

Clinician-Patient Communication About Physical Activity in an Underserved Population

Jennifer K. Carroll, MD, MPH, Kevin Fiscella, MD, MPH, Sean C. Meldrum, MS, Geoffrey C. Williams, MD, PhD, Christopher N. Sciamanna, MD, MPH, Pascal Jean-Pierre, PhD, Gary R. Morrow, PhD, MS, and Ronald M. Epstein, MD

Background: The 5A (Ask, Advise, Agree, Assist, Arrange) model, used to promote patient behavior changes in primary care, can also be applied to physical activity. Our goal was to assess primary care physicians' use of the 5A model in discussions with underserved populations about physical activity.

Methods: We analyzed 51 audio-recorded, transcribed office visits on randomly selected patient care days and after-visit patient surveys with adults in 2 community health centers in Rochester, New York.

Results: The patient sample was 51% African-American and predominantly female (70%), with the majority having a high school-level education or less (66%) and an annual household income <\$39,000 (57%). Physical activity was discussed during 19 of the 51 visits, which included 16 (84%) visits with "Ask"; 10 (53%) with "Advise"; 4 (21%) with "Agree"; 5 (26%) with "Assist"; and 0 with "Arrange" statements. Most discussions of physical activity contained several Ask or Advise statements but few Agree, Assist, or Arrange statements.

Conclusion: Communication about physical activity that included Agree, Arrange, and Assist statements of the 5A model was infrequent. Health promotion interventions in underserved populations should target these steps and prompt patients to initiate communication to improve physical activity. (J Am Board Fam Med 2008;21:118–127.)

Clinical guidelines, derived from behavioral medicine frameworks, emphasize specific communication strategies for clinicians to effectively counsel their patients about various health habits. A commonly used clinical framework for health behavior counseling is the 5A guidelines, shown in Table 1.¹ The 5As paradigm, adapted from the 4As model originally developed by the National Cancer Institute for smoking cessation, has been effectively applied to several other health behaviors and has been endorsed by the United States Preventive Services Task Force as a unifying framework for behavioral counseling in primary care.^{2–6} Previous

studies examining the use of the 5As in communication about diet, exercise, and weight loss in adults^{7,8} found that communication about these behaviors seldom includes offers of assistance (range, 14% to 17%) or plans for follow-up (range, 3% to 10%). Despite a growing evidence base demonstrating the utility of the 5A guidelines,^{3,9} primary care practices—especially those with a large underserved population—may have difficulty implementing it. Competing demands often push primary prevention to the bottom of the agenda for many routine primary care visits.¹⁰ However, because primary care clinicians are a major source of health behavior advice, there is a need for ways to support clinicians in providing effective counseling.

To design practical interventions to promote effective counseling for physical activity in community-based primary care settings, we need “real-world” data regarding actual communication that occurs; ie, ways in which the 5As actually translate into clinical practice. Gaps exist in our knowledge of the effectiveness of communication about physical activity with underserved populations, both because we lack these “real-world” examples of specific communication and because we do not fully understand the extent to which

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From the Department of Family Medicine (KF, SCM, PJ-P, RME), the Cancer Center (JKC, KF, PJ-P, GRM, RME), and the Department of Internal Medicine (GCW), University of Rochester, New York; and the Division of General Internal Medicine, Penn State College of Medicine (CNS).

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Corresponding author: Jennifer Carroll, MD, MPH, University of Rochester School of Medicine, Family Medicine Research Programs, 1381 South Avenue, Rochester, NY 14620 (E-mail: Jennifer_Carroll@URMC.Rochester.edu).

