandeville et al 2019). NICE's decision making committees were aware of less than a quarter of the specific interests.

Becker et al (2017) describe how commercial influence impacted on opioid prescribing. They argue company representatives, experts (some paid), and funded organisations highlighted an "epidemic" of untreated chronic pain. They posited diagnoses, subsequently held to be fallacious, such as "pseudo addiction" to justify greater opioid prescribing. In 2017 following an investigation by the FDA into conspiracy to increase revenue through illegal schemes, the pharmaceutical company Purdue pleaded guilty to misbranding a drug with intent to defraud and mislead, and paid a $600 million settlement (FDA 2017).

The memorandum by Flynn (MP) (2005) on behalf of the Select Committee for Health warns that there are very serious concerns that pharmaceutical companies are using patient's organisations as conduits to promote their products in a subtle form of marketing. There is a complete lack of transparency in the regulation of these relationships and few formal legal requirements. Instead of representing the interests of patients, groups in some cases have become marketing tools for the pharmaceutical companies and this raises serious concerns about their credibility.

Biii. Gifts and Hospitality

Promotional gifts, including lunches and other forms of hospitality, are an effective way of marketing drugs to doctors through relationship-building. Wazana (2000) undertook a major systematic review of 538 studies into medical professionals' perceptions and practices which found that most doctors believe that they are unaffected by promotional initiatives including free lunches and gifts. Wazana (2000) went on to evidence that this was not in fact the case: the prescribing practices of most, were, in fact, influenced by such relationship-building. Wazana (2000) also found that the actions

they took (treatment decisions) as a result of that influence led to non-rational prescribing and ultimately to worse outcomes for health systems (for example due to increased prescribing, prescribing fewer generics or using newer medicines that had no advantages).

Lieb et al (2014) showed that gift acceptance, and the belief that one is receiving adequate information from a pharmaceutical representative, are associated with changed prescribing habits.

In some cases, industry makes recorded payments to doctors. Morse et al (2019), Morse et al (2018) and Dyer (2019) demonstrate that there is a correlation between payments received and prescriptions issued: more prescriptions were written for the drugs in question, and those prescriptions were for greater quantities of medication.

We should also consider our patients' perceptions. Patients who think their doctor receives gifts from the industry have less trust in them and health care systems they work in (Grande et al 2012).

Prescribing decisions should be made on the basis of the best available independent evidence, taking into account the needs of the individual patient. Whether doctors are aware of it or not, pharmaceutical companies' marketing techniques interfere with this decision-making process. Prescribers should therefore avoid information, gifts and hospitality provided directly or indirectly by pharmaceutical companies.

C. Joint working with the pharmaceutical industry

Another new avenue being pursued by drugs companies to promote their brands is entering into working partnerships with NHS organisations. The number of 'joint working arrangements' is growing in England, and drugs companies brought more than £7.5m (€8.7m; $9.9m) into the health service in 2016 and 2017 (Moberly 2019). Although this has led to an increase in service provision, many concerns are being raised about these new ways of working as set out below.

These are:

- openness about funding sources and private sector involvement;
- failure to gain patient consent;
- skewing NHS priorities;
- over-diagnosis.

Ci. Openness and transparency about funding sources and involvement of the private sector

Many joint working agreements are potentially at odds with guidance from the NHS and Department of Health (Dept. of Health 2008) that urges openness and transparency about funding sources as members of the public and healthcare workers cannot access information about these agreements (Moberly 2019).

However, an example of where benefits have been felt is Buckinghamshire Healthcare NHS Trust which says it has seen considerable benefits from joint working approaches. “The Trust partnered with a pharmaceutical supplier in 2016 to create a new eye facility at one of its hospitals to increase patient access. One of the project’s aims was to enable 90% of patients to receive treatment for wet age-related macular degeneration within one week of diagnosis.”

Moberley (2019) quotes Cathy Augustine, of the organisation Keep our NHS Public, who feels that allowing industry to provide NHS services in this way “camouflages the underfunding”.

