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Abstract

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ABSTRACT
Claims such as “most prescribed” are commonly made by top-selling prescription drug brands in their direct-to-consumer (DTC) advertising. Under the FDA’s current policy, sponsors may present “market leadership claims” (MLCs) with only sales data to support the claim. This paper examines how MLCs might affect consumers’ product judgments and whether such claims evoke unwarranted inferences and beliefs about the superiority of the leading brand.

Results of two studies suggest that market leadership claims in DTC advertising signal greater trust of the brand among prescribing doctors and imply superior product effectiveness under conditions when supporting survey and clinical data to support such inferences have not been provided.

ADVERTISING OF PRESCRIPTION DRUGS?
Prescription drug advertising has become increasingly consumer-directed in recent years, and the industry spent $4.2 billion on “direct to consumer” (DTC) advertising in 2004 in the U.S.- an increase of nearly 30% from 3.2 billion in 2003 (Boston Globe, March 2, 2005). Market Leadership claims (MLCs) are commonly used in DTC prescription drug advertising; many of the top-selling brands in several categories (e.g., Celebrex, Zoloft, Avandia, and others) make claims of market leadership to differentiate themselves from competition. (For example, Celebrex has used the claim “The #1 selling prescription arthritis medicine.”) We note two characteristics of MLCs that may have important implications when such claims are used in the advertising of prescription drugs. These claims are comparative in nature and may lead consumers to make inferences regarding the leader’s superiority on important product attributes. (c.f., Barone and Miniard 1999; Shimp 1978). In addition, a MLC for a prescription drug may lead consumers to draw inferences about the brand’s market acceptance, i.e., its relative standing among health care professionals.

The advertising of prescription drugs is regulated by the Food and Drug Administration (FDA), and under current FDA regulations, claims of product superiority or market acceptance must be supported by relevant clinical or market evidence. Therefore, if a company has clinical data to support the claim that its brand is “more effective” than competition, it could differentiate itself from competition based on this explicit claim of superior performance. However, if actual superiority in performance or doctor preference is difficult to document, MLCs that suggest perceived superiority may be used by the sales leader to differentiate itself from challenger brands. Under current FDA regulations, such MLCs are permitted as long as they are supported by sales data, such as that provided by the IMS Health National Prescription Audit. This research investigates how consumers interpret a MLC in the context of DTC prescription drug advertising, and examines the potential of such claims to evoke unwarranted inferences about relative effectiveness of the leader and/or its superior standing among physicians or patients.

BACKGROUND LITERATURE
In one of the few papers in marketing that have examined market share, Hellofs and Jacobson (1999) identified conditions under which a high brand market share would lead to perceptions of higher quality. In the economics literature, Caminal and Vives (1996) suggest that a brand’s market share, which reflects the relative preference for the brand aggregated across dispersed individual buyers, could be used by consumers to make inferences about unobservable product quality. Based on this logic, prescription drug marketers could use various tactics to gain sales leadership (e.g., deep price discounts to select formularies, aggressive sampling, and intensive detailing, etc.), and then use MLCs to shape consumer judgments. These strategies are likely to be effective, since research in marketing suggests that consumers are more likely to use extrinsic cues in their evaluation of experience/credence products such as prescription drugs (see Ziethaml 1988).

While Hellofs and Jacobson’s (1999) research offers initial empirical evidence on the effects of market share information, their study did not examine consumer responses to a brand’s leadership claim presented within an advertisement. Furthermore, this research does not offer an understanding of the nature of consumer inferences made from MLCs for prescription drugs, in particular, whether they may lead to unwarranted conclusions about specific attributes of the sales leader. Additionally, consumers may interpret share of prescription drug brands as indicative of the brands’ endorsement by physicians, who are experts, and may draw meaningful inferences about doctors’ preferences and brand beliefs. These may, in turn, influence consumer evaluations of the product. Two studies described below address these issues. Study 1, adopts an open-ended questioning approach to explore the nature of inferences evoked by a MLC. Study 2 examines how MLCs affect beliefs about the brand’s effectiveness and its standing among doctors (relative to competing brands).

