Attitudes and Behaviour of Patients, Doctors and Pharmacists in New Zealand and Belgium Toward DTC Advertising of Medication

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Abstract

This article investigates patients’, doctors’ and pharmacists’ attitudes toward direct-to-consumer advertising (DTCA) for medication and their beliefs of the impact it has on patient behavior in terms of request for and consumption of advertised medication. Results were obtained in New Zealand, one of two countries which allow DTCA for prescription medication, and in Belgium, which does not allow the practice for prescription medication. Attitudes were significantly more positive in New Zealand than in Belgium, but the impact of DTCA (both in a positive and a negative sense) on patient behavior and their interaction with doctors and pharmacists proved to be limited in both countries.
Introduction

Direct to consumer advertising (DTCA) of medication involves the promotion of medication direct to the consumer through mass media, including television, radio, newspaper and consumer magazines and through personalized communication (such as direct mail) with individual patients, and, increasingly, through both advertising and ‘editorial’ content of Internet sites (Eagle & Kitchen, 2002).

While promotion of over-the-counter medication is common in many countries, promotion of prescription medicines is currently permitted only in the USA and New Zealand. However, prescription medication advertising restrictions are under review by several countries (Eagle & Chamberlain, 2004). In the mid 1980s, the USA initially permitted only category rather than individual brand promotion; the Food and Drug Administration (FDA) further relaxed regulations in this area in 1997 to permit brand-specific promotion of prescription medication (Hoek, Gendall, & Calfee, 2004). New Zealand has technically allowed DTCA of both over-the-counter and prescription medications since 1981 (Hoek & Gendall, 2002). However, DTCA for prescription medication came into prominence only after the 1997 American law change (Eagle & Chamberlain, 2003). In Europe, brand-specific advertising is currently only allowed for over-the-counter (OTC) medication, not for prescription medication. For this latter category, ads are permitted only when there is no explicit reference to a specific brand, i.e. similar to the pre-1997 USA provisions.

In order to contribute to the debate regarding the impact of DTCA, this paper aims to contrast attitudes and behavior of doctors, pharmacists and patients toward prescription medication DTCA in a country where it is allowed (New Zealand) with one where it is not (Belgium). We commence by summarizing the literature surrounding the DTCA debate. We then present the
results from a series of empirical studies, focusing primarily on patient views, but also including the views of doctors and pharmacists. We conclude the paper with a discussion of the implications of the findings and a suggested future research agenda.

Pro’s and con’s of prescription medication DTCA

DTCA spend is highly visible, hence the amount of debate. Many arguments have been put forward both in favor and against DTCA for prescription medication. DTCA is acclaimed an important cause of increasing health expenditure, because it would lead patients to visit their doctor and receive prescriptions more frequently, and because the drugs promoted are generally more expensive (Cline & Young, 2004; Wilkes, Bell, and Kravitz, 2000). As such, DTCA puts increasing pressure on health funding organisations, governments and consumers (Findlay, 2001). Proponents, however, point out that DTCA drives down prices by facilitating information seeking and stimulating competition (Calfee, 2002). Because DTCA encourages prompt treatment and discussion, long-term health budgets are actually reduced (Deselle & Aparasu, 2000). The causal link between promotional and drug spending has yet to be proven (Findlay, 2002).

It has also been proposed that DTC promotion of medication diverts funds away from other critical priorities, such as research and development (Auton, 2004). In the end, however, it generates sales revenues that can be spent on new product development (Findlay, 2001). In addition, it should be noted that DTCA remains only a small percentage (12% in 2002) of the total pharmaceutical promotional spend, although it is the fastest growing health care expense, growing faster than the spending on R&D between 1997 and 2001 (Auton, 2004; Findlay, 2002).
Although the question of how and to what extent DTCA impacts public health, and health insurance costs and expenses is an important one, we will continue by concentrating only on the impact of DTCA on patient, physician and pharmacist attitudes and behavior.

**DTCA and changing physician/pharmacist - patient relationships**

Initial prescription drug advertising generated a number of complaints that the activity would adversely impact on doctor-patient relationships. The existing literature (see e.g. Hollon, 1999), cites numerous instances of DTCA campaigns which could have led to inappropriate prescribing. Studies report that when patients mention DTCA, many physicians feel some pressure to prescribe something (Lewis, 2003; Auton, 2004), and that patients who request a prescription for a specific medication are more likely to receive one than patients asking in general (Hollon, 1999; Mintzes et al., 2002). A 2002 FDA study concluded that 57% of physicians reported to feel a little or somewhat pressured to prescribe advertised medication upon patient request; only 28% felt it caused any real tension; only eight percent report feeling very pressured (Lewis, 2003). In New Zealand, half of doctors believe that DTCA disrupts their relationships with patients; but 39% report it has no impact (Hoek & Gendall, 2002).

