

Revisiting Harm Reduction - An Update of Pros and Cons

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In order to, as close as possible, achieve a tobacco-free society there is a need for a combination of strategies:

- Prevention strategies
- Cessation strategies
- Harm Reduction strategies that can serve as;

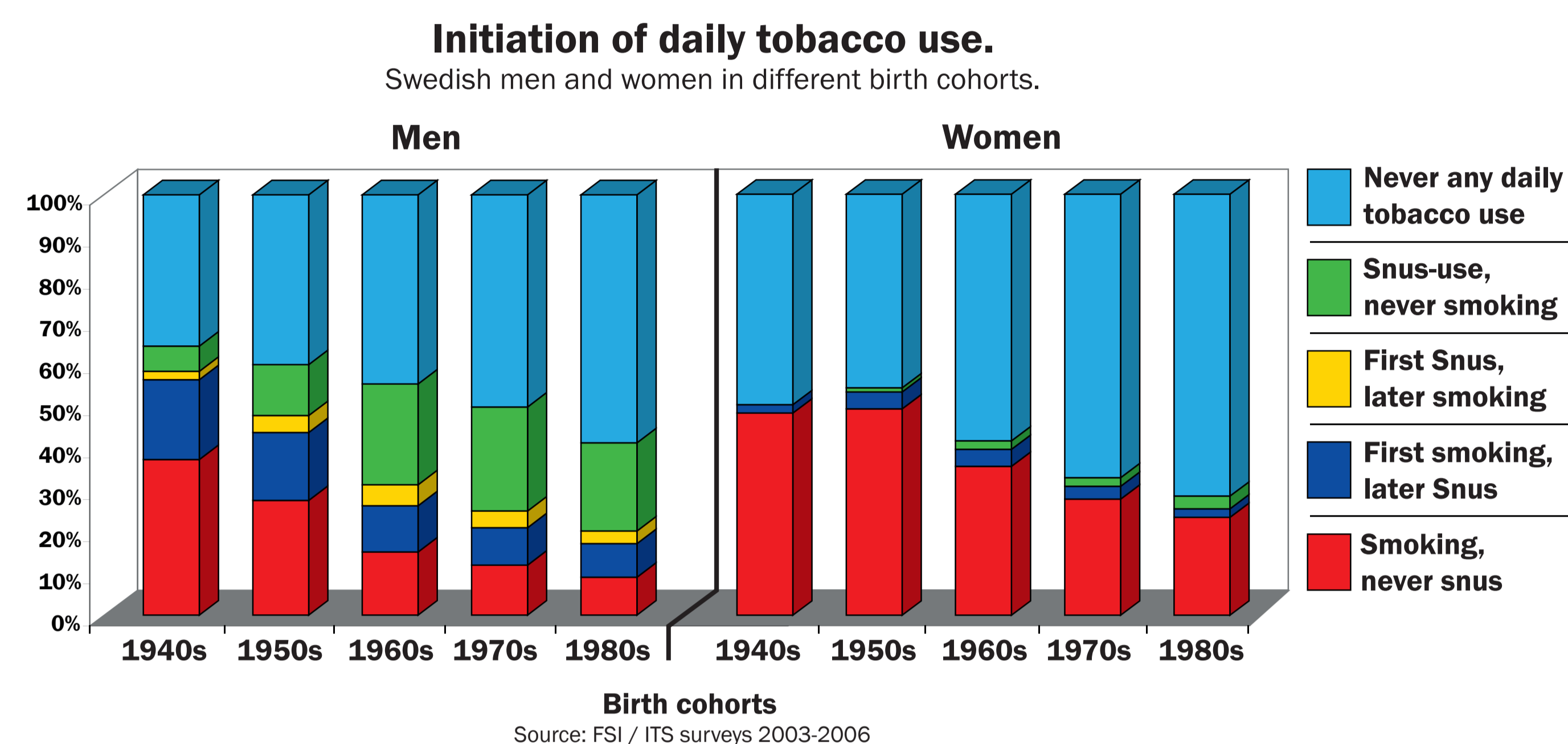
stepping stone towards final cessation of all nicotine use or, if this is not possible, minimization of tobacco-related ill-health also for non-cessation-prone tobacco users.

Harm Reduction is basically a matter of letting nicotine dependent smokers replace the highly toxic combustion products in all tobacco smoke with low-toxicity nicotine products. Possible options include medicinal products (nicotine chewing gum etc) and some non-medicinal products such as Low-Toxicity Oral Tobacco (LoTOT), for example the Swedish type, Snus, but not certain other types of oral tobacco. While the primary objective is to terminate smoking, increasing attention is now given to the possibility of a second step where all nicotine use is abandoned.

