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Development of an Instrument to Document the 5A's for Smoking Cessation

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Abstract

Background—The widely recommended 5A's strategy for brief smoking cessation includes five tasks: Ask, Advise, Assess, Assist, and Arrange. Assessments of the 5A's have been limited to medical-record review and self-report. Using observational data, an instrument to assess the rate at which the 5A's are accomplished was developed.

Methods—The 5A's Direct Observation Coding scheme (5A-DOC) was developed using published 5A's guidelines and was refined using observed clinician–patient interactions. The development sample consisted of 46 audio-recorded visits of smokers with their physician (*n*=5), collected in 2000. The 5A-DOC was next applied to a second sample of 739 visits with 28 physicians between 2005 and 2008. Inter-rater reliability was assessed and frequencies reported. Analyses were completed in 2008.

Results—Three observations shaped the development of the 5A-DOC: (1) patients accomplish 5A's tasks; (2) some communication actions accomplish multiple 5A's tasks simultaneously; and (3) sequence is important. Inter-rater agreement for identifying each task was moderate to excellent (kappa=0.58–1.0). When smoking status was established (Ask, *n*=78), 61% Assessed readiness, and 50% contained Assist. In all, 73% failed to complete the 5A's adequately.

Conclusions—Accounting for patient activity in smoking-cessation discussions is essential to accurately capture the degree to which the 5A's have been accomplished. The 5A-DOC can be applied to audio or transcript data to reliably assess which of the 5A's tasks have been accomplished. Clinician performance of the 5A's was modest, and findings suggest that clinician training should focus on Assess, the timing of this task, and its alignment with patients' reported readiness.

Introduction

The 5A's framework for smoking cessation (Ask, Advise, Assess, Assist, and Arrange) has been widely recommended for the delivery of brief advice in primary care outpatient visits.[1–4] However, evaluating the actual implementation of the 5A's in clinical practice has been limited by a lack of systematic assessment tools. In a recent review[5] of available instruments

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and techniques for assessing delivery of the 5A's, it was concluded that there are no standardized or widely used assessments of 5A's delivery. It has been suggested that observational coding systems developed from live, audio- or video-recorded clinician–patient interactions should be considered the gold standard for research and evaluation.[5] Additionally, although a number of instruments and methods have been designed to examine the 5A's, these instruments largely rely on clinician or patient report or medical-record review, which may introduce inaccuracies in reporting or documentation.[5–10] Studies using audio- or video-recorded data to evaluate the delivery of the 5A's in smoking-cessation discussions are lacking,[5] although one study recently utilized audio to evaluate the delivery of the 5A's for physical activity.[11] Therefore, the purpose of the current study was to use audio recordings of clinician–patient discussions of smoking cessation to develop and evaluate a direct observation tool to assess the use of the 5A's framework during clinical encounters.

Methods

Overview

The 5A's Direct Observation Coding scheme (5A-DOC) was developed and evaluated in several steps. In order to clearly define each of the 5A's tasks evaluated by the 5A-DOC, current literature describing the 5A's guidelines[3,4,12] was reviewed (Table 1). The specific A's that are included in any given 5A's model, and their definitions, have shifted over the past decade. In an effort to remain consistent with the approach proposed by the U.S. Public Health Service,[4,12] the current study examined five distinct constructs: Ask, Advise, Assess, Assist, and Arrange.

First, a preliminary list of clinician activities capable of accomplishing the goals of each step in the 5A's process was produced using the aforementioned reference as a guide.[4,12] Next, an interdisciplinary team of analysts examined a subsample of transcribed physician–patient encounters in an iterative process to assess the utility of applying the 5A's definitions to interaction-specific data. From an examination of these data, modifications and clarifications were made to the 5A-DOC protocol in order to achieve operationalized definitions for each 5A's task (Table 1). Developmental work for this study demonstrated the need for operational definitions that focused on the activities accomplished by clinicians and patients in the encounter rather than adhering to rigid definitions of specific utterances necessary to accomplish a 5A's task. These revised operational definitions of the 5A's were applied to a second subsample of transcribed physician–patient encounters to further refine the coding protocol. The final evaluation step involved application of the 5A-DOC to a completely new sample of cases.

