

## RESEARCH HIGHLIGHTS

# Promoting Wellness or Waste? Evidence from Antidepressant Advertising

Based on BFI Working Paper No. 2018-14, "[Promoting Wellness or Waste? Evidence from Antidepressant Advertising](#)," by Bradley Shapiro, assistant professor of marketing, UChicago Booth School of Business

### KEY TAKEAWAYS

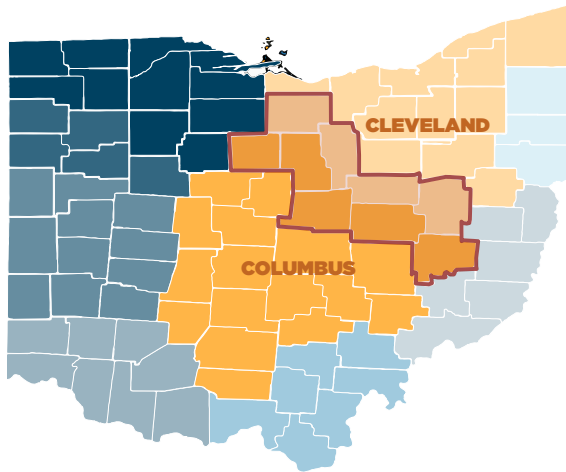
- ✓ 10 percent of Americans suffer from depression, which impacts their ability to work efficiently
- ✓ Direct-to-consumer advertising for depression drugs has proven controversial
- ✓ However, research suggests that the benefits of advertising antidepressants far outweigh the costs
- ✓ Policymakers should consider the impact on individual behavior when contemplating rules to limit advertising for certain drugs

If you have watched television at all in recent years you have probably noticed advertising for antidepressant medication. The commercials typically begin by describing symptoms that viewers may experience and suggesting that they might be suffering from depression, without even knowing it. At the end, interested viewers are told to ask their doctors about a certain drug that could provide help.

Sounds innocent enough, but many observers and policymakers are critical of such marketing, arguing that the cost of advertising unnecessarily raises the price of the drug while steering people to those over-priced pills. Consumers, they argue, who are already properly served by another medication could be encouraged to request the advertised drug from their doctors, thus increasing costs to either the patients, their insurance companies, or both. In addition, people who are not depressed and did not need such medication might be convinced otherwise and induced to seek it out.

However, this response doesn't consider any possible benefits to such advertising. Sick people in need of treatment, either through medication or consultation, might be moved to visit a doctor to seek help. In the end, more people might be helped because of such ads, even though costs may rise. But how do you measure such benefits? How much is it worth to have people treated for depression? What are the benefits of improving worker attendance and productivity? Those are some the questions addressed in "[Promoting Wellness or Waste? Evidence from Antidepressant Advertising](#)," by Bradley Shapiro, assistant professor of marketing at UChicago's Booth School of Business. Significantly, Shapiro offers a first-ever attempt at determining the costs and benefits, in dollars, of such direct-to-consumer advertising (DTCA).

**Figure 1** · Ohio and DMA Border Example



### The costs and benefits of getting help

Total DTCA of prescription drugs, while significant, has decreased from about \$3 billion in 2004 to a little over \$2 billion in 2012. Meanwhile, antidepressant DTCA makes up a key fraction of total DTCA and has increased from about \$200 million in 2004 to a peak of about \$400 million in 2011, declining to about \$300 million in 2012. Do these costs provide any benefits?

To answer this question, Shapiro ties advertising to both direct costs to consumers (demand and prices) as well as to indirect benefits (increased labor supply). Among other results, Shapiro finds evidence against the idea that DTCA has an economically meaningful impact on either the price or the co-pay of the drug, conditional on prescription. More importantly, he finds that DTCA brings benefits in the form of increased labor supply, which outweigh the total cost of additional prescriptions by more than an order of magnitude. Shapiro estimates that a 10 percent increase in DTCA brings \$769.5 million in wage benefits while generating \$32.6 million in prescription costs.

But the benefits may be larger. In terms of unmeasured benefits, some individuals may not work more days but are rather more productive while they are at work. Additionally, some people might simply feel better, and that could have considerable value to them personally, but such value is difficult to measure.

Likewise, there may be additional other costs, such as increased adverse effects despite a return to work. Shapiro's analysis finds that advertising does not increase in adverse effect reporting. However, less severe adverse effects that are not

reported to physicians, such as headaches may increase and be unmeasured. These side effects could be privately costly as well as make the employee less productive for the employer. Of course, if the benefit of feeling better does not outweigh the pain of adverse effects, then the patient could discontinue use or try another treatment. Shapiro finds that advertising does not lead to an increase in the rate of discontinuation.

How does Shapiro derive causal relationships about the effects of television advertising for depression-related medicines? He exploits the nature of geographic targeting of television advertising. In particular, advertisers can only target locally as designated market areas (DMAs), which are large collections of counties that receive the same local ads. Shapiro compares people who live very near to each other, but on opposite sides of DMA borders. For example, imagine someone lives in Cleveland, OH, DMA and someone else lives just a few blocks away, but across the DMA border in the Columbus DMA (see Figure 1). When both these individuals, who likely share similar characteristics (approximately "all else equal"), watch the same TV program, they will experience different ads. Tracking those ads and resultant viewer choices provide a clean comparison of the causal impact of the ads on individual behavior.

### Conclusion

Depression, a chemical imbalance in the brain leading to decreased self-worth, affects roughly 10 percent of Americans. For economists trying to measure the impact of depression, the disease is characterized by the systematic underestimation of one's marginal product. Shapiro's primary contribution is to compute the benefits of product advertising: a 10 percent increase in DTCA brings \$769.5 million in wage benefits vs. \$32.6 million in direct costs of new drugs.

For policymakers, especially those who have advocated for a ban on DTCA, these and other immeasurable benefits should be at the forefront of policy considerations. Shapiro's results highlight the importance of understanding which types of consumers are affected by advertising and measuring how much these consumers benefit from marginal treatment when assessing the desirability of DTCA. In the case of antidepressants, marginal consumers stand to gain—and do gain—from treatment in a way that far exceeds the social cost. While this result might not be the same across different drug categories, it highlights that a more nuanced approach than a blanket ban on DTCA might be desirable. In addition, policymakers could consider the benefits of non-branded public service announcements to educate the public about certain illnesses, including depression.

#### READ THE WORKING PAPER

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[bfi.uchicago.edu/Shapiro-WP-201814](http://bfi.uchicago.edu/Shapiro-WP-201814)

#### MORE ABOUT



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