McCartney (2015a) raises the concern that such arrangements may open the door to deeper involvement of the private sector in the national health service. She asks “If industry finances more drugs optimisation projects, what effect might it have on the NHS pharmacy services that normally do this work? Will it mean that the only drugs optimisation work available promotes drug switches that are profitable to industry?” One of Pfizer’s stated aims from partnership working is to “develop a deeper insight and understanding of the NHS”. She questions if we’re getting a fair exchange for this intelligence gathering? (McCartney 2015a).

A further issue raised by patient groups is about the lack of transparency. They are concerned that no such partnership with industry should influence the clinical decisions of doctors and that service development should be led by an overall view of what services are most needed – not what services the pharmaceutical industry is willing to provide (Moberly 2019).

In some circumstances, pharmaceutical companies pay an intermediary company to provide prescribing support or carry out case finding work. These companies can then apply for ‘NHS business partner’ status. An example of this is Interface Clinical Services, which has been paid by Postrace (who make vitamin and calcium products) to do active case finding for osteoporosis. McCartney (2015a) stresses the need for transparency about these arrangements.

A GMC report considered the trust that the public places in types of organisations in the context of healthcare data confidentiality (GMC 2015). Access to data by private sector organisations was a particular concern for many patients (Stevenson et al 2013). Grant et al (2013) found that many members of the public have a concern in regard to pharmaceutical companies involvement in research projects to the extent it would put them off registering, although thought that their involvement might be necessary due to the funding that they are able to bring.

Cii. Failure to gain adequate patient consent

Case finding is a strategy for targeting resources at individuals or groups who are suspected to be at risk for a particular disease. This is an area where pharmaceutical companies, or third parties funded by the pharmaceutical industry, are offering to do work on behalf of the NHS by reviewing medical records and in some instances contacting the patients or giving advice about further investigation or management.

We find the question of whether it is necessary to obtain explicit patient consent for case-finding, unclear. McCartney (2015a) expresses that there is wider concern about consent: are patients whose medical records are being reviewed, properly informed about the origin of some of the professionals carrying out the reviews and advising about changes to their care? She quotes Jeremy Taylor, chair of National Voices who questions this practice and argues that patients should be asked for consent.

According to the General Medical Council (GMC, 2017) we may rely on implied consent to share patient health records with those who provide (or support the provision of) direct care to the patient provided we are satisfied that the person with whom we are sharing the information with is receiving it for this purpose, and that information is readily available to patients explaining how their information will be used and that they have the right to object.

The GMC goes on to advise, however, that if we suspect a patient would be surprised to learn about how you are accessing or disclosing their personal information, then we should ask for explicit consent unless it is not practicable to do so. The guidance focuses on us ensuring that the *reasons* for sharing health records are legitimate; the guidance does not include transparency about funding sources. But as section Ci above makes clear, patients have expressed concerns about this and our opinion is that patients would feel surprise.

It is our duty as data controller to uphold the principles of GDPR which require us to process our data fairly, lawfully and transparently. In the area of case finding, we feel that how we discharge this responsibility is not made plain by the available guidance. We are concerned that there may be no legal basis for sharing records for this reason without explicit patient consent which we are not willing to seek. This is one of the reasons why we choose not to participate in case-finding projects involving third parties.

Ciii. NHS priorities

It has been questioned whether NHS investment would be better spent elsewhere than in joint working arrangements that are designed around the interests of pharmaceutical companies. Moberly (2019) gives the perspective of Sheila Keeling, chief executive of Adopt, a support charity for families affected by ADHD. She did not think that three joint working projects carried out in 2016 and 2017 which involved reviewing the medication of people with attention-deficit/hyperactivity disorder were a good use of NHS money. Keeling argued that NHS investment in ADHD services would be better spent elsewhere: “If they want to provide a better service for children, they need to go back and look back at their child and adolescent mental health services” she said.

In many projects, the benefits for companies are explicitly described as being “more use of medicines”, “improved access to innovative medicines”, or an “increase in access to innovative medicines” (Moberly 2019). These benefits are in line with the pharmaceutical industry’s ultimate goal: profit, and may not lead always to improved health outcomes or best use of NHS resources.