There is no longer any controversy about the far-reaching health benefits for the individual smoker who switches to LoTOT, for example, Snus. But there are remaining questions regarding possibly negative consequences in a public health perspective. There is a current discussion on pros and cons of Harm Reduction focusing on a number of issues that could be elucidated by research in Sweden so as described here below. The results presented in this poster are based on surveys conducted from January 2001 to February 2011.

Does primary Snus-use serve as a gateway to smoking and thereby increase smoking?

Tobacco use can start as smoking or as Snus-use. In each case a secondary initiation of other kind of tobacco use may or may not occur. The figure below shows how the patterns of initiation of daily tobacco use in Sweden have changed from around 1960 (those born in the 1940s) till around 2000.



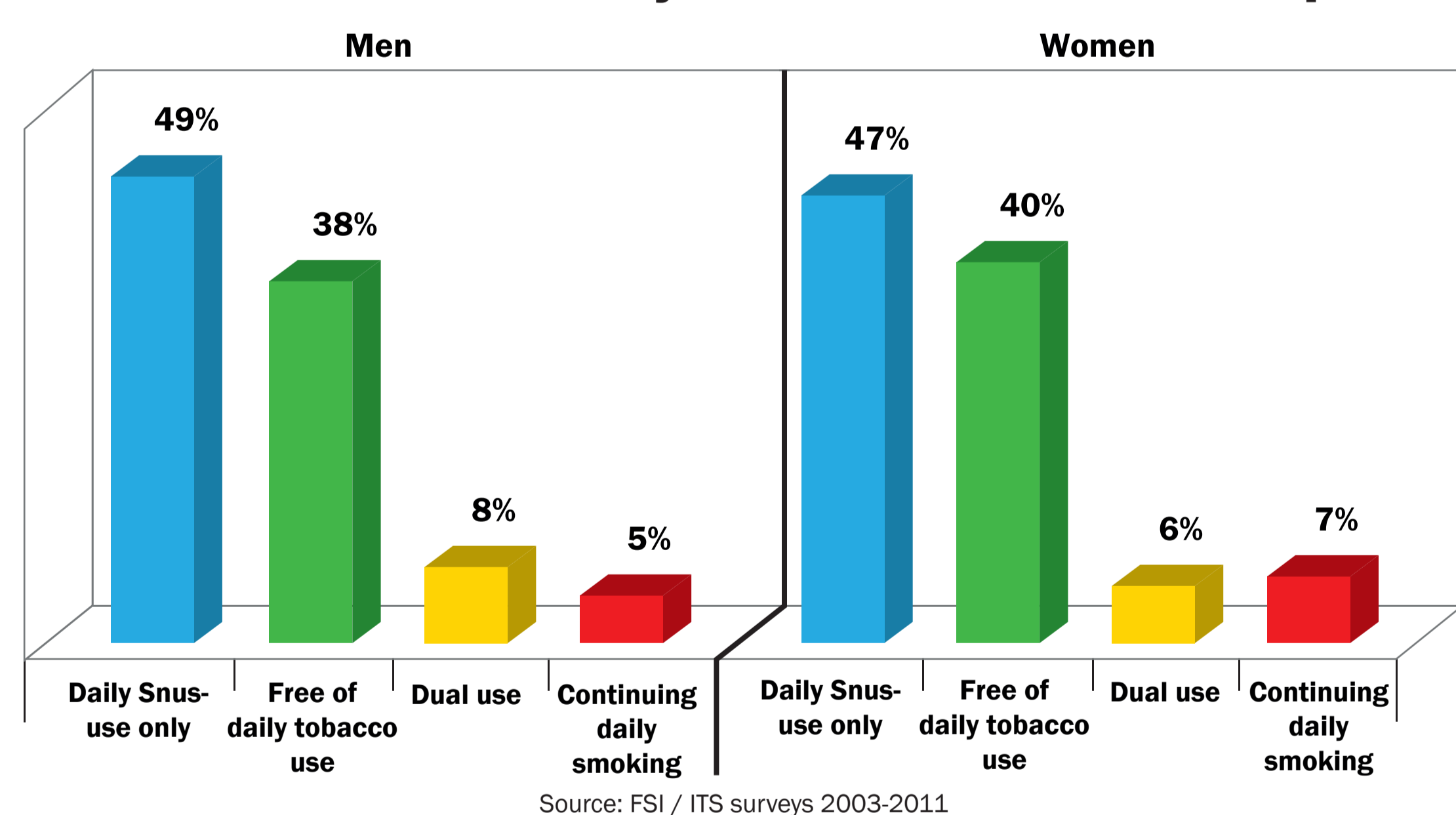
Among men there has been a striking increase of “primary” Snus-initiation (green and yellow segments). The subsection “First Snus, later smoking” (yellow segments) is a very small and decreasing fraction. The subsection “Snus-use, never smoking” (green segments) is the dominating and increasing part of the initiation patterns. This development has been accompanied by a drastic decrease of initiation of “primary” smoking (dark blue and red segments). The expansion of Snus-use has thereby become associated with increasing proportions of “Never any daily tobacco use”.

