Tool to improve patient-provider interactions in adult primary care

Randomized controlled pilot study

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Abstract

Objective To assess whether an intervention to help patients prioritize goals for their visit would improve patient-provider communication and clinical outcomes.

Design Randomized controlled pilot study.

Setting Primary care clinic.

Participants There were 120 adult hypertensive patients enrolled.

Intervention Patients were randomized to receive either usual care or a previsit patient activation card developed through a series of focus groups that prompted patients to articulate their needs and set priorities for their clinic visit. Encounters were audiorecorded, transcribed, and assessed using duplicate ratings of patient activation and decision making.

Main outcome measures The primary outcome was change in medication adherence as measured by pill count at 4 and 12 weeks after the initial visit. Secondary outcomes evaluated patient-provider interaction quality (patient satisfaction, patient activation, shared decision making, patient trust, and physicians' perceived difficulty of the encounter), functional status, and blood pressure control.

Results Of the 120 enrolled patients, 106 completed the baseline visit (mean age of 66 years, 53% women, 57% Black, 36% White). Participants had multiple comorbidities (median number of medications = 8). During the visit, there was greater patient activation in the intervention arm than in the control arm (4.4 vs 3.8, $P = .047$; ratings were based on a scale from 1 to 10). However, after the visit there were no differences in medication adherence (4 weeks: 45.8% vs 49.5%; 12 weeks: 49.4% vs 51.1%), blood pressure control (4 weeks: 133/78 mm Hg vs 131/77 mm Hg; 12 weeks: 129/77 mm Hg vs 129/76 mm Hg), or encounter satisfaction (78.6% vs 73.8% fully satisfied; $P = .63$). There were also no differences in shared decision making, patients' trust, or perceived difficulty of the encounter.

Conclusion A single previsit tool designed to prompt patients to set a prioritized agenda improved patient activation during the visit, but did not affect the quality of the interaction or postvisit patient-centred outcomes.

Editor's key points

- A single, previsit tool designed to prompt patients to assert a prioritized agenda slightly improved patient activation during the visit, but did not affect other patient-centred outcomes.
- Simple, patient-targeted tools for improving agenda setting and patient-provider interactions, while able to slightly increase patient activation, are insufficient to make a clinically significant difference on relevant patient outcomes.
- More robust patient and physician interventions could optimize communication in ways that improve outcomes.

Points de repère du rédacteur

- Un outil unique, préalable à une visite, conçu pour inciter les patients à établir la priorité de leurs objectifs, a légèrement amélioré la participation des patients durant la visite, mais n'a pas eu d'effets sur les autres résultats axés sur le patient.
- Des outils simples et axés sur le patient pour améliorer l'établissement des priorités et les interactions entre le patient et le médecin, bien que susceptibles d'augmenter légèrement la participation du patient, ne suffisent pas pour faire une différence cliniquement significative dans les résultats pertinents pour les patients.
- Des interventions plus rigoureuses de la part des patients et des médecins pourraient optimiser la communication de manière à améliorer les résultats.

Un outil pour améliorer les interactions entre les patients adultes et les médecins en soins primaires

Étude expérimentale randomisée contrôlée

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Résumé

Objectif Évaluer si une intervention visant à aider les patients à prioriser les objectifs de leur visite améliorerait la communication patient-médecin et les résultats cliniques.

Type d'étude Une étude expérimentale randomisée contrôlée.

Contexte Une clinique de soins primaires.

Participants L'étude a recruté 120 patients adultes souffrant d'hypertension.

Intervention Les patients ont été choisis aléatoirement pour recevoir soit leurs soins habituels, soit une fiche incitative avant leur visite, élaborée à la suite d'une série de groupes de discussion, les invitant à formuler leurs besoins et à établir leurs priorités pour leur visite clinique. Les conversations durant la visite étaient enregistrées, transcrites et évaluées selon des notes mesurant à la fois la participation et la prise de décisions des patients.

Principaux paramètres à l'étude Le principal résultat recherché était un changement dans la conformité à la médication en fonction du décompte des médicaments aux semaines 4 et 12 après la visite initiale. Au nombre des résultats secondaires évalués figuraient la qualité de l'interaction entre le patient et le médecin (satisfaction et participation du patient, prise de décisions conjointe, confiance du patient et impression du médecin quant à la difficulté de la rencontre), l'état fonctionnel et le contrôle de la pression artérielle.