STUDY 1
Although economic signaling theory suggests that market share will be used by consumers to make inferences about relative quality (see Caminal and Vives 1996), it offers little detail on the psychological mechanism for how judgments of other consumers might affect an individual’s perceptions. But support for such a mechanism can be found in studies in consumer psychology that have examined the issue of how social influence in general, affects consumer judgments. This stream of research has shown that even for familiar products in which personal taste was the sole criterion for evaluation, individual judgments can be modified by the perceived evaluations of others. This modification in judgment occurred despite the fact that no attempt was made to encourage subjects to believe that the information conveyed by others was accurate or reliable (c.f., Price and Feich 1984). Cohen and Golden (1972) note the importance of the “informational” value of social influence—“influence to accept information provided by others which is taken as evidence about reality” (p. 54). Social psycholo-

*The views expressed here are solely those of the authors and do not necessarily reflect the policies of the Food and Drug Administration.
gists use the term “social validation” to describe this influence. “We use actions (of others) as a means of social validation, as an interpersonal way to locate and validate the correct choice (Festinger, 1954).” This implies that a brand’s leadership position, which reflects a strong preference for the brand across numerous decision makers, is likely to influence consumer judgments about the brand’s market acceptance.

Since doctors are the primary decision makers in the selection of prescription drugs, which have risks associated with usage, research in social validation suggests that the prescribing behavior of doctors (reflected in the MLC) can significantly affect consumer judgments (Burnkrant and Cousineau 1975). Note that a moderate MLC (“most prescribed” can be made stronger by providing additional factual information (e.g., “4 million more than the next leading brand”). Thus we predict:

\[ H1.a \] A MLC will evoke more inferences about the brand’s acceptance among doctors than a non MLC; more of such inferences will be evoked with a strong (vs. moderate) MLC.

Consumer research suggests that consumers use extrinsic cues such as price, warranty or brand name in judging the quality of a product (Rao and Monroe 1989; Srivastava and Mitra 1998), and that reliance on such cues to judge unobservable product quality is greatest when product attributes are difficult to evaluate prior to purchase (Ziethaml 1988). Consumer expertise in the prescription drug category is low. This suggests that a MLC, if interpreted as brand preference of numerous experts, i.e., doctors, is likely to evoke inferences about attributes of the drug. Thus we predict:

\[ H1.b \] A MLC will evoke more inferences about product effectiveness than a non MLC; more of such inferences will be evoked with a strong MLC, compared to a moderate MLC.

Furthermore, a MLC such as “Celebrex is the brand most prescribed by doctors” does not draw an explicit conclusion nor does it provide an explicit argument structure (Sawyer 1988; Kardes 1993). Yet, the “open-ness” of the MLC makes it an effective persuasion tactic for two reasons: (a) involved audience members construct their own syllogistic reasoning and self-generate a desired conclusion; and (b) the audience attributes ‘less bias’ in the message (c.f., Sawyer 1988, p 168). Instead of directly asserting performance superiority, the ad that reports the behavior of doctors may generate fewer counterarguments and resistance to the source of the message. This further enhances the likelihood of self-generated inferences about the superiority of the market leader, especially under a strong MLC. Thus:

\[ H2.a \] A MLC will evoke more comparative product quality inferences than a non MLC; more of such inferences will be evoked with a strong (vs. moderate) MLC.

\[ H2.b \] A MLC will evoke more comparative market acceptance inferences than a non MLC; a greater number of such inferences will be evoked with a strong (vs. moderate) MLC.

Method
The overall research approach was consistent with suggestions by Graeff and Olson (1994) on the best methods to get a deeper understanding of consumer inferences, and similar it is also similar to other studies of comparative advertising (Manning, Miniard, Barone, and Rose 2001). We employed a non-directive, thought-listing approach to investigate the nature of consumer inferences evoked by MLCs.