Among women snus use is still rather uncommon. Initiation of smoking has been decreasing less markedly among women and is still higher than among men.

Does start of subsequent Snus-use among daily smokers lead to dual use rather than to cessation of smoking?

When primary daily smokers start subsequent Snus-use, their tobacco use will eventually change into either dual use, daily Snus-use only, no daily tobacco use or they will go back to smoking only. The figure below shows the current tobacco-use status of Swedish daily smokers who subsequently have taken up Snus-use.

Current status of Swedish daily smokers who have taken up Snus-use



Among those daily smokers who have taken up snus use, a vast majority, 87% of men as well as of women, have quit daily smoking completely. Among men 38% have terminated all daily tobacco use. Among women the corresponding figure is 40%. Dual use is a very small fraction, 8% among men and 6% among women.

Will switching from daily smoking to daily Snus-use strengthen nicotine dependence?

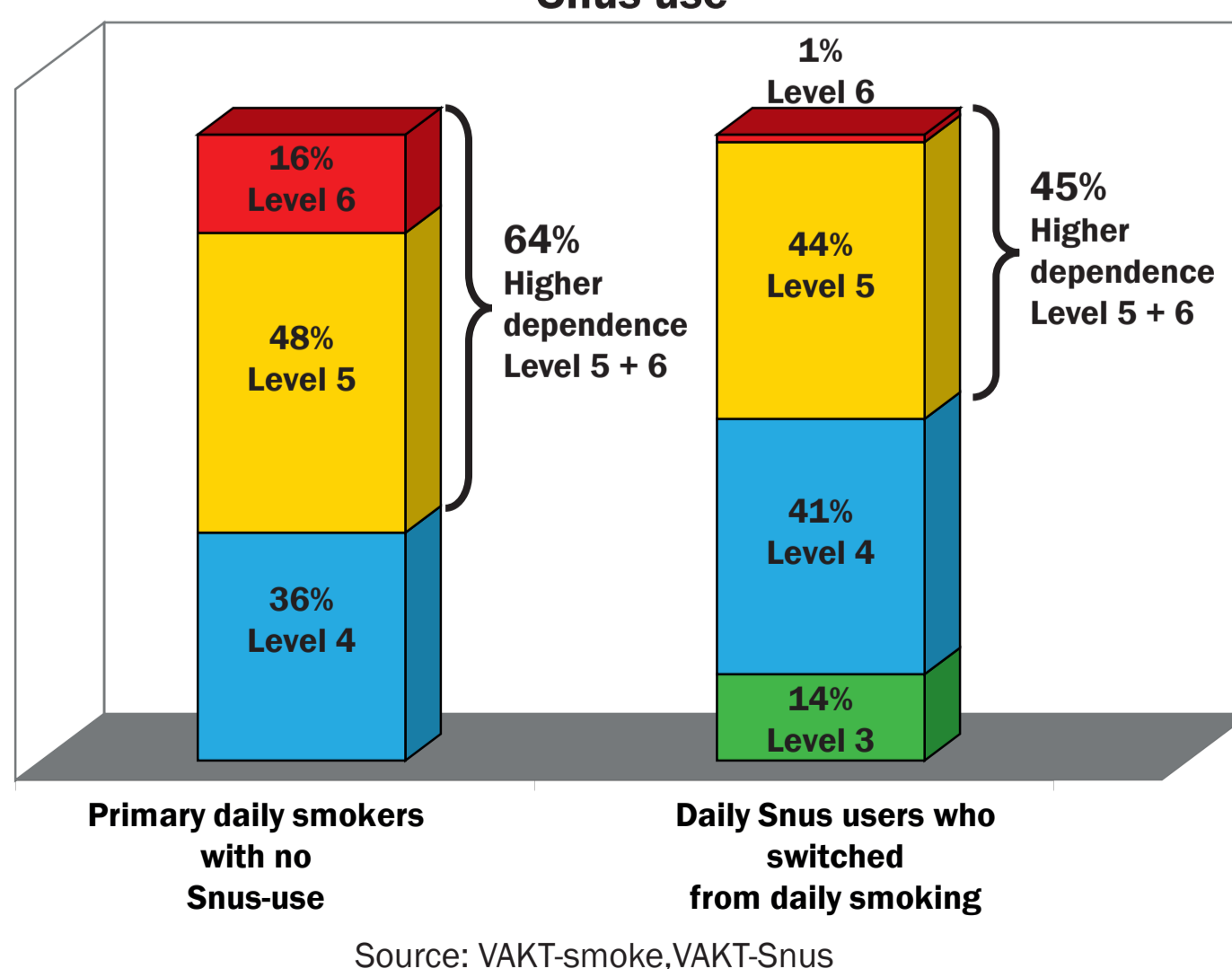
For smokers who switch from cigarettes to Snus there is not only a change of product but also a change of the way nicotine is delivered. This is important, since there is evidence from basic research on drug dependence that:

