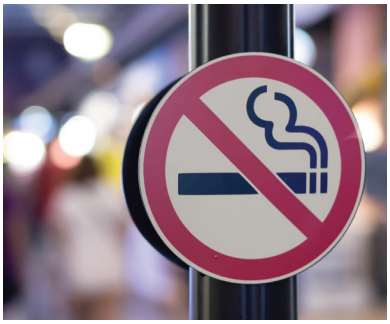
POPULATION-BASED CESSATION:
A Tobacco "Quit Machine"



Aided Versus Unaided Quitting

For many in the field of tobacco control, "cessation" is short-hand for cessation treatment. Because the success rate for unaided quitting is so low, and because various treatments have been proven to increase the rate of success, the population benefits of unaided quitting may be easily overlooked. Yet the great majority of smokers who quit successfully do so on their own, without medications or counseling. This is not to say that tobacco users do not need help, but rather that a complete view of population-based cessation must encompass unaided quitting.

Quality Versus Quantity

On the population level, tobacco cessation is the product of three factors:

- The percentage of tobacco users attempting to quit
- The number of quit attempts they make
- The average success rate per quit attempt.

For example, in a given year if 60% of tobacco users make an average of 1.5 attempts each, and 7% of those attempts are successful, the annual cessation rate will be about 6%.

To oversimplify somewhat, the proportion attempting to quit and the number of attempts can be considered "quantity", and the average success rate can be considered "quality". Both the quantity and quality of quit attempts can be improved through intervention. Quality can be improved by creating easy access to effective treatments, including counseling and medications, and by increasing their use. Quantity can be improved by motivating tobacco users to try quitting, and to keep trying till they succeed.

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Quality Versus Quantity

California survey data show that it takes an average of 12 attempts for those who do not use a cessation aid to quit for good, compared to 10 attempts for those who do use an aid. This suggests that, on a population level, quantity is more critical than quality.

While the operators of cessation treatment programs necessarily strive for high quit rates among program participants, public health officials need to focus on boosting overall quitting activity, both aided and unaided, in the whole population. In other words, they have to increase quit attempts. Promoting use of treatment can be an important part of this effort, but care should be taken to avoid conveying the message that tobacco users will be unsuccessful if they try to quit cold turkey.

Quantity is also more susceptible to intervention: because the great majority of quit attempts are unaided, it is much harder to increase the success rate than to get more people to make more attempts.

A "Quit Machine"

The process by which tobacco users cycle through quitting and relapsing until they finally quit for good can be conceptualized as a "Quit Machine", as shown in the figure below. Daily smokers either quit altogether and become former smokers, or in some cases reduce their smoking to the point that they are low-rate or non-daily smokers. Low-rate smoking is often a jumping-off point for quitting altogether. Among recent former smokers, relapse is common.

They may relapse to non-daily smoking or go all the way back to daily smoking. Their desire to quit usually remains, leading them to cycle through the process again and again, till they become former smokers long enough to be less vulnerable to relapse.

Motivating Quit Attempts

From a public health perspective, the goal should be to get all tobacco users onto the Quit Machine and to help them cycle through it as expeditiously as possible, till they have successfully quit. The focus should be on normalizing quit attempts, just as the overall tobacco control movement has been successful at de-normalizing tobacco use. Anything that can speed up the machine, motivating relapsed smokers to make fresh quit attempts, will result in increased cessation rates. Efforts should be designed to increase the desirability of quitting, to increase the sense of urgency about quitting earlier in life, and to reach all groups of tobacco users.

Fortunately, many population-based strategies have the potential to motivate quit attempts, including:

- Increasing the price of tobacco products
- Imposing restrictions on when and where tobacco can be used
- Providing consistent health care provider advice to quit
- Reducing barriers to cessation aids
- Promoting quitting through media campaigns, making tobacco users feel more hopeful about their chances of quitting successfully.

This material is based on findings presented by Shu-Hong Zhu, PhD, at the 2006 World Conference on Tobacco or Health and at a 2009 summit meeting, Creating Positive Turbulence: A Tobacco Quit Plan for California. For more information, see the complete summit report:Roeseler A, Anderson CM, Hansen K, Arnold M, Zhu, S-H. 2010. Creating Positive Turbulence: A Tobacco Quit Plan for California. Sacramento, CA: California Department of Public Health, California Tobacco Control Program.