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Medication Adherence in Older Adults: A Qualitative Study

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Abstract

To effectively address medication adherence and improve cardiovascular health among older adults, a deeper understanding is needed of the barriers that this age group faces and approaches that would be most effective and feasible for improving adherence. We conducted a focus group study (n=25) in a diverse population of older adults with hypertension recruited from the Cohort Study of Medication Adherence in Older Adults (CoSMO). A structured guide was used to collect feedback on barriers to adherence and acceptability and feasibility of intervention strategies. The final coding framework outlines factors at the individual, relationship, health care system, and environmental or policy level which affect adherence in older adults, including memory, knowledge, attitudes and beliefs, side effects, social support, interaction with health care providers, and cost and convenience of medication filling. Patient responses highlighted the varied nature of barriers and the need for interventions which are both multi-faceted and tailored.

Keywords

adherence; hypertension; health behavior; geriatrics

Introduction

Hypertension is an important risk factor for cardiovascular morbidity and mortality, particularly in adults age 65 years and older (Lopez, Mathers, Ezzati, Jamison, & Murray, 2006). Despite the fact that effective therapies for hypertension are available, suboptimal adherence remains a public health and clinical challenge in this age group (Munger, Van

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Tassell, & LaFleur, 2007; Osterberg & Blaschke, 2005; Dunbar-Jacob et al., 2000; Klein, German, McPhee, Smith, & Levine, 1982; van, Tsang, Wensing, de Smet, & Grol, 2003). To effectively address adherence and improve cardiovascular health among older adults with hypertension, researchers and clinicians need a better understanding of the barriers that older adults face and the approaches that would be most effective and feasible for increasing adherence in this population.

Qualitative studies documenting perspectives on medication adherence in older adults are essential for the design of effective interventions in this population. While previous quantitative studies have examined factors associated with antihypertensive medication adherence in this age group (Krousel-Wood, Muntner, Islam, Morisky, & Webber, 2009; Vawter, Tong, Gemilyan, & Yoon, 2008; Braverman & Dedier, 2009), qualitative studies on adherence have primarily been conducted among patients with limited access to health care. Further, while previous studies have investigated barriers to adherence, few have solicited specific feedback on feasible intervention strategies. (Ogedegbe, Harrison, Robbins, Mancuso, & Allegrante, 2004; Tsiantou V, Pantzou P, Pavi, Koulirakis G, & Kyriopoulos J, 2010; Lewis LM, Askie P, Randleman S, & Shelton-Dunston B, 2010; Lukoschek, 2003). Further qualitative research is needed to understand which strategies are most acceptable for improving adherence among populations of older adults who have health insurance and access to medical care. To fill this gap, we conducted a focus group study in a diverse population of insured older adults to investigate barriers to medication adherence and gain feedback on acceptable intervention strategies.

Methods

Study Design and Participants

Focus group participants were recruited from the Cohort Study of Medication Adherence in Older Adults (CoSMO). This longitudinal cohort study captured extensive quantitative data on adherence to antihypertensive medication, assessed via self-report using the 8-item Morisky Medication Adherence Scale (MMAS-8) (Morisky, Ang, Krousel-Wood, & Ward, 2008). CoSMO study design, recruitment flowchart, and baseline characteristics of participants have been previously described (Krousel-Wood, Muntner, Islam, Morisky D.E., & Webber L.S., 2009). In brief, CoSMO participants included patients 65 years and older who were receiving treatment for essential hypertension and were part of a large managed care organization (MCO) in southeastern Louisiana. Both the parent CoSMO study and the current focus group study were approved by the Ochsner Clinic Foundation's Institutional Review Board. CoSMO participants were eligible for the focus group study if, at the time of the parent study, they indicated that they would be interested in being re-contacted for an additional, in person study and had no evidence of severe cognitive impairment (using a cutoff of 3 on the Six-Item Screener)(Callahan, Unverzagt, Hui, Perkins, & Hendrie, 2002). Because previous data from CoSMO and other studies have indicated that barriers to adherence differ by race (Krousel-Wood et al, 2010), eligible CoSMO participants were stratified by self-reported race (Black vs. White) and adherence level (low=MMAS-8 score < 6 over the last two years vs. high=MMAS-8 score equal to 8 over the last two years) such that four groups were formed (White/low adherers, White/high adherers, black/low adherers,

and black/high adherers). Recruitment lists within each stratum were randomly ordered, and eligible participants were contacted by phone and offered the opportunity to participate in the focus group study. Staff continued recruitment until 6-12 participants in each group were scheduled. Recruitment was conducted in May 2010 and the four focus group sessions were held in June and July of 2010.

