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J Hum Lact published online 6 June 2012
DOI: 10.1177/0890334412447080

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What is This?
Milk and Social Media: Online Communities and the International Code of Marketing of Breast-milk Substitutes

Sheryl W. Abrahams, MPH

Abstract

Background: The advent of social networking sites and other online communities presents new opportunities and challenges for the promotion, protection, and support of breastfeeding. This study examines the presence of infant formula marketing on popular US social media sites, using the World Health Organization International Code of Marketing of Breast-milk Substitutes (the Code) as a framework.

Methods: We examined to what extent each of 11 infant formula brands that are widely available in the US had established a social media presence in popular social media venues likely to be visited by expectant parents and families with young children. We then examined current marketing practices, using the Code as a basis for ethical marketing.

Results: Infant formula manufacturers have established a social media presence primarily through Facebook pages, interactive features on their own Web sites, mobile apps for new and expecting parents, YouTube videos, sponsored reviews on parenting blogs, and other financial relationships with parenting blogs. Violations of the Code as well as promotional practices unforeseen by the Code were identified. These practices included enabling user-generated content that promotes the use of infant formula, financial relationships between manufacturers and bloggers, and creation of mobile apps for use by parents. An additional concern identified for Code enforcement is lack of transparency in social media-based marketing.

Conclusion: The use of social media for formula marketing may demand new strategies for monitoring and enforcing the Code in light of emerging challenges, including suggested content for upcoming consideration for World Health Assembly resolutions.

Keywords
infant formula, marketing, breast milk substitutes, breastfeeding, social media, Facebook

Well Established

Certain forms of infant formula marketing banned by the International Code of Marketing of Breast-milk Substitutes, which is a global code for manufacturers, but not legislated in the US, are negatively associated with breastfeeding success. Social media is increasingly popular among Internet users, especially young women, and plays an influential role in consumer decisions.

Newly Expressed

US infant formula manufacturers have established a social media presence through Facebook, Twitter, YouTube, mobile apps, interactive brand Web sites, and financial relationships with parenting blogs. Although some of this social media content is in violation of the provisions of the International Code of Marketing of Breast-milk Substitutes, certain social media-enabled practices clearly were not anticipated by the Code.

Background

The advent of social media presents new opportunities and challenges for the protection, promotion, and support of breastfeeding. Social media use accounts for 23% of the total time Americans spend online. Its particular popularity among female Internet users, and those aged 18-34, suggests that...
important life events like pregnancy and early motherhood play out against a backdrop of social media use for many American women. Understanding the influence exerted by social media messages is an important step toward understanding the context in which infant feeding decisions are made. Evidence that consumers turn to social media to evaluate their options when ready to make choices about their health suggests an especially significant role for this medium in health decision making. This article describes emerging commercial influences on infant feeding by examining the presence of infant formula marketing content within US social media, using as a framework the International Code of Marketing of Breast-milk Substitutes.

Social Media
Social media is defined by Kaplan and Haenlein as a collection of Internet-based applications that allow for the creation and exchange of user-generated content. This definition includes blogs, social networking sites like Facebook, microblogging services like Twitter, content communities like YouTube, and collaborative projects like Wikipedia.2

Social media is an increasingly popular resource for health and wellness information. Of the 64% of American adults who report going online for health information, an estimated 34% use social media to access it.3

Social media is an increasingly popular, and increasingly promising, advertising venue.4-6 Marketing research indicates that exposure to promotional content through the members of one’s social network (for example, Facebook notifications that a friend has “liked” a certain product’s page) are associated with significantly increased ad recall and purchase intent, compared to Internet ad exposure alone.6 In addition to social media’s potential to influence purchasing decisions, previous work suggests that it also provides a means by which pharmaceutical and infant formula manufacturers may circumvent existing voluntary or compulsory codes of marketing to advertise their products.4,5

