Smoking cessation should be an integral part of serious mental illness treatment

The treatment of persons with serious mental illness is finally beginning to incorporate smoking cessation[1]. Why has this taken so long? In part, the delay reflects widely held beliefs that smoking is beneficial for these patients, plus concerns that stopping smoking might exacerbate the underlying mental illness. In part, the change stems from emerging evidence about the pervasive effects of using combustible tobacco in general, and the huge differential toll smoking exerts on persons with behavioral health conditions.

Despite a gradual worldwide decline in smoking prevalence, tobacco remains the number one killer in the world (approximately 5 million deaths per year) and in developed nations such as the U.S. (540,000 annual deaths). Additionally, many people suffer from tobacco-attributable illnesses such as chronic lung and heart disease. In the U.S. alone, this amounts to an estimated 14 million people[2]. In addition to the well-known links with lung cancer, heart disease and chronic obstructive pulmonary disease, smoking is also associated with increased risk for premature delivery, Alzheimer's disease, many oral-pharyngeal and gastrointestinal cancers, cataracts and osteoporosis. No other risk factor comes close as a cause of death and disease.

Because persons with mental illnesses not only are more likely to smoke but also smoke more frequently, they bear a disproportionate burden. For example, persons with behavioral health problems account for 25% of the adult population, but consume 40% of cigarettes sold in the U.S.[3]. These persons die much earlier than the general population, with estimates ranging from 8 to 20 years of life lost[4]. Most of the causes of early deaths come from smoking-attributable conditions, such as chronic lung and heart disease, diabetes and lung cancer.

Although the global prevalence of adult smoking declined between 1980 and 2012 from 41% to 31% for men, and from 11% to 6% for women, because of population growth the actual number of world smokers increased during that time, from 718 million to an estimated 966 million. In general, smoking prevalence for those with mental illness is two to three times higher than the overall population. Rates are highest in persons with schizophrenia and bipolar disorder. Recent declines in smoking in the U.S. did not include those with mental illness, who were then deprived of the major health benefits accruing from reduced smoking rates[5].

The following myths about smoking and mental illness have been refuted by recent studies[6]:

Myth: Tobacco use is necessary self-medication. *Response*: Many symptoms relieved by smoking are in fact symptoms of nicotine withdrawal. Furthermore, some of the studies alleging benefit are suspect, since they were sponsored by the tobacco industry.

Myth: Persons with mental illness are not interested in quitting. *Response*: Studies have shown that smokers with mental illness are just as interested in quitting (about 70%) as the general population[7].

Myth: Persons with mental illness are not able to quit. *Response*: Quit rates are low for all smokers, ranging from 3-5% for unassisted quit attempts to 16-30% for drug trials with strong counselling and follow-up. Probably the "real world" cessation rate for smokers receiving both counselling and cessation medications is more like 10-15%[8]. Despite this discouragingly low rate, after repeated quit attempts many smokers do quit; in the U.S. there are now more former smokers than current ones. Quit rates for smokers with mental health conditions mirror the results of the general population, although with slightly less success[9].

Myth: Quitting worsens recovery from mental illnesses and also worsens prospects for sobriety in persons with substance use disorders. *Response*: As discussed below, stopping smoking can have a salutary effect on these conditions.

Myth: Smoking cessation is a low priority problem. *Response*: The urgency surrounding acute manifestations of psychiatric illnesses does often crowd out longer range considerations. But because smoking is the biggest killer of those with mental illness, attention to smoking cessation should be a paramount long range goal.

For many decades these myths have been ingrained within the culture of mental health treatment, resulting in ignoring tobacco use. Smoking was tolerated – and even rewarded – in treatment settings, and mental health clinicians themselves had higher rates of smoking than clinicians in other medical specialties[1].

Stopping smoking is the healthiest choice a patient can make, and health benefits accrue no matter what age cessation occurs. For someone quitting at ages 25-34 years, an additional 10 years of life are gained. Corresponding figures for later age groups are 9 years gained at ages 35-44 years, 8 years gained at 45-54 years, and 4 years gained at 55-64 years[10]. Even very old quitters live longer compared to those who continue smoking. Within one year of stopping smoking, the risk of coronary heart disease is only half of continuing smokers, and within 15 years it reaches that of people who never smoked. Within five years, the risk of a stroke decreases to that of a never-smoker; within ten years, lung cancer risk declines to half that of continuing smokers.

Beyond healthier lives and longer life spans, there are specific benefits for those with severe mental illness. Because some ingredients in tobacco smoke (but not nicotine) accelerate the catabolism of most antipsychotic drugs and many antidepressants, therapeutic levels of drugs established in smoke-free hospitals become sub-therapeutic when smoking resumes. In addition,

since in many nations smoking is becoming stigmatized, persistent smoking presents a barrier to integrating persons with mental illness into society. Another concern is costs: as tobacco taxes increase, the cost of acquiring cigarettes consumes a larger portion of the usually constrained budgets of those persons. Furthermore, a recent meta-analysis showed that smoking cessation leads to less depression, anxiety and stress, as well as increased positive mood and quality of life. These benefits apply equally to those with and without mental illnesses, and the effect sizes are equal to or larger than those of antidepressant treatment for mood and anxiety disorders[11].