- Nicotine addictiveness is mainly determined by the speed of delivery to the brain.
- Nicotine delivery from snus is substantially slower than from cigarettes.

Snus-use could therefore be expected to be less addictive than cigarette smoking. This is supported by empirical data shown in the figure to the right. In the underlying study respondents were categorized in six levels of dependence based on time to the day's first cigarette/Snus, type of Snus and amount of cigarettes/Snus per day.

The survey data suggest that former daily smokers who have switched to daily Snus-use have a lower level of dependence than continuing daily smokers with no Snus-use.

Level of dependence for continuing primary daily smokers and former daily smokers who have switched to daily Snus-use



Are smokers who take up Snus-use less likely to make quit-smoking-attempts?

Most, but not all, smokers make attempts to quit smoking. In the FSI / ITS surveys 2003 – 2005 all Ever Daily Smokers were asked about their quit attempts.

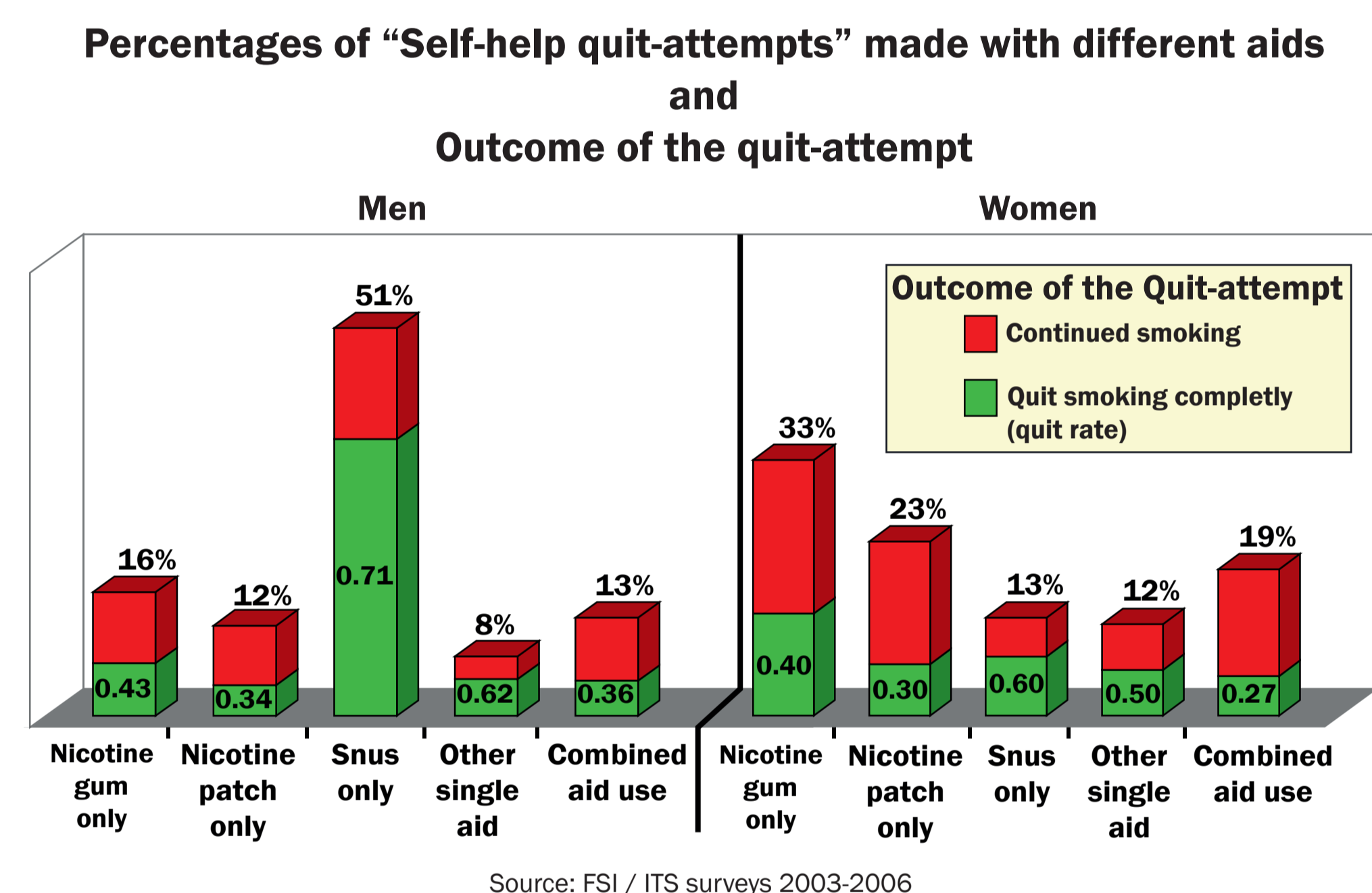
Occurrence of quit-smoking-attempts in Sweden. Comparison between daily smokers with and without subsequent initiation of daily Snus-use			
Men		Women	
OR	95% CI	OR	95% CI
2.22	1.75-2.81	3.08	1.79-5.20