Résultats Parmi les 120 patients inscrits, 106 étaient présents lors de la visite initiale (âge moyen de 66 ans, 53 % de femmes, 57 % de race noire, 36 % de race blanche). Les participants avaient des comorbidités multiples (nombre moyen de médicaments = 8). Durant la visite, la participation était plus grande dans le groupe de l'intervention que dans le groupe témoin (4,4 c. 3,8, p = ,047; les cotes se fondaient sur une échelle de 1 à 10). Toutefois, après la visite, il n'y a eu aucune différence dans la conformité à la médication (semaine 4 : 45,4 c. 49,8 %; semaine 12 : 48,4 c. 52,3 %), le contrôle de la pression artérielle (semaine 4 : 133/78 c. 131/77 mm Hg; semaine 12 : 129/77 c. 129/76 mm Hg) ou la satisfaction concernant la visite (78,6 c. 73,8 % entièrement satisfaits; p = ,63). Il n'y avait pas non plus de différence dans la prise de décisions conjointe, la confiance du patient ou la difficulté perçue de la rencontre.

Conclusion Un outil à usage unique, conçu pour inciter les patients à établir, avant leur visite, la priorité de leurs objectifs, a amélioré la participation des patients durant la visite, mais n'a pas influencé la qualité de l'interaction ni les résultats centrés sur le patient après la visite.

Patient-provider communication is a complex and challenging interaction, especially if patients have multiple chronic conditions.[1] Communication quality affects patient satisfaction, trust, adherence to medications, and potentially other clinical outcomes.[2-6] Some interventions have been shown to improve physicians' communication skills in primary care, although most have not been robust enough to sustain skills in a meaningful way.[7]

In cancer care, lists of question prompts and patient concern inventories improve the quality of decision-making conversations.[8-10] However, it is unproven whether it is possible to enhance primary care management of chronic illness by improving the quality of the patient-provider interaction. One systematic review of 35 trials with the aim of improving patient-provider communication found a range of approaches that could change interactions and that showed some promise for improving patient health.[8] However, health outcomes were often subjective, and only 4 trials with health outcomes met predefined quality criteria.

Patient activation and engagement is an emerging area of research. Patients who are more activated and engaged in self-care have better outcomes, including better blood pressure control.[10-14] Providers with more positive beliefs about patients' roles in self-management have more activated patients.[15]

Studies on how to activate patients in primary care are few. In one study, patients in community mental health centres who were randomized to a 4-hour group education seminar encouraging active participation in their mental health treatment had improved activation and higher satisfaction, but no change in mental health outcomes.[16] Senior centre attendees who watched a video encouraging self-management of chronic conditions were more likely to report being more activated for self-care at 6 months and to exhibit healthier behaviour.[17] Interventions that involved intensive interaction with an interviewer, such as reflecting on past decisions and doing exercises to help participants develop and prioritize a list of questions for their providers, increased patient activation, but researchers collected no health outcomes.[18,19] In another trial, patients were randomized to a computer-based activation intervention to help prepare for their clinic visit. While participants were more likely to disclose stressors during the visit, they were not more activated than controls.[20]

We conducted a randomized controlled pilot test to assess the efficacy of a patient activation card that prompted patients to reflect on their goals and expectations for the day, and to define a prioritized agenda in writing. Our goal was to develop and test an intervention that was feasible for use in ambulatory care settings. We hypothesized that explicit prompting of patients to reflect on, articulate, and prioritize their agenda would help improve the visit by activating their involvement in the interaction. In addition to assessing outcomes such as trust, satisfaction, and activation, we assessed whether activation led to better medication adherence and hypertension control.[21] In particular, we hypothesized that enhanced interaction and activation would improve adherence to antihypertensive medications and would result in improved blood pressure control.[22]

Methods

Study design

We conducted a randomized controlled trial that compared usual care with a previsit patient activation card that prompted patients to reflect on, articulate, and prioritize their needs for the visit that day. This protocol was approved by the Walter Reed Army Medical Center Institutional Review Board and is registered on **https://clinicaltrials.gov** (NCT01606930). Our report adheres to the CONSORT (Consolidated Standards of Reporting Trials) statement.[23]

Participants

Eligible participants included all adult patients visiting a primary care clinic who had an established patient-provider relationship (defined as more than 2 visits in the preceding year) with 1 of 11 participating clinicians, spoke English, and had at least 3 comorbid medical conditions (one of which was hypertension). Patients were ineligible if they were incapable of completing surveys because of cognitive impairment, as assessed by chart review and by discussion with the patient's caretaker. Patients were not excluded for lack of English-language proficiency.

