

Experimental Study of Direct-to-Consumer (DTC) Promotion Directed at Adolescents

0910-NEW

SUPPORTING STATEMENT

Terms of Clearance: None.

A. Justification

1. Circumstances Making the Collection of Information Necessary

Regulatory Background

Section 1701(a)(4) of the Public Health Service Act (42 U.S.C. 300u(a)(4)) authorizes the Food and Drug Administration (FDA) to conduct research relating to health information. Section 903(b)(2)(c) of the Federal Food, Drug, and Cosmetic Act (FD&C Act) (21 U.S.C. 393(b)(2)(c)) authorizes FDA to conduct research relating to drugs and other FDA regulated products in carrying out the provisions of the FD&C Act.

Adolescents and DTC

Sponsors for several prescription drug classes market their products directly to vulnerable groups, including adolescents. Such direct-to-consumer (DTC) marketing to adolescents raises a variety of potential concerns. Adolescents are a unique audience for DTC drug marketing because their cognitive abilities are different than those of adults, and they are usually dependent on adults for health insurance coverage, health care provider access, and prescription drug payment. Despite this uniqueness, research regarding how adolescents use risk and benefit information for health-related decisions is limited. If considered at all in healthcare communication research, age is typically treated as simply another segment of the audience (Southwell, 2010), and researchers fail to consider how information processing (how people understand information) in response to ad exposure might differ among adolescents versus older viewers.

The FD&C Act requires manufacturers, packers, and distributors that advertise prescription drugs to disclose certain information about a product's uses and risks to potential consumers in all advertisements. Consumers must consider trade-offs with regard to the product's risks and benefits in deciding whether to ask their health care professionals about the product. Presenting technically factual information is important, but other factors can also affect potential consumers. Information processing capacity, the relevance and vividness of the information, and contextual factors such as family dynamics likely affect how adolescent consumers weigh the potential risks and benefits of using a product.

Despite the lack of previous research specific to DTC drug marketing to adolescents, existing theoretical and empirical data make a strong case for treating adolescence as a unique life stage during which vulnerabilities that can affect informed decision-making must be taken into account. Well-known theories of adolescent development have long pointed to developmental changes that occur during the transitional period as an individual moves from childhood to young adulthood (Lerner & Steinberg, 2009). For instance, Erikson (1963, 1974) describes an often turbulent psychosocial crisis that occurs as adolescents strive to develop their unique identity. Piaget (1952, 1972) and Kohlberg (1969) describe changes in stages relative to cognitive processing and reasoning that occur in this period, as the adolescent becomes increasingly capable of more abstract thinking. Different cognitive, social and emotional, and developmental processes in the adolescent brain mature simultaneously and at different rates, affecting decision-making by age. All of these factors can influence how adolescents perceive and process information as well as weigh risks and benefits.

The need for understanding how adolescents weigh risks and benefits is particularly critical given the potential adverse events associated with use of the drug classes that are marketed

directly to adolescents. Suicide and suicidal ideation has been associated with some of these classes, including a commonly used class of acne medications. The risk and benefit information needs to be clearly presented in ways that adolescents can understand. Interpretation of more subtle messages in the advertisements, along with the lens through which adolescents view the message, must be understood. For example, given the potential stigma of acne and adolescents' heightened concerns about peer perceptions, marketing that emphasizes these two features in subtle ways might minimize the attention given to any risk information provided. This suggests the need to systematically explore the role of various factors that would be expected to influence adolescent decision-making, such as peer and family perceptions of stigma.

2. Purpose and Use of the Information Collection

We plan to conduct a randomized, controlled study in two different medical conditions that assesses adolescents' perceptions following exposure to DTC prescription drug advertising that varies in benefit and risk onset and risk severity. We plan to compare adolescents' perceptions to those of young adult counterparts. Because adolescents typically depend on their parents for prescription drug purchases, we also will include a sample of parents matched to their adolescent children to explore similarities and differences in perceptions for these matched pairs.

