

Patient Costs As a Barrier to Intensive Health Behavior Counseling

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Background: Although intensive health behavior counseling has been demonstrated to help patients lose weight and quit smoking, many payers offer limited coverage for such counseling.

Purpose: This mixed-methods case study examined how coverage affected utilization of an electronic linkage system (eLinkS) to help adult patients obtain intensive health behavior counseling, provided through a collaboration of primary care practices and community programs.

Methods: Grant support enabled patients to obtain counseling at no cost, but funds were exhausted within 5 weeks as a result of an overwhelming response. To study the influence of cost as a barrier, referrals were resumed for an additional 3 weeks, but patients were required to pay for them. Use of eLinkS, level of clinician counseling and referrals, and patient interest in referrals were measured using electronic medical record data and patient and clinician interviews.

Results: When counseling was free, approximately one in five patients with an unhealthy behavior and an eLinkS prompt was referred for intensive counseling. However, when patient charges were instituted, referrals decreased by 97% (from 21.8% to 0.7%, $p < 0.001$); clinicians asked fewer patients about health behaviors (37% vs 29%, $p < 0.001$); clinicians offered fewer patients referrals (29% vs 6%, $p < 0.001$); and patients were less interested in accepting referrals (76% vs 14%, $p < 0.001$). In interviews, patients and clinicians cited cost as a major barrier.

Conclusions: Coverage for intensive health behavior counseling is important to utilization, particularly for interventions that involve clinician–community partnerships. The potential public health benefits of such collaborations to reduce unhealthy behaviors justify the elimination of financial barriers (e.g., copayments) by payers.

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Background

The need for Americans to control weight and stop smoking has become a national priority. Although helping patients to change behaviors is difficult, certain counseling interventions are effective.^{1–3} Brief interventions (e.g., up to 5 minutes of clinician advice) have a modest effect on smoking cessation and uncertain effects on weight loss, but more intensive counseling has greater effectiveness.^{1,2,4–7} Intensive counseling is difficult to offer in primary care settings but can be provided through

partnerships with existing community programs that offer such support.^{8–11}

Currently, health plans provide limited coverage of health behavior counseling and few are willing to extend coverage beyond the clinic for otherwise healthy patients.^{12,13} Although deductibles and copayments are known barriers to uptake of clinical preventive services,^{14–17} it is less clear whether these restrictions have a similar effect on uptake of health behavior counseling programs.¹⁸

As reported previously,¹⁹ we created an electronic linkage system (eLinkS) for health behavior counseling that allowed clinicians to easily refer patients to community resources for 9 months of health behavior counseling. This collaborative relationship between clinicians and community programs markedly enhanced counseling rates,¹⁹ establishing a systematic process for clinicians to assess unhealthy behaviors and give patients brief advice, and for community counselors to provide more intensive, extended counseling. Initially, counseling was pro-

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vided for free (the “coverage” period). After grant funds were exhausted, eLinkS was re-implemented with the sole modification of asking patients to pay for counseling (the “no-coverage” period).

Methods

This mixed-methods case study compares use of eLinkS during the coverage versus no-coverage periods. Nine practices (48 clinicians) in the Virginia Ambulatory Care Outcomes Research Network participated.

Intervention

Details about eLinkS are provided elsewhere.¹⁹ Briefly, eLinkS employed an electronic medical record template to prompt nurses to document patients’ height, weight, and smoking status. A clinician prompt identified patients who had a BMI ≥ 25 kg/m² or smoked. The clinician could then open a dialogue box to document patient advice and refer patients to one of three community counseling options based on patient preference. Referrals were automated; eLinkS directly e-mailed patient information to counselors, who proactively telephoned all referred patients for counseling.

The three counseling options were: group counseling, telephone counseling, and computer care. Group counseling was offered by Weight Watchers® and a hospital’s wellness center.²⁰ Telephone counseling was provided by the University of Kentucky Behavior Health Improvement Program (BeHIP).²¹ Computer care provided patients with access to a self-directed website^{22–24} and an option for e-counseling (provided by BeHIP).

During the 5-week coverage period (April–May 2006), grant funds subsidized counseling to eliminate patient charges. When eLinkS was reinstated during the 3-week no-coverage period (June 2006), patients were charged \$60 for telephone or e-counseling, \$110 for smoking group classes, and \$10 per week for Weight Watchers. Computer care remained free. Information about charges was disseminated to patients via flyers, and to clinicians and staff via educational sessions held at each site.

Quantitative Data

Electronic medical record and eLinkS data, collected for all adults visiting the practices, included age, gender, comorbid conditions, height, weight, smoking status, and health behavior counseling and referrals. Fisher’s exact test was used to calculate differences between the coverage and no-coverage periods using SAS, version 9.2.

