Smoking tobacco is the number one preventable cause of death in the United States today. Many of our patients have tobacco dependence as one of their most correctable risk factors for prevention of a first heart attack or a recurrence. This is separate from the risk of cancer and chronic lung disease associated with tobacco. In this Heartbeat, I'll discuss the benefits of smoking-cessation medications and counseling to assist your patients.

Findings from a large meta-analysis of randomized clinical trials (RCTs) revealed pharmacotherapy and individual or telephone counseling are safe and effective ways to help motivated patients with cardiovascular disease (CVD) quit smoking.¹

Data from several studies on the efficacy and safety of smoking-cessation therapies in the general population have been shown effective at increasing quit rates in healthy individuals, but whether they work in patients with CVD has been unclear. Some earlier research did not show improvement.

Teachable Moment

Patients with CVD are very high-risk for events compared with the general population, resulting in a greater motivation to quit in the time following an event. We have to take advantage of this “teachable moment,” a time window when the nurses and physicians can offer spontaneous counseling to make the CVD patient want to quit smoking. Since these events occur less often in the general population, the motivation to quit tends to be quite different. Post-acute-event cardiac rehabilitation has documented improved outcomes and includes tobacco cessation counseling.²

Suissa and her team did a network meta-analysis of 24 randomized trials comprising more than 6,700 patients with CVD who were motivated to quit smoking. They found seven such trials encompassing 2,095 patients that assessed pharmacological interventions with varenicline (Chantix, Champix, Pfizer), bupropion, and nicotine-replacement therapy, and 17 with 4,666 patients that assessed behavioral interventions, including in-hospital counseling, telephone therapy and individual counseling.

The pharmacotherapy trials assessed continuous abstinence at 12 months, with six of them validating abstinence with a blood test. All included three to 25 sessions of personal counseling in addition to drug therapy.

The most common behavioral intervention was motivational support (in 10 trials). Only three behavioral intervention trials provided cognitive behavioral therapy.
In-hospital counseling trials offered an average of 44 minutes of intervention; telephone counseling trials offered 99 minutes; and individual counseling trials offered an average of 233 minutes.

Results of the network meta-analysis showed that varenicline was more than two-and-a-half times more effective than placebo in helping CVD patients quit smoking (relative risk [RR] 2.64, 95% CI 1.34–5.21) and that bupropion was 42% more effective than placebo (RR 1.42, 95% CI 1.01–2.01). But nicotine-replacement therapy didn’t appear effective (RR 1.22, 95% CI 0.72–2.06).

Among the behavioral interventions, individual counseling was the most effective in helping CVD patients quit smoking (RR 1.64, 95% C: 1.17–2.28), followed by telephone therapy (RR 1.47, 95% CI 1.15–1.88). In-hospital behavioral interventions didn’t appear to be effective (RR 1.05, 95% CI 0.78–1.43).

An analysis of smokers using different aids to help them quit found the use of varenicline did not result in any significant neuropsychiatric or CVD risk compared with nicotine replacement therapy. Varenicline use was associated with the 20% lower risk of ischemic heart disease and a significant 30% lower risk of depression and a 44% lower risk of self-harm. 3

### Smoking Worsens Outcomes After PCI/CABG

The SYNTAX trial was a prospective, multicenter, randomized trial that compared percutaneous coronary intervention (PCI) with coronary artery bypass grafting (CABG) surgery in patients with complex coronary artery disease (CAD). 4 Complex CAD included left main stem disease, triple-vessel disease, or both. A total of 1,793 patients were included in the analysis.

Smoking status was ascertained for all patients at baseline and at six months and one, three and five years. The study end point was the impact of smoking on a composite end point of death, MI or stroke after five years of follow-up. Some 20% of the cohort was smoking at baseline, but this dropped to 8.6% at six months and was still 8.7% at one year.

At five years, smoking was associated with a 38% increased risk of the composite end point of death, MI, or stroke (hazard ratio [HR] 1.38, 95% CI 1.02–1.86; P=0.035).

Smoking was also associated with a 28% increased risk of major adverse cardiac and cerebrovascular (MACCE) events (HR 1.28, 95% CI 1.01–1.61; P =0.041).

Non-smokers generally stay nonsmokers, but ex-smokers or current smokers often change their smoking status over five years. If they haven’t had any problems for a few years, they might think that it’s OK to start again.

In an accompanying editorial, 5 the authors comment, “At presentation, 20.2% of patients actively smoked, and while most of these patients quit, over 25% resumed smoking during the five-year follow-up.” "These findings are sobering," the editorialists add, “and emphasize that our efforts at smoking cessation for our patients with the most severe CAD need to be continuous, not myopically targeted only to the time of initial revascularization.”

### Never Too Late

The good news for older adults who decide to quit smoking—even after 60 years of age, quitting smoking for five years translates into a significant reduction in CVD mortality when compared with individuals who continued to smoke. 6 Continuing to smoke is associated with a two-fold increased risk of CVD mortality compared with non-smokers. 7
Conclusion

Having a discussion with patients and taking everything into account, including the benefits of the different smoking-cessation treatments and the uncertainty of their success is all part of the shared decision-making process.

Smoking cessation efforts should be just as aggressive in older patients.

We should give very clear advice about stopping smoking, and we need to assess patients for smoking status at each visit as well, because if patients have resumed smoking, they need to be reminded that the danger involved in doing so is substantial in terms of having a first or another heart attack or an acute event.

My personal counseling includes a description of what happens to the coronary vessel with each smoked cigarette. “The inside becomes more sticky allowing cholesterol to increase blockage and increasing the risk of clotting. Each time you smoke the nicotine tightens the vessel, magnifying the blockage (vasoconstriction). Lastly, the boxcars carrying oxygen to the heart through these pipelines like carbon monoxide better and thus get filled up with the wrong stuff—the triple whammy of smoking on the heart.” This is on top of lung and laryngeal cancer risk, development of emphysema and the cost of approximately eight dollars per day.

I use varenicline as directed and a target date along with a nicotine patch starting on the target date. I hand out the NJ Quit number, at right.

**AWARD** acronym: with each patient visit. Your patients need to know you think this is important. That one in ten shot increases quit numbers with persistence at each visit.

- **A** Ask about smoking.
- **W** Warn your patients about the chance of dying from smoking related diseases.
- **A** Advise your patient to quit smoking and cut their risk of death.
- **R** Refer your patients to smoking cessation or for medication.
- **D** Do it again until they quit.

We congratulate patients who manage to quit and encourage continued abstinence. It’s a big deal!

Billing codes are 99406 for 3-10 minutes and 99407 for > 10 min and I use them.

**NJ Information:** According to the U.S. Centers for Disease Control and Prevention (CDC), New Jersey spends the lowest percentage in the nation for prevention efforts while getting a billion dollars from taxes (tobacco) and the settlement agreement with the tobacco industry each year.

The American Lung Association and the CDC think this is a disservice to the people of New Jersey and are urging the Christie administration to direct more monies for programs for prevention (especially for teenagers) and support for those trying to quit.

**NJ Department of Health Quit Services:**

**NJ Quit Line:** 866-657-8677 (two weeks of patches)

**Mom’s Quit Connection:** 888-545-5191

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References