There has been a change to the relationship many patients seek with their doctors and pharmacists. The commencement of prescription DTCA in the USA and in New Zealand coincided with moves toward a more information-sharing based relationship between doctors and patients (Weiss, 1985; Cohodes, 1995). The ‘traditional’ paternalistic model, emphasizing a doctor’s or pharmacist’s authority but limiting patients’ freedom to make treatment choices or to contribute to decisions, is no longer acceptable to many patients (Assa-Eley & Kimberlin, 2005; Eagle and Chamberlain, 2003; 2004). Many patients are now more involved in seeking health information both from their doctor and beyond (Cegala et al., 2004; Dutta-Bergman, 2005).
Glascoff (2000) attributes the change to several factors. Firstly, many patients are better educated and have the resources and, more importantly, the time to keep up with current findings about specific medical conditions. Secondly, fuelled by the consumer movement, patients are also more comfortable questioning authority. They carry the burden of paying at least part of their medical expenses, either directly or indirectly and appear to have high expectations of treatment outcomes.

Doctors and pharmacists do recognize this change and many appear to welcome it. The majority of patients who consulted their doctor regarding DTC advertised medication reported their doctor was open to a discussion upon the request and treated it as an ordinary part of the visit (FDA, 2003a). The influence of DTCA on doctor-patient relationships was originally perceived in a less positive manner by many doctors. In 1984, the American Medical Association (AMA) found a majority (84%) of its members opposed DTCA. However, according to the latest FDA survey, 53% of questioned physicians agreed that DTCA was improving the value of patient discussions. Consequently, doctors’ views appear to become more positive. However, 41% reported DTCA caused misconceptions within patients they needed to correct. (Auton, 2004)

*DTCA awareness and information*

The extent and nature of the change in doctor-patient relationships should be examined on the basis that direct-to-consumer communication via media such as the Internet and personalized communication is a reality, even in countries that do not allow mass media advertising. Patients are reported to use many information sources in addition to DTCA, on average, consulting 3 to 4 sources. The most important information source remains the doctor (Eagle and Kitchen, 2002). 50 to 80% of all patients go online for health-related information (Auton, 2004; Von Knoop et
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al., 2003). Some 25% of the available online information is health-related (Auton, 2004). Glascoff (2000, 37) warns “Net-savvy patients are finding information about their condition or illness at a rate that can surpass a typical physician’s ability to find the same or better information”.

Awareness for DTC ads is typically high. The FDA (2003a) concluded that about three quarters of American consumers recalled seeing or hearing an advertisement for both prescription and non-prescription medication. Several studies report that about one-third of American adults visit their doctor as a result of seeing a DTCA message (Fetto, 2002; Cline & Young, 2004), although it has to be acknowledged that, according to White et al. (2004), “only 13.2% of adults responded to a healthcare advertising message by asking their doctor to prescribe a specific drug”.

As a result of DTCA, patients frequently talk about conditions they had not previously discussed (Calfee, 2003). According to an FDA (2003b) study, patients asking doctors about drugs in 88% of the cases did in fact suffer from the condition for which the medicine was intended. It also raises awareness of new treatment options (Bonaccorso and Sturchio, 2002). Supporters of DTCA for medication thus claim that DTCA tackles under-treatment, making patients aware of possible conditions and available treatment options. Numerous studies cite examples of the costs associated with under-treatment (e.g. Downs et al., 1998, Hirschfeld et al., 1997). A number of leading conditions, such as diabetes, high cholesterol or high blood pressure are systematically under-diagnosed. Increased use of pharmaceuticals can improve public health, e.g. lowering the risk of heart attacks or preventing strokes (Holmer, 1999). American patients acknowledge that DTCA for prescription medication is useful (Calfee, 2003) and Australian patients agree that it would be (Miller and Waller, 2004).
So called “lifestyle drugs” (e.g. for obesity, baldness) are heavily marketed. Critics fear that the promotion of these drugs encourage “medicalization” (“process by which non-medical problems become defined and treated as medical problems, usually in terms of illness or disorder” (Mintzes, 2002, p. 908)), when pharmaceutical solutions are offered for normal physiological or ageing processes. It is also claimed that promotion of medications results in other sustainable behavior changes, such as exercise and diet being neglected (Auton, 2004).