Source: FSI / ITS surveys 2003 – 2005

Among primary daily smokers who have subsequently started daily Snus-use the odds of having made a quit-smoking-attempt were found to be two to three times higher than among those without Snus-use. A possible reason for this may be that the widespread awareness in Sweden that Snus can be an effective aid to quit smoking serves as an encouragement to make quit attempts.

Can Snus be an effective cessation aid?

Close to half of Swedish smokers who make quit attempts use some self-administered nicotine product as a cessation aid. The figure below shows how common different such practices are and what outcome they yield.



Among men Snus is the most commonly used self-help aid. Among women nicotine gum or patch is more common.

The quit rates in the different groups suggest that Snus is a more effective aid than any of the other alternatives – both for men and for women.

Among men the combination of high usage and high efficiency means that the majority of successful self-help quit attempts (green segments) have been achieved by use of Snus as cessation aid.

The role of Snus in smoking cessation in Sweden is further illustrated by survey results showing that, among male Ever Daily Smokers, 85 % of those with experience of Snus-use have quit smoking completely compared to 56% of those without Snus-use.

Conclusions:

The data presented above suggest following answers to the above five questions in red:

- Primary Snus-use does not serve as a gateway to smoking, rather as a resistance against smoking.
- Initiation of Snus-use among smokers will lead to cessation of smoking rather than to dual use.
- Switching from daily smoking to daily Snus-use will weaken rather than strengthen nicotine dependence.
- Smokers who take up Snus-use are more likely to make quit-smoking-attempts.
- Evidence from Sweden demonstrates that Snus can be an effective smoking cessation aid and has been a major contributory factor behind the record low prevalence of smoking in Sweden.

In summary:

Harm reduction strategies substituting Snus for cigarettes could play an important role in the efforts to achieve a tobacco-free society.

The results presented in this poster are based on three different surveys conducted by the Research Group for Societal and Information Studies (FSI).

VAKT, Smoke

Is a prospective study of 1000 smokers followed over a period of two years. The study was conducted in collaboration with the Norwegian Institute for Alcohol and Drug Research (SIRUS) and the Institute for Tobacco Studies (ITS).

VAKT, Snus

Is a Web-based study where 1000 daily Snus-users were asked the same questions as in the VAKT, smoke base-line study. The study was conducted in collaboration with the Institute for Tobacco Studies (ITS).

FSI/ITS-survey

An ongoing national postal survey reaching approximately 10.000 respondents during every year. The study is conducted in collaboration with the Institute for Tobacco Studies (ITS).

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Disclaimer: No conflict of interest