Community Preventive Services Task Force

Reducing Tobacco Use and Secondhand Smoke Exposure: Reducing Out-of-Pocket Costs for Evidence–Based Tobacco Cessation Treatments

Task Force Finding and Rationale Statement

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Intervention Definition

Reducing tobacco users' out-of-pocket costs involves policy or program changes that make evidence-based treatments, including medication, counseling or both, more affordable. To achieve this, new benefits may be provided, or changes may be made to the level of benefits offered that reduce costs or co-payments. Policy and program changes may be communicated to tobacco users and health care providers to increase awareness, interest in quitting, and use of evidence-based treatments.

Task Force Finding (August 2012)

The Community Preventive Services Task Force recommends policies and programs to reduce tobacco users' out-of-pocket costs for evidence-based cessation treatments based on strong evidence of effectiveness in increasing the number of tobacco users who quit. Evidence was considered strong based on findings from clinic-based trials and population-based policy evaluations of reduced out-of-pocket costs for both cessation counseling and medications. Clear communication of benefit changes both to tobacco users and healthcare providers increases use and impact of these interventions.

Rationale

Basis of Finding

The Task Force finding is based on evidence from a Community Guide systematic review published in 2001 (Hopkins et al, 5 studies, search period 1980-2000) combined with more recent evidence (13 studies, search period January 2000-July 2012). Based on this updated review, the Task Force recommendation was changed from sufficient evidence to strong evidence of effectiveness.

Primary evidence for the finding comes from 14 of these 18 studies that evaluated the effectiveness of reducing out-of-pocket costs for cessation treatments on rates of tobacco cessation, total number of tobacco users who quit, or the prevalence of tobacco use in defined populations. Twelve of the 14 studies provided measurements of change in quit rates and observed a median absolute percent increase of 4.3 percentage points (interquartile interval [IQI]: + 0.2 to +6.0 percentage points) with follow-up periods of 3.5 months or longer. The two remaining studies observed decreases in smoking prevalence over two years in populations provided with a new tobacco cessation benefit.

The included studies also provided measurements of change in use of the covered cessation treatments, and in overall quit attempts. Fifteen studies examined changes in the use of cessation treatments, of which 11 reported differences in the rate of use and observed a median absolute percent increase of 7.0 percentage points (IQI: +1.4 to +18.3 percentage points). Seven studies examined changes in overall quit attempts, with six studies reporting a median absolute percent difference in quit attempt rates of +2.8 percentage points (IQI: -0.6 to +9.1 percentage points).

Evidence-based treatments considered in the Task Force recommendation were based on the findings of Treating Tobacco Use and Dependence: 2008 update (Fiore et al., 2008) a series of recent systematic reviews conducted to document the evidence of effectiveness of clinical interventions and cessation treatments to reduce tobacco use among patients in health care settings and systems. Cessation treatments described in the included studies for this review were categorized for description and analysis as cessation counseling and cessation medications. The evidence-based treatments provided at reduced out-of-pocket costs in 13 of the 18 studies included both medications and counseling. Five studies assessed the effectiveness of reducing out-of-pocket costs for cessation medications only, and observed

results similar to the overall body of evidence. Only one study assessed the effectiveness of reduced out-of-pocket costs only for cessation counseling, so the effectiveness of this benefits approach remains unclear.

Applicability and Generalizability Issues

Fifteen of the included studies were conducted in the United States, while the remaining studies were conducted in Germany, the Netherlands, and the United Kingdom. With some reservations noted elsewhere, findings of this review should otherwise be considered applicable to the general population of tobacco users' with health care coverage in the United States.

The majority of the included studies collected information on age and gender. Half or fewer reported race/ethnicity, and levels of income or education. Only one study, however, analyzed cessation outcomes on these client characteristics and observed only small differences by age. Five of the included studies evaluated the provision of reduced out-of-pocket costs for cessation treatments to population groups with higher rates of tobacco-use or tobacco-related diseases. These populations included lower income pregnant and postpartum women, and Medicaid clients. Results were similar to the overall findings, indicating that reducing out-of-pocket costs for cessation treatments is a potentially important approach to address tobacco-related disparities (in this case, for population groups with coverage and access to health care).

Data Quality Issues

Nine of the included studies were randomized controlled trials while the remaining studies were primarily a mix of cohort and time-series designs. Common limitations of these studies included small sample sizes, low participation or response rates, differences between intervention and comparison groups at baseline, and differences between the study population and general population.

Other Benefits and Harms

No other benefits or harms specific to these interventions were identified by the review team or evaluated in the published literature.

Economic Evidence

Eighteen studies were included in the economic review. For the purposes of this review, cost per additional quit outcomes were converted to cost per quality-adjusted life years saved (QALYS) based on results from a 2006 study (Solberg) that estimated savings of 1.16 QALYs for every additional quit. Estimates of cost-effectiveness were assessed in comparison to a conservative threshold of $50,000 per QALY saved. All monetary values from studies are reported in 2010 U.S. dollars.

Fifteen studies reported average costs ranging from $93 to $776 per quit attempt. Costs varied based on the number of cessation services covered and the type of medication and counseling provided. Three studies with complete information showed a median average cost estimate of $1,150 per quit (range of values: $469 to $1,723 per quit).