Data Collection and Analysis

A structured interview guide was developed using open-ended questions and probes to collect in-depth feedback on specific barriers to and facilitators of antihypertensive medication adherence which had been previously identified in the CoSMO study (Krousel-Wood et al., 2009). As part of the interview session, participants were also asked to rate the acceptability and feasibility of intervention strategies. All focus group sessions were held in conference rooms. Each session lasted approximately two hours and refreshments were provided. Focus groups were led by a trained moderator (ALR) and assistant (KAL). Before starting the session, the moderator conducted group introductions, and participants signed a written informed consent form. Upon completion of the focus group session, each participant was provided a \$20.00 gift card in appreciation for their time participating in the study. All focus group sessions were audio-recorded and transcribed verbatim without names and identifiers.

Qualitative data analysis was performed by four independent coders using directed content analysis. First, coders individually read focus group transcripts for scope, then re-read transcripts for identification of recurring themes or concepts. Each coder created a provisional coding frame (Barbour, 2007) based on the focus group discussion guide of *a priori* identified themes (three of the coders used the long-table approach to create a coding frame by hand (Krueger & Casey, 2000) and one coder used QSR NVivo 8 © Software for coding frame creation). Using an iterative process, provisional coding frames were modified continually in accordance with the themes that were introduced by focus group participants: coders identified themes in the same grouping and sorted quotes by identifying categories until no new categories or subcategories could be created. After coders had finished their independent coding frameworks, they came together as a group to compare categories and subcategories. The socio-ecological model was used to structure the final coding framework. Discrepancies in categorization between coders were resolved through discussion until they agreed upon a final coding frame. Further analysis characterized results by race and adherence group. SAS version 9.1 was used to compute summary statistics of focus group participants.

Results

Study Population and Design

A total of 39 CoSMO study participants were scheduled to take part in focus group sessions. Of these, 25 participated in the four focus group interviews (fourteen canceled or did not show up for their sessions because of conflicts or inclement weather). Demographic and clinical characteristics of the focus group participants are shown in Table 1. Sixty-eight percent of participants were White, 54% were between the ages of 70 and 75 (age range =

68-82), and 40% were classified as low adherers according to their MMAS-8 scores. The majority (64%) of participants were women, 56% were married, and 43% were taking 3 or more classes of antihypertensive medications.

Barriers to and Facilitators of Medication Adherence

The socio-ecological model recognizes that health behaviors and outcomes are influenced at multiple levels, starting with the individual and continuing with the family and community, the health care system, and ending at the environmental or policy level (McLeroy, Bibeau, Steckler, & Glanz, 1988; Stokols, 1992). Table 2 shows participant-identified factors associated with antihypertensive medication adherence structured according to this model.

Patient (Individual-level)—Memory and forgetfulness were repeatedly emphasized as important barriers to adherence. Many patients had difficulty remembering to take their medications. One participant described this, saying, “We forget things that we used to not forget. I know, I’m 72 and sometimes I forget things. I’m quite sure that all of us forget sometimes.” Another said:

‘I think some people, especially older people are forgetful. My mother takes blood pressure pills and I say, mom did you take your medicine. She says, oh I forgot to take them this morning. She gets caught up in doing something and doesn't take them.’

When probed about strategies that would be effective for overcoming forgetfulness, participants stressed the importance of implementing medication-taking routines such as taking pills at the same time every day and using a pillbox to help to organize and remember pills. One participant described how his own routine helps him to take his medications, saying:

‘I have two little containers that I put mine [my blood pressure medications] in at night before I go to bed. I put some in one for the morning and some in the other for the evening. If I think I forgot, I look over there at the containers and see if there are any in there.’