Although the variables we are examining are all attributes of the drug products themselves and do not reflect particular behaviors of sponsors, this information will be crucial in determining what types of prescription drugs may require additional care when advertising them to adolescents. The study findings will inform FDA of relevant issues related to DTC promotion directed at adolescent populations.

3. Use of Improved Information Technology and Burden Reduction

Automated information technology will be used in the collection of information for this study. The contracted research firm will collect data through Internet administration. One hundred percent (100%) of participants will self-administer the Internet survey via a computer, which will record responses and provide appropriate probes when needed. In addition to its use in data collection, automated technology will be used in data reduction and analysis. Burden will be reduced by recording data on a one-time basis for each respondent and by keeping surveys to less than 30 minutes.

4. Efforts to Identify Duplication and Use of Similar Information

We are aware of no published studies examining DTC promotion directed toward adolescents.

5. Impact on Small Businesses or Other Small Entities

No small businesses will be involved in this data collection.

6. Consequences of Collecting the Information Less Frequently

The proposed data collection is one-time only. There are no plans for successive data collections.

7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5

There are no special circumstances for the collection of information.

8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency

In accordance with 5 CFR 1320.8(d), FDA published a 60 day notice for public comment in the Federal Register of October 31, 2013 (78 FR 65326). FDA received two public comments. In the following section, we outline the observations and suggestions raised in the two submissions and provide our responses:

(Comment 1) One comment mentioned that the document states the FDA will examine "adolescents' perceptions following exposure to different types of DTC prescription drug advertising" and asked if the agency can clarify what "types" of ads will be studied? In particular, will Internet display ads, social media ads (e.g., Facebook), and mobile ads be considered?

(Response) As stated in the 60-day notice, participants will be randomly assigned to view one website ad for a fictitious prescription drug that treats either acne or ADHD. This ad will be similar to current website advertisements produced for pharmaceutical companies, however all content will be on a single page, without active links to sub-pages. On the web page, there will be an embedded video that resembles a television ad.

(Comment 2) One comment mentioned that the document states "The protocol will take place via the Internet. Participants will be randomly assigned to view one Web site ad for a fictitious prescription drug that treats either acne or ADHD and will answer questions about it." The commenter mentions that it appears that FDA will be specifically looking at Internet display ads and that FDA seems mainly concerned with "timing issues" that are not applicable to "web-based" promotional campaigns unless these are video campaigns, which can be YouTube campaigns or merely TV ads embedded in Web pages. The commenter asks for clarification.

(Response) To present the stimuli, we will produce a series of fictitious advertisements using a web format with embedded video that are comparable to current advertisements produced for pharmaceutical companies. The "timing issues" that are being manipulated in the study are not related to timing of the presentation of the information in the ads, but to the adolescents' perception of the timing of the onset of benefits and the timing of the onset of risks of the drugs. We are specifically interested in learning whether adolescents are more likely than adults to give

more credence to benefits that occur immediately and to discount risks that do not occur immediately.

(Comment 3) One comment mentions modifying the sample by including groups of symptomatic/undiagnosed adolescents and their parents in the study design because perception of risk may vary depending on whether an individual is diagnosed or not. The commenter states that diagnosed adolescents who are taking medication and who experience no side effects may be less sensitized to risk (just as their adult counterparts tend to be), because once they have experienced a medication with no accompanying side effects, the possibility of risk may seem more remote.

(Response) We agree that perception of risk may vary depending on whether or not an individual is diagnosed with the condition. In our design, adolescents do not have to have a medical diagnosis of acne to participate in the study. Because acne is a visible and commonly self-diagnosed condition, it is reasonable to include non-diagnosed individuals with acne in the study. However, for the ADHD condition, we aim to enroll only adolescents who are diagnosed with ADHD to avoid the potential confusions for “lay” or self-diagnosis of the condition.

(Comment 4) One comment mentions modifying the sample by including groups of symptomatic/undiagnosed adolescents and their parents in the study design because it will help better understand what the primary impact of DTC is on teens and to what extent DTC functions to help teens self-identify with a condition vs. advocate for a brand.

