

Alpert HR, Connolly GN, Biener L. A prospective cohort study challenging the effectiveness of population-based medical intervention for smoking cessation. *Tobacco Control* 2012; doi:10.1136/tobaccocontrol-2011-050129

Response from Drs. Peter Selby, Sophie Soklaridis and Laurie Zawertailo

This paper reports on findings from a household survey in Massachusetts. The authors examined the relationship between relapse to smoking at follow-up interviews and assistance used including NRT with or without professional help. The study consisted of three waves:

Wave 1: Of the 6739 adults surveyed, 4991 were current smokers, recent quitters (787 reported quitting in the past 2 years) or young adults.

Wave 2: One year later, the authors tried to re-interview all individuals from Wave 1 (4991). They completed 2805 interviews. 480 out of the 787 recent quitters in Wave 1 responded to this survey (60% response rate).

Wave 3: The following year, they tried to re-interview all of the participants from Wave 2 (4991) and completed 1916 interviews (response rate of 68%). 364 out of the 480 recent quitter respondents in Wave 2 responded to this survey (75% response rate, but only 54% of original sample).

The study found that almost 1/3 of recent quitters at each wave reported to have relapsed by the subsequent interview. Those who were abstinent for less than 6 months were significantly more likely to have relapsed than those who had been abstinent for greater than 6 months (35% vs. 17%). The odds of relapse were not affected by using NRT for more than 6 weeks with or without professional counselling. In other words, relapse between Wave 2 and Wave 3 was greater in those who used NRT without professional help (52%) compared to those who did not NRT (22%) or used NRT with professional help (30%).

Caution is duly noted when interpreting the results of this study:

- A survey's response rate is viewed as an important indicator of survey quality. To be able to generalize findings, the response rate should be higher than 80% otherwise the results of the study could be subject to sampling bias (members of the intended population are less likely to be included than others). This study lost 46% of the wave 1 recent quitter sample by Wave 3 so data on relapse are only available for half of the original sample.
- Study does not add to any new knowledge of understanding abstinence. We know that the duration of abstinence predicts future abstinence and that those who can sustain abstinence for 6 months are much more likely to remain abstinent over the long term, regardless of how they quit initially.
- The duration of NRT use was highly variable ranging from 1 time use to greater than 6 months.
- It is not clear why the authors further divided the small group of NRT users into NRT with and without professional help. The term "no counselling" can be ambiguous. Since the authors did not provide the survey questions it is impossible to know how 'professional help' was defined or how it may have been interpreted by the survey respondents.

- The small sample size in each subgroup was too small to be able to pick up a treatment effect.

What we know:

- NRT is effective for cessation
- NRT doubles quit rates
- For NRT to be effective it needs to be taken appropriately.
- The risk of relapse is high due to the chronic relapsing nature of the disease. As such, one would not expect the *rate* of relapse to differ between different short-term treatments
- A major limitation of this study is that they did not report on how many people tried and succeeded in quit using NRT versus not using NRT.
- Other limitations are the small sample size, and the high loss to follow-up rate.