Subjects and Procedure. One hundred twenty undergraduate female students at a private university participated in the study. They were randomly assigned to see one (of three) versions of an ad for a hypothetical brand of prescription pain reliever.

Stimuli. Advertising claim condition was manipulated at three levels: (a) moderate leadership, (b) strong leadership, and (c) control. The layout and composition of the ads were modeled after an actual advertisement for a leading brand. In the “moderate” market leadership condition, the first claim featured in the ad was: “PRIDON. #1! The Most Prescribed Treatment for Acute Pain.” In the “strong” market leadership condition, the leadership claim was supplemented with the sentence “Over 4 Million More Prescriptions Than The Next Leading Brand.” Both leadership claims were accompanied by a referencing footnote (“** Data from IMS HEALTH, National Prescription Audit. Based on total dispensed prescriptions for the period 5/01 through 1/02”), and “#1 Prescribed” banner that was placed in the upper right-hand corner of the ad. In the control condition, the first claim featured in the ad was: “PRIDON. Prescription Medicine For The Treatment of Acute Pain.” Other parts of the advertisement (major statement of side effects and warnings, etc.) were held constant across the three ad conditions.

Dependent Measures. After reading the ad, subjects answered two open-ended questions: “What does this ad claim mean to you?” and, “What, if anything, about Pridon is suggested by this statement.” They also responded to a manipulation check measure.

Results
Manipulation check. Subjects’ responses showed that overall, MLC claim manipulations were successful in increasing subjects’ perceptions of relative prescription frequency. Average prescription frequency for the control and two market leadership versions were 2.5, 3.2 and 3.4 respectively (F (2,117)=10.1; p<.001). While prescription frequency was perceived to be significantly different between the control and the MLC conditions, the perceived difference between the moderate and strong MLC conditions were not significant.

Findings. The 440 separate responses elicited by the thought listing task were content analyzed by two judges to classify the nature of the elaboration indicated by each response. A third judge was used to resolve discrepancies (kappa=.815). A response was classified as a simple “ad restatement” if it was a verbatim or near verbatim restatement of the ad claim with little or no elaboration (“you can get it only from a doctor”). Responses indicating elaboration about the product were labeled Inferences and were classified under: (a) “product attributes,” if the response mentioned a specific attribute (e.g., “it’s effective”, “it is strong”), or (b) “market acceptance,” if the response addressed the brand’s relationship with doctors (“it’s popular”, “doctors trust it”). Finally, responses were classified as comparative (e.g., it’s more effective) versus noncomparative (e.g., it’s effective). Subjects reported an average of 4.0 responses to the two questions. See Table 1.

Results for the three ad claim conditions are presented in Table 2. We observe strong support for H1a, that MLCs evoke more market acceptance inferences relative to the control claim (\( \text{F(2,117)}=25.1; p<.001 \)). The difference between the moderate and strong MLC conditions was not statistically significant (\( F(1,78)=2.18; n.s. \) ). However, contrary to H1b, MLCs did not evoke more product attribute inferences com-
pared to the control claim ($\bar{u}_{control}=2.10$, $\bar{u}_{mod}=1.60$, $\bar{u}_{str}=1.60$, $F(2,117)=1.41$, n.s.).

MLCs also evoked comparative inferences. About 30% of inferences about product attributes were comparative in nature.

Comparative product inferences were higher under the MLC conditions ($\bar{u}_{control}=0.25$, $\bar{u}_{mod}=0.58$, $\bar{u}_{str}=0.75$, $F(2,117)=3.0; p = .054$), providing support for H2a. There was partial support for H2b. Comparative market acceptance inferences, which were not
observed in the control condition, represented about 39% of the market acceptance inferences in the MLC conditions. However, although more comparative inferences were observed in the strong than moderate MLC condition (moderate: 0.38, strong: 0.60), the difference was not statistically significant (F(1,78)=2.14; p=0.15).