To gain feedback on intervention strategies that would assist with issues of forgetfulness, participants were asked about the feasibility and acceptability of regular reminder phone calls from pharmacists, friends or family members. A number of participants felt that reminder phone calls could be helpful for patients who struggled with unintentional low adherence. One participant said:

‘I think it [reminders calls] would definitely be great. For one thing, you go off and you're doing something else and you haven't taken your medication and somebody is calling you and you say ok. And you know they [are] going to call you the next day and the next day. You [are] not going to want to say, oh no, I didn't take it yet. I think it would be a big help.’

Another said:

‘I think it [reminder calls from a pharmacist] would be especially [helpful] if the pharmacist and doctor know that this patient is reluctant to take their medications.

The doctor can tell by your blood work and the pharmacist can tell by the frequency of your refills. They have some kind of red flag where they can tell.'

However, other participants were less receptive to the idea of regular phone calls from a pharmacist, making statements such as, "That would irritate me". Generally, focus group participants seemed to agree that this strategy would be more acceptable and effective in those elderly patients with more severe memory problems. Also, participants were generally more receptive to the idea of reminder calls if they were from family members or someone close, one said, "If somebody reminds you of something then you can take your medicine. It's very important that you have somebody to care enough to remind you to take your medicine."

A large portion of the group discussions focused on the role that patients' knowledge, attitudes, and beliefs played in medication adherence. In particular, participants felt that the lack of immediate consequences associated with missing doses was an important barrier, particularly given the asymptomatic nature of hypertension. One participant said: "I have talked to several people and they don't seem very concerned about that [effects of blood pressure]. They figure, I feel well, so why should I have to take the medication?" Another noted, "If I miss a pill for 2 days, I don't feel any different." Patients emphasized that adherence is a struggle for some because the short and long-term consequences of missed doses are not clearly apparent to the medication-taker.

A number of participants stressed that sustained adherence to medications was dependent on one's personal attitudes, and that adherence was a personal decision or lifestyle choice. One participant described his attitudes towards medication-taking in the following way:

'... Now it [adherence to blood pressure medications] has become my priority, but my lifestyle has changed considerably. Now I can get up in the morning with a focused mind. Instead of getting up with the coffee on my mind, I get up with the pill on my mind. I had to make myself go there. It didn't just happen.'

Another participant stressed that by gaining knowledge of the consequences of not taking medications his attitude changed:

'... Basically you find a way to train yourself and discipline yourself to take the medication and if you know the consequences of not taking them then of course you start to realize. For me it was [to] learn what was going to happen if I didn't take them. When I realized what would happen, it was like you make a choice as you go to the different doctors. Stroke or heart attack, which would you prefer? And so you know you don't want either one. So you're going to do what you need to do to keep from having that.'

These participants felt that knowledge about the deleterious effects of uncontrolled hypertension helped them to focus on their personal behaviors.

Some participants mentioned that patients' beliefs about the dangers of antihypertensive medication can hinder their adherence. Specifically, there were participants who expressed fears that their blood pressure medications might be addictive or harmful:

'I have friends that are taking high blood pressure medicine. A lot of them said if they had known that it was something they could not stop taking they wouldn't have started taking it. And some of them said they would hold back because it [the high blood pressure medicine] was doing damage to their bodies.'

In these cases, patients may be making decisions without all the facts, further jeopardizing their health. When asked about strategies to address barriers related to knowledge, attitudes, and beliefs, participants stressed education and re-education by health care providers, as well as referral to follow-up educational programs. One participant said,

'It [sending patients to an educational program] probably would [work]. Some folks, the more you remind them of it, then they will take it [their high blood pressure medications]. If you tell them this month and maybe in the next two or three months, maybe they will take it.'