Qualitative Data

Two qualitative investigators conducted semistructured interviews with a purposive sample of eight physicians, six nurses, four office managers, and 22 patients. Office managers recruited clinician and nurse participants. All patients

referred to counseling were mailed a recruitment flyer. Interviewers followed a semistructured format that addressed the use and perceptions of eLinkS. Interviews were audio-recorded; transcripts were coded and analyzed in Atlas.ti. A preliminary code list was created using deductive methods^{25,26} and then refined using inductive methods.^{27,28}

Results

During the coverage period, 5679 patients visited the practices; 1860 had at least one unhealthy behavior (triggering an eLinkS prompt); and 407 (21.8%) were referred for intensive counseling (Figure 1). Patients seen in the practices were typical of adult primary care populations (median age=53 years; 64% women) and had similar weights and health behaviors as local norms (64% overweight/obese and 16% smokers; Table 1).^{29–31} Referred patients were similar to the practice population except for gender (75% vs 64% women, $p < 0.001$). A substantial percentage of referred patients were African-American (27%); had an annual household income $< \$35,000$ (35%); and had a high school education or less (40%).

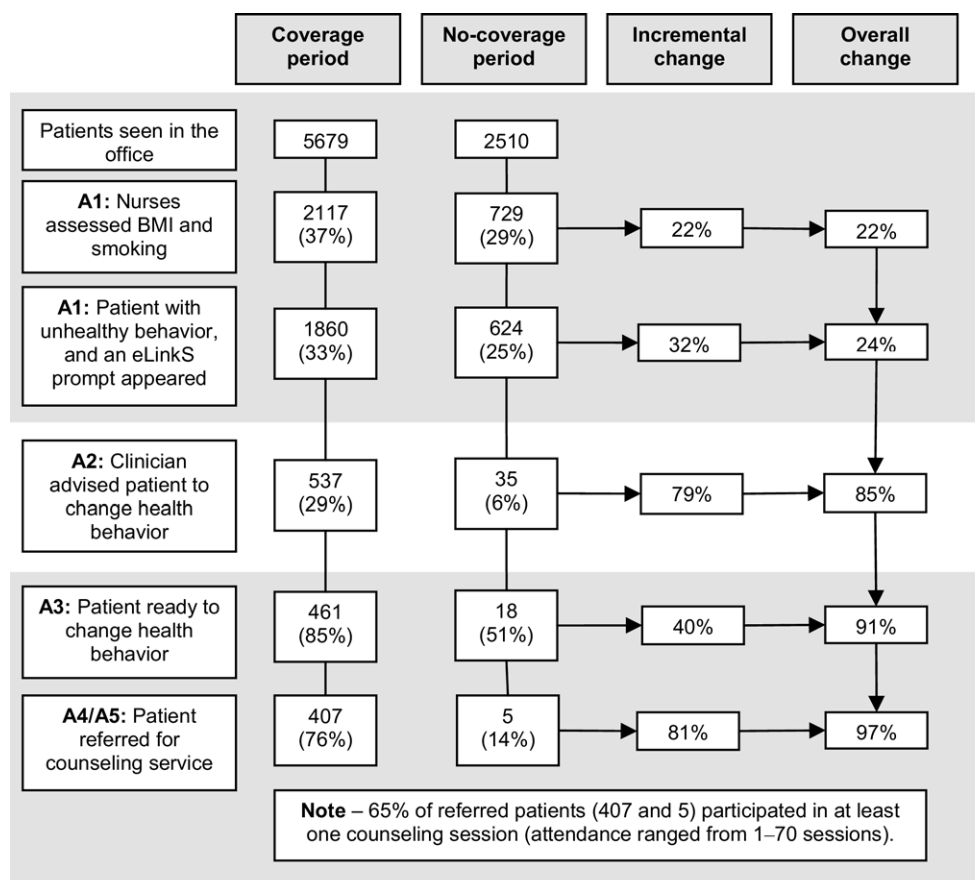
During the no-coverage period, 2510 patients visited the practices and 729 had at least one unhealthy behavior (triggering an eLinkS prompt), but only five (0.7%) were referred for intensive counseling (Figure 1). Compared to the coverage period, the overall referral rate for patients with an unhealthy behavior and eLinkS prompt decreased by 97% (21.8% vs 0.7%, $p < 0.001$). Practice nurses asked 22% fewer patients about health behaviors (37% vs 29%, $p < 0.001$). When prompted by eLinkS, clinicians offered referrals to 79% fewer patients (29% vs 6%, $p < 0.001$). If a referral was offered, 81% fewer patients accepted (76% vs 14%, $p < 0.001$).

Patient interviews confirmed that costs introduced a barrier to counseling, for patients and clinicians. Some patients were explicit that charges would prevent participation (“I don’t have the money for this type of stuff Because the program is free, I can do it.”). Other patients who deferred counseling in the past were motivated to enroll because it was free (“Since I didn’t have to pay, I felt I could give it a try . . . and it’s working”). Patients who had used such programs were able to return for a longer period to find new motivation (“It’s hard to justify continuing paying for it But, when my doctor said it was free, I thought, Great, I can reconnect.”).