International Code of Marketing of Breast-milk Substitutes
The International Code of Marketing of Breast-milk Substitutes (the Code) was adopted by the World Health Assembly (WHA) in 1981, to protect and promote appropriate infant and young child feeding. It calls for the prohibition of all forms of direct-to-consumer promotion of breast milk substitutes and related feeding accessories by manufacturers and distributors, and it specifies appropriate practices in relation to public education about infant feeding.7 Several subsequent WHA resolutions have been issued to update and clarify the Code, including WHA Resolution 54.2, which expressed concern over the use of “new modern communication methods, including electronic means” to promote products within the scope of the Code, and called on governments to strengthen mechanisms to ensure Code compliance in all forms of media.8

No portion of the Code has been enacted into US law. However, the Code notes that: “Independently of any other measures taken for implementation of this Code [i.e. laws], manufacturers and distributors of products within the scope of this Code should regard themselves as responsible for monitoring their marketing practices according to the principles and aim of this Code, and for taking steps to ensure that their conduct at every level conforms to them.”7 Hence, the manufacturers are responsible and liable if their activities do not adhere to the Code, whether or not it is legislated in that particular country. This assertion is particularly important with regard to social media messaging, which readily crosses international boundaries.

Article 4 of the Code stipulates that infant feeding educational materials designed to reach pregnant women and mothers of young children should include information on the superiority of breastfeeding, the risks of artificial feeding, the negative effect on breastfeeding of introducing partial bottle feeding, and the difficulty of reversing the decision not to breastfeed. These materials also must not contain any pictures or text that may idealize breast milk substitutes or undermine breastfeeding.7,9 Article 4 also restricts the direct distribution of industry-prepared educational materials to members of the public.7

Practices banned by Code Article 5 include the gifting of samples and the distribution of discount coupons or other articles promoting the use of breast milk substitutes.7 Article 5 also restricts persons employed by manufacturers of products within its scope from making professional contact with pregnant women or families of young children. Company personnel are likewise prohibited by Code Article 8 from performing educational functions with respect to pregnant women and families of young children.7,9 Code Article 6 prohibits the promotion of breast milk substitutes within health care systems, and Article 7 states the responsibilities of all health workers to promote breastfeeding.7

Code provisions are supported by evidence that certain forms of infant formula promotion are negatively associated with breastfeeding success, particularly among mothers who are uncertain about their breastfeeding intentions.10-12 These forms of promotion include commercial hospital discharge bags,10 prenatal breastfeeding educational materials prepared by formula manufacturers (as compared to independently prepared educational materials),11 and general exposure to infant formula advertisements.12

The Code is left to individual governments to legislate and enforce, using its provisions as a minimum standard for these national efforts.7 Although no portion of the Code has been legislated in the US, the 2011 US Surgeon General’s Call to Action to Support Breastfeeding called for voluntary adoption of certain Code provisions. Specifically, it called for manufacturers and distributors to voluntarily refrain from direct-to-consumer promotion of infant formula, and to end all such promotion within the US health care system.13
Code violations are common in the US and in other countries in which provisions lack the force of law. The use of social media for infant formula marketing, including the use of mobile apps and Facebook, has been previously reported. As the Code predated the widespread use of social media, it is unknown to what extent emergent social media-based marketing practices pose challenges for implementation and monitoring of its provisions.

Objectives
This article examines the presence of infant formula marketing in social media sites that are likely to be visited by new and expectant parents, in order to describe how social media is used for the promotion of breast milk substitutes in the US.

Methods
We examined popular social media outlets for infant formula promotion and related content, including educational messages that were created or otherwise enabled by manufacturers and distributors, during the period from June-November 2011. Content was assessed for (1) Code violations, and (2) practices deemed promotional or potentially detrimental to optimal infant feeding norms, but not clearly within the letter of the Code.

We made a list of infant formula brands widely available in the US, including 7 name brands and 4 generics. This list included 2 brands manufactured specifically for children with special medical needs, as such products also fall within the scope of the Code. We then identified popular social media tools with the potential to enable marketing content. These tools were Facebook, MySpace, Twitter, YouTube, Google+, blogs, mobile applications, and interactive Web sites.

The Code serves as a framework for discussion and examines the presence of both marketing practices within its scope and emerging practices that may fall outside its letter. We then identify and discuss emerging challenges for the protection and support of breastfeeding, through maintenance and enforcement of the Code, in an era of social media.

