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Google Searches or Quit Attempts as a Success Measure for an Antismoking Campaign

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In a recent study by Ayers et al.,¹ the authors analyzed Google search patterns associated with health conditions depicted in CDC's national tobacco education campaign, Tips From Former Smokers (Tips). Although examining search trends to inform the effectiveness of health campaigns holds promise, the authors make a number of statements that we, as the principal scientists and campaign managers, disagree with.

First, the authors state that "Tips is the nation's most costly tobacco control initiative." To put the cost of Tips (approximately \$50 million annually) into perspective, this amount represents less than 2 days of what the tobacco industry spends in a year (\$8 billion) on tobacco promotion. States also spend approximately \$500 million yearly on integrated tobacco control. A recent study² demonstrated that the Tips campaign was a highly cost-effective initiative, based on often-used benchmarks for public health interventions.

Second, the authors state that "little is known about [the Tips campaign's] effectiveness," citing a 2013 study published in *Lancet*.³ However, this study was a rigorous evaluation of campaign effectiveness, based on a large, nationally representative, longitudinal cohort of smokers and nonsmokers in the U.S. The campaign was responsible for approximately 1.6 million new quit attempts, with an estimated 100,000 of these sustained for at least 6 months. In addition, the 2012 Tips campaign was associated with increased knowledge of the health conditions featured in Tips ads, increased motivation to quit, and increased smoking-related concerns about health.⁴

Third, the authors posit that Tips was no longer effective in 2013. CDC has closely tracked calls to the 1-800-QUIT-NOW quitline, which showed increases directly associated with campaign tags in 2012 and 2013.⁵ In 2013, there were marked increases in calls in the alternating weeks the campaign was on the air (Figure 1). In addition, an independent

prospective cohort study of smokers found that 71% saw at least one 2013 Tips ad and the campaign increased awareness of health risks and cessation resources.⁶

The primary objective of the Tips campaign is to increase quit attempts among smokers, not to increase web searches. Google search trends data have significant limitations and, as the authors admit, are not a validated measure of tobacco attitudes and behaviors. Google search trends track how “popular” a particular search term is, relative to all search volume. Hence, the relative search volume for any given topic can vary, depending on other events happening during that time. In addition, spikes in volume may be more related to novelty than effectiveness. These data are less useful for studying nuanced topics that smaller proportions of the population would likely search for over time. Limitations of these data have been noted in published literature⁷ and in the popular press.⁸

Tips has been shown to be a highly cost-effective intervention that has increased quitline calls, quit attempts, and knowledge of smoking-related health conditions. Rigorous Tips evaluation studies will continue using a range of data sources, including population-based surveys, quitline call volumes, campaign website use, and metrics of digital ad exposure and digital information seeking.

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References

1. Ayers JW, Althouse BM, Emery S. Changes in internet searches associated with the “Tips From Former Smokers” campaign. *Am J Prev Med*. 2015; 48(6):e27–e29. <http://dx.doi.org/10.1016/j.amepre.2015.03.015>. [PubMed: 25998929]
2. Xu X, Alexander RL Jr, Simpson SA, et al. A cost-effectiveness analysis of the first federally funded antismoking campaign. *Am J Prev Med*. 2015; 48(3):318–325. <http://dx.doi.org/10.1016/j.amepre.2014.10.011>. [PubMed: 25498550]
3. McAfee T, Davis KC, Alexander RL Jr, Pechacek TF, Bunnell R. Effect of the first federally funded U.S. antismoking national media campaign. *Lancet*. 2013; 382(9909):2003–2011. [http://dx.doi.org/10.1016/S0140-6736\(13\)61686-4](http://dx.doi.org/10.1016/S0140-6736(13)61686-4). [PubMed: 24029166]
4. Duke JC, Davis KC, Alexander RL, et al. Impact of a U.S. antismoking national media campaign on beliefs, cognitions and quit intentions. *Health Educ Res*. 2015; 30(3):466–483. <http://dx.doi.org/10.1093/her/cyv017>. [PubMed: 25976009]
5. CDC. Impact of a national tobacco education campaign on weekly numbers of quitline calls and website visitors—United States, March 4–June 23, 2013. *MMWR Morb Mortal Wkly Rep*. 2013; 62(37):763–767. [PubMed: 24048152]
6. Huang LL, Thrasher JF, Abad EN, et al. The U.S. national *Tips From Former Smokers* antismoking campaign: promoting awareness of smoking-related risks, cessation resources, and cessation behaviors. *Health Educ Behav*. 2015; 42(4):480–486. <http://dx.doi.org/10.1177/1090198114564503>. [PubMed: 25588934]
7. Nuti SV, Wayda B, Ranasinghe I, et al. The use of google trends in health care research: a systematic review. *PLoS One*. 2014; 9(10):e109583. <http://dx.doi.org/10.1371/journal.pone.0109583>. [PubMed: 25337815]
8. Lohr, S. Google flu trends: the limits of big data. *New York Times*; Mar 28. 2014 http://bits.blogs.nytimes.com/2014/03/28/google-flu-trends-the-limits-of-big-data/?_r=2

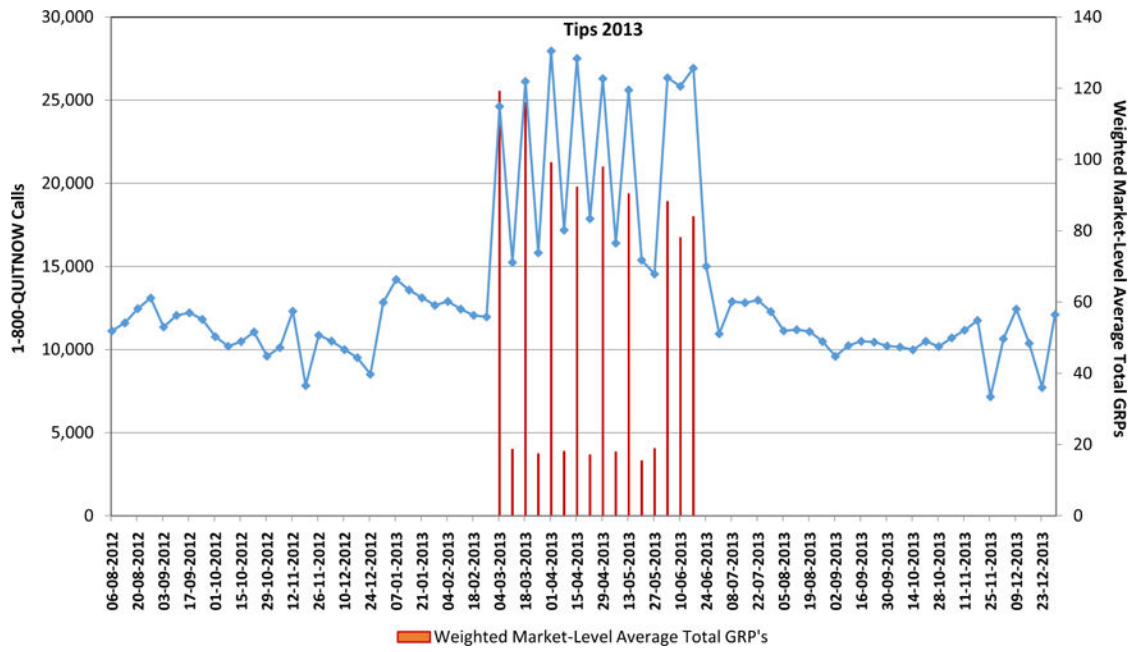


Figure 1. Call volume for 1-800-QUIT-NOW and Tips 2013 campaign gross ratings points (GRPs).