Four studies provided different assessments of cost-effectiveness. The median cost per QALY saved based on 5 estimates from two studies was $2,349 (range of values: $1,290 to $24,647 per QALY saved). One study found the cost per life year saved (LYS) to be $5,990. The remaining study reported costs per disability adjusted life year (DALY) averted that ranged from $7,695 to $16,559. The DALY estimates are cost-effective measured against the per capita income ($32,352) for Australia. Study estimates varied by type of medication offered, time period of the model, effectiveness rate, and length of intervention.

Eight out of the 10 studies with cost-benefit comparisons found that benefits of these interventions exceeded costs. The point at which savings exceeded costs depended on the time period, duration and type of benefit, and assumptions used to calculate savings. Included studies showed that all of the ROPC interventions covered by employer-sponsored health plans and two of the four interventions covered by insurers showed net savings between years 1 and 10 (majority found savings between year 2 and 5). The employer-sponsored health plans had greater savings compared to those implemented by the insurers due to the additional monetary benefits gained from reduced absenteeism and improved productivity. One study focused on a Massachusetts Medicaid population found net savings from reduced hospitalizations associated with cardiovascular conditions within 2 years, with a return of $3.12 for every $1 spent (Richard, West & Ku, 2012).

In summary, the economic evidence indicates that reduced-out-of-pocket cost interventions are cost-effective and may provide net savings to the implementer.

Considerations for Implementation

Awareness of a new or improved cessation benefit among both clients and providers should be considered essential outcomes of effective implementation. In one Medicaid survey from 2000, cessation benefit awareness was only 36% among client tobacco users and only 60% among healthcare providers (McMenamin et al, 2004). Although most of the included studies did not describe or evaluate activities to communicate the cessation benefit change, studies of public employees in Wisconsin, and Medicaid clients in Massachusetts both observed that promotion efforts were important in increasing use of covered treatments over time. In Wisconsin, for example, use of covered treatments among clients was 39.5% among those aware of the benefit, compared to 3.5% among those unaware of the benefit (Burns, Rosenberg & Fiore, 2005).

The broader literature considered in this review identified a number of potential barriers to the implementation and use of these interventions. Health systems, insurers, and plans may be concerned that establishing a cessation benefit will lead to abrupt or unpredictable increases in treatment use. Both clients and their providers may be under-informed or confused about new or existing benefits, or find additional pre-authorization, prescription, or referral requirements as barriers to successful use.

This review did not include evidence on effectiveness from studies of quitlines, population-accessible telephone cessation treatments commonly provided free of charge to callers. In a concurrent updated systematic review, the Task Force also recommends quitline interventions based on strong evidence of effectiveness in increasing tobacco use cessation among callers interested in quitting. Both interventions have the potential to increase the use of evidence-based cessation treatments by tobacco users interested in quitting, and provide opportunities for both complementary coverage (quitlines are an accessible resource for tobacco users without access to health care services) and synergistic services (health care systems and providers can provide or encourage the use of quitline counseling as an additional component to their own cessation assistance)..

Evidence Gaps

Most of the included studies reported cessation rates as the primary outcome measure, an important but incomplete assessment of the potential effectiveness of these interventions. Future studies should evaluate defined populations and compare changes in awareness, use of covered benefits, quit activity, tobacco cessation rates, and the total number of tobacco users who successfully quit. Future studies should also include and describe efforts to effectively communicate the presence and availability of covered treatment benefits, and evaluate both the reach and effectiveness of different techniques. Although the included studies provide evidence of effectiveness that should be

broadly applicable to tobacco users in the United States, additional studies could examine the effectiveness of these interventions (including promotion) for populations defined by income, education level, race, and ethnicity.

Future economic research should also capture the costs and economic outcomes within defined client populations and incorporate the costs of promotion into the overall economic assessment. Future studies could also compare the costs, effects, and economic outcomes of cessation benefits for clients with the promotion and delivery of cessation services through quitlines.

The data presented here are preliminary and are subject to change as the systematic review goes through the scientific peer review process.

References

Burns ME, Rosenberg MA, Fiore MC. Uses of a new comprehensive insurance benefit for smoking-cessation treatment. Preventing Chronic Disease 2005 Available from: http://www.cdc.gov/pcd/issues/2005/oct/05_0007.htm.

Fiore MC, Jaen CR, Baker TB, et al. Treating Tobacco Use and Dependence: 2008 Update [www.ahrq.gov/clinic/tobacco/treating_tobacco_use08.pdf]. Clinical Practice Guideline. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service. May 2008

Richard P, West K, Ku L. The Return on Investment of a Medicaid Tobacco Cessation Program in Massachusetts. *PLos ONE* 2012;7(1):1-8. doi:10.1371/journal.pone.0029665

Solberg L, Maciosek M, Edwards N, Khanchandani H, Goodman M. Repeated Tobacco-Use Screening and Intervention in Clincal Practice. Health Impact and Cost-Effectiveness. *Am J Prev Med* 2006;31(1);62-71..

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