Table 1. Elements of the 5A Model and Definition of 5As Used in the Coding of Audio-Recorded Office Visits

Counseling Activity	Description
Ask/assess	<ul style="list-style-type: none"> ● Inquire about health behaviors, self-efficacy ● Did the clinician ask about the patients exercise or physical activity habit in any way? Was there any discussion about initiating, maintaining, or changing physical activity levels in any way?
Advise	<ul style="list-style-type: none"> ● Discuss health risks; benefits of change; review appropriate amount, intensity, and frequency of behavior ● A clear statement that the clinician makes to the patient recommending the patient do regular physical activity. The clinician gives clear, personalized, and specific advice to change physical activity/exercise habits, which may or may not include information about personal benefits to health.
Agree	<ul style="list-style-type: none"> ● Collaboratively set physical activity goals based on patient's interest and confidence ● The clinician and patient collaboratively select appropriate treatment goals and tasks based on the patient's interest and willingness to change the behavior.
Assist	<ul style="list-style-type: none"> ● Identify personal barriers and problem-solving techniques; community opportunities for physical activity and social support ● The clinician assists the patient to aid them in changing their physical activity/exercise plans by addressing any challenges or barriers that the patient may face. This category also refers to the clinician helping the patient strategize or come up with a plan on how the patient might actually change their exercise level to meet their goals. The clinician might also mention available community resources, programs, or referral options for physical activity/exercise programs in this step.
Arrange	<ul style="list-style-type: none"> ● Help the patient complete the plan by providing referrals, reminders, access to resources; specify future arrangements (follow-up visit, call, reminder) to follow-up on progress ● The clinician and patient explicitly discuss a follow up plan. This means that the doctor schedules a follow up appointment to provide ongoing assistance and support to the patient for helping them change their exercise level. This step may also involve a referral to a program or specialist to help the patient with the exercise program (in this sense may overlap somewhat with the Assist step).

competing demands may influence discussion with underserved populations about physical activity. The goal of our study was to examine the actual language used by primary care physicians when they communicated about physical activity with underserved populations and to analyze that language according to the 5A guidelines. We also explored whether patient characteristics or competing demands influenced the discussion of physical activity. Here we define “underserved populations” as groups with low income (eg, $\leq 200\%$ of the federal poverty level) and/or low educational attainment (eg, less than a high school diploma or equivalent) who may or may not be racial/ethnic minorities.

Methods

Study Design, Setting, and Participants

We conducted a cross-sectional observational study of clinicians and their patients at 2 urban community health centers in Rochester, New York. The centers provide primary care to a diverse community of primarily low-income patients, including African-Americans, Asian-Americans, Hispanics, and refugees and immigrants from Africa, Eastern Europe, and Southeast Asia. Twelve of the 13 (92%) clinicians who provided primary medical care services at the centers (8 physicians, 2 physi-

cian assistants, and 3 nurse practitioners) participated in the study. Clinicians were informed that the purpose of the study was to observe communication about health in primary care practice. We obtained written informed consent from clinicians before patient recruitment. Then we collected data on the primary outcome variable, the use of the 5A model for communication about physical activity, using both direct audio-recording of the visit and a patient survey after the visit.

Patient Recruitment, Enrollment, and Audio-recording of Office Visits

Patients were recruited from the clinics on randomly selected patient care days. Patients who were 18 years of age or older and were scheduled for a routine, same-day appointment for non-urgent problems or a health maintenance office visit with a participating clinician were told about the study before they met with their clinician. Patients were told that the purpose of the study was to examine communication between patients and their clinicians about health behaviors. Those who expressed an interest in participating met with either the primary investigator or a research assistant (SF) for further discussion and, if they agreed to participate, to give written informed consent. Consented visits were unobtrusively recorded using a digital audio

recorder. All medical care at the visit was per office routine. Clinicians were not blinded to whether the patient had consented to participate. Neither patients nor clinicians received remuneration for participation. The study was approved by the Research Subjects Review Board of the University of Rochester.

Patients were surveyed at the end of each clinical encounter. The survey consisted of questions regarding patient sociodemographic characteristics, health status and functioning,^{11,12} health behaviors, recall of previous communication with their clinician about physical activity,¹³ and quality of the patient-physician relationship.¹⁴

Data Coding and Analyses

We developed a coding and transcription template to capture data from the audio-recorded content of the office visits. Any communication about physical activity or exercise (eg, asking about current exercise or talk about maintaining or changing physical activity behaviors) was coded. We did not use the 5As as a means to include or exclude discussion of activity, but rather as a means for cataloguing it or describing it when it occurred. Therefore there were no examples of activity discussions that were excluded. For each office visit, any discussion of physical activity was transcribed verbatim as described below. We also coded (1) other topics covered in the visit, (2) whether or not other health behaviors were discussed, and (3) the total duration of the visit.