(Response) Although we agree that it would be interesting to examine the extent to which DTC advertising functions to help teens self-identify with a condition vs. advocate for a brand, this question is beyond the scope of this study. The ads used in this study are intended to assess risk perceptions in DTC ads, not to examine identity measures, brand recognition or advocacy.

(Comment 5) One comment mentions modifying the sample by including subsets of diagnosed teens who are currently medicating for ADHD, vs. non-medicating, and, as part of the exit interview, capture data on those who have experienced side effects from medication, vs. those who have not.

(Response) We agree that we should include teens who are both currently medicating and non-medicating. Although we are not screening participants based upon their medication status, we will be asking participants about their current and past use of medications and will explore this as part of our analysis. We also agree that it would be interesting to explore differences for teens who have experienced side effects and those who have not experienced side effects since experience with side effects might affect perception of the risk of the drugs in the study. Based upon this recommendation, we will add an item to the instrument to measure the participants' previous experience with side effects from medications. This item will serve as a moderator variable.

(Comment 6) One comment mentions not supplementing the sample with siblings of teens diagnosed with ADHD because they believe that adolescents who do not suffer from the symptoms of ADHD cannot truly evaluate the benefits of a treatment vs. its risk, in the absence of experiencing the symptoms first hand.

(Response) We agree that it is desirable to recruit a sample of adolescents who have been diagnosed with ADHD, therefore we do not currently plan to recruit adolescents who have not been diagnosed with the condition. Preliminary estimates lead us to believe that we will be able to recruit a sufficient sample of adolescents who are diagnosed with ADHD. If, however, an appropriate sample size cannot be obtained, we plan to extend the sample by including adolescents

with family members who have been diagnosed with ADHD rather than adolescents who are not at all familiar with the condition.

(Comment 7) One comment mentions modifications to topic areas to include questions about the role of teens in the decision to seek diagnosis, to medicate (or not), and the actual brand decision because it is also important to understand this processing within the context of the entire patient pathway.

(Response) We agree that it is important to know more about the role of teens in the decision to seek diagnosis, whether or not to medicate, and the actual brand decision. It is beyond the scope of this study to look at decisions regarding teens' roles in seeking diagnosis and brand decision-making. Our study does explore teen roles in decision-making about use of medication through the following questions:

1. Who would make the final decision about whether you would use this drug? (you/ your [PARENT RELATIONSHIP]/you and your [PARENT RELATIONSHIP] together)
2. My [PARENT RELATIONSHIP] lets me decide what prescription medication I should or shouldn't take. (scale ranging from always to never)
3. My [PARENT RELATIONSHIP] asks me my preference when we discuss taking different prescription medications. (scale ranging from always to never)

(Comment 8) One comment mentions modifications to topic areas to include questions about the relative importance of various sources of information that impact teen perceptions of treatment options because teens consume media differently than their adult counterparts.

(Response) Although we agree that the relative importance of and preferences for various sources of information may affect the perception of treatment options, exploration of this topic is outside the scope of our current study.

(Comment 9) One comment mentions considering supplemental research methodologies because direct questioning does not always provide an accurate reflection of real world behavior and to further bolster the findings of this study, consider engaging teen experts to study teens on behalf of FDA.

(Response) We agree with the comment that direct questioning does not always provide an accurate reflection of real world behavior. To that end, we engaged 19-20 year old college students as part of a teen “expert” work group during the development of the measurement instrument for this study in order to obtain items that provide the most accurate reflection possible. The teen/young adult consultants provided feedback on the measures and suggestions for revisions. Further involvement of teen “experts” would require a formal qualitative component of the study that we are unable to conduct at this time. However, a qualitative study to further explore decision making among teens could be a useful area for future research.

(Comment 10) One comment mentions considering supplemental research methodologies because in order to gain an accurate read on the processing of risk/benefit information, the stimuli should be depicted as realistically as possible and accurately reflect typical DTC in the category targeted to 13-17 year olds.