**Compliance and health outcomes**

DTCA promotes greater consumer participation in health care (Cline & Young, 2004) and contributes to correct use of prescription medications (Petersen, 1999). A study by Pfizer (2001) showed that patients who involve themselves in their health care by requesting prescription drugs were more likely to remain compliant with the therapy. This effect was especially applicable to patients who are motivated by advertising. Patients also report that DTCA affects their compliance in a positive way. About one third of American adults report that they were prompted to refill an existing prescription and/or take their prescribed medication more regularly following a DTC advertisement for the medicine (Calfee, 2002; White et al. 2004).

Lexchin and Mintzes (2002) argue that the evidence presented that DTCA results in improved health outcomes, is weak. If 30% of patients report to be more compliant thanks to DTCA, this means 70% are not. In addition, the outcome depends on the type of medicine these patients are taking, a factor which has not been taken into account. The authors state that the beneficial claims are as speculative as the possibility of the reverse being true (increased hospitalization due to harmful effects of unnecessary drug use).
Risk information in DTC advertising

One of the major arguments proposed in favor of DTCA for medication, is that it educates and informs patients and can tackle under-treatment (Auton, 2004). On the other hand, critics state that advertising is profit driven by manufacturing companies and that these are selective about the information they provide and conditions they identify where the problems of under-treatment can be helped by advertising (Auton, 2004). In 1999, Pharmac (New Zealand Pharmaceutical Management Agency) (1999) expressed concerns that DTC advertising exploits patients’ lack of medical knowledge, resulting in patient confusion and unnecessary concern over their state of health. Pharmac’s medical director stated that if the goal is really to educate patients and make them more compliant, more appropriate strategies are available (Moodie, 2000). The question arises of who would meet the costs of implementing any alternative strategies.

Most people remain skeptic about the information provided via DTCA. In a 1999 FDA study, 58% of American patients agreed that DTCA make drugs seem better than they really are (Lewis, 2003). The major concern is that DTCA does not provide adequate risk information (Paul, Handlin, & Stanton, 2002. However, most patients are aware of this (Lyles, 2002), and DTCA can actually lead to increased awareness of risks and side effects (Calfee, 2002). What is important is that advertisements provide patients with sufficient information to discuss the advertised medicine with their doctor, who – in the end – still needs to issue a prescription (Calfee, 2002).

In support of DTCA, Pfizer (2003) commented there was no evidence that DTCA was abusing regulatory disclosure standards, providing insufficient information to spur a doctor-patient discussion or that reminder ads were misleading about benefits.
From the discussion above, it is clear that DTCA can entail significant benefits in terms of knowledgeable patients, who are more involved in their healthcare and comply better with prescribed treatments. However, allowing DTCA may create unnecessary demand for treatments, putting pressure on medical professionals and on healthcare budgets. We therefore now examine the major issues in this debate further, through empirical studies of the attitudes and behavior of patients, doctors and, pharmacists in both New Zealand and Belgium.

Research objectives

The purpose of the study is to investigate the differences in patients’, doctors’ and pharmacists’ knowledge, attitudes and behavior regarding DTCA for medication between a country (New Zealand) where it is common practice for both prescription and non-prescription medication for a long time already, and a country (Belgium) where it is not (yet) allowed for prescription medication. We will not go into more detail about the economic and public health issues presented in the discussion above.

The following research questions relating to knowledge, attitudes and behavior regarding DTC advertising are investigated:

*Knowledge*

1. Are patients generally aware of DTCA? Do they recall seeing or hearing advertisements in mass media? If so, which media? How much of the information provided do they generally read?

*Attitudes regarding DTCA for (prescription) medication*

2. What is the attitude of patients, doctors and pharmacists toward DTCA for (prescription) medication?
3. What is the attitude of doctors and pharmacists toward patients asking for and discussing advertised medication?

Behaviour in relation to DTC advertising for medication

4. Does DTC advertising cause a spur for patients to look for further information? What sources, if any, do patients turn to for additional information and how often?

5. Has DTC advertising created inappropriate demand for the advertised medication in terms of the active pursuit of a medication by the patient, and/or applying pressure on the physician to prescribe a certain brand of treatment and how do doctors and pharmacists respond to patient requests for advertised medication? How do patients react subsequently?