Research assistants (SF, AD) trained by the primary investigator (JKC) listened to all audiotapes of office encounters independently and transcribed any communication about physical activity occurring in the visit to a worksheet. To operationalize the 5A guidelines for coding of each A term in the audiorecorded visits, we defined each A term on our coding templates according to definitions adapted from previous work in the field,^{3,7} as shown in Table 1.

Descriptive statistics (SAS software, version 9.1, SAS Institute, Cary, NC) were used to analyze and report the frequency and content of communication about physical activity. We first computed the sum of each of the 5 A terms occurring in each office visit based on the transcriptions of the audio-recorded office visits. We used χ^2 statistics to examine the association between each A term and its

relationship to certain patient and visit characteristics.

We compared audio-recorded office visit and self-report (survey) data on the 5As to examine the relationship between previous and current communication about physical activity. We qualitatively analyzed the transcripts for which any discussion about physical activity occurred with a manual coding editing approach derived from grounded theory to identify specific examples of the 5As in communication.

Results

There were 134 patients scheduled for appointments on days selected for observation. Of those, 64 (48%) were excluded because they did not meet study criteria (eg, pediatric patients); because they missed their appointment; because of constraints on clinicians' schedules; or because of the lack of an available room. Seventy patients were asked to participate in the study; 51 (73%) agreed to participate and 19 (27%) refused. The most common reasons for refusal were private/sensitive issues to discuss ($n = 7$) and lack of time ($n = 5$).

Table 2 shows patient and clinician participant characteristics. The patient participant sample was largely underserved, as indicated by the racial and ethnic composition, income, and educational levels (Table 2). The clinician participants were all trained in family medicine, predominantly female ($n = 10$; 83%), and were a mix of family physicians ($n = 8$; 67%) and either family physician assistants or family nurse practitioners ($n = 4$; 33%). The majority of visits were routine follow-up appointments (ie, 15-min long) with patients' primary care clinicians. Acute visits (eg, for an "urgent care" level problem) were excluded by design.

Of the 51 participants, 49 (96%) completed the post-visit survey, 47 (92%) completed observational data, and 44 (86%) completed both observed visits and the survey. Observational data were missing for 4 of the 51 patients; in 3 cases the equipment malfunctioned and in 1 case the participant intentionally turned off the recorder during the visit.

Use of the 5A Guidelines for Physical Activity Counseling

Discussion of physical activity was noted during 19 (41%) of the 46 audio-recorded/observed patient

Table 2. Participant Sociodemographic and Health Status Information

Patient Participants (n = 12)	
Age group (years)	
18–29	12 (6)
30–39	12 (6)
40–49	27 (13)
50–59	20 (10)
60–69	18 (9)
70+	8 (4)
Not reported	2 (1)
Gender	
Female	71 (35)
Male	29 (14)
Race/ethnicity	
African-American	51 (25)
White	37 (18)
Other	12 (6)
Employed	
Yes	33 (16)
No	35 (17)
Not reported	33 (16)
Annual income	
<\$12,000	27 (13)
\$12,000–\$20,000	20 (10)
\$21,000–\$39,000	10 (5)
\$40,000+	8 (4)
Not reported	35 (17)
Education	
<12 years	29 (14)
High school diploma	37 (18)
Partial college	18 (9)
College degree	14 (7)
Not reported	2 (1)
Number of Comorbidities	
0	31 (15)
1–2	31 (15)
3–4	24 (12)
5–8	14 (7)
Common Comorbidities	
Diabetes	27 (13)
Hypertension	47 (23)
Congestive heart failure	8 (4)
Body mass index	
18.5 ≤ 24.9 (normal)	6 (3)
25.0 ≤ 29.9 (overweight)	22 (11)
≥30.0 (obese)	53 (26)
Not reported	18 (9)
Achieving recommended level of physical activity*	
Yes	22 (11)
No	78 (38)

(Table continues)