(Response) We agree that it is important to depict the stimuli as realistically as possible. We will be modeling the stimuli after DTC ads being presented currently on the web and on television, using similar language, graphic design techniques and voice-over scripts. In addition, we will be attentive to current marketing norms with regard to selection of locations, wardrobe and actors for the video ads.

External Reviewers

In addition to inviting public comment, OPDP sent materials to two individuals for external peer review. The following individuals provided comments:

Amy Farb, Ph.D.
Office of Adolescent Health
Department of Health and Human Services
1101 Wootton Parkway, Suite 700
Rockville, MD 20852

Kimberly Leeks, Ph.D.
Centers for Disease Control and Prevention
1600 Clifton Road
Atlanta, GA 30333

9. Explanation of Any Payment or Gift to Respondents

Internet panel participants receive points for completing a survey. Members are allowed to use their points to exchange for vouchers from a partner network. Internet panel participants are enrolled into a points program that is analogous to a ‘frequent flyer’ card: respondents are credited with bonus points in proportion to their regular participation in surveys. Traditionally, panelists earn bonus points for surveys that are longer or require special tasks by the panel member. When a panelist’s point balance is equivalent to \$10, panelists may elect to redeem the points for vouchers to a variety of national retailers. Participants will receive an estimated 7,500 points (approximate monetary value is \$7.50) redeemable towards partner network vouchers.

A small number of in-person cognitive interviews (n = 30 or fewer, no longer than one and a half hours in duration per interview) will be conducted before launching the internet survey, in order to ensure proper operation of the survey questions and stimuli. The interviews will be conducted with parents, adolescents aged 13-17, or young adults aged 25-30, who have been

diagnosed with (ADHD condition), have experience with (acne condition), or have a child who has been diagnosed with or has experience with ADHD or acne (parent interviewees).

We propose to provide \$75 remuneration to each individual participant for their time completing the survey and to reimburse them for any travel or parking expenses incurred getting to the interview facility. Our rationale for this amount is as follows:

- The Centers for Disease Control and Prevention estimate the incidence of diagnosed ADHD in children and adolescents ages 4-17 at approximately 11%,^[1] making the study sample small and difficult to recruit. A monetary incentive will help increase the response rate among this limited population.
- Potential participants, particularly adolescents that are likely involved in school and extracurricular activities, have competing demands for their time. Research has shown that, when compared to no incentive, the use of incentives increases response rates among the study population, and that cash incentives are more effective than gift cards, lotteries, or other non-monetary gifts.^[2]
- Studies run by industry offer incentives at much higher levels than those typically allowed by government studies, establishing a market rate that makes recruitment more difficult. Our research has found that industry incentive rates for adults and adolescents is \$100 for a one-hour interview during the day, and \$125 for a one-hour interview during the day for a low prevalence population, as ADHD respondents are (Shugoll Research, personal communication, March 21, 2014).

In addition, several studies have been published demonstrating the effects of incentives on increasing response rates, particularly among adolescents:

^{[1][1]} Centers for Disease Control and Prevention. (2011). ADHD. Retrieved from <http://www.cdc.gov/ncbddd/adhd/data.html>

^{[2][2]} Couper, M.P. (2008). *Designing effective web surveys*. Cambridge, UK: Cambridge University Press

- **McCormick, et al., 1999:** In a paper examining recruitment strategies used to obtain a sample of adolescents for multi-site focus groups, the research team found that “cash as an incentive proved extremely successful” in recruiting adolescent participants.^[3]
- **Krueger and Casey, 2009:** The authors of this guidebook on conducting focus groups noted that incentive payments reduce the time needed to recruit study participants, making it more efficient to pay more for incentives “and thereby reduce the recruiting time and increase the likelihood that people will show up.”^[4]
- **Peterson-Sweeney, 2005:** The author of this study, who researched the use of focus groups in pediatric and adolescent research, suggested that incentives should be offered to adolescent participants as a way of acknowledging their contributions of time. These incentives included snacks, meals, cash, or gifts.^[5]
- **Ezzati-Rice et al., 1995:** The authors suggested that the use of incentives can result in a higher motivation to participate, and are most likely to have an effect in research studies that “require the respondent to travel, are lengthy or have a longitudinal component, are focused at hard to reach populations (like adolescents or young black males), or that ask questions about sensitive topics.”^[6]

This evidence, coupled with the need to recruit among a small population suggest it is critical to offer a sufficient incentive to all interview participants in order to obtain the required

^[3]^[3] McCormick, L. K., et al. (1999). Recruiting Adolescents into Qualitative Tobacco Research Studies: Experiences and Lessons Learned. *J Sch Health*. 69(3): 95-99.