6. How does DTC advertising contribute to patients’ reported medical consumption and self-medication?

Research method

Three different questionnaires were constructed and mailed to general practitioners, pharmacists and patients. The questions were developed from a range of sources, including (with permission) the American Food and Drug Agency 1999 and 2000 studies, and from a consumer study of Prevention Magazine (Slaughter, 2002). Where attitudinal data were requested, a mix of positive and negatively worded statements was used to minimize directionality bias. The questionnaire was pre-tested and modifications were made to wording, layout and overall readability of the questionnaire before its implementation in the full study. It should be noted that respondents were asked in some parts of the questionnaire to reflect back on discussions with medical professionals, introducing the potential for recall bias, an inevitable consequence of the
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methodology used (Calfee, 2002). The questionnaires were constructed both in Dutch (for Belgium) and English (in New Zealand). However, mainly due to the different legal situations in the two countries, questions about DTCA for prescription medication in New Zealand had to be changed to questions for non-prescription medication for Belgium. A number of hypothetical questions concerning DTCA for prescription medication for Belgium were then added.

Random samples from doctors and pharmacists were obtained from commercial databases in both countries. The “doctors” category was restricted to doctors in general practice, as opposed to specialists or those in the employment of hospitals and related organizations. For patients, a stratified random sample of adults aged 20+ was drawn from the New Zealand Electoral roll. In Belgium, a snowball sample was used to contact patients. We chose to question adults only. A questionnaire together with a reply paid envelope was enclosed with a covering letter explaining the origin, purpose and intention of the survey.

Sample sizes and response rates are shown in Table 1 and the profile of respondents in Tables 2 and 3. Table 2 indicates that in the New Zealand patient’s sample, females are overrepresented (Statistics New Zealand, 2001). No significant differences were found between the age profile of respondents and that of the overall New Zealand population (source). The Belgian sample is representative of the Dutch-speaking population for gender and age profile (FOD, 2005a). In both counties, higher educated people are strongly overrepresented (FOD, 2005b; Statistics New Zealand, 2001). This could be due to the complexity of the questionnaire. Table 3 presents the demographic profile of responding general practitioners and pharmacists. The gender profiles of general practitioners are representative of the Dutch-speaking Belgian (NIS, 2003) and of the New Zealand population of registered general practitioners (NZHIS, 2004). About half the GPs
graduated more than 25 years ago, representative of the Belgian population (NIS, 2003). In New Zealand, older GPs are overrepresented (NZMA, 2004).

In both countries, more than half of the questioned patients have visited their doctor within the last 3 months. For almost one third of respondents, it has been at least 6 months. The pattern did not differ significantly between New Zealand and Belgium. Half the respondents reported taking at least one prescription medicine per day, with the average number of medications taken significantly higher in New Zealand than in Belgium. 10% (New Zealand) to 20% (Belgium) of respondents also reported taking on average 1.5 non-prescription medication per day. In total, little over half the respondents reported taking at least one medicine per day (prescription or non-prescription). The average number of medication taken daily is 2.73 for New Zealand and slightly but significantly lower (2.15) for Belgium.

Thus, the two patient samples are reasonably comparable in terms of medical consumption and doctor visits.

Although the Belgian patient sample is small, results from our study did not differ significantly from those found in 1997 and 2001 in national surveys (Scientific Institute of Public Health, 1997; 2001) of over 10 000 respondents aged 15 and older in terms of frequency of doctor visits., subjective health perceptions (largely positive), percentage of patients suffering from a chronic illness (52.7%), and percentage of patients reporting to take at least one medicine per day for any kind of medication in general (52.2%) and for prescription medication in particular (49.6%), but not for non-prescription medication (respondents in our survey reported significantly lower usage, but this is likely due to the fact that minerals, vitamins and homeopathic medication were not included in our study). The relatively small sample of Belgian
patients appears to have medical characteristics and habits that are fairly similar to the ones reported in large-scale representative studies.

Results

In this section, we present results for patients, pharmacists and general practitioners in New Zealand and Belgium. Where results are reported as significant, we have always applied an $\alpha = 0.05$ threshold. Detailed significance levels are mentioned in the tables. The number of respondents varies between questions, due to missing answers. Where we have chosen to analyze a subset of respondents, it is explicitly mentioned.

Knowledge

**DTCA awareness and information reading**

Consumer DTCA awareness is rather high. In both countries, about 80% of respondents recalled seeing or hearing DTCA within the last three months. What is remarkable is that – while DTCA for prescription medicine is currently prohibited in Belgium – almost one third of Belgian patients claim to have seen or heard DTCA for prescription medication. This was not due to exposure to the ad on the internet (only 14.3% of these respondents recalled seeing an ad on the internet), but rather to the allocation of medication to the wrong category (respondents considered non-prescription medication as prescription medicine).

Most respondents who recalled seeing DTC advertising in the last three months, report seeing it on television (Table 4). New Zealand respondents listed television more frequently than Belgian respondents. Magazines are the next most frequently recalled source (with more respondents listing it in Belgium than in New Zealand), followed to a lesser extent by
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newspapers and radio. Overall, internet and email advertising score very low on recall, with internet being more frequently recalled in Belgium than in New Zealand.