Table 2. Continued

Clinician Participants (n = 12)	
Gender	
Female	83 (10)
Male	17 (2)
Clinician specialty	
Physician	67 (8)
Physician assistant or nurse practitioner	33 (4)
Race/ethnicity	
African-American	25 (3)
Asian	8 (1)
White	67 (8)
Years in practice	
≤5	33 (4)
>5 to ≤10	33 (4)
>10 to ≤15	17 (2)
>15	17 (2)
Years at health center	
≤5	66 (8)
>5 to ≤10	0 (0)
>10 to ≤15	17 (2)
>15	17 (2)

*Two patient participants did not provide survey data.

visits. The 19 visits included 16 (84%) with “Ask” statements, 10 (53%) with “Advise” statements, 4 (21%) with “Agree” statements, 5 (26%) with “Assist” statements, and none with “Arrange” statements.

Patterns of 5A Use by Clinicians

Table 3 shows the clinician-level variability in use of the 5As for the 19 visits in which the topic of physical activity came up. As Table 3 shows, the pattern of use of the 5 A terms was fairly evenly distributed among physicians and nonphysicians. Ten (83%) of the 12 participating clinicians used an “Ask” statement, 8 (67%) used an “Advise” statement, 5 (42%) used “Agree” and “Assist” statements, and none used an “Arrange” statement. The average number of A terms used for both physicians and nonphysicians when the topic of physical activity came up was 2 (range, 0–4). In the 19 visits during which physical activity was discussed, specific activity levels (such as the type, frequency, duration, and/or intensity according to recommended levels^{15,16}) occurred during just 5 visits. These specific recommendations occurred in the context of advising (n = 2), agreeing (n = 1), and assisting (n = 2).

Table 3. Patterns of Observed Use of 5As Among Clinicians

Clinician	Ask/ Assess	Advise	Agree	Assist	Arrange
MD-1	[1]			[12]	
MD-2	[2]				
		[11]	[11]		
	[13]	[13]	[13]		
	[19]				
MD-3	[9]				
MD-4	[17]	[17]	[17]	[17]	
MD-5					
MD-6	[14]	[14]		[14]	
	[15]	[15]			
MD-7	[3]				
MD-8	[6]	[6]			
NP/PA-1	[18]			[18]	
NP/PA-2	[4]				
		[5]			
	[7]	[7]		[16]	
	[16]	[16]			
NP/PA-3	[8]	[8]			
	[10]		[10]		
NP/PA-4					

[n] = visit in which an A term was used among all 19 visits in which physical activity was discussed among the 12 participating clinicians. Visit number is shown to distinguish between multiple visits per clinician with A term used. For example, MD-2 used Ask statements on 3 separate visits, coded as visits [2],[13], and [19].

MD, physician participants; NP, nurse practitioner participant; PA, physician assistant participant.

In those visits during which discussion about physical activity occurred, clinicians tended to do most of the initiating and talking about the topic. In 3 cases (16% of the visits during which activity was discussed) the patient initiated the discussion. For visits during which discussion of physical activity occurred, clinician talk usually consisted of 2 or more questions in the “Ask” or “Advise” steps, but comparatively little discussion (typically a single question, sentence, or phrase, if anything) for the “Agree” or “Assist” steps.

Examples of 5A statements are provided in Table 4. The content of physical activity discussions varied; clinicians mostly provided brief motivational, logistic, or biomedically oriented communication relating the physical activity to patients’ specific health conditions. We did not identify any instances of detailed clinician patient communication examining patient-specific barriers or goals with regard to physical activity.

Physical Activity Discussion by Patient and Visit Characteristics

Table 5 shows patient and visit characteristics and their association with whether or not discussion of physical activity occurred. Visits with discussions of physical activity tended to be longer (median length, 19 min vs 12 min) and to include discussion of more topics (median, 7 topics vs 4 topics) and discussion of other health behaviors in addition to physical activity (Table 5). For example, among patients with whom physical activity was discussed (n = 19), smoking was also discussed in 37% of cases (n = 7 visits). Smoking was discussed only 24% of the time in visits which did not include discussions of physical activity. Discussion of physical activity was observed less frequently with African-American patients, obese patients, and patients with fewer comorbidities. Based on patient survey data, only 22.4% (n = 11) of patients met recommended guidelines for physical activity (3 patients with whom activity was discussed, 8 patients with whom it was not discussed).