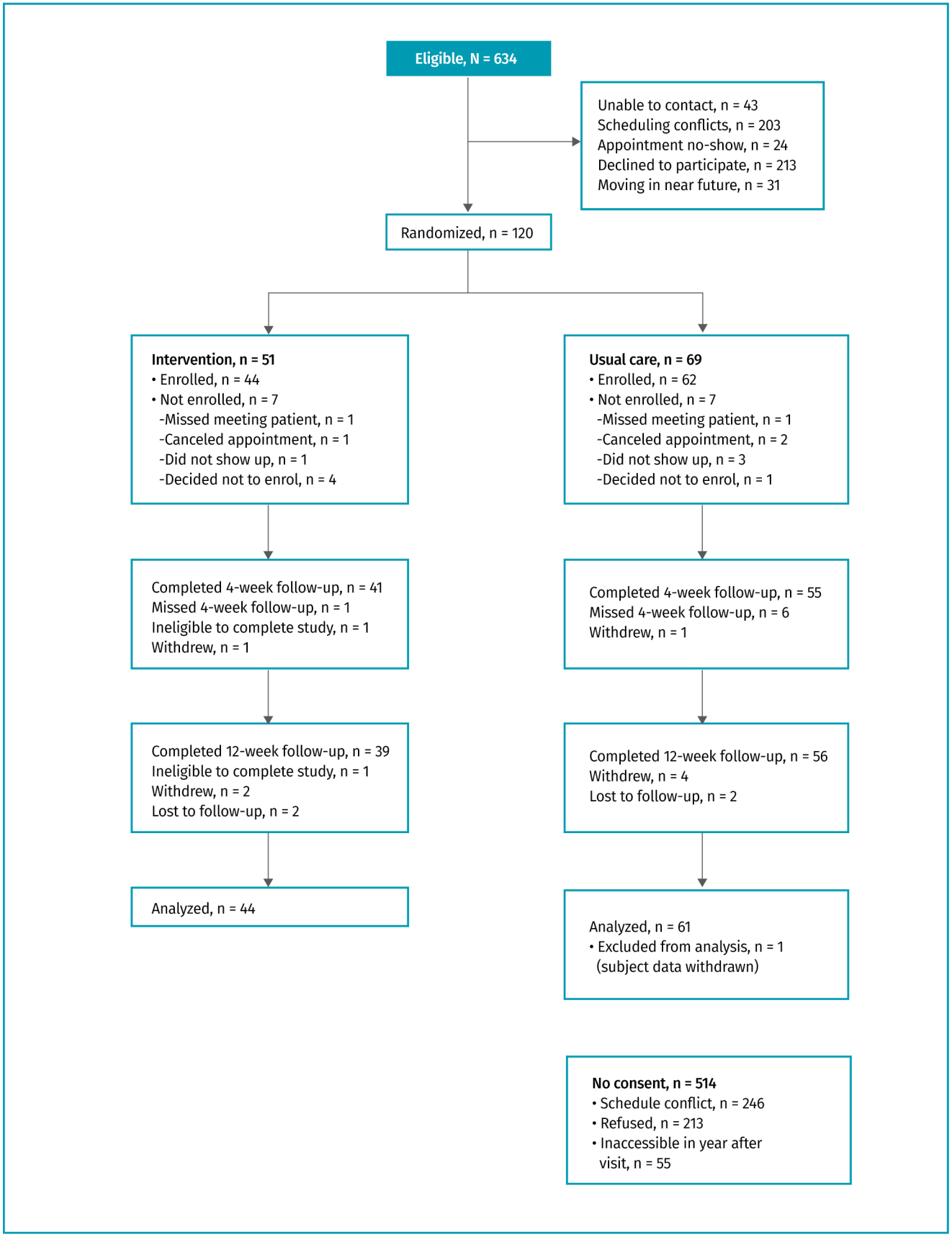
Between October 2011 and May 2012, 634 eligible patients were screened and 120 were randomized (**Figure 1**). Of excluded patients, 246 had scheduling conflicts, 213 did not consent, and 55 were excluded because they were not expected to be in the local area for at least 1 year. Those who did not consent to the trial were similar to enrolled participants with respect to age and sex.