Study 1 demonstrated that MLCs have the potential to evoke inferences about comparative product effectiveness and market acceptance of the market share leader. In the next study, we examine if MLCs affect specific brand beliefs.

STUDY 2

Consumer researchers have noted that inference plays an important role in persuasion, and may influence persuasion even more than the advertising message. (Chattopadhyay and Alba 1988; Greenwald 1968; and Petty, Cacioppo and Schumann 1983). Results of Study 1 showed that MLCs evoke inferences about the attributes of the market leader. In Study 2, we examine more specifically the issue of belief formation after exposure to a market leadership claim in DTC advertising. We make the following predictions:

H3. Compared to a non MLC, a MLC will enhance beliefs about: (a) product effectiveness and (b) comparative product effectiveness. A strong MLC will enhance beliefs more than a moderate MLC.

H4. Compared to a non MLC, a MLC will enhance beliefs about doctor-brand acceptance. A strong MLC will enhance beliefs about doctor-brand acceptance more than a moderate MLC.

Method

Subjects and Procedure. Seventy- seven undergraduate students participated in the study and were randomly assigned to one of ad claim conditions for a prescription pain reliever. The procedure used in this experiment was similar to that used in Study 1.

Stimuli. As in Study 1, advertising claim condition was manipulated at three levels: The layout and composition of the ad was adapted from that of a leading brand and included elements common to prescription drug print advertisements. The level of market leadership—strong and moderate—was manipulated using length of time (six months vs. five years). Thus, the moderate (strong) MLC featured in the ad was: “In 2002 (over the last five years), doctors prescribed PRIDON more than any other brand of prescription pain reliever.” The MLC was supported with a footnoted reference to data from an IMS audit for the appropriate time period (i.e., five-year time period vs. first six months of 2002). In the control condition, the claim featured in the ad was “Prescription medicine for the treatment of severe pain.” All other portions of the advertisement were held constant across all three conditions.

Dependent measures. Beliefs about product effectiveness were measured on three 7-point likelihood scales (effective/unreliable). Comparative effectiveness was assessed using the same items posed in a comparative context (e.g., “more effective than other prescription pain relievers”). Beliefs about the relative preferences of doctors were assessed using a series of six questions about relative preference, trust and effectiveness (e.g., “How likely is it that doctors prefer PRIDON over other prescription pain relievers?” “... like PRIDON less than ...” “... think PRIDON is more effective than other prescription pain relievers”; Very unlikely=1; Very likely=7). Subjects’ perception of relative sales was assessed on two 5-point scales. These measures served as the manipulation check.

Results

Manipulation check. Results showed that MLCs were successful in affecting perceptions of relative sales. Cell means for the two relative sales measures are in the appropriate direction across the three conditions (See Table 3). A factor score for “relative sales” was created based on the two items (see item loadings in Table 3). GLM analyses with planned comparisons revealed that the differences across the three claim conditions approached conventional levels of statistical significance (û str=−.36, û mod=.02, û control =.29; F(2,74)=3.02, p<.06). Perceived sales level in response to the strong MLC was significantly higher than the control (d=.65, t=2.45 (p<.05)), but the difference between the moderate and control conditions, was not statistically significant (d=.34, t=1.18, (n.s.)).

Beliefs. Means for the brand belief items are displayed in Table 3. Factor scores for each construct were created (item loadings are displayed in Table 3). A summary of the GLM and contrast analyses is shown in Table 4.

Effectiveness. Consistent with H3a, consumer beliefs about product effectiveness were higher in the MLC conditions (û control =.41, û mod=.52, û str=.23; F(2,74)=3.91; p<.05). Contrasts reveal a significant difference between the control vs. the strong MLC condition (d=.75, t=2.85, (p<.01)), but not for the control vs. the moderate MLC condition (d=.43, t=1.50, (n.s.)). A similar pattern was observed for comparative effectiveness (û control =−.36, û mod=.11, and û str=.20; F(2,74)=2.33; p=.10), providing marginal support for H3b. Contrasts reveal a significant difference for the control vs. the strong MLC condition (d=.55, t=2.06, (p<.05)), but not for the moderate vs. control (d=.47, t=1.62 (n.s)).