With regard to the question if patients who notice DTCA read all the information (“small print”) provided in an advertisement, about 21 to 27% of respondents (in Belgium and New Zealand, respectively) report not reading any information or not even noticing it. This means that up to 73% of patients would read at least some of the information. Less than 20% read all of it. Results did not differ significantly between countries.

Attitudes regarding DTCA

Attitudes toward DTCA for medication.

The perception in both countries of the usefulness of DTC advertising for prescription and OTC medicines is shown in Table 5. Most patients in either country do not find DTC advertising for prescription medication very useful, whereas they do agree that DTC advertising for non-prescription medication is a little useful. Table 5 also reveals that consumer perceptions of the usefulness of DTC advertising are more positive in New-Zealand than in Belgium for both types of medicine. Overall, patients reported feeling the same (72-80%) or better (16-26%) about the safety and benefits of their medication when seeing a DTC advertisement for it. Less than 4% say they feel worse. They feel relatively better about the benefits than regarding the safety of the advertised medicine. Results do not differ significantly between New Zealand, where DTC advertising is allowed even for prescription medication and Belgium, where DTC advertising is strongly regulated.

To measure attitudes of patients, GPs, and pharmacists toward DTCA in more detail, we presented a list of statements regarding DTCA to each group, where they were asked to indicate their level of agreement with each statement, ranging from 1 = strongly disagree to 5 = strongly
agree. Statements were both positively and negatively worded. In New Zealand, statements were scored for prescription medication, whereas in Belgium, DTC advertising for non-prescription medication was concerned. We pooled the data from both countries and extracted two factors from the list of statements, explaining respectively 41.27% (patients), 46.40% (GPs), and 40.60% (pharmacist) of variance. The first factor can be called “informational effect of DTCA for consumers”, including 7 items such as e.g. “Advertising provides patients with information they have a right to know” and “Advertisements give patients enough information to decide whether to discuss it with a doctor” (Cronbach’s $\alpha = .816$, .748, and .803 for patients, GPs, and pharmacists respectively). The second factor is called “reliability of DTCA as an information source”, containing 3 items (“Advertisements make medications seem better than they really are”, “Advertisements do not give enough information about risks and negative effects”, and “Advertisements are profit driven on the part of the medication manufacturers”) (Cronbach’s $\alpha = .617$, .577, and .680 for patients, GPs, and pharmacists respectively). The first factor proved to be more reliable than the second. The scores of the items loading significantly high on one factor were summated.

In Table 6, the mean scores of the summated scale are given for both factors for patients, general practitioners, and pharmacists, per country. A higher score represents a more positive attitude. In general, attitudes toward DTCA are ambivalent to negative. Respondents were not convinced of the information function DTCA could serve and moreover felt that DTC advertising was not a reliable source of information, in that it makes medications seem better than they really are, does not give enough information about risks and negative effects and is strictly profit driven by pharmaceutical companies. Relative to New Zealand, all three groups of Belgian respondents were significantly less positive about the informational benefits of DTCA.
Belgian respondents also tended to agree more that DTCA misleads patients, although the difference was only significant for general practitioners.

**Medical professionals’ attitudes toward patients asking for advertised medications.**

To explore GPs’ and pharmacists’ attitudes toward patients asking about advertised medication, we presented a list of statements to them and asked to what level they agreed with each of the statements on a 5-point scale (1 = strongly disagree, 5 = strongly agree). Again, we pooled data from both countries and extracted two factors, explaining 57.88% (GPs) and 53.13% (pharmacists) of the variance. The first factor refers to the “degree to which DTCA contributes to participative decision making” between patients and doctors/pharmacists. It includes 4 items, such as “Patients with background information about pharmaceutical products have more meaningful discussions with me” and “I treat it as an opportunity to talk to them about the various alternative options for management of their condition”, and has reasonable reliability (Cronbach’s $\alpha = .654$ (GPs) and .545 (pharmacists). The second factor relates to the “degree to which patients who ask about advertised medications are more difficult” and summates the scores of “It wastes time when I have to explain why advertised medicine is not right” and “I find patients who wish to discuss particular medications they have seen advertised are more demanding than traditional patients” (Cronbach’s $\alpha = .618$ (GPs) and .613 (pharmacists)). The reliability for the latter factor is higher than for the first one, also when calculated for Belgium and New Zealand separately.

Table 7 presents the attitudes of general practitioners and pharmacists toward patients asking about medication they have seen or heard advertised. In general, attitudes are neutral to positive, and significantly more positive in New Zealand than in Belgium. Although general practitioners and pharmacists are generally not convinced of the informational capacity of DTCA, they do
tend to agree that patients who come to them with questions about advertised medication are better informed. Respondents do not find these patients more time consuming and demanding.

