FOR IMMEDIATE RELEASE
December 21, 2015
Contact: Michael Rozansky | mrozansky@asc.upenn.edu | 215-746-0202

Cigarette Warnings with Images Are Better at Conveying Smoking Risks
Study uses real-world approach to test pictorial warning labels

PHILADELPHIA – A study using a real-world approach to evaluate graphic warning labels on cigarette packs has found that the emotionally engaging images are more successful than simple text warnings at educating smokers about the risks of smoking.

In research released in the journal PLOS One, the first study of day-to-day exposure to the pictorial warnings proposed by the Food and Drug Administration in 2011 showed that smokers using their own brand of cigarettes for four weeks with the pictorial warnings were better able to recall the warnings and name the health risks associated with the habit than smokers who were merely exposed to textual information. The graphic warning labels also were found to be more credible.

"This study shows that pictorial warnings do a better job of educating smokers than text alone," said Daniel Romer, research director of the Annenberg Public Policy Center (APPC) of the University of Pennsylvania. He co-directed the study in a joint project with researchers at The Ohio State University. "Concerns raised by the courts that pictorial warnings that illustrate the risks of smoking are uninformative overlook the potential of these warnings to help smokers confront the risks of their habit."

In a suit brought by tobacco companies, the U.S. Court of Appeals in Washington ruled in 2012 that the FDA-proposed graphic warning labels "do not convey *any* warning information at all" and were "unabashed attempts to evoke emotion (and perhaps embarrassment) and browbeat consumers into quitting."

The PLOS One study analyzed data from 244 adults who smoked between five and 40 cigarettes a day. The smokers, from Philadelphia and Columbus, Ohio, were given their own brand of cigarettes to smoke for four weeks with either the pictorial labels proposed by the FDA on the front and back of the packs or the text mandated by Congress in the Family Tobacco Act of 2009 on the side of the pack where current warnings reside. Those text warnings were presented more prominently and included more information about the risks of smoking than the current warnings, which research has shown are largely ignored.

The pictorial warnings were seen as more believable than the text-only warnings and were more likely to change smokers' feelings about their habit.

Research in other countries such as Canada, where color pictorial warnings were first introduced in 2001, suggests that they encourage smokers to quit. However, this research does not permit

clear conclusions because the warnings are almost always introduced along with other changes in the market, such as price increases.

"The value of a clinical trial, such as the one that we conducted, is that it enables us to isolate the effects of exposure to pictorial warnings in direct comparison with text-only warnings," Romer noted.

The researchers also studied a condition in which smokers were given pictorial warnings with additional text that expanded on the risks of smoking beyond the text that was mandated by Congress. This condition was not more successful than text alone in enhancing the credibility of the warnings, suggesting that further research is needed to identify ways to transmit more information to smokers along with the pictorial warnings.

More than 70 countries have adopted picture warnings on cigarette packages, according to a 2014 report from the Canadian Cancer Society.

Earlier this year a team at the University of Pennsylvania published the first report on the use of functional magnetic resonance imaging (fMRI) to examine smokers' brain response to pictorial warning labels. The study, published in Tobacco Control, showed that the more powerful images triggered parts of the brain associated with emotional memory.

Co-authors of the study in PLOS One were Abigail T. Evans and Ellen Peters of The Ohio State University; Andrew Strasser of the Perelman School of Medicine at the University of Pennsylvania; Lydia F. Emery of Northwestern University; and Kaitlin M. Sheerin of the University of Missouri.

The Annenberg Public Policy Center was established in 1994 to educate the public and policy makers about the media's role in advancing public understanding of political and health issues at the local, state and federal levels.