Doctor-Brand Acceptance. Results also showed support for significant MLC effects on consumer beliefs about the doctor’s acceptance of the brand. Consumer beliefs about doctors’ relative trust in market leader brands were affected by MLCs (û control =−.52, û mod=.24, and û str=.23; F(2,74)=5.33 (p<.01)). Doctors were thought to trust the leader brand more in both the moderate (d=.767, t=2.74, (p<.01)) and strong (d=.757, t=2.93, (p<.01)) MLC conditions.

Beliefs about doctors’ brand preference or liking for a market leader were similarly affected by MLCs (û control =−.49, û mod=.15, and û str=.27; F(2,74)=4.74 (p<.05)). Contrasts showed that doctors were thought to prefer the leader brand more in both the moderate (d=.646, t=2.29, (p<.05)) and strong (d=.765, t=2.95, (p<.01)) MLC conditions. These results provide support for H4.

MLCs affected consumer beliefs about doctors’ judgments of relative effectiveness in a similar manner, but to a lesser degree. Doctors were thought to judge a market leader brand as being more effective than other brands (û control =−.40, û mod=.15, and û str=.20; F(2,91)=4.74 (p=.05)). Contrasts revealed significant differences between the control and the strong MLC condition (d=.60, t=2.26, (p<.05)), but not for the moderate vs. control (d=.54, t=1.89 (p<.10)) at the alpha=.05 level.

DISCUSSION

This paper extends previous research in economics and marketing on the role of market share information to understand the effects of leadership claims, specifically, MLCs used in prescription drug advertising. Our study provides preliminary evidence that an ad featuring an MLC for a prescription drug can enhance consumer beliefs about effectiveness, both in absolute and relative terms. We also observed that MLCs resulted in beliefs about the doctors’ comparative judgments about the market leader. In particular, presentation of a MLC resulted in consumers believing that doctors judged the product to be more effective, more preferable and more trustworthy than other brands. An interesting finding was...
that even with a “moderate” leadership claim (six months share leader), the brand was seen as being trusted more and preferred more by physicians. This suggests that a brand which can achieve sales leadership, for as few as six months, can advertise the fact and reap potential benefits in terms of consumer beliefs about doctor preference and trust.

While more research is needed to extend and test whether the results are generalizable, several implications are suggested about market leadership claims in DTC advertisements. First, MLCs may create a “difficult-to-correct” bias against competitor brands that may not be clinically different in terms of clinical effectiveness or doctors’ comparative evaluations. Consider the claim a challenger brand might (accurately) use in a counter-attack—“No other brand is proven more effective than ProPill.” The likelihood that such a claim may be able to correct misperceptions may be low, especially if the challenger cannot support the claim with a well-controlled