Behavior-related impact of DTCA

In this section, we look into how DTCA affects patient behavior in general and what actions people take as a result of seeing healthcare advertising, from the perspective of patients, as well as doctors and pharmacists. Patient results are only reported for patients recalling to have seen or heard DTC advertising within the last three months.

DTCA as an information-seeking impetus.

One of the main alleged advantages of DTCA, is that it provides patients with useful information (Calfee, 2003; Miller and Waller, 2004). We have shown in the previous section that all three parties involved hold ambivalent attitudes toward this suggestion. Most people believe the information provided is not adequate or complete enough. However, it is possible that DTCA advertising serves as a first contact, making patients aware of the medicine, and inciting them to seek more information about the medicine or the illness it was manufactured to cure.

Overall, very few respondents reported consulting other sources of information (newspaper/magazines, internet, toll-free numbers) after seeing or hearing DTCA, with doctors and pharmacists still being the most frequently consulted (15-20%). For individual sources, results did not differ significantly between Belgium and New Zealand, although the percentage of people who turned to general practitioners, print media, toll free numbers and the internet tended to be higher in New Zealand. Only the percentage of patients who in total reported to consult at least one information source, was significantly higher in New Zealand than in Belgium.
General practitioners on average estimate only 4 to 5% of their patients ask them about an advertised medicine. Only 1% inquires about medication seen on the internet. This is substantially less than the percentage of patients reporting to consult their doctor about advertised medication. For patients asking about medication, doctors say these inquiries mostly (in 70 to 80% of cases) take place during a regular appointment, i.e. one that was made to discuss other matters. Patients, too, reported largely discussing advertised medication only during a regular appointment. Percentages in New Zealand and in Belgium did not differ significantly.

From Table 8, it is obvious that pharmacists do not think many of their patients consult them specifically about advertised medication, whether prescription or non-prescription. New Zealand pharmacists report giving significantly less advice to patients concerning advertised prescription medication than Belgian pharmacist concerning advertised non-prescription medication. All other between-country differences were non-significant.

**Demand for the advertised medication.**

We questioned pharmacists and general practitioners about the level of pressure they felt to provide the medication when requested and asked them about their reaction to this request. We also asked patients who requested an advertised medication from their pharmacist or general practitioner for details regarding the consultation and their satisfaction with how their request was handled.

When patients ask for an advertised medicine, general practitioners and pharmacists report to feel little pressure to provide the requested medicine, as shown in Table 9. More than half the doctors and pharmacists reported feeling only a little or no pressure.

There was no significant difference in pressure felt by general practitioners or pharmacists between Belgium and New Zealand.
Of patients who had consulted their doctor regarding advertised medication, at least 75% say they specifically referred to the product they saw advertised. According to patients, in most cases general practitioners discussed medication and treatment options with the patients. Most patients did not end up receiving the medicine they asked about. New Zealand patients say their doctors more frequently gave in to their requests than in Belgium, whereas Belgian patients more often received a different medicine. In almost every case, general practitioners took the time to explain why the requested medication was not prescribed or recommended. The most frequently cited reason was that the requested medication was not right for the patient and a different medication was called for. About 75% of patients were totally satisfied with their doctor’s reaction. Patients who were not satisfied mostly did not take any action to express or diminish their dissatisfaction. This is confirmed by the doctors’ responses.

Most general practitioners report they only rarely give in to patient requests for advertised medicine, significantly less so in Belgium than in New Zealand (Table 10). This low level of agreement is in line with what patients reported was the frequency with which they received the requested advertised medication. General practitioners will in some cases recommend other medication, mostly prescription. Belgian general practitioners will more frequently recommend other medicine, both prescription and non-prescription, than in New Zealand. Almost half the general practitioners questioned reported frequently recommending lifestyle changes, although patients did not see it accordingly at all.

When patients did not receive the requested medicine from their general practitioner, a great number of general practitioners (80 to 85%) report most of these patients fully agreed with the doctor’s recommendation (no significant difference between countries). Only some general practitioners found their patients a bit reluctant to accept the recommendation, and almost no-one
estimated their patients were disappointed enough to turn to another doctor or a pharmacist. This is in line with what patients report. New Zealand general practitioners estimated fewer patients were disappointed than Belgian GPs did.