Comparison of Audio-recorded Discussion to Patient Recall of Physical Activity Discussion

Compared with audio-recorded discussion of physical activity, patient self-report (on a survey that asked about recall of 5A use in discussion with their primary care clinician) demonstrated a much higher overall incidence of clinician use of each A of the 5As. Forty-one of the 49 (84%) patients who completed the questionnaire reported ever having had a discussion with their clinician regarding physical activity. Thirty-two (65%) patients reported use of an “Ask” statement (eg, “My doctor has asked me about my current activity/exercise habits”); 36 (73%) an “Advise” statement (“My doctor has given me clear, specific advice to change my activity level/exercise habits”); 37 (76%) an “Agree” statement (“My doctor and I share in decision making about ways to improve my activity level/exercise habits”); 32 (65%) an “Assist” statement (“My doctor helped me develop specific ideas, plans, or changes I can make to improve my activity/exercise”); and 25 (51%) an “Arrange” statement (eg, “My doctor and I made follow-up plans to discuss how I am doing with changing my activity level/exercise”). There was modest agreement between patients and observers as to whether physical activity was discussed during the audio-re-

Table 4. Examples of Ask, Advise, Agree and Assist Statements

Statement Type	Examples
Ask	<ul style="list-style-type: none"> ● Clinician: “Exercising three times a week . . . that’s what you had set as a goal last year in March. How is that going? . . . How much are you thinking you are exercising . . . once a week? Once a month?” ● Clinician: “Do you do any sort of exercise? . . . Anything in particular?”
Advise	<ul style="list-style-type: none"> ● Clinician: “You have to do at least half an hour of some kind of motion before it is considered beneficial to you . . . It does help to control your blood pressure . . . it helps control your diabetes . . . helps strengthen your bones, makes you less likely to fall . . . prevents osteoporosis.” ● Clinician: “Try to exercise for three or four times a week. What is walking, what is riding a bike for a good half an hour at a time . . . cause that will also help.” ● Clinician: “What else is good for you is . . . getting out and getting to do things that you like to do, getting some exercise . . . getting your body going will help you a little bit as well. (in relation to depression) If you do this power walk 5 days a week for a half an hour where you’re sweating, eat a little healthier, more fruits and vegetables and water, less of the bad stuff, you will lose that weight.” Patient: “I’m working on it.”
Agree	<ul style="list-style-type: none"> ● Clinician: “You did the water flexibility fitness [class]? I’d love to see you go back.” Patient: “Is it still going on?” Clinician: “Yep, and it’ll continue.” Patient: “What day is it? Mondays and Wednesdays?” Clinician: “Yeah, Mondays and Wednesdays.” Patient: “I’m going back. I don’t care if my blood pressure’s high or not. I just want to go, cuz see Dr. X stopped me from going. I was kinda tired; I was kinda glad I had an excuse not to go. But, you know, I was going - getting up and going, and it was in my schedule. I was going.” Clinician: “I know.”
Assist	<ul style="list-style-type: none"> ● Clinician: “I found out about this place that does sort of like cardiac rehab. They do a little bit more intensive follow-up for the weight loss and diabetes and for your heart. They prescribe exercise for those three reasons. You do well when I see you frequently. When we don’t lose contact, I think you do well. When you have someone on your case, you do a little bit better.” ● Clinician: “I think you would be a good candidate because you are doing well with [local exercise program] and I know when you get excited when you do this . . . this weight loss. So I think you’d be a good candidate for this. So can I refer you there?”

corded visit: 6 of 19 (32%) patients with whom some discussion was observed recalled no discussion when interviewed, and 5 of 24 (21%) patients with whom no discussion was observed reported discussion ($\kappa = 0.46$). Patients were much less likely to report that they had received communication from other health care staff (ie, clinic nurses or other health professionals) compared with their recall of discussion with their primary care clinician about physical activity.