Another participant noted that increasing patients' knowledge would give them the confidence necessary to develop a goal-setting mentality, noting:

'I would think it makes a person more confident once he understands all that [ie what high blood pressure is, its effects, treatment for the disease, and consequences of non-adherence]. He would be willing to set goals. The goal would be to set your blood pressure as [close as] possible to normal.'

These participants felt that more deliberate and repeated attempts to inform patients about their condition would lead them not only to better adherence in the short-term but also to better self-efficacy and confidence in managing their health in the long-term.

Other barriers to adherence that patients stressed were medication side-effects and/or the physical discomforts associated with swallowing pills. Participants commented that these features made them reluctant to take their medications regularly and contributed to intentional non-adherence. One participant said, "There are so many side effects to many of the medications that you don't want to even take them." Another agreed, saying, "When you read the side effects on medication and you see that there are 9 things that might affect you, you don't want to take it for the one thing it is prescribed for." Patients admitted that they dealt with medication side effects by self-regulating their pill-taking. For example, some intentionally do not take their medications on days when they want to be free from worries about frequent urination or sexual performance. One participant said:

'... [On] alternate days I take one or two of my medications. Coming here today [to the focus group session] I was suppose to take two, but I said no I'll be running to the bathroom too much so I'll take one. I didn't know how long the meeting was going to last so when I go back home I'll take the other one. I didn't want to be running to the bathroom.'

A male participant stated:

'As you put it earlier about the libido thing. Oh God! You mean I'll be less if I take this medicine? I'm not ready to be less. So maybe I won't take it everyday. I'll just take it every other day or maybe I won't take it at all because I still want to perform. For a male I think that would be a major major thing. Even if you're not performing

that much, you still want to think you can if you wanted to. I think that would be a big handicap as far as not willingly taking the medicine.’

When asked about strategies to overcome non-adherence because of side effects, participants stressed the importance of discussing medication side effects with their health care provider to come up with an acceptable treatment plan.

Family, Friends, and Community—Interpersonal relationships, specifically, support from family and friends, and peer or community groups, were identified as important contributors to adherence, and participants thought that this was particularly important for patients who live alone. Several participants felt that regular meetings with other groups of seniors, such as church members, exercise partners, or friends, can be an effective way to remember to take medications. One participant described her experience, saying:

‘Every morning at 6:45 we take our medicine before we go walking. It helps us because we set a time to take our medicine before we go walking. Nobody forgets it, we all take it. I think it's good to have a buddy to walk with.’

In addition to the benefits of walking, other benefits of this type of support system include the built-in reminders to take one's medicine as well as the normalization of the behavior. If everyone in the group is behaving a certain way, there is less stigma associated with the behavior. The more “normal” a behavior is considered, the more likely it will be continued.

While some participants appeared very enthusiastic about the role that support groups could play in medication adherence, not all agreed that increased social support would be an effective intervention strategy for increasing adherence. For example, one participant stressed that his adherence to medications was based on a personal decision he makes to take care of his health, and that increased social support would not necessarily help people like him. He said, “I look at it more personally you know. I could be in here with 50 of you and if I know I need to take my blood pressure medicine today, I just have to take it.” This participant felt that his ability to take the medicine outweighed his need for social support.

Health care system—Participants spent a substantial amount of time discussing their interactions with their health care providers, and how this may or may not affect their adherence. Overall, there was general agreement that open communication with their doctor was an important facilitator of adherence. One participant said, “... I think if you have a friendship with your doctor [it] would help [with adherence]. You would be more free to talk to him or her if you have a problem.”

When asked whether they thought that doctors asking specific questions about medication-taking behavior might affect their adherence, participants were generally positive. One participant said, “I think a person would be more aware of taking their medication if they were quizzed about it.” Another said, “Just the fact of what he (the doctor) was asking, I was getting embarrassed. I wasn't going to lie to him...He would say, ‘OK kid, you've got to get this down.’” Another pointed out that doctors and patients should work together, saying, “I think a doctor has some responsibility and a patient has some responsibility.”