Table 11 shows that most pharmacists more than half of the time give patients the requested medicine. This number is higher in Belgium than in New Zealand. New Zealand pharmacists, on the other hand, more frequently recommend patients to consult their doctor or recommend another OTC medicine. Lifestyle changes are not frequently recommended in either country. When patients did not receive the medicine they asked about, about 80% of pharmacists stated patients in most cases agreed with the pharmacist’s recommendation. According to pharmacists, a small proportion of patients was mildly disappointed, but accepted the recommendation anyway and only a very small group was disappointed enough to perhaps seek a second opinion. Patients confirmed that they were on average satisfied with their pharmacists’ reaction: On a scale of 1 to 5, with 1 = totally dissatisfied and 5 = totally satisfied, mean scores were 4.09 in New Zealand and 4.15 in Belgium.

*Medical consumption.*

A very large group of patients (about 90%) report that DTCA does not or would not change the frequency with which they take or refill their medication. However, a small fraction (4-10%) reports it makes them take or refill their medication more regularly. Although only 6.5% of Belgian patients asserted if DTCA for prescription medication were allowed, it would encourage them to refill their prescription more often, this percentage was significantly higher than in New Zealand.

In New Zealand (94.4%) patients self medicate significantly more than in Belgium (89.6%). Moreover, in New Zealand, 39.7% of patients do not tell their doctor about the medication they
are taking. In Belgium, significantly more patients (85.1%) inform their doctor on their medication. These numbers rise for patients currently taking medication (66.6% and 91.7%).

Discussion

About 80% of patients are aware of medication DTCA, in that they claim to recall having seen or heard it in the last 3 months. Consistent with AC Nielsen’s breakdown of pharmaceutical spending on DTCA (Eagle & Chamberlain, 2004), most respondents recalled seeing the ad(s) on television. These results are similar to previous studies in the USA (Slaughter, 2002; FDA, 2003a). DTC advertising awareness is high, whether brand-specific advertising for prescription medication is allowed or not. Patients do not report reading more information if a prescription medication is concerned than for non-prescription medication.

Overall, very few respondents reported consulting other sources of information after seeing or hearing DTCA. Doctors and pharmacists were the most frequently consulted, but frequencies were still very low and well below the one-third found in other studies (e.g. White et al., 2004). This was confirmed by the general practitioners and pharmacists we questioned. They too reported low levels of consultation based on DTCA. Where patients did talk to their doctor about an advertised medicine, the vast majority of these consultations occurred during a regular appointment, i.e. an appointment made to discuss other matters. A slightly larger number of patients consulted a doctor or pharmacist for a new versus an existing condition, but Calfee’s (2003) argument that “patients frequently talk about conditions not previously discussed” seems to be an overstatement on the basis of our study. The argument that DTCA causes a spur for patients to consult a medical professional, used both in favor (early detection of illnesses and increased quality of life) and against (unnecessary doctor visits) DTCA for medication, does not seem to uphold.
The role of the internet comes out limited from this study. General practitioners say only 1% of their patients consult them about internet-advertised medication. The patients in this study state they will hardly refer to the internet as a result of seeing DTCA. Other (US) studies have found up to 80% of all patients go online for health related information (Von Knoop et al., 2003). Either these numbers are significantly lower in the countries under study, or the internet search is not motivated by DTCA.

Overall, all three groups of respondents (patients, general practitioners and pharmacists) are wary in their attitudes regarding DTCA. This is in line with results from US studies (Wilkes, Bell, & Kravitz, 2000). However, we found attitudes are significantly more favorable in New Zealand than in Belgium. Although in both countries, the information value of DTCA is judged poorly, New Zealand respondents are milder in their evaluations. New Zealand patients are also more convinced of the usefulness of DTCA, both for prescription and non-prescription medication. The fact that New Zealand attitudes toward DTCA are more positive could be due to experience with the phenomenon. Auton (2004) points out that, in the US, attitudes are becoming more positive since DTCA for prescription medication is allowed there.

Although general attitudes toward DTCA for medication are generally rather negative, medical professionals’ attitudes toward patients asking about these medications are not. Medical professionals tend to agree that these patients are better informed and do not pose an extra burden on their practice. Again, we see that attitudes are significantly more positive in New Zealand than in Belgium. New Zealand medical professionals were able to base their judgments on experience with patients asking for prescription medication.

Most medical professionals reported not to feel much pressure by patients to prescribe the requested advertised medicine. Doctors and patients agree that most of the time, patients do not
receive the medicine they asked about. The number of patient requests resulting in an actual prescription of the medication is below the one found in a number of US studies (e.g. FDA, 2003a; 2003b). Pharmacists tend to give in to patient requests more often. Most medical professionals feel that, when they do not give patients the requested medicine, patients do largely agree with their recommendation. Again, we found no evidence that DTCA would harm the doctor/pharmacist – patient relationship, nor that DTCA would lead to the inappropriate delivery of advertised medication. The level of pressure felt by medical professionals to provide the requested medicine to patients is low, and more importantly, not significantly higher in New Zealand, where DTCA for prescription medication is allowed, than in Belgium, where it is not.