Discussion

Our results show that when clinicians addressed physical activity, their efforts were characterized by an emphasis on 2 As (Asking and Advising), with relatively little use of Agreement (ie, collaborative goal-setting); Assistance (ie, with identifying and overcoming barriers); or Arrangements to help the patient follow through with a physical activity program. There were seldom assessments of patients’ willingness to change behavior, and few recommendations were given regarding community resources. These findings are similar to patterns of

use of the 5As in tobacco counseling^{17–19} and in research on diet and exercise counseling in underserved populations.¹⁶

The finding that the topic of physical activity was raised 41% of the time was somewhat higher than previously reported in other studies.^{7,20,36} Yet the question of how much counseling is sufficient, and by whom, is an area of active debate. If we consider that the majority of our participants (78%) were not meeting recommended levels of activity and/or were either overweight or obese (75%), then one could argue that the observed rate of counseling was inadequate to achieve national goals. In all likelihood, a wide variety of strategies in the health care, mass media, policy, and school settings are needed. Intervention studies are also needed to identify efficacy of the 5As in questioning patients about physical activity, as well as large practical, clinical trials to test the effects of use of the 5As on physical activity change in primary care settings.

Although primary care clinicians are in a key position to promote physical activity, this task is

Table 5. Patient and Visit Characteristics in Relation to Visits with and without Observed Discussion of Physical Activity

Patient and Visit Characteristics	No Discussion of Physical Activity (n = 25) (n)	Any Discussion of Physical Activity (n = 19) (n [%])
Age group		
18–39	7	5 (42)
40–59	12	8 (40)
60+	5	6 (55)
Not reported	1	0 (0)
Gender		
Female	17	14 (45)
Male	8	5 (38)
Race/Ethnicity		
African-American	15	8 (35)
White	2	3 (60)
Other	8	8 (50)
Annual income		
≤\$12,000	7	4 (36)
>\$12,000	11	8 (42)
Not reported	7	7 (50)
Employed		
Yes	8	6 (43)
No	7	8 (53)
Not reported	10	5 (33)
Body mass index		
18.5 ≥ 24.9 (normal)	1	1 (50)
25.0 ≥ 29.9 (overweight)	4	6 (60)
>30.0 (obese)	15	9 (38)
Not reported	5	3 (38)
Number of comorbidities		
0	11	3 (21)
1–2	6	6 (50)
3–8	8	10 (56)
Years of education		
<12 years	6	8 (57)
High school diploma	12	6 (33)
Any college	7	5 (42)
Median number of topics discussed	4	7 (n/a)
Median number of health behaviors discussed	1	2 (n/a)
Median visit duration (minutes)	12	19 (n/a)
Total*	25	19 (43)

*Two patients with missing data have been excluded.

challenging in a time-pressured environment with competing priorities, systems barriers, and limited resources.¹⁰ These issues are magnified for clini-

cians working with underserved populations. Nevertheless, we found no evidence that discussion of a large number of concerns diminished the likelihood of physical activity counseling; in fact, the reverse may be true. Although visits in which activity was discussed were longer, they also included nearly twice as many patient concerns. A larger study is needed to assess the relative contribution of the number of patient concerns, demographics, obesity, and race to the likelihood of discussing physical activity.

Previous work has shown that primary care physicians spend an average of approximately 55 seconds per visit (though the time varies widely) providing diet and/or exercise advice to patients.²⁰ Not surprisingly, fewer than half of patients receiving such advice were able to recall what their physician had said. In one study, an extra minute in the encounter discussing these issues was associated with a 2.5-fold increase in patient recall.²⁰ Perhaps, if more emphasis were placed on strategies or systems to support mutual agreement, setting goals, and specific assistance, clinicians could make better use of their limited time and see improved recall and/or positive behavioral changes in their patients.

Little is known about how the 5A model changes patient motivation in regard to physical activity, but based on specific features of the 5As (providing assistance, intratreatment support, access to information about available community resources, and establishing a clear plan for follow-up) seem likely to motivate patients or result in a change of physical activity behaviors.^{21,22} Some of the A terms (mostly the least frequently observed ones: Agree, Assist, and Arrange) aim to set goals collaboratively based on the patient's willingness to change. If patients do not want to change, emphasis may be more appropriately placed on helping the patient connect their behavior to their health; in this way, asking or advising may reinforce patients' responsibility for changing their activity if they believe it will preserve their health. This overlaps conceptually with other behavioral models^{23–26} that promote patient activation to become self-managers more explicitly by providing them with assistance in problem-solving skills.