When participants were asked whether they thought more frequent visits to the doctor would make a difference in increasing adherence, responses were mixed. One participant said, “I think it [seeing the doctor more frequently] would help. People are different and if they see their doctor more frequently they would do what they are supposed to do to help themselves be more healthy.” Despite numerous comments about the importance of patients’ interactions with their health care providers, some participants felt strongly that the responsibility for medication adherence belongs to the patient, not the doctor. One participant said:

‘I see my doctor every month and have my blood work done, but I don’t stop taking my medicine because I see him once a month. Some people look at it differently and say, ‘If I could see my doctor more regularly I would take my medicine more often.’ That is not helping you. You have to look out for the benefit of your health instead of saying if I can’t see my doctor more often I won’t take my medicine.’

Patients commented that having an established relationship with their doctor was important for maintaining open lines of communication about the medication challenges they were facing, and for coming up with a strategy to help to overcome these challenges.

Environmental and policy level—The cost and coverage of medications were identified as important policy-level barriers to adherence; these themes were stressed by participants across race and adherence groups. Several participants admitted that because of the high cost of medications they often had to skip, reduce doses, or use pill-cutting strategies. One participant note, “I have to stretch it [my blood pressure medications]. I take it one day and sometimes I skip a day.” Another participant said:

‘Some people are on a fixed income and don’t have enough money to buy food or pay their rent and pay for their medicine. That makes a big difference. If you don’t have the money, you can’t get the medicine unless there is a program to help you... Some will go without their medicine because they can’t afford to buy them.’

Participants also commented that they found they could not afford medications when they were in the “Medicare Donut Hole” (i.e., the prescription coverage gap which occurs after a Medicare beneficiary surpasses the coverage limit and before expenses reach the catastrophic coverage threshold). Participant-generated strategies for dealing with the high cost and lack of coverage of prescription medications included working with healthcare providers to obtain free samples and/or prescriptions for generic drugs. One participant said, “When I know I’m going in the donut hole, I go to my Internist and my Cardiologist and one of them are able to give me samples.”

While not all participants agreed that convenient access to pharmacies impacted their adherence, some noted that this issue was potentially important for patients who depend on friends and others to pick up or bring them their medications. One participant said, “I have friends that depend on friends and other people. If the pharmacy was closer, it would be convenient for everybody.” Participants agreed that for patients with no independent means of transportation, convenient access to pharmacies may be particularly important.

Differences by Race and Adherence Group

On some topics, participant responses differed by race and adherence group. For example, despite general agreement among high adherers regarding the importance of medication-taking regimens, low adherers – while they admitted that a regimen was helpful – tended to express less enthusiasm about routines. One low adherer said, “...I try to put myself on a routine which I don't like. I don't like taking medication at all.” Another said, “I don't like any routine you know, where I have to be somewhere at a certain time. I live with it because its necessary, but I don't like it.”

While 100% of black participants agreed that their relationship and ability to communicate with one's health care provider is an important contributor to adherence, a lesser proportion (82%) of white participants believed that improving provider communication could increase adherence. . For example, a white participant commented, “There was a time when I didn't take my medication. And it wasn't because I didn't have a [good] relationship with her as a healthcare provider.” This participant went on to express that, for her, adherence was more closely linked to personal knowledge and commitment to behavior change than her relationship with her healthcare provider.

In all groups, participants felt that the cost of medications was considered an important barrier – however, among groups comprised of black participants, there was more elaboration on cost issues, including the challenge of regularly purchasing expensive medications on a fixed income and the importance of intervention strategies which address the high cost of medications. For example, one participant noted, “They [some patients] get \$600 or \$700 a month [in fixed income] and their pills are \$200 or \$300 a month. They just can't do it.”

Discussion

We explored patient perspectives on impediments and strategies to improve medication adherence among older adults with hypertension. Participants provided feedback on barriers to and facilitators of adherence at the individual, community/family, health care system, and environmental/policy levels and discussed strategies which would be effective and acceptable for improving adherence in older populations. The current study extends upon previously published qualitative articles by documenting adherence perspectives among a population of older adults with health insurance and access to care. Patient perspectives on barriers to adherence from this population were consistent with those collected in other studies on varying populations. As in previous studies, patients highlighted the importance of social support, patients' knowledge, attitudes and beliefs, patient-provider interactions, and medication cost. Patient responses highlighted the diverse nature of barriers to adherence and the need for interventions which are both multi-faceted and tailored (Ogedegbe et al., 2004; Lewis LM et al., 2010; Tsiantou V et al., 2010).