^[4]^[4] Krueger, R.K., and Casey, M.A. (2009). *Focus Groups: A Practical Guide for Applied Research Fourth Edition*. Thousand Oaks, CA: Sage Publications, Inc.

^[5]^[5] Peterson-Sweeney, K. (2005). The Use of Focus Groups in Pediatric and Adolescent Research. *Journal of Pediatric Health Care*. 19: 104-110.

^[6]^[6] Ezzati-Rice, Trena., et al. "Time, dollars, and data: succeeding with remuneration in health surveys." *Office of Management and Budget, Seminar on New Directions in Statistical Methodology, Statistical Policy Working Paper, Washington, DC: Office of Management and Budget*. No. 23. 1995.

sample of participants while also minimizing biases in self-selection and balancing recruitment expenses.

10. Assurance of Confidentiality Provided to Respondents

Data will be collected by an independent contractor and shared with FDA electronically. No personally identifiable information will be sent to FDA. All information that can identify individual respondents will be maintained by the independent contractor in a form that is separate from the data provided to FDA. The data shared with FDA will be used to answer the research questions. The proposed data collection should have no impact on privacy.¹

The information will be kept in a secured fashion that will not permit unauthorized access. The privacy of the information submitted is protected from disclosure under the Freedom of Information Act (FOIA) under sections 552(a) and (b) (5 U.S.C. 552(a) and (b)) and by part 20 of the Agency's regulations (21 CFR part 20.63).² These methods will all be approved by FDA's Institutional Review Board (Research Involving Human Subjects Committee (RIHSC)) prior to collecting any information.

All respondents will be provided an assurance of privacy to the extent allowable by law. The Internet panel includes a panel privacy policy that is easily accessible from any page on the site. A link to the privacy policy will be included on all survey invitations. The panel complies with established industry guidelines and states that members' personally identifiable information will never be rented, sold, or revealed to third parties except in cases where required by law. These

¹ This paragraph satisfies sections D.b.2 and D.b.3 of the OMB Guidance for Implementing the Privacy Provisions of the E-Government Act of 2002.

² This section states: "(a) The names or other information which would identify patients or research subjects in any medical or similar report, test, study, or other research project shall be deleted before the record is made available for public disclosure. (b) The names and other information which would identify patients or research subjects should be deleted from any record before it is submitted to the Food and Drug Administration. If the Food and Drug Administration subsequently needs the names of such individuals, a separate request will be made."

This satisfies section D.b.4.1 and D.b.4.2 of the OMB Guidance for Implementing the Privacy Provisions of the E-Government Act of 2002.

standards and codes of conduct comply with those set forth by the American Marketing Association, the Council of American Survey Research Organizations, and others. In addition, a consent form will be displayed before participants begin the survey (Appendix B). The consent form states that participation is voluntary.³

All electronic data will be maintained in a manner consistent with the Department of Health and Human Services' ADP Systems Security Policy as described in the DHHS ADP Systems Manual, Part 6, chapters 6-30 and 6-35.⁴ All data will also be maintained consistent with the FDA Privacy Act System of Records #09-10-0009 (Special Studies and Surveys on FDA-Regulated Products).⁵

11. Justification for Sensitive Questions

This data collection will not include sensitive questions. The complete list of questions is available in Appendix A.

12. Estimates of Annualized Burden Hours and Costs

12a. Annualized Hour Burden Estimate

The total annual estimated burden imposed by this one-time collection of information is 8,065 hours.