Samples and Data Collection Procedures

Development sample—Data for the development phase were derived from a cross-sectional study of 186 patients and five purposively sampled physicians.[13] The physicians were sampled based on their high rate of health behavior–advice delivery observed in a prior study of 138 physicians.[14,15] Consecutive adult patients were invited to participate in the waiting room. Each patient participant completed a brief survey of current health behaviors, including smoking. The visit was observed and audio-recorded. The patient participation rate was 82%. Both physicians and patients were blinded to the specific study hypotheses but were informed that the study was about physician–patient communication. These data were collected in 2000, and the study was approved by the University Hospitals of Cleveland IRB.

Application sample—Data for the application phase of the study were derived from a convenience sample of 28 community-practicing, primary care physicians and their patients. Consecutive adult patients scheduled to see their physician received a letter introducing the

study and were invited via telephone to participate. Participating patients completed a brief telephone survey to assess smoking status prior to the visit. The visit was observed and audio-recorded. The patient participation rate was 51%. Of the 739 visits included in this analysis, 131 were with self-identified smokers. Both physicians and patients were informed that the study was about physician–patient communication but were blinded to the specific study hypotheses. An exit survey was used to assess the degree to which being observed affected patient behavior; 84% reported "not at all" and only 10% reported "very little." These data were collected between 2005 and 2008, and the study protocol was approved by the University Hospitals of Cleveland IRB.

Data Management and Analysis

All audio recordings of patient encounters were transcribed verbatim in their entirety, and transcripts were organized using Atlas.ti,[16] a qualitative data management program. Sections of text containing talk about smoking were transcribed a second time using established techniques[17] in order to annotate more nuanced elements of the discussion (e.g., small pauses, false starts, rising and falling intonation). Data from patient surveys were used to identify smokers; the text of each encounter was thoroughly reviewed for any talk of smoking; and the 5A-DOC was applied. Kappa statistics for inter-rater reliability[18] were computed for each of the 5A's tasks. Descriptive statistics for the application sample were used to report the frequency of each 5A's task that was accomplished. A summary variable indicating the adequacy of the completed 5A's (according to previously developed guidelines[4,12]) is reported. All analyses were completed in 2008.

Results

Findings from the Development of the 5A-DOC

The developmental work of establishing an assessment scheme of talk between clinician and patient revealed three main findings. First, both patients and clinicians can accomplish these tasks; therefore, a singular focus on clinician actions alone would mischaracterize the 5A's tasks that were actually accomplished during an encounter. Second, a single turn can accomplish multiple 5A's tasks. Finally, preliminary but compelling evidence suggests that the sequence in which the 5A's tasks were performed may be related to difficulties in the discussion about smoking cessation. Excerpts from actual transcripts have been edited and simplified for clarity of presentation here.

Both Patients and Clinicians Can Accomplish 5A's Tasks

Although the 5A's are generally framed as a series of clinician tasks, patients often completed them in the encounters examined in the current study. Patients completed Ask by revealing their smoking status without physician elicitation (Example 1).

Example 1

Patient: You know I still smoke my milds.

Advise was often completed when a link was established between smoking and an illness or disease condition or when the potential benefits of cessation for the management of a chronic condition were highlighted (Example 2).

Example 2—(In this case, some discussion about smoking had already occurred.)

Physician: Oh, but ah- and you know you know and we've talked about many times that smoking and being an asthmatic just don't make sense. And you're such a health nut in every

other way, you know and even your blood pressure would be better easily—more easily controlled if you stopped smoking.

Physicians also completed Advise using a direct form that closely resembled published 5A's guidelines (e.g., *You should quit smoking because…*), but did so rarely (Example 3).