We randomized the 120 participants to 1 of 2 arms using a random numbers table; numbers were placed in numbered, opaque envelopes that were opened by our study coordinator after patients agreed to participate. After participants were enrolled, they completed a series of surveys, and then had 3 serial blood pressure measurements taken.

Intervention development and description

Before this study, we developed a patient activation card using a series of 4 focus groups of physicians (n = 11) and patients (n = 46) from this clinic. Focus groups were audiorecorded and recordings were transcribed. The groups were led by a senior investigator with experience in focus groups (J.H.). The senior investigator used a script approved by the Institutional Review Board to provide consistency across groups. Participants were

Figure 1. Participant enrolment flowchart



told that the purpose of the focus groups was to "help us develop some ways of teaching and some materials for teaching that will build better communication." In addition, focus groups were given a range of possible interventions (eg, coaching, videotapes, letters) and were asked to develop a simple intervention to prime patients for activation during their visit. Focus groups were conducted until data saturation occurred. The final instrument (**Figure 2**) was designed to prompt patients to reflect on their specific goals for the medical encounter, prioritize those goals, and engage in a discussion with their physician centred on their concerns and expectations. This card was given to patients at least 30 minutes before their encounter, with assistance and coaching available as needed. Patients were encouraged by study personnel to bring this form to their visit and use it to engage their clinician in discussion about their health needs.

All participating physicians received 1 hour of training on the importance of addressing patient concerns and expectations. In addition, all participating physicians were briefed on the study's purpose during the consent process.

Measurements

Blood pressure. We measured blood pressure of participants who had been sitting for 5 minutes before taking the first of the 3 measurements, each taken 5 minutes apart. When then used the average of these measurements. Measurements were taken at baseline and at 4 and 12 weeks thereafter.

Surveys. We surveyed patients before the visit, immediately after the visit, and at 4 and 12 weeks after the visit. Previsit surveys assessed comorbidities, functional status (using the Medical Outcomes Study 6-Item Short Form Health Survey),[24] stress, pain severity, medication adherence (using the Morisky Medication Adherence Scale and pill count),[25] and health literacy.[26] Postvisit surveys included questionnaires that measured trust in the physician[27] and visit satisfaction.[28] All of these tools have validity evidence, are sensitive to change, and are widely used. Patient surveys at 4 and 12 weeks assessed functional status, stress, pain, trust, and adherence.

Adherence to antihypertensive medications. All participants met with a clinical research pharmacist for adherence assessments of their antihypertensive regimens at baseline and at 4- and 12-weeks' follow-up. Pill counts

Figure 2. Intervention tool

Thank you for participating in this study.

We hope to improve how patients and doctors talk to each other. Sometimes, patients are not active in discussions. Some doctors don't bring their patients into active discussion. Patients may want more information or options.

Your doctor will welcome your upfront concerns.

* * Share your thoughts and feelings with your doctor * *

The most important concern I want to discuss today:

_____

_____

Because:

_____

_____

_____

My 3 most important questions for my doctor are:

1)_____

2)_____

3)_____

By the time I leave today, I hope this happens:

_____

_____

SEE OTHER SIDE FOR EXAMPLES OF IMPORTANT CONCERNS

These are some COMMON PATIENT CONCERNS
Please check any concerns to discuss with your doctor.