Formula brand names and manufacturer names were used as keywords to search within these sites (for example, searching under a brand’s name within Facebook’s internal search bar). We also conducted searches on Google using the general form of brand name and social media tool (eg, a brand name and Twitter), and the general form of manufacturer name and social media tool as keywords to identify additional formula marketing content. Additional Google searches were conducted using the general format of infant formula and social media tool (eg, infant formula and Facebook). Sponsored reviews and other financial support for parenting blogs were discovered by conducting Google searches under the general form of brand name review and by searching under the terms infant formula and blog.

Mobile applications distributed by infant formula manufacturers were discovered by conducting Google searches using the general form of brand name and mobile app. We also visited each brand’s Web site to determine the presence of interactive social media tools, such as message boards, photo galleries, and “Tell a Friend” tools.

The analysis is restricted to content that is enabled by the particular features of social media, as opposed to banner ads within the sites visited. A corporate social media presence, without mention of infant formula or a particular formula brand, was not considered in our results. Likewise, if a particular brand was associated with both infant formula and other products (such as complementary food), it was considered to have a social media presence only if the brand’s social media sites included information about its formula(s). Finally, although the Code applies to a variety of infant feeding products and accessories, this analysis is restricted to commercial infant formula as the product specifically addressed by the US Surgeon General’s Call to Action.

This study was exempted from full review by the Non-Biomedical Institutional Review Board of the University of North Carolina at Chapel Hill.

Results
Of the 11 brands identified, 10 had some social media presence. This presence occurred primarily through Facebook pages, interactive features on the brands’ own Web sites, mobile apps for new and expectant parents, YouTube videos, sponsored reviews on parenting blogs, and other financial relationships with parenting blogs. Nine of the 11 brands had a presence on 2 or more of the social media venues included.

Facebook
Of the 11 brands identified, 8 had established Facebook pages. Each page allowed, and in some cases prompted, users to post comments and questions, including testimonials about products. Pages also allowed users to become fans by “liking” the site. One manufacturer’s page alone displayed over 2 million “likes.” Fans were eligible for prize drawings on at least 1 site.

Six of the 8 Facebook pages sponsored photo contests, in which users were incentivized to submit photos of their children to the site for viewing by other users, or for selection for use in marketing materials. Discount offers posted on these pages varied over time; at least 5 had included links to coupons or other special offers. For example, one brand’s Facebook page directed users to an external Web site to request free product samples. Another linked users to an online search tool to find maternity facilities offering that brand’s hospital discharge bag. The same page also linked to a variety of educational content and provided a list of feeding experts available to respond to user questions on the page.
Although 3 of the 8 Facebook pages included a statement on the superiority of breastfeeding, none included all of the information mandated by Code Article 4 in a clearly visible location. For example, no page included information on the risks of artificial feeding or the negative impact on breastfeeding of introducing partial bottle feeding.

**MySpace and Google+**

Google+ pages, which allow businesses to connect with consumers, had only recently been launched at the time of the study. Only 1 of the 11 brands had created a Google+ page. Only 1 of the 11 brands had a dedicated MySpace page, which had not been updated since 2010.

**Twitter**

Three of the 11 brands had established Twitter accounts for communicating messages about their formula products. Three additional brands were associated with a general Twitter account maintained by their manufacturer. Many of the tweets mirrored status updates posted on brands’ Facebook pages and included notifications about photo contests, discounts, and giveaways.

**YouTube**

Five of the 11 infant formula brands had established a YouTube presence, either through manufacturers’ or brands’ own dedicated YouTube channels or through promotional content distributed by a retailer. Not represented in this total were 3 brands with a common manufacturer, which created a dedicated YouTube channel to promote the use of store brand over name brand formulas. (One brand specifically represented on this channel was included in the total.) YouTube allows viewers to comment on or “like” videos, upload them to external Web sites, or pass them along via links.

One manufacturer posted a promotional video on its YouTube channel that described the difficulties of breastfeeding a preterm infant. Two brands had created YouTube video advertisements with images of live infants and information on the potential benefits of their products, including optimal growth and brain development. None of the videos viewed adhered to the provisions of Code Article 4 by including clear information on the risks of artificial feeding.