³ This satisfies section D.b.4.1 and D.b.4.2 of the OMB Guidance for Implementing the Privacy Provisions of the E-Government Act of 2002.

⁴ This satisfies section D.b.4.3 of the OMB Guidance for Implementing the Privacy Provisions of the E-Government Act of 2002.

⁵ This satisfies section D.b.4.4 of the OMB Guidance for Implementing the Privacy Provisions of the E-Government Act of 2002.

Table 1: Estimated Annual Reporting Burden					
Activity	No. of Respondents	No. of Responses per Respondent	Total Annual Respondents	Average Burden per Response	Total Hours
Cognitive Interviews	30	1	30	1.5 (90 min.)	45
Pretest 1 screener	8,730	1	8,730	.08 (5 min.)	698
Pretest 2 screener	1,930	1	1,930	.08 (5 min.)	154
Main study screener (acne)	7,142	1	7,142	.08 (5 min.)	571
Main study screener (ADHD)	43,086	1	43,086	.08 (5 min.)	3,447
Pretest 1 (420/medical condition)	900	1	900	.5 (30 min.)	450
Pretest 2 (20/medical condition)	200	1	200	.5 (30 min.)	100
Main study, 13-15 year olds (both acne and ADHD)	1,300	1	1300	.5 (30 min.)	650
Main study, 16-17 year olds (both acne and ADHD)	1,300	1	1300	.5 (30 min.)	650
Main study, young adults (both acne and ADHD)	1,300	1	1300	.5 (30 min.)	650
Main study, parents (both acne and ADHD)	1,300	1	1300	.5 (30 min.)	650
Number of pretest/study completes	6,300				
Total	==	==	==	==	8,065

These estimates are based on FDA's and the contractor's experience with previous consumer studies.

12b. Annualized Cost Burden Estimate

Table 2. --Estimated Annualized Burden Costs			
Type of Respondent	Total Burden Hours	Hourly Wage Rate	Total Respondent Costs
General public	8,065	\$19.30 ¹	\$155,654.50

¹Based on the fourth quarter 2012 median weekly income of \$772 for both sexes, as reported by the Bureau of Labor Statistics, <http://www.bls.gov/news.release/wkyeng.t01.htm>

13. Estimates of Other Total Annual Costs to Respondents and/or Record Keepers/Capital Costs

There are no capital, start-up, operating or maintenance costs associated with this information collection.

14. Annualized Cost to the Federal Government

The total estimated cost to the Federal Government for the collection of data is \$1,082,664 (\$360,888 per year for three years). This includes costs paid to the contractor to create measurement instruments, program the study, draw the sample, collect the data, and create a database of the results (\$1,002,664). The task order was awarded as a result of competition. Specific cost information other than the award amount is proprietary to the contractor and is not public information. The cost also includes FDA staff time to design and manage the study, analyze the results, and draft a report (\$80,000; 7.5 hours per week for 3 years).

15. Explanation for Programs Changes or Adjustments

This is a new data collection.

16. Plans for Tabulation and Publication and Project Time Schedule

Data will be analyzed in three steps: (1) exploratory data analysis, (2) hypothesis testing, and (3) multivariate modeling (See part B for detailed information on the design, hypotheses, and analysis plan). The Agency anticipates disseminating the results of the study after final analyses of the data are completed, reviewed, and cleared. The exact timing and nature of any such

dissemination has not been determined but may include presentations at trade and academic conferences, publications, articles, and Internet postings.

Project Timetable:

Task	Estimated Completion Date
External Peer Review	April 2014
RIHSC Review	July 2014
30-day FR notice publication	July 2014
OMB Review of PRA package	February 2015
Data Collection	April 2015
Receipt of Data and Methods Report from Contractor	June 2015
Data Analysis	August 2015
Draft Report	October 2015
Internal Review of Draft Report	November 2015
Revisions	December 2015
Final Report	January 2016

17. Reason(s) Display of OMB Expiration Date is Inappropriate

No exemption is requested.

18. Exceptions to Certification for Paperwork Reduction Act Submissions

There are no exceptions to the certification.