Example 3

Physician: Umm, but I'm also just gonna continue to encourage you because I think I probably said this before probably the biggest decision you could make in terms of your health care would be to toss the cigarettes. Okay?

Patient: Uh-huh.

It was common for patients to complete the Assess task. Patients completed Assess by expressing their willingness or unwillingness to make a quit attempt without a physician prompt. For example, some patients said that they wished to quit and asked for assistance. Some patients said that they would not quit now, but would quit at some point after circumstances changed (Example 4).

Example 4

Physician: When I talked to you a year ago you were smoking. Now what's going on with that?

Patient: Uhh, my ex smokes like a chimney.

Physician: Oh no!

Patient: And I am convinced…

Physician: he's a bad influence on you.

Patient: Yeah. I have the mindset already that as soon as he is out of there I'm gonna quit. And I've never had trouble quitting when I set my mind to it.

Single Utterances Accomplish Multiple 5A's Tasks

In Example 5, a patient accomplishes Ask, Assess, and Advise with a single statement.

Example 5

Patient: But it seems like it's coming back and the—the cough never really left. I'm kinda worried about it. I want you to give me something to help me stop smoking. I—I'm really at the point now.

Here, the patient completes Ask indirectly when she states that she wants to stop smoking. The patient also engages in the activity of Advise by positioning her request for assistance immediately following her statement of worry about her cough, creating an implicit link between her worrisome cough and her smoking. In effect, she provides the rationale for her need to quit smoking in a way that is personally relevant—a defining feature of the Advise task. Finally, this patient completes the Assess task by clearly indicating that she is "really at the point now" where she is willing to make a quit attempt.

The Sequence of the 5A's Matters

According to the 5A's guidelines, physicians should Assist patients whose willingness to make a quit attempt has been Assessed. However, inappropriate sequences were observed, such as cases in which Assistance was offered after a patient had explicitly expressed their unwillingness to quit (Example 6).

Example 6

Physician: Are you in a mood to try to quit yet?

Patient: Mmm. It's not—not really.

Physician: Not really.

Patient: Um-hum.

Physician: Because you're scared to quit or?

Patient: No, it's…I don't know.

Physician: The risks that you have you know keep on increasing the older you get.

Patient: Mmhmm.

Physician: Umm there's Zyban, umm, even [assistant] can tell you about a person who said how wonderful it was.

Assistant: That's right.

Physician: Umm, it really—he—he didn't even think about his cigarettes when he was on the Zyban. And this is from an older guy who had smoked a lot more than you have.

Patient: Uh-huh.

(Physician continues with smoking talk, but patient never engages the topic.)

Physicians and patients often fail to establish smoking cessation as a common goal before the physician proceeds to Assist. Example 6 is included to show the patient's lack of engagement in the smoking cessation talk that follows her clear indication that she is not interested in quitting. This young patient gives only minimal, vague responses to the physician's statements regarding increasing risks and the efficacy of a cessation strategy. As the talk about smoking cessation continued in this case (not shown), the patient continued to passively resist the physician's questions, prompts, and offers of Assistance. Eventually, the physician abandoned the unsuccessful efforts to provide smoking-cessation counseling.

The 5A's framework instructs clinicians to Arrange follow-up appointments for those patients who have been Assessed as willing to make a quit attempt and have been Assisted in developing a cessation strategy (Example 7).

Example 7

Physician: I want you to quit smoking and you want you to quit smoking, right?

Patient: Umhum.

Physician: So we'll put you on Zyban—

Patient: Okay.

Physician: —to help you quit smoking. And then have you check in with me in a month. So we'll know how you're doing with your quitting smoking.