• MEDICATIONS:
- ❑ Any changes caused by your medications
- ❑ Questions about your medications
- ❑ Refills

• DECISIONS ABOUT:
- ❑ Surgery
- ❑ A procedure
- ❑ A test

• INFORMATION YOU NEED from your doctor:
- ❑ Test results
- ❑ What your symptoms mean
- ❑ Your prognosis
- ❑ Your treatment options

• INFORMATION TO TELL your doctor:
- ❑ Symptoms
- ❑ Over-the-counter medications
- ❑ Vitamins, herbs, or other supplements
- ❑ Other health care providers you see (doctors, therapists, etc)

• OTHER THINGS TO DISCUSS:
- ❑ Symptoms of any kind (acute or chronic)
- ❑ Tobacco, drug, or alcohol use
- ❑ Personal problems (sexual health, depression, grief, trauma, etc)
- ❑ Worries
- ❑ Advice

SEE OTHER SIDE TO WRITE DOWN YOUR MOST IMPORTANT CONCERNS

were calculated as the number of pills taken (the number of pills dispensed minus the number of pills counted). The number of pills expected to have been taken was calculated by multiplying the daily dose (half, 1, or 2 tablets) by the number of days since the date dispensed.[29]

Clinician surveys. Clinicians completed the Physician Belief Scale[30] and the Freiburg Mindfulness Inventory.[31] Immediately after each participant's visit, physicians rated the difficulty of the encounter using the Difficult Doctor-Patient Relationship Questionnaire.[32]

Audiorecording coding and measurement of patient activation. Audiorecordings from these encounters were transcribed and then coded by 3 coders who were blinded to the participant study group; the coders assessed the degree of patient activation using the Roter Interaction Analysis System, a validated system that assigns utterances of patients and providers into 26 mutually exclusive domains.[33] On the basis of these codes, we defined patient activation as a composite score (1 = low, 10 = high) of ratings in 6 dimensions: relationship symmetry, control of session by the patient, patients' questions, directedness and confidence in decision making, specific information giving, and patient focus as determined by independent duplicate coding blinded to allocation arm. Each encounter was double coded, with high agreement between coders (Spearman rank correlation = 0.83). Disagreements were discussed, and a final code was based on consensus among the 3 coders.

Outcomes

The primary outcome variable was change in medication adherence as measured by a pill count at 4 and 12 weeks. While the goal of the intervention was to improve the visit interaction, we chose to evaluate the outcome of improved interaction by its effect on a process measure (medication adherence) known to influence patient outcomes. Secondary outcomes included constructs sensitive to the quality of the interaction (patient satisfaction, trust in one's physician, physician rating of the encounter as "difficult," and patient activation). Other secondary outcomes included functional status and change in blood pressure at 4 and 12 weeks.

Statistical analysis

The sample size determination (N = 120) for this study was based on a 25% increase in baseline adherence (from 45%), with an α of 0.05 and a β of 0.80, yielding 53 patients per group, with an additional 7 participants per group for expected attrition. This number was based on prior literature on adherence responsiveness to interventions[34] coupled with previous findings that a smaller increase in adherence would have a smaller effect on blood pressure control.[35] For those lost to follow-up, multiple analyses were performed to assess the sensitivity of our findings in the absence of these data: we tried excluding the data or assuming either a zero change or an average change. A two-tailed χ^2 analysis and a *t* test or the Mann-Whitney *U* test were used for univariate comparisons of categorical and continuous variables, respectively. Multivariate repeat measure models assessing the effect of our intervention on primary and secondary outcomes (controlling for psychological variables and baseline differences with $P < .20$) used logistic and linear regression with adjustment for clustering by provider. Analysis was by intention to treat. A *P* value of .05 or less from a 2-tailed test was considered to indicate statistical significance. All analyses were performed with SPSS, version 22.0.

Results

Characteristics of patients

We identified 634 potentially eligible participants, of whom 120 agreed to participate. Reasons for nonparticipation are in **Figure 1**. Of the 120 randomized participants, 106 completed the baseline visit (1 then asked to withdraw), 96 completed the 4-week follow-up, and 95 completed the 12-week follow-up. There were 56 women and 49 men who completed the baseline visit. Overall, the cohort was elderly (mean age of 66), mostly Black (57%) or White (36%), and mostly married (73%). Participants had substantial illness burden (**Table 1**; median of 8 medications), good health literacy (only 8% needed help more than "rarely"), but poor adherence (47% average adherence with hypertensive medications, by pill count). There was general balance in baseline factors between the groups, although the intervention arm trended toward a higher proportion of White people, higher health literacy and adherence, higher functional status, less diabetes, and less pain.

Characteristics of physicians