An area of particular emphasis in our focus group discussions was the role that components of the health care system can play in addressing medication adherence. Because knowledge, attitudes, and beliefs were consistent themes among participants, hospitals, clinics and health care providers are ideally suited to deliver interventions tailored to the adherence

barriers of the individual patient (Pladevall et al., 2010). The majority (88%) of participants in our study felt that communication with health care providers can affect adherence, and 64% felt that having a positive relationship with your health care provider could contribute to better adherence. The patient-physician encounter has consistently been identified as an ideal avenue for delivery of interventions to improve adherence behavior (Lewis LM et al., 2010; Harmon et al., 2006) because of one-on-one opportunities for discussing adherence during the initial diagnosis of disease, while physicians are reviewing existing or new medicine prescriptions, and at follow-up visits. Physicians and other healthcare providers are well-positioned to use assessment tools to identify patients at risk for low adherence and to implement strategies to address the specific barriers that each patient faces. Such strategies could include changing medications to avoid side-effect issues, providing generics to address cost barriers, simplifying medication regimens, and emphasizing pill-taking routines to address issues of forgetfulness (Harmon et al., 2006; Williams et al., 2005). Providers could also screen patients for available social support and knowledge of hypertension and encourage them to use available systems to help them with adherence (Lewis LM et al., 2010) or connect them to appropriate external resources such as educational programs and support groups. Because patients and providers share the responsibility in optimizing adherence and the response to therapeutic interventions, providers can initiate interventions that can be followed at home by patients. However, while providers such as physicians are an ideal group to target for the delivery of interventions, their contact with patients can be sporadic, and the time allowed for counseling during a clinic visit is often limited. Thus, adherence intervention strategies may be more effective, cost effective, and feasible when physicians partner with pharmacists, nurses, health coaches, or mid-level providers, who hold special expertise in counseling or behavioral interventions and can interface with patients on a regular basis to educate, counsel, or discuss patient concerns (Cutrona et al., 2010). Future studies comparing the efficacy and cost-effectiveness of interventions delivered by physicians vs. those delivered by alternate health care providers would add important data to the literature.

Both in the current study and in previous qualitative studies (Ogedegbe et al., 2004; Tsiantou V et al., 2010), participants emphasized memory, forgetfulness, or unintentional skipping of doses as important reasons for non-adherence. Once identified, patients facing these barriers would benefit most from interventions that emphasize the initiation of medication regimens and reminder protocols. Healthcare providers and staff could facilitate the establishment and continuation of reminder phone calls from family members, pharmacists, nurses, or health coaches based on patient need and preference. They could also encourage the distribution of pillboxes and introduce or provide support for the integration of medication-taking into daily routines such as with meals or before/after exercise groups. Of note, in our sample of older adults, participants were generally more enthusiastic about strategies which involved reminder phone calls originating from family or friends rather than pharmacists or pharmacy audio-recordings. There was, however, general agreement that pharmacy phone calls could be effective for improving adherence in patients who are elderly and who have memory problems. This highlights the fact that adherence interventions have greater opportunity for success when their strategies are tailored to the individual barriers which patients face.

As in previous studies, participants in our study emphasized that non-adherence often stems from patients' lack of knowledge about hypertension, attitudes towards health maintenance behaviors, or beliefs about hypertension and antihypertensive medications (Tsiantou V et al., 2010; Lewis LM et al., 2010; Ogedegbe et al., 2004). For example, participants noted that they stopped taking their medications when they felt they no longer suffered from symptoms and/or felt their blood pressure was under control. Participants also referred to beliefs that blood pressure medications can be dangerous or addictive – a theme that has been emphasized in previously conducted interviews (Ogedegbe et al., 2004). Participants stressed that multi-disciplinary educational programs which emphasize the causes, consequences, and management of hypertension can play an integral role in increasing patients' knowledge, changing their attitudes, and consequently increasing their motivation to adhere to established guidelines for blood pressure control. By referring patients to educational programs on chronic disease management, providers could make a significant impact on patient adherence.