Application of the 5A-DOC

Data from a second sample of 739 audio recordings and transcripts were used to evaluate the 5A-DOC. Patients' smoking status was established in 244 of the 739 encounters (33%), which constituted a completion of Ask. Among encounters with current smokers (*n*=131), 78 (60%) contained some discussion of smoking (Table 2). These 78 cases serve as the denominator for the rest of the 5A's tasks. Assess was accomplished in 61% of the cases, and it was frequently accomplished by the patient (*n*=25, 52%). Inter-rater agreement for completion of the 5A's tasks was evaluated using the kappa statistic across cases that included smoking talk. Kappa coefficients ranged from moderate (0.58) to excellent (1.0).[18]

Summary variables indicating appropriate completion of the 5A's (Table 3) show that the proportions of cases in which smoking was: (1) not discussed (i.e., no talk about smoking occurred); (2) adequate (i.e., Ask, Advise, and Assess were completed only for patients not ready to change; or Ask, Advise, Assess, and Assist were completed for those patients expressing readiness to change); (3) incomplete (i.e., failed to Assess or Advise); (4) inappropriate (i.e., offering Assist efforts when patient indicated he/she was not ready to change, or failing to Assist when patient indicated readiness) were computed. The Arrange follow-up assessment was not included as a criterion for achieving a rating of adequate, as it occurred very rarely (*n*=2). For those cases that included some smoking-cessation discussion, adequate smoking-cessation discussion occurred in only 27% of these visits. The 5A's were most often incomplete (56%), and inappropriate advice was observed in 17% of the visits. If the recommendation that smoking be addressed at every visit[4] were included as a criterion for a rating of adequate, only 21 of 131 visits (16%) would achieve this rating.

Discussion

The 5A's tasks can be reliably documented by examining audio recordings and transcripts of primary care encounters. Efforts to develop an accurate and efficient method for identifying the 5A's tasks showed that an exclusive focus on the activities of physicians would lead to a mischaracterization of the 5A's tasks actually accomplished during the encounter. The 5A-DOC flexibly codes both physician and patient completion of the 5A's tasks, which allows an important social convention of conversation to be included in the analysis. It is well documented[19] that it is socially inappropriate to ask questions in an interaction when the answer has already been established during that conversation. For example, a clinician would be very unlikely to Ask a patient if they smoke when the patient's smoking status had already been established by a statement made by the patient earlier in the visit. Thus, the importance of the patient's role in accomplishing the 5A's tasks is clear, as patients' statements may effectively preempt a clinician's question or statement that would accomplish a 5A's task.

Identifying possible associations between patients accomplishing the 5A's tasks and their subsequent smoking-cessation outcomes is an empirical issue that merits further investigation. A reliable observation tool such as the 5A-DOC could be used as a standard against which less-resource-intensive methods such as patient report, clinician checklists, and medical-record review might be evaluated. For example, the degree to which other assessment methods capture tasks accomplished by the patient is unclear. Multimethod studies including observational methods could greatly enhance our understanding of the degree and nature of documentation biases and could be used to further guide the refinement of items on surveys and checklists.[15]

Evaluation of the completion of the 5A's indicated that adequate advice occurred in only 27% of visits with smokers in which smoking was discussed. If the recommendation that smoking should be addressed at every visit were followed,[4] then only 16% of visits would be considered adequate. However, it has been shown[20] that competing priorities can reasonably override the importance of addressing smoking cessation in about one quarter of primary care visits. Even after accounting for this fact, the observed rates of adequate advice fall short of expectations. In particular, the 5A-DOC showed physicians rarely completing Arrange, even when willing patients had been Assisted in their cessation plans. Multimethod research using the 5A-DOC along with other data collection methods could examine the factors that encourage or discourage Arranging follow-up visits for smoking cessation. Additionally, clinician training might emphasize this underutilized task to further support patients in their cessation efforts.

The delivery of the 5A's in this study is comparable to other reports that use direct observation methods in primary care settings. For example, using field notes about primary care visits with smokers, it was found[20] that 12 of 91 (13%) smokers received adequate counseling; another 7 of 91 (8%) received "good but deficient" counseling, because their readiness to stop smoking was not assessed. In another study[21] that used a direct observation checklist during primary care visits with 244 smokers, it was reported that the following counseling elements were addressed: Advise (55%); Assess (37%); and Assist (38%).