**Mobile Applications**

Four of the 11 brands provided free mobile apps for use by expectant parents and parents of young children. One brand’s app allowed parents to record and track infant feeding and sleeping trends, including breastfeeding sessions, and to email these records to others. The app prompted users to record start and end times for breastfeeding and formula feeding sessions and provided suggestions as to when the next session might begin. A second brand’s app provided expectant parents with weekly updates on fetal development, interactive pregnancy to-do lists, a contraction counter for use during labor, and a tool to create and send birth announcements. It also connected users with information about receiving an in-hospital formula gift bag.

A third brand created 2 apps for expectant parents and parents of newborns, respectively. The first provided users with information on fetal development and infant nutrition and allowed mothers to track their own medical appointments and weight gain. The second provided tools to record and track feeding sessions and growth, and to create online scrapbooks.

A fourth brand distributes an app for parents of children with confirmed or suspected food allergies. It provides online diary tools for parents to record children’s food intake, symptoms, and daily care activities and allows diaries to be emailed.

**Sponsored Reviews on Blogs**

Sponsored reviews for one brand’s mobile app were found on a variety of parenting blogs, commissioned by the brand’s parent company, through a third party media company that specializes in connecting manufacturers with bloggers. In the US, bloggers must disclose financial incentives received in relation to product reviews. Most reviewers disclosed the direct relationship with the media company, rather than the more indirect relationship with the formula manufacturer.

Sponsored reviews for 2 store brand formulas were also discovered on a number of parenting blogs. The reviews focused on the brands’ comparable safety and nutritional content, and significantly lower price, compared to name brands. None of the reviews complied with Code Article 4.

Additional financial relationships between manufacturers of infant formula and independent bloggers were discovered, such as an industry trade group’s financial sponsorship of an independent blog critical of breastfeeding promotion efforts. The blog contained educational content with an emphasis on research that failed to find associations between breastfeeding and health outcomes, and links to submit infant feeding questions to an affiliated nurse practitioner. It also encouraged users to reject efforts to remove infant formula gift bags from hospitals. Content on other parenting blogs revealed that one brand’s parent company had sponsored a 2009 event for parenting bloggers at its US headquarters, with travel and accommodations provided to invited guests. It is unclear to what extent formula products were discussed or promoted at the event, although company representatives reportedly did address controversies relating to its marketing of infant formula.
Interactive Web Sites

Five of the 11 brands contained social media features on their own Web sites. Educational content targeted to pregnant women and mothers, along with user-generated photos and comments, and access to live infant feeding advice, were found on 2 major brands’ Web sites. Web sites for 2 store brands included other interactive content, such as tools to notify friends about their products. One brand’s site linked Web visitors to a company blog that allowed users to re-blog, Tweet, Facebook, “like,” or comment on individual entries.

Discussion

Our results confirm previous observations that social media is used by pharmaceutical and infant formula manufacturers for direct-to-consumer advertising. To our knowledge, this is the first study to demonstrate the extent to which US infant formula brands have established an online social media presence through those sites likely to be used by new and expectant parents.

Violations of the Code were common within the content examined, most notably the existence of direct-to-consumer advertising in the form of YouTube videos, brand Web sites, brand Facebook pages, promotional Twitter tweets, and sponsored reviews on blogs. Another common violation was virtual contact between infant formula marketing personnel and families of young children, in the form of Facebook wall posts, Twitter feeds, and online message boards. Other Code violations included provision of manufacturer-created educational materials directly to the public, without information mandated by Code Article 4, and provision of free samples and coupons.

Other practices were not clear Code violations, but they were nonetheless of concern because they have the potential to influence consumers’ infant feeding decisions. In particular, the existence of user-generated content on social media sites is an issue not anticipated by the Code, nor has it been addressed by subsequent resolutions. Allowing users to post comments or testimonials about formula products provides brand sites with marketing content without having to take any Code-proscribed action. Soliciting user-generated photos also provides a way for manufacturers to affect to having been compliant, but, in effect, to circumvent proscriptions on the use of images idealizing formula feeding.

