

Abstract: The Global Diffusion of Tobacco Control

PI: Thomas Valente

3R01CA157577-02S1

#### Extending a School-based Cohort to Improve Longitudinal Modeling

This administrative supplement proposal is being submitted so that we can re-interview an existing cohort of approximately 1,000 12<sup>th</sup> grade students in four schools in southern California. The existing cohort has been interviewed three times, twice in 10<sup>th</sup> grade (in fall and spring) and once in 11<sup>th</sup> grade (spring). Data on multiple network relationships (friends, admire, succeed, romantic, and popular) were measured as well as tobacco use behaviors. These data have been quite useful for estimating social influences among this age group. In the parent study, we have developed a Diffusion Network/Stochastic Actor Model (DN/SAM) module in RSIENA useful for estimating social influences that account for both changes in behavior as well as changes in networks. This supplemental funding will provide a second dataset to test the DN/SAM estimates using proportionate hazards model requiring three waves of data and significant behavior change (achievable using these supplemental data). In addition, we will collect new data assessing two dimensions of tobacco attitudes needed to empirically calibrate an agent based model on smoking initiation: (1) The affective component consists of mostly socially constructed imagery (e.g., smoking is cool, or trashy/low class), and (2) the utilitarian component measures concepts such as weight control, stress relief, health risks, and so on.