This study also provides evidence that the sequence of the 5A's is important and thus may be necessary to evaluate the effectiveness of the 5A's in practice. This sample provided examples of difficulties that were encountered when physicians continued to offer specific options for cessation Assistance in cases in which patients had not expressed readiness to change. Others have indicated that the failure of clinicians and patients to mutually establish readiness for change may result in patient resistance,[22,23] inefficient time usage, and a straining of the clinician–patient relationship.[24,25] An implication for future work is that the sequence and response patterns observed for the tasks of Assess and Assist may be important when researching the effectiveness of the 5A's. If further inquiry supports the observation that patient resistance is engendered when Assist occurs without an Assessment of readiness, efforts to train clinicians may need to emphasize the Assess task and its timing.

This study does have limitations. First, the samples of physicians and their adult patients were limited to primary care practices in one geographic region. Data generated from a larger and more geographically varied pool of clinicians would add to the generalizability of these findings. Second, study participants were not completely blinded to the research process; therefore, it is possible that the presence of the observer and audio recorder may have caused the participants to interact differently than they would have in a typical visit. However, when surveyed after their visit, the overwhelming majority of patients reported no effect or very minimal effect from being observed. Additionally, patients and physicians were made aware of only the general aim of the study, namely the investigation of physician–patient communication in routine healthcare visits.

Third, the development phase was conducted with only 46 cases, which may have limited exposure to some of the possible variation in the range of utterances and discussions that could accomplish the 5A's tasks. Yet this sample size was adequate to reach a point of developmental saturation, with new cases no longer introducing material beyond the scope of the coding rules. Additionally, the application of the 5A-DOC to a second sample of 131 encounters with smokers that were drawn from the patients of 28 primary care physicians strengthens the assessment that the 5A-DOC is capable of accurately capturing specific aspects of smoking discussions across a wide range of physician and patient communication styles.

Fourth, inter-rater reliability for Assess was modest (kappa=0.58). An examination of disagreements between coders rating Assess indicates that difficulty arose during the interpretation of ambiguous patient statements about readiness to change. Efforts are currently underway to further refine coding rules for Assess. This refinement may be particularly important given that proper application of the 5A's depends on an accurate Assessment of a patient's readiness to change. An improved coding instrument could better examine this crucial task. Finally, the 5A-DOC is a resource-intensive protocol, and therefore the range of its possible applications may be limited.

The strength of the 5A-DOC is its ability to fill a significant gap in the research tools available for analyzing the prevalence and delivery of this widely disseminated model for discussing smoking cessation. By attending to interactive features of smoking discussions, the 5A-DOC captures all of the goals of the 5A's that are accomplished, not just those performed by clinicians; completion of 5A's by patients may be unaccounted for in self-reported data.

Highlighting the variety of utterances and exchanges that could accomplish the operationalized goals of each of the 5A's tasks is a significant contribution to the adequate evaluation of the extent to which the goals of the 5A's model are being achieved in actual practice. Additional evaluation of the 5A-DOC tool is necessary to assess its reliability across a wider range of clinicians, patients, and clinical settings. If additional findings are robust, the 5A-DOC could be used as a benchmark against which other methods currently used to document the 5A's might be compared.

Conclusion

The assessment of the 5A's using observational data is feasible, but any assessment must account for patients' contributions to the completion of the 5A's tasks and the implicit accomplishment of some tasks. The 5A-DOC is a reliable instrument, capable of capturing these important features of smoking-cessation discussions. Additional applications of the 5A-DOC to larger samples could better inform our understanding of the rate at which the 5A's are appropriately employed, and whether the preliminary findings of this study regarding the sequence of smoking-cessation discussions and the generation of patient resistance are replicable.