Despite the multiple barriers to the delivery of high quality counseling, several lines of evidence support a role for expanded physician counseling for physical activity. Randomized clinical trials have found that intensive²⁷ and brief²¹ physician

counseling have been shown to increase physical activity levels in patients, though data on long-term outcomes are lacking. The Activity Counseling Trial found that when physicians were taught how to Ask and Advise patients to promote physical activity and were supported by ancillary staff and office-based systems to provide the other As, they were able to use the model efficiently and achieve a high level of satisfaction from providing it.²¹ The tobacco literature has determined that counseling using the 5As is 3 times more likely to occur if clinics have support systems to remind physicians to do the counseling.^{28,29} Implementation of office systems to identify sedentary individuals and facilitate the provision of support materials (eg, chart note templates, identification systems for those at risk, and/or community resources lists) might increase counseling for physical activity using the 5As.

Primary care physicians have access to a large portion of the US population; 80% of adults visit a physician during a 1-year period, and most of these visits are with primary care physicians.³⁰ Patients are often more vulnerable or concerned about their health when visiting a physician and as such are more likely to be receptive and responsive to the information they receive.³¹ Patients find physician counseling useful and it is associated with higher satisfaction with clinical care.³² Patients who are advised by a physician to lose weight, quit smoking, eat less fat, and/or become physically active are significantly more likely to attempt to change these behaviors than those who are not advised.³³⁻³⁵ Although data from underserved populations are lacking, one study showed that low-income patients with whom physical activity was discussed were significantly more likely to attempt behavior change than were high-income patients.³⁶

Some data suggest that the last 2 As (Assist and Arrange) may be better achieved by collaboration with allied health educators, community programs, or other health care staff resources given the competing demands that primary care clinicians face.^{6,15} Because strong empirical data to support this are lacking, especially among underserved populations, studies should address the role of ancillary professionals in the delivery of counseling and the effect on activity outcomes.

Interestingly, only one audio-recorded discussion with 4 of the 5 A terms was patient-initiated. Although very preliminary, this observation sug-

gests that patient-initiated discussion about physical activity may be more likely to lead to in-depth conversation (defined as more A terms are covered); thus, clinician training plus patient activation may yield more discussion about physical activity.

Our study has several limitations. First, it was designed to collect a preliminary set of observations to show how the 5As occur and was conducted at 2 community health centers. We thus had a small sample size in a narrowly defined underserved population, which limits generalizability. Because we used a cross-sectional design, we were unable to assess clinician-patient communication about physical activity over time. We attempted to address this shortcoming by incorporating questions about previous communication in the post-visit patient survey, but recall may have been biased, especially given the discordance seen in patient recall compared with actual observed communication. It is possible that the 3 least commonly observed A terms (Agree, Assist, and Arrange) require more patient involvement and dialogue and thus are more time- and effort-intensive for the clinician; we therefore would not have captured these as frequently. We did not include the clinician's perspective on recall or adequacy of communication about physical activity.

Future studies should compare the effects of physician counseling, involvement of other health professionals, and patient activation or prompting of the topic of physical activity outcomes in underserved populations. Only longitudinal studies can measure communication interventions in the "real-world setting" over time, the dose response effect of physical activity discussions, the effect of continuity of care on the 5As, and to test whether 5A-derived communication interventions result in improved patient behaviors and/or health status.

Conclusion

Although primary care clinicians in a practice serving an urban underserved population asked and advised about physical activity, very few sought agreement about increasing activity levels, offered specific assistance to patients, or made arrangements to address physical activity. Interventions that support clinicians' efforts directly or via ancillary personnel to address challenges or barriers patients may face, help the patient to set goals and/or change activity levels, discuss specific com-

munity programs or resources, and make follow-up arrangements to address physical activity may be beneficial. Although training physicians to provide physical activity counseling is important, interventions that encourage patients to prompt their clinicians may further increase clinicians' discussion of physical activity in a manner that motivates behavior change.

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