The lack of expertise in NHS organisation’s in negotiating contractual arrangements has meant that the health service is often left at a disadvantage when collaborating with the industry. For example, a five-year £800m NHS out-sourcing contract in Cambridgeshire ended after eight months. A report on the contract by the Public Accounts Committee (2016) found that procurement was undermined by poor commercial expertise, lack of realistic pricing and weak oversight and they commented that failures resulted in unforeseen costs and losses, and services for patients in Cambridgeshire were likely to suffer as a result.

National Voices, which promotes patients’ interests, raised the concern that joint working could undermine the relationship of trust between doctor and patient and the principles of informed, shared decision-making (McCartney 2015a).

The Department of Health and NHS guidance (Dept of Health 2008) states the need for each NHS organisation to have a register of joint working. An investigation in the British Medical Journal (BMJ) found that many trusts did not have a register; also Trusts who were undertaking joint working stated that they did not have any such joint-working arrangements. The BMJ had to use Freedom of Information requests to access this data (Moberly 2019).

Civ. Overdiagnosis

Overdiagnosis is recognised as a negative "side effect of modern medicine" (WONCA 2018) (World Association of Family Doctors) that results in unnecessarily turning people into patients. Moynihan et al (2005) evidence that the pharmaceutical industry contributes to this in ways that include expanding disease definitions and medicalising common life experiences. Screening with a low diagnostic threshold (for example, screening for diabetes with a low glucose cut-off point) does lead to the fewest number of patients being harmed by untreated disease; this comes at the "expense" of more patients being diagnosed with a disease, and more being harmed from treatment (Kale el al 2018).

Fell (2016) proposes that case finding is no different to screening, but the term case finding is used when UK national screening criteria have not been met. National screening criteria are that the benefits of screening have been determined to outweigh the risks. He argues that although case finding may be beneficial to some it also leads to overdiagnosis, leading to overtreatment which can cause iatrogenic harm. Wald et al (1996) argued that the term case-finding should be abandoned as it avoids the obligation to specify expected improvements in health.

Looking at recent evidence for the impact of case finding, Jordan at al (2016) demonstrated in the TargetCOPD randomised controlled trial that case finding identified new cases of COPD. However, Haroon et al (2018) followed up these patients and found that patients diagnosed with COPD through routine care were significantly more likely to receive clinical care than those found through targeted case finding. They suggest more research is needed to investigate the reasons for these differences. We agree because we would like to have clear evidence that case finding results in improved health outcomes in addition to increased number of diagnoses.

Yudkin et al (2014) highlight that following a number of recommendations by the American Diabetes Association (ADA), the definition of "people at risk of diabetes" (or "pre-diabetes") expanded from impaired glucose tolerance to include people with raised fasting glucose or glycated haemoglobin (HbA1c) concentrations; also cut-off points were lowered. The net result was a three fold increase in the number of people classed as "at risk". Yudkin et al point out that less than 50% of those now defined as "at risk" will go on to develop diabetes and suggest that rather than turning healthy people into patients with pre-diabetes, we should use available resources to change food, education, health, and economic policies. Pillar (2019) discusses the financial conflicts of interest in the area of pre-diabetes. ADA receives $18-27 million a year from the pharmaceutical industry. Many physicians who wrote the 2010 and 2018 ADA standards of care for pre-diabetes, which recommend that doctors consider prescribing drugs for pre-diabetes, also received large sums from the pharmaceutical industry. Barry et al (2017) conclude that "screening" for pre-diabetes using HbA1C is inaccurate, which means some people will receive an incorrect diagnosis and be referred for interventions while others will be falsely reassured and not offered the intervention. It is important

that any case finding or screening by the NHS is based on good evidence, and without influence from the pharmaceutical industry, to avoid conflicts of interest.