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References

1. Goldstein MG, Whitlock EP, DePue J. Multiple behavioral risk factor interventions in primary care. Summary of research evidence. Am J Prev Med 2004;27(2S):61–79. [PubMed: 15275675]
2. Treating tobacco use and dependence—clinician's packet. A how-to guide for implementing the Public Health Service clinical practice guideline. www.ahrq.gov/clinic/tobacco/
3. Whitlock EP, Orleans CT, Pender N, Allan J. Evaluating primary care behavioral counseling interventions. An evidence-based approach. Am J Prev Med 2002;22(4):267–284. [PubMed: 11988383]
4. Fiore, M.; Jaen, CR.; Baker, T., et al. Treating tobacco use and dependence: 2008 update. Clinical practice guideline. Rockville MD: USDHHS, Public Health Service; 2008.

5. Glasgow RE, Emont S, Miller DC. Assessing delivery of the five 'As' for patient-centered counseling. Health Promot Int 2006;21(3):245–255. [PubMed: 16751630]
6. Hazlehurst B, Sittig DF, Stevens VJ, et al. Natural language processing in the electronic medical record: assessing clinician adherence to tobacco treatment guidelines. Am J Prev Med 2005;29(5):434–439. [PubMed: 16376707]
7. Conroy MB, Majchrzak NE, Silverman CB, et al. Measuring provider adherence to tobacco treatment guidelines: a comparison of electronic medical record review, patient survey, and provider survey. Nicotine Tob Res 2005;7(S1):S35–S43. [PubMed: 16036268]
8. Conroy MB, Majchrzak NE, Regan S, Silverman CB, Schneider LI, Rigotti NA. The association between patient-reported receipt of tobacco intervention at a primary care visit and smokers' satisfaction with their health care. Nicotine Tob Res 2005;7(S1):S29–S34. [PubMed: 16036267]
9. Quinn VP, Stevens VJ, Hollis JF, et al. Tobacco-cessation services and patient satisfaction in nine nonprofit HMOs. Am J Prev Med 2005;29(2):77–84. [PubMed: 16005802]
10. Szpunar SM, Williams PD, Dagroso D, Enberg RN, Chesney JD. An assessment of user acceptance and satisfaction with the tobacco use cessation automated clinical practice guideline. Am J Manag Care 2007;13(6 Pt 1):313–315. [PubMed: 17567229]
11. Carroll JK, Fiscella K, Meldrum SC, et al. Clinician-patient communication about physical activity in an underserved population. J Am Board Fam Med 2008;21(2):118–127. [PubMed: 18343859]
12. Fiore, M.; Bailey, W.; Cohen, S., et al. Clinical practice guideline. Rockville MD: USDHHS, Public Health Services; 2000. Treating tobacco use and dependence.
13. Flocke SA, Kelly RB, Highland J. Initiation of health behavior discussions during primary care outpatient visits. Patient Educ Couns 2009;75(2):214–219. [PubMed: 19013742]
14. Stange KC, Zyzanski SJ, Jaen CR, et al. Illuminating the 'black box'. A description of 4454 patient visits to 138 family physicians. J Fam Pract 1998;46(5):377–389. [PubMed: 9597995]
15. Stange KC, Zyzanski SJ, Smith TF, et al. How valid are medical records and patient questionnaires for physician profiling and health services research? A comparison with direct observation of patient visits. Med Care 1998;36:851–867. [PubMed: 9630127]
16. Dubey V, Mathew R, Iglar K, Moineddin R, Glazier R. Improving preventive service delivery at adult complete health check-ups: the Preventive health Evidence-based Recommendation Form (PERFORM) cluster randomized controlled trial. BMC Fam Pract 2006;7:44. [PubMed: 16836761]
17. Jefferson, G. Glossary of transcript symbols with an introduction. In: Lerner, GH., editor. Conversation analysis: studies from the first generation. Philadelphia: John Benjamins; 2004. p. 13-23.
18. Landis JR, Koch GG. The measurement of observer agreement for categorical data. Biometrics 1977;33:159. [PubMed: 843571]
19. Silverman, D. Interpreting qualitative data. Vol. 2nd. London: Sage Publications; 2001. Naturally occuring talk.
20. Jaen CR, McIlvain H, Pol L, Phillips RL, Flocke S, Crabtree BF. Tailoring tobacco counseling to the competing demands in the clinical encounter. J Fam Pract 2001;50(10):859–863. [PubMed: 11674888]
21. Ellerbeck EF, Ahluwalia JS, Jolicoeur DG, Gladden J, Mosier MC. Direct observation of smoking cessation activities in primary care practice. J Fam Pract 2001;50(8):688–693. [PubMed: 11509163]
22. Miller, WR.; Rollnick, S. Why do people change?. In: Miller, WR.; Rollnick, S., editors. Motivational interviewing: preparing people for change. Vol. 2nd. New York: Guilford Press; 2002. p. 3-12.
23. Miller, WR.; Rollnick, S. Motivational interviewing: preparing people to change addictive behavior. Edinburgh: Churchill Livingstone; 1991.
24. Pilnick A, Coleman T. "I'll give up smoking when you get me better": patients' resistance to attempts to problematise smoking in general practice (GP) consultations. Soc Sci Med 2003;57(1):135–145. [PubMed: 12753822]
25. Coleman T, Stevenson K, Wilson A. Using content analysis of video-recorded consultations to identify smokers' "readiness" and "resistance" towards stopping smoking. Patient Educ Couns 2000;41:305–311. [PubMed: 11042433]

