



Cigarette smoking is the leading cause of preventable death in the US, killing almost half a million people every year. Computational models have been successful in helping us understand the expected path of the smoking epidemic and its potential consequences. In particular, these models have shed light on the influence of smoking initiation in setting the course of the smoking trajectory. While useful in examining very general policy interventions that affect initiation, existing models are not set up to describe the process of smoking initiation in sufficient detail to accommodate interventions targeted to different groups of smokers.

In this talk I will present results from an ongoing research that aims to model teenage smoking initiation as driven in part by peer imitation, distinguishing between men and women. The model was calibrated using data from the National Survey on Drug Use and Health. I will also discuss the policy implications of the results.

**David Méndez** is an Associate Professor in the Department of Health Management and Policy at the University of Michigan where he teaches courses in Data Management, Quantitative Methods and Simulation Modeling applied to Health and Health Care.

Dr. Méndez training is in Management Science and Systems Science. His work has focused on building simulation and analytical models for the analysis of diverse health policy issues, particularly tobacco control.

Dr. Méndez has published numerous research articles on tobacco control topics using simulation models and has served as a consultant to the Academy of Medicine and the Food and Drug Administration on modeling and analysis of potential smoking policy interventions.

The seminar series “Providing Better Healthcare through Systems Engineering” is presented by the U-M Center for Healthcare Engineering and Patient Safety: Our mission is to improve the safety and quality of healthcare delivery through a multi-disciplinary, systems-engineering approach. For additional information and to be added to the weekly e-mail for the series, please contact [genehkim@umich.edu](mailto:genehkim@umich.edu)

**Please note on location:** **1123 LBME** is room 1123 in the Ann & Robert H. Lurie Biomedical Engineering Building (LBME). Street address is 1101 Beal Avenue, link to map and directions: <http://www.bme.umich.edu/about/directions.php>.