### TABLE 3

Study 2: Means and Standard Deviations by Advertising Claim Condition

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Claim</th>
<th>Moderate Leadership Claim</th>
<th>Strong Leadership Claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative Sales a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescription Frequency (.93)</td>
<td>2.71 (1.23)</td>
<td>3.00 (1.07)</td>
<td>3.45 (1.12)</td>
</tr>
<tr>
<td>Sales Volume (.93)</td>
<td>2.54 (1.06)</td>
<td>2.95 (1.09)</td>
<td>3.16 (1.04)</td>
</tr>
<tr>
<td>Beliefs about brand b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effectiveness (non comparative)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective (.89)</td>
<td>4.54 (1.28)</td>
<td>5.09 (1.19)</td>
<td>5.35 (0.95)</td>
</tr>
<tr>
<td>Relieves Pain (.88)</td>
<td>4.96 (1.76)</td>
<td>5.41 (1.14)</td>
<td>5.77 (0.84)</td>
</tr>
<tr>
<td>Unreliable (.69 c)</td>
<td>3.96 (1.55)</td>
<td>3.68 (1.43)</td>
<td>3.26 (1.37)</td>
</tr>
<tr>
<td>Effectiveness (comparative)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More Effective (.93)</td>
<td>3.96 (1.49)</td>
<td>4.86 (1.28)</td>
<td>4.87 (1.86)</td>
</tr>
<tr>
<td>Relieves Pain Better (.94)</td>
<td>4.25 (1.39)</td>
<td>4.59 (1.47)</td>
<td>4.58 (1.71)</td>
</tr>
<tr>
<td>Less Reliable (.70 c)</td>
<td>4.00 (1.35)</td>
<td>3.36 (1.29)</td>
<td>3.00 (1.32)</td>
</tr>
<tr>
<td>Beliefs about Doctor-Brand Acceptance b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr-Brand Trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drs trust more (.93)</td>
<td>3.83 (1.46)</td>
<td>5.00 (1.93)</td>
<td>4.84 (1.53)</td>
</tr>
<tr>
<td>Drs have less confidence (.72 c)</td>
<td>4.21 (1.50)</td>
<td>3.09 (1.57)</td>
<td>2.97 (1.54)</td>
</tr>
<tr>
<td>Dr-Brand Preference</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drs prefer over other (.90)</td>
<td>3.83 (1.27)</td>
<td>4.64 (1.87)</td>
<td>4.84 (1.59)</td>
</tr>
<tr>
<td>Drs like less than (.76 c)</td>
<td>4.21 (1.41)</td>
<td>3.23 (1.38)</td>
<td>3.10 (1.40)</td>
</tr>
<tr>
<td>Dr-Brand Effectiveness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drs think more effective (.93)</td>
<td>3.91 (1.32)</td>
<td>4.95 (1.86)</td>
<td>4.90 (1.37)</td>
</tr>
<tr>
<td>Drs believe works better (.85)</td>
<td>3.92 (1.50)</td>
<td>4.50 (1.50)</td>
<td>4.71 (1.51)</td>
</tr>
</tbody>
</table>

*aBoth measures were five-point scales (much less/lower than other prescription pain relievers=1; about the same=3; and much more/higher=5)
*bScale: very unlikely=1; very likely=7 c Scale item reversed
How Do Consumers Interpret Market Leadership Claims in Direct-to-Consumer Advertising of Prescription Drugs?

TABLE 4
Study 2: GLM Summary for Beliefs by Advertising Claim Condition

<table>
<thead>
<tr>
<th>Variable</th>
<th>F (2,72)*</th>
<th>p</th>
<th>Advertising Claim Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Control (n=24)</td>
</tr>
<tr>
<td>Relative Salesb</td>
<td>3.02</td>
<td>.06</td>
<td>- .36</td>
</tr>
<tr>
<td>Beliefs about brand</td>
<td></td>
<td></td>
<td>(n=24)</td>
</tr>
<tr>
<td>Effectiveness (non comparative)b</td>
<td>4.07</td>
<td>.02</td>
<td>- .42</td>
</tr>
<tr>
<td>Comparative Effectivenessb</td>
<td>2.33</td>
<td>.10</td>
<td>- .36</td>
</tr>
<tr>
<td>Beliefs about Doctor-Brand</td>
<td></td>
<td></td>
<td>(n=24)</td>
</tr>
<tr>
<td>Acceptance</td>
<td></td>
<td></td>
<td>(n=24)</td>
</tr>
<tr>
<td>Trust morea,b</td>
<td>5.33</td>
<td>.01</td>
<td>- .52</td>
</tr>
<tr>
<td>Prefer morea,b</td>
<td>4.74</td>
<td>.02</td>
<td>- .49</td>
</tr>
<tr>
<td>More effectiveb</td>
<td>2.91</td>
<td>.05</td>
<td>- .40</td>
</tr>
</tbody>
</table>

* Based upon GLM type III SSQS
a Contrast of Control vs. Moderate significant at p<.05 (one-tailed)
b Contrast of Control vs. Strong significant at p<.05 (one-tailed)

comparative efficacy study. Even with such a study and consumer acceptance of the challenger’s claim, the counter-claim may result in, at best, a belief of competitive-parity.