Despite the fact that the seniors in this study had health insurance and access to medical care, participants discussed medication cost as an important contributor to non-adherence. Recent findings that increased medication adherence among Medicare Beneficiaries results in overall cost reductions to the health care delivery system may provide impetus for future programs designed to help offset patient co-pay costs (Congressional Budget Office 2012). However, until co-pay offset programs are fully implemented, health care providers can improve cost-related low adherence by inquiring about cost barriers and switching patients to generic brand medications.

Strengths and Limitations

The use of focus groups to explore patient perspectives on adherence using open-ended questions and probes encourages expressions of emotion and differences of opinion within a group setting. The resulting discussion and interaction provide richness and depth to the data collected that are not available from quantitative studies. Also, the choice of study population (insured older adults) makes results widely generalizable, given that almost all US adults 65 have health insurance through Medicare (Egan, Zhao, & Axon, 2010; Cohen R & Martinez, 2012). The diversity of race and adherence level in the sample allowed for an initial exploration of differences by group, however, a higher rate of no-shows among low adherers limited the sample size in low adherence groups. Future studies with more than one group for each strata would also be helpful in confirming the preliminary results reported here. Finally, this study was not designed to investigate the impact of depression and mental quality of life, which are important correlates of medication adherence (DiMatteo, Lepper, & Croghan, 2000; Holt et al, 2010; Krousel-Wood et al, 2010) Future studies including higher proportions of patients with depressive symptoms and emphasizing anonymity and probing around sensitive issues would add important information on acceptable and effective strategies for addressing psychosocial barriers to adherence among older adults.

Conclusion

In conclusion, this study documents the perspectives of insured older adults with hypertension regarding perceived barriers to and facilitators of medication adherence. Participants provided feedback on barriers that could be effectively addressed by carefully designed intervention strategies. Health care providers can play an important role in identifying patients at risk for low adherence and implementing strategies designed to address the specific barriers that each patient faces. Future studies designed to test interventions tailored to the needs of individual patients and delivered through the health care system would add important data to the literature.

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Table 1
Characteristics of CoSMO Focus Group Participants (N=25)*

	%
White, %	68
Low Medication Adherence (MMAS-8 < 6)	40
Age	
65 to <70	12
70 to <75	54
75 to 80	34
Women, %	64
Marital Status	
Married	56
Separated/Divorced	8
Widowed	32
Never Married	4
3+ classes of antihypertensive medication	43

MMAS-8 – Morisky Medication Adherence Scale-8

* Data for Table 1 collected as part of the Cohort Study of Medication Adherence in Older Adults (CoSMO)

Table 2
Participant-identified Factors Associated with Antihypertensive Medication Adherence

<p><i>Patient (Individual Level)</i></p> <hr/> <p>Memory/Forgetfulness</p> <p>Knowledge of hypertension</p> <p>Asymptomatic nature of disease</p> <p>Unaware of the long-term consequences of non-adherence</p> <p>Personal attitudes and beliefs</p> <p>“Goal-setting” mentality</p> <p>Prioritization of healthy behaviors</p> <p>Denial of seriousness of hypertension</p> <p>Medication-taking inconveniences</p> <p>Side effects</p> <p>Difficulty swallowing pills</p> <hr/> <p><i>Community and Family</i></p> <hr/> <p>Social Support</p> <p>Phone calls from family/friends</p> <p>Support groups</p> <hr/> <p><i>Health Care System</i></p> <hr/> <p>Health Care Providers</p> <p>Relationship / interaction with provider</p> <p>Adherence assessments</p> <p>Frequency of doctor visits</p> <hr/> <p><i>Environmental and Policy</i></p> <hr/> <p>Cost of Medications</p> <p>Pharmacy Convenience</p>