Clinicians reported that removing cost as an impediment, combined with an easy means to refer patients, transformed the counseling experience. Their patient discussions, which were otherwise dominated by cost concerns, could now focus on behavior change. Clinicians found it rewarding to observe heightened patient interest and improved health outcomes. This trend reversed

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are substantial, and the ability of intensive counseling to reverse these behaviors, proven in controlled trials,^{1–3} is foregone when patients encounter monetary barriers.

To date, first-dollar coverage (e.g., elimination of copayments) has not been widely extended to such counseling. In a 2007 survey of employers, only 15% covered weight-loss services.^{13,32} Medicare covers smoking-cessation counseling but only biannually and when performed by clinicians; community-based counseling is excluded. Medicare covers medical nutrition counseling, but only for patients with diabetes or kidney disease, not to help otherwise healthy patients lose weight.³³ The benefits of eliminating financial barriers are amplified by the fact that the populations most likely to respond, such as low-income patients, who are least able to pay for services, are often those with the high-

Figure 1. Use of eLinkS during the coverage period (free for patients) versus no coverage period (patients paid for counseling); figure shows the comparative use of eLinkS in the coverage and no-coverage periods based on the 5A’s model (Ask [A1], Advise [A2], Assess [A3], Agree [A4], and Arrange [A5]). A1 activities were dependent on the practices’ nurses using eLinkS, and the percentage denominator is the number of patients seen in the office ($n=5679$ and $n=2510$). Prompts would appear only if the patient had an unhealthy behavior and the nurse entered the patient’s height, weight, and smoking status into the electronic medical record. A2 activities were dependent on clinicians using eLinkS, and the percentage denominator is the number of patients for whom the eLinkS prompt appeared ($n=1860$ and $n=624$). A3, A4, and A5 activities were dependent on patients’ interests, and the percentage denominator is the number of patients whom clinicians advised to change health behaviors ($n=537$ and $n=35$). eLinkS, electronic linkage system

when charges were reinstated. The disincentives that normally inhibit counseling, such as inadequate reimbursement, returned to prominence. Fewer successes diminished motivation to perform the work of counseling.

Discussion

This case study found that cost barriers dramatically decreased utilization of health behavior counseling services, effectively eliminating its potential benefits. The public health and economic implications of tobacco use and obesity

are substantial, and the ability of intensive counseling to reverse these behaviors, proven in controlled trials,³⁴ In this reported study, referrals were requested most often by low-income patients and minorities.¹⁹

Our quantitative and qualitative data underscore that clinicians, not just patients, are influenced by costs. Despite prompts, nurses were less likely to record patients’ BMI and smoking status during the no-coverage period, triggering fewer eLinkS prompts. Clinicians were less likely to discuss health behaviors with patients. However, even when clinicians did offer a referral, 81% fewer patients accepted. Patients described

Table 1. Demographic characteristics of patients referred for counseling, *n* (%) unless otherwise indicated

Characteristics	All patients seen in the study practices		All patients referred for intensive counseling	
	Coverage period (n=5679)	No-coverage period (n=2510)	Coverage period (n=407)	No-coverage period (n=5)
Median age (years; range)	53 (18–105)	53 (18–100)	51 (19–7)	55 (42–72)
Gender (% women)	64	66	75	75
Comorbidities				
Circulatory disease	1921 (34)	—	137 (34)	—
Diabetes	533 (9)	—	58 (14)	—
Neoplasm (any type)	826 (15)	—	53 (51)	—
Respiratory disease	2849 (50)	—	206 (51)	—
Behavioral risk factors				
BMI=25–29 kg/m ²	1415 (25)	639 (25)	74 (18)	3 (38)
BMI≥30 kg/m ²	2197 (39)	1044 (42)*	303 (74)	5 (63)
Current smoking	922 (16)	454 (18)**	113 (28)	2 (25)
Alcohol abuse	286 (5)	102 (4)	23 (6)	0 (0)

**p*=0.01 comparing the patients seen during the coverage and no-coverage periods

***p*=0.04 comparing the patients seen during the coverage and no-coverage periods

cost as a barrier to affordability and as a psychological deterrent to motivation.

The main limitation of this study is that the natural experiment necessitated a pre-post design rather than a randomized trial. Although eLinkS programming and counseling services were unchanged in both periods, secular trends are possible. Also, having counseling services be free initially may have introduced subtle artifacts during the no-coverage period. Finally, information about actions taken during clinical encounters was derived from eLinkS rather than direct observation.

These limitations notwithstanding, the current data comport with the larger body of evidence that financial barriers impede uptake of preventive services. The current study indicates that policymakers and payers should support clinical–community partnerships and eliminate cost as a barrier to intensive smoking-cessation and weight-loss counseling. Modifying health behaviors is daunting enough for patients and clinicians—cost can be the tipping point in their decision to forego the effort.

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