Will consumers “self-correct” this bias? Previous research shows that consumer experience with products is often ambiguous, and in such cases, experience is often interpreted in line with prior expectations (Hoch and Ha 1986; Hoch and Deighton 1989). In some categories, consumers who are “new-to-the-market” may find their experience with a prescription drug especially hard to evaluate even with guidance from a healthcare professional. Therefore, we might hypothesize that expectations created by MLC advertising will influence how consumers form their consideration set and how consumers interpret subsequent product experience. Those who are prescribed the leader brand might experience a stronger placebo effect or may be more reluctant to switch to another brand in spite of a less than optimal product experience. Conversely, patients using a smaller share brand may switch unnecessarily because of the tendency to interpret the current performance of the brand as potentially inferior to that promised by a leader. Also, because of expectations, caregivers, who are now often the target of prescription drug advertising, may be similarly affected by leadership claims. They may be more inclined to ask about a market leader. Left uncorrected, the bias created by MLCs may protect consumers from being misled. Since doctors serve as the learned intermediaries, consumers may assume that doctors’ prescribing patterns represent expressions of (unconstrained) choice among available medications, and that the brand selected in each case is the one that is “best” for the patient. If so, the market leadership position (achieved through the prescriptions written by numerous individual doctors acting independently.) would appear to the consumer as a true reflection of relative superiority. Ironically, the more strongly consumers believe that physicians act in the patients’ best interest, independent of external influence, the more susceptible they may become to the effects of MLCs. Those most skeptical of their physician’s motives (and/or DTC advertising) may be the least affected by MLCs.

If MLCs cause consumers to believe that a brand is superior, the incentive for pharmaceutical manufacturers to do comparative brand (as opposed to placebo) efficacy studies may be reduced. Under current FDA regulations, a brand would be allowed to make a direct claim about its superior effectiveness or doctor preference only when supported by market surveys or clinical data. We argue that MLCs in DTC advertising offer the brand an indirect way to make a claim of relative superiority without presenting such evidence. Our studies show that consumers make MLC-based inferences about relative effectiveness of prescription drugs, consistent with predictions of signaling theory (Caminal and Vives 1996). Caminal and Vives note that firms would attempt to gain market share by lowering prices and promoting the product heavily. The implication is that if a MLC can be used to shape beliefs about relative effectiveness as suggested by our data, then drug companies may have fewer incentives to do well-controlled clinical studies to assess comparative effectiveness. An advertising strategy...
based on post-marketing data (such as IMS), may be less risky and less costly, even though post-marketing sales data are obviously not designed to assess comparative effectiveness.

Our studies provide initial evidence to suggest that market leadership claims in DTC advertising may serve as an indirect method of making a statement about the comparative superiority of a brand under conditions in which clinical or market evidence to support such claims are not available. Future research might examine potential boundary conditions on the extent to which MLCs affect consumer inferences. For example, researchers might examine the effects of using explicit share percentages to support the MLC, and if providing such information would result in fewer inferences about the relative superiority of the share leader. Without specific market share figures for the major brands in the category to clarify the leader’s claim, consumers are left to form their own impressions about market structure. Consumers exposed to a MLC may overestimate the leader’s relative market share (either the ratio of the leader’s share to next largest challenger’s, or the incremental difference between them). These assumptions about relative market share might affect whether the leader is viewed as better than “all other brands,” “most other brands,” or “some other brands” (c.f., Johar 1995). Research may also investigate the effectiveness of a disclosure in the advertisement stating that sales data (leadership) are not suitable evidence for judgments of comparative brand efficacy or safety.

REFERENCES