In the end, it is still the medical professionals who decide on treatments, not pharmaceutical companies or patients themselves. If New Zealand doctors prescribe the requested medicine more often than in Belgium, it is not because they feel more pressure to do so. If Belgian pharmacists provide the requested medicine more often than in New Zealand, again they do not feel more pressure to do so. In addition, we did not find that DTCA has led many doctors or pharmacists to discuss alternative treatments with their patients.

A small number of patients (5 to 10%) acknowledged that DTCA can motivate them to comply with ongoing treatments. However, this number is a lot smaller than what was found in other studies (e.g. White et al., 2004). About 90% of patients, declared that DTC advertising makes no difference in their compliance for advertised medication. Compliance was not higher in New Zealand than in Belgium, and Belgian patients did not expect their compliance rate to improve if DTCA for prescription medication would be allowed. The benefits of DTCA in terms of compliance seem limited. We did not specify the question further (e.g. distinguish between
types of medicines) and therefore cannot comment on whether a perverse effect may occur, as Lexchin and Mintzes (2002) suggest.

Conclusion, limitations and further research.

The basic research question of this paper was to what extent there were differences between Belgium, a country in which DTC advertising is severely regulated and New Zealand that allows DTCA, in the attitudes and behavior of medical professionals and patients with respect to DTCA.

The results show that with respect to a number of important issues and characteristics, there is no difference between the two countries. The vast majority of patients in both countries is aware of DTCA for medication and read at least some of the information provided. Patients in both countries report DTCA for medication makes them feel mostly the same or slightly better about the safety and benefits of advertised medication. Most patients agree that especially DTCA for non-prescription medication can be useful.

Overall, attitudes of patients, doctors and pharmacists toward DTCA are moderate to negative. In both countries medical professionals also moderately agree with the statement that DTCA contributes to patients’ participation in decision making, and they feel that they do not create additional pressure, requests or burden. DTCA does not seem to cause a great spur for patients to look up additional information or to consult their doctor or pharmacist. Only a minority of patients reported consulting other sources. Doctors and pharmacists in both countries only report small percentages of patients specifically asking for DTCA medication. About 90% of patients in both countries state that DTCA does not make a difference to their medical consumption.

However, there are some important differences between the two countries. Most of them point at a more positive attitude in New Zealand than in Belgium, and some of them suggest
behavioral differences. DTC advertisements for both OTC and prescription medicines are considered more useful by patients in New Zealand than in Belgium. New Zealand doctors, pharmacists and patients give higher scores to the informational effect of DTCA and New Zealand doctors have a less negative perception of the reliability of DTCA than their Belgian counterparts. More New Zealand patients consult additional sources of information and pharmacists after seeing a DTC advertisement. New Zealand doctors give in to a patient’s request for DTC-advertised medicines significantly more often than Belgian ones, while Belgian doctors more often prescribe a different medication. Remarkably enough, the opposite is true for pharmacists. In New Zealand, significantly more patients practice self-medication and less patients tell their doctor about their medical consumption than in Belgium. All in all, based on the New Zealand results compared to the Belgian ones, prescription medicine DTCA seems to lead to significantly more positive perceptions of medical professionals and patients.

This study has a number of limitations that call for additional testing and research. First of all, the results obtained are all based on the perception of medical professionals and patients. For many issues (like the amount of pressure and response, and the perception of informativeness of advertisements) these perceptions are important, but they do not replace real (prescription and selling) behavior of doctors and pharmacists. Therefore, a more thorough investigation of real prescription (doctors) and selling behavior (pharmacists) is needed. Furthermore, differences in attitudes and behavior between New Zealand and Belgium can to a certain extent be attributed to differences between DTCA regulations, but causal inferences should be made with great caution. To a certain extent the differences found may also be attributable to country-specific differences regardless of the influence of DTCA rules. Further research should go into more detail about the longitudinal evolution of attitudes and behavior as regulations change further. A specific point
that requires more elaboration is the large difference found between the two countries in terms of self-medication and patients informing their doctors about it. Finally, in this study we mainly investigated attitudes and perceptions about DTCA and perceived influence on patients-doctors and patient-pharmacists relations. The important question of to what extent general medical consumption, public health, and health insurance costs and expenses are affected by different DTCA regulations warrants further research, but was outside the scope of this study.
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