Which Public Policy is More Cost-Effective in Reducing Cardiac Deaths: Increased Taxes or Smoking Bans?

J. Michael Menke, D.C., M.A. and Daniel C. Malone Ph.D., R.Ph.

Background
- Smoking and heart attacks are reduced after smoking bans. 
- Cigarette taxes also reduce smoking and may reduce heart attacks.
- Both prevalence and consumption can be affected and the interplay of the two outcomes can be complex.
- Two primary public policies that affect smoking: price and bans.
- Bans and prices affect the smoking prevalence among young adults.
- Adult smokers exhibit an 11% drop in consumption with bans & 4% with 10% price increases.
- Bans may be limited or total. They can be gradually stepped in.
- Projected Medical Costs of Each Strategy
  - Parameter estimates obtained from the literature:
    - Effects of tax and bans on propensity to quit smoking.
    - Incidence of acute myocardial events associated with smoking.
    - Reductions in quality of life associated with AMI.
    - Mortality and the value of a statistical life.

Methods
- Acute cardiac events are shown to be sensitive to primary and second-hand smoke.
- Assess the cost effectiveness of bans or tax levy on the incidence of acute myocardial infarction (AMI).

Primary Assumptions
- Objective
- Assess the cost effectiveness of bans or tax levy on the incidence of acute myocardial infarction (AMI).

Results
- Bans resulted in fewer cardiac events and deaths compared to tax levy or no action.
- The ban or tax levy had the greatest impact on males above 50 years old.
- The differences on a per person basis were minimal, including no interventions.
- Savings increase with age of smoker.
- Savings were greater for males.

Discussion
- Bans require enforcement.
- Increased taxes encourage cross-border sales, sales on Indian Reservations, illegal sales and counterfeiting.
- Both bans and taxes may promote contextual cues for other cessation aids.

Conclusions
- Bans saved $26.58 per smoker in health care costs over tax increases, and $89.49 over neither program.
- Findings exclude revenue generating from taxes and enforcement costs for both taxes and bans.

For more information, contact:
J. Michael Menke: menke@u.arizona.edu
Daniel C. Malone: malone@pharmacy.arizona.edu

Disclosure
Authors of this presentation have nothing to disclose at this time.