Allowing users to re-tweet, re-post, link to, email, or “like” other social media content provides greater exposure to manufacturer-generated marketing content without the need for manufacturers to actively violate the Code. Features standard to Facebook include newsfeeds that automatically inform users’ contacts when they have become a fan of a Facebook page or post comments to it. Gaining fans for a brand’s page therefore increases its exposure to other users, including those without formula feeding intentions. This issue is especially concerning in light of the influence of such organically generated marketing buzz on consumer purchasing intent. Additionally, the creation of online communities around certain formula products may help to perpetuate certain infant feeding norms, including ideas that optimal breastfeeding is unattainable by most mothers.

There is no Code provision that specifically prohibits financial relationships between manufacturers and bloggers; however, bloggers are part of the “public,” which allows manufacturers to harness popular bloggers’ influence to promote their products. Relationships that are not subject to disclosure laws or that occur through third-party media companies, as well as bloggers who fail to make required disclosures, reduce transparency and hinder Code monitoring and enforcement.

Infant formula manufacturers’ use of health workers to respond to user questions within social media venues is another issue only partially covered by the Code. The Code prohibits such use of personnel within health care settings and calls on health workers to promote and encourage breastfeeding, but is not specific about the circumstances under which they may provide infant feeding advice. Although these professionals may be qualified to provide objective infant feeding advice, including breastfeeding support, their presence may also encourage traffic to industry sites and expose families to marketing content.

Similarly, manufacturers’ creation of mobile apps may provide useful tools to some consumers, but it also increases their brands’ exposure. It is of particular importance to note that these apps may disseminate ideas or information detrimental to breastfeeding success. For example, an app that tracks breastfeeding sessions may cause parents to become unnecessarily concerned when a baby fails to nurse on a certain schedule. Furthermore, as maternity care practices are associated with breastfeeding success, formula industry tools for expectant parents have the potential to discourage care decisions conducive to breastfeeding. For example, apps that help families to locate maternity hospitals in their area, or provide information about what to expect during a maternity stay, may steer families toward facilities with formula contracts and away from birth centers or certified Baby-Friendly facilities more likely to practice immediate postpartum skin-to-skin contact or rooming-in. Similarly, these apps may also increase demand for in-hospital giveaways known to interfere with breastfeeding.

There is a vast and growing potential audience for the promotional material described. Facebook alone is estimated to reach 70% of active US Internet users, with over 140 million unique US visitors in May 2011. The Facebook site of one formula manufacturer displayed over 2 million “likes” by members of the public. Blogger and Twitter, the next most popular social media brands, received over 50 million and 23 million unique US visitors in May 2011. These numbers provide some urgency to consideration of the issues raised above.
Limitations

This study was unable to assess the existence of certain potential marketing practices, such as social media content purported to be from consumers, but compensated or ghost-written by marketing personnel, or the moderation of user-generated content on social media sites to perpetuate certain norms.

Conclusion

Infant formula manufacturers use a variety of social media tools to promote their products, create communities around their use, and contribute to current dialogues about infant feeding. Examination of social media-based content created by US infant formula manufacturers revealed limited to no adherence to the Code and identified unanticipated challenges to the maintenance and enforcement of the Code in an era of social media. These challenges include the use of user-generated content, lack of transparency in marketing, and the use of social media tools to perpetuate norms not conducive to optimal feeding. Further studies are needed to determine social media-based marketing practices in other parts of the world, including countries in which Code provisions are law. Additional research is also needed to determine the influence of social media on infant feeding decisions.

Institutions concerned with the promotion and protection of breastfeeding through maintenance and enforcement of the Code, including those working with industry to encourage adherence and those considering new WHA resolutions, should consider novel issues raised by social media. Institutions and individuals concerned with the education of pregnant women and families of young children should also take care to promote the appropriate use of social media for educational purposes, including the use of objective sources.

Acknowledgments

The author wishes to thank Dr. Miriam Labbok, Director of the Carolina Global Breastfeeding Institute at the University of North Carolina at Chapel Hill, for her valuable comments on this manuscript.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by the endowment of the Carolina Global Breastfeeding Institute in the Department of Maternal and Child Health at the University of North Carolina’s Gillings School of Global Public Health.

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