As evidence mounts about the harms from smoking and benefits from quitting, the culture of mental health treatment is evolving from one of well-meaning but ill-advised neglect to one embracing smoking cessation. Examples of that shift are the movement of state psychiatric hospitals in the U.S. from 20% smoke-free in 2005 to 83% by 2011; the increasing use of telephone quitlines by smokers with mental health conditions; and the actual or pending adoption of smoking cessation as a core policy by professional and advocacy organizations such the American Psychiatric Nurses Association, the American Psychiatric Association, the American Psychological Association, and the National Alliance for Mental Illness. In addition, the Substance Abuse and Mental Health Services Administration, the largest U.S. federal agency focused on behavioral health clients, has integrated smoking cessation into its core goals[12].

Clinical approaches to smoking cessation mirror those used in the general population, following the principle that more is better[8]. These include clinician advice, motivational interviewing, and – equally important and better if combined – counseling (including toll-free telephone quitlines) and one of the seven medications approved for smoking cessation (five forms of nicotine replacement therapy, bupropion and varenicline). In addition, there have been several programs focusing specifically on persons with serious mental illness, often including peer to peer counseling, involvement of clinic staff, outreach to community settings, plus longer duration of counseling and pharmacotherapy than recommended for the general population[13].

Because smoking is such a huge health risk for persons with serious mental illness, the question is not whether smoking cessation should become an integral part of treatment, but how quickly that integration will proceed. Changing longstanding practice habits is daunting, and the powerful tobacco industry will continue to market its products aggressively. Several relevant issues are also unresolved, such as the risk/benefit ratio of the electronic cigarette and the risk profile of core smoking cessation medications such as varenicline. While it may be comforting to realize that declines in smoking will continue to occur among all populations, the truth is that every missed opportunity to accelerate that decline translates into needless death and disability.

Steven A. Schroeder
Department of Medicine, University of California at San Francisco, San Francisco, CA, USA

1. Schroeder SA, Morris CD. Annu Rev Public Health 2010;31:297-314.
2. Rostron BL, Chang CM, Pechacek TF. JAMA Intern Med 2014;174:1922-8.
3. Substance Abuse and Mental Health Services Administration. Adults with mental illness or substance use disorder account for 40 percent of all cigarettes smoked. Rockville: Substance Abuse and Mental Health Services Administration, 2013.
4. Chesney E, Goodwin GM, Fazel S. World Psychiatry 2014;13:153-60.
5. Cook BL, Wayne GF, Kafali EN et al. JAMA 2014;311:172-82.
6. Prochaska JJ. N Engl J Med 2011;365:196-8.
7. Hall SM, Prochaska JJ. Annu Rev Clin Psychol 2009;5:409-31.
8. Fiore MC, Jaen CR, Baker TB et al. Treating tobacco use and dependence 2008: update. Rockville: Public Health Service, 2008.
9. Ziedonis D, Hitsman B, Beckham JC et al. Nicotine Tob Res 2008;10:1691-715.
10. Jha P, Ramasundarahettige C, Landsman V et al. N Engl J Med 2013;368:341-50.
11. Taylor G, McNeill A, Girling A et al. BMJ 2014;348:g1151.
12. Santhosh L, Meriwether M, Saucedo C et al. Am J Publ Health 2014;104:796-802.
13. Williams JM, Zimmermann MH, Steinberg ML et al. Adm Policy Ment Health 2011;38:368-83.

DOI:10.1002/wps.20332

Physical activity and mental health: evidence is growing

Physical activity should be viewed as a continuum ranging from virtually no movement at all (e.g., sedentary behaviour or sitting time) through light physical activity (e.g., light ambulation) to moderate-to-vigorous physical activity, MVPA (e.g., exercise, playing sports, cycling to work). While it is often MVPA and "exercise" that are considered to be associated with better mental health, we should not rule out the positive changes that can occur from lower down the continuum. It is also important to note that people have widely varying preferences for the types of activity they wish to engage in. Some of the mental health benefits may be associated with doing something people "want to" and enjoy. We should not be too prescriptive, therefore, concerning the types of activity we recommend for mental health.

In the expanding literature on physical activity and mental health, researchers have addressed the effects of both single bouts and programs of physical activity. In addition, a wide variety of psychological outcomes have been studied, including effects on mood, self-esteem, cognitive functioning and decline, depression, and quality of life.

"Exercise makes you feel good" is a common assumption and refers to often-reported psychological effects of single bouts of physical activity, such as walking or structured exercise. While mood enhancement has been well documented,