Joint working between the NHS and the pharmaceutical industry is a new area, and so there is limited evidence of impact. As we have set out in the four paragraphs above, there are grounds for concern about its impact on NHS service provision, on trust between doctors and patients, and on patient care. The Royal College of GPs (RCGP 2019) considers patient-centred care and shared decision-making a core competency for a GP. We are concerned that such joint working might lead to increases in treatment which, although they may be pharmacologically justifiable, are not patient-centred and do not take into account the impact on the patient's life (for example increased medication burden and the psychological impact of a further diagnosis).

D. Education

A large proportion of the funding for postgraduate medical education, known as Continuing Medical Education (CME), comes from the pharmaceutical industry (Avorn and Choudhry 2010). In 2010, pharmaceutical funding accounted for one third of CME expenditure. This has fallen over recent years as a result of increasing regulation attempting to limit industry influence.

Some argue that without industry funding there would be no way of maintaining many CME activities. But in 2011 CME activity and hours increased despite a fall in industry funding (Roehr 2012).

Of course, CME takes many forms: conferences, lectures, e-learning modules and opinion pieces in healthcare publications all play a role in keeping doctors informed about the latest developments in medical care. Doctors are strongly encouraged and often obligated to show a certain degree of CME activity every year.

There is strong evidence that the influence of industry funding has led to CME becoming akin to marketing. The role of "key opinion leaders" (KOLs) has been particularly controversial (Moynihan 2008). KOLs are doctors approached by pharmaceutical companies and trained to perform keynote speeches at conferences. The slides are often prepared by the company (Sismondo 2013). There is clear evidence that these lectures are an effective way of convincing large groups of doctors to prescribe newer, more expensive drugs: Nair et al (2010) demonstrate the notable peer effects in prescription choice, and how those peer effects significantly multiply as those doctors influenced by KOLs themselves pass on the message to other doctors.

Booth and Detsky (2019) suggest that relationships between KOLs and the pharmaceutical industry are associated with biased positions. This is evidenced by Fickweiler et al (2017) who demonstrate that physicians who attended industry sponsored CME changed their prescribing to increase prescribing of the branded drugs. For this reason, Booth and Detsky (2019) argue that KOLs should not be working with industry, and that pharmaceutical companies should have no involvement in CME. An example of how KOL and doctors can be persuaded, and then persuade others, is those

doctors who promoted opiates for chronic pain. Experts cited inadequate but authoritative research such as the brief NEJM letter as evidence that opiates were not addictive in chronic pain (Leung et al 1980). They converted many other doctors to their thinking, i.e. that this was safe and scientific prescribing, which contributed significantly to an epidemic of opioid overuse (Becker et al 2017).

Lieb et al (2014) showed that avoiding industry-sponsored CME is associated with more rational prescribing habits.

For the reasons outlined above, we choose as a practice to avoid participating in education provided by the pharmaceutical industry as we believe there is a conflict of interest.

Conclusion

We have described ways in which we believe pharmaceutical engagement compromises our ability to provide high quality, patient-centred care.

- The interests of pharmaceutical companies are to make a profit and add value for their shareholders (section A).
- Promotional material from pharmaceutical companies makes doctors more likely to ignore guidelines and evidence, and to prescribe more of their medications (section B).
- Joint working arrangements with pharmaceutical companies, which have proliferated in recent years, provoke our concern that there is a lack of transparency about funding sources, failure to obtain adequate patient consent, diversion of resources away from NHS priorities, and over-diagnosis (section C).
- There is evidence that the influence of pharmaceutical industry funding has compromised the educational quality of Continuing Medical Education (CME) (section D).

We have set out the evidence regarding the negative impacts on prescribing behaviour when health professionals engage with the pharmaceutical industry. We await more evidence of the impacts of the relatively new area of joint working, but already early evidence raises concerns. The evidence is clear: when health professionals engage with the pharmaceutical industry, their prescribing habits change – whether they are aware of this or not – in favour of the sponsoring company's medications. This should come as no surprise: it's what marketing does. We believe that the only way to avoid such negative impacts is for all health professionals to avoid any form of engagement with the pharmaceutical industry, an industry with very different interests to those of healthcare professionals. Therefore, this is our practice policy.

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