Table 1

Operationalized definitions of 5A's tasks

5A's task	U.S. Public Health Service definition	5A-DOC operationalized definition
Ask	Identify and document tobacco use status for every patient at every visit.	Is tobacco use identified in any way during the encounter?
Advise	In a clear, strong, and personalized manner, urge every tobacco user to quit.	Are specific reasons to quit given that are intended to be relevant to the patient? Is there a clear message to quit smoking?
Assess	Ask every tobacco user if he or she is willing to make a quit attempt at this time (e.g., within the next 30 days).	Is the patient's readiness to make a quit attempt in the near future determined?
Assist	For the patient willing to make a quit attempt, use counseling, pharmacotherapy, and supplementary materials to help him or her quit.	Are attempts made to construct a plan of action for tobacco cessation? Are specific strategies suggested or explained? Is the patient referred to an outside source for assistance in cessation?
Arrange	Schedule follow-up contact, preferably within the first week after the quit date.	Is there a follow-up appointment scheduled with the stated purpose of monitoring tobacco-cessation efforts?

Table 2

Frequency of 5A's tasks among 131 smokers

5A's task	Number eligible	Kappa[a]	Accomplished *n* (%)	Accomplished by patient *n* (%)[b]
Ask	131		78 (60)	20 (26)
Advise	78	0.79	38 (49)	9 (24)
Assess	78	0.58	48 (61)	25 (52)
Assist	78	0.93	39 (50)	15 (38)
Arrange	78	1.00	2 (3)	0 (0)

[a] Kappa computed between two raters, *n*=57 cases

[b] The number of instances accomplished by the patient divided by the total number of instances accomplished (e.g., 20/78=25.6%)

Table 3

Application of the 5A-DOC

5A's evaluation	***n* (%)**
Smoking not discussed	53 (40)
Smoking discussed	78 (60)
Adequate[a]	21 (27)[d]
Incomplete[b]	44 (56)[d]
Inappropriate[c]	13 (17)[d]

[a] Adequate indicates that only Ask, Advise, and Assess were completed for those patients not ready to change; or that Ask, Advise, Assess, and Assist were completed for those patients expressing readiness to change.

[b] Incomplete indicates cases without Advise or Assess.

[c] Inappropriate indicates discussions in which Assist efforts were offered to patients who were not ready to make a cessation attempt, or in which patients who were ready to make a cessation attempt were not offered any Assistance to do so.

[d] Percentages calculated with total number of smoking discussions (n=78) as the denominator.