

Preventing Harms from Tobacco Use among People living with HIV:

A brief guide for HIV providers



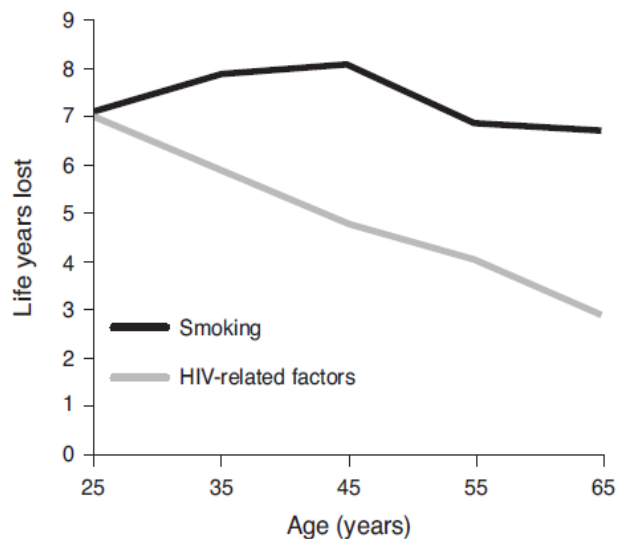
Comments or questions?
Dr. E. Jennifer Edelman (ejennifer.edelman@yale.edu)
Dr. Srinivas Muvvala (srinivas.muvvala@yale.edu)
Dr. David Fiellin (david.fiellin@yale.edu)

Tobacco use is common and is a major cause of morbidity and mortality among people living with HIV (PLWH)

NOTES

- ❖ More than 50% of PLWH smoke cigarettes¹
 - higher prevalence among PLWH with other substance use (men – 90%, women – 70%)¹
- ❖ In PLWH, smoking causes more years of lost life than HIV²

Excess mortality and loss of life years



- ❖ PLWH less likely to be asked, advised or assessed for smoking cessation interventions than other patients³
- ❖ **Immediate** benefits with cessation

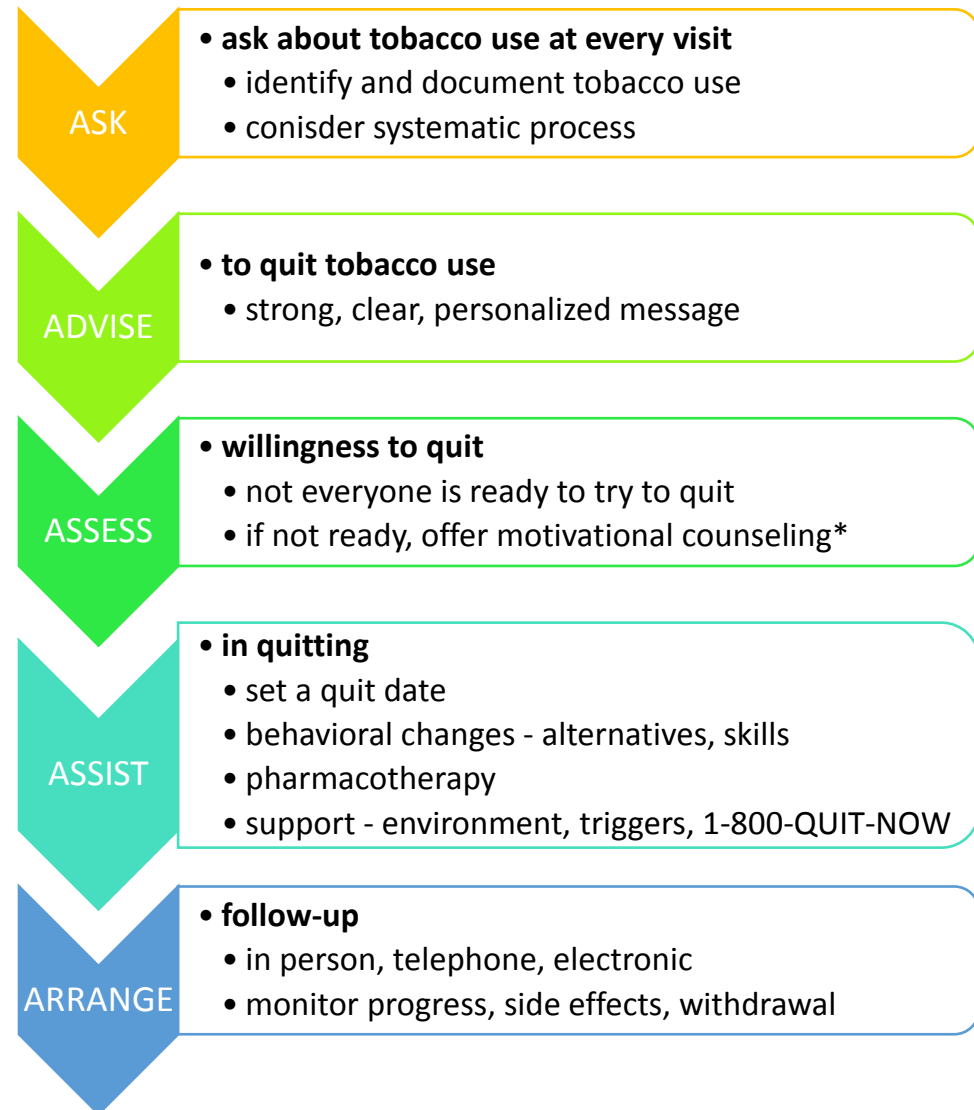


REFERENCES

1. Weinberger AH, Smith PH, Funk AP, Rabin S, Shuter J. Sex Differences in Tobacco Use Among Persons Living With HIV/AIDS: A Systematic Review and Meta-Analysis. *J Acquir Immune Defic Syndr*. 2017;74(4):439-453.
2. Helleberg M, Afzal S, Kronborg G, et al. Mortality attributable to smoking among HIV-1-infected individuals: a nationwide, population-based cohort study. *Clin Infect Dis*. 2013;56(5):727-734.
3. Vijayaraghavan M, Yuan P, Gregorich S, et al. Disparities in receipt of 5As for smoking cessation in diverse primary care and HIV clinics. *Prev Med Rep*. 2017;6:80-87.
4. Patel MS, Steinberg MB. In the Clinic. Smoking Cessation. *Ann Intern Med*. 2016;164(5):ITC33-ITC48.
5. Lai DT, Cahill K, Qin Y, Tang JL. Motivational interviewing for smoking cessation. *Cochrane Database Syst Rev*. 2010(1):CD006936.
6. Anthenelli RM, Benowitz NL, West R, St Aubin L, McRae T, Lawrence D, et al. Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial. *Lancet*. 2016;387(10037):2507-20.
7. Sterling LH, Windle SB, Filion KB, Touma L, Eisenberg MJ. Varenicline and Adverse Cardiovascular Events: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *J Am Heart Assoc*. 2016;5(2).
8. Mercie P, Arsandaux J, Katlama C, Ferret S, Beuscart A, Spadone C, et al. Efficacy and safety of varenicline for smoking cessation in people living with HIV in France (ANRS 144 Inter-ACTIV): a randomised controlled phase 3 clinical trial. *Lancet HIV*. 2018;5(3):e126-e35.

The 5 “A”s⁴

*Recommended by U.S. Public Health Service Clinical Practice Guideline



*Based on a Cochrane Review of 14 studies, motivational interviewing vs. brief advice or usual care increases quitting (Risk Ratio 1.27 [CI 1.14, 1.42])⁵

Smoking Cessation Pharmacotherapy^{4,5,6,7}

*Greatest benefits seen with dual NRT or varenicline

Medication	Mechanisms	Use	Notes
Long-acting			
Nicotine patches*	Slower delivery than nicotine in cigarettes associated with decreased reward; Lack of toxins in smoke	Start with 21mg if >10 cigarettes per day x 4-6 weeks, then 14mg x 2 weeks, then 7mg if no cravings	Titrate to prevent withdrawal symptoms and cravings; Typical cigarette delivers ~2mg of nicotine thus use of dual therapy is most effective. Can cause rash and impact sleep [if worn at night]. Advise patient to wear patch even if smoking.
Bupropion (150 mg/day)	Inhibits serotonin, norepinephrine, and dopamine	Begin 1-2 weeks prior to quit date and continue for 8-12 weeks	Also used as an antidepressant. May cause dry mouth, insomnia, anxiety, headache, rash. Lowers seizure threshold. Interacts with antipsychotics, monoamine oxidase inhibitors and drugs with MAO inhibitor-like activity; may cause elevated BP.
Varenicline	Partial agonist at $\alpha 4$ - $\beta 2$ nicotinic receptor, leading to dopamine release and decreased craving and less reward with tobacco use	Begin 1 week prior to quit date. May be used up to 24 weeks; studies in general population demonstrate safety up to 1 year.	May cause nausea, sleep disturbances, and gastrointestinal symptoms. Administer with food and water. May need dose adjustment with renal impairment.

Medication	Mechanisms	Use	Notes
Short-acting			
Nicotine gum*	Short acting nicotine replacement therapy	Chew every 1-2 hours as needed; <i>chew</i> until nicotine taste appears and <i>park</i> until taste disappears then repeat x 30 minutes; 2mg (if <25 cigarettes daily) and 4mg (if \geq 25 cigarettes daily) strength	May cause nausea, jaw pain. Use as needed and can be self-titrated. Available over-the-counter.
Nicotine inhaler*	Short acting nicotine replacement therapy	Puff as needed up to 16 cartridges per day; no need to inhale deeply as orally absorbed.	Mimics hand-mouth behavior. May cause nasal irritation with cough or throat irritation. Avoid food and acidic drinks before and while using.
Nicotine nasal spray*	Short acting nicotine replacement therapy	1-2 sprays/hour. Do not sniff/inhale – tilt head back and spray.	Use as needed. Rapid relief of symptoms. Use with caution with asthma, nasal/sinus problems.
Nicotine lozenge*	Short acting nicotine replacement therapy	2 and 4mg (use 4mg if smoke within 30 minutes of awakening); dissolve in mouth; do not chew; use 9-15 per day for 6 weeks and then taper.	Ease of use. Available over-the-counter. Flexible dosing. Avoid food and acidic drinks before and while using. May cause hiccups, nausea, heartburn.

Notes: greatest benefits seen with combined counseling and pharmacotherapy.

*use with caution post-myocardial infarction, angina and/or recent arrhythmia; systematic review data demonstrate safety in patients with and without CVD.

*RCT data demonstrate similar rates of neuropsychiatric effects with varenicline and bupropion versus nicotine patch and placebo. Pilot study demonstrate safety and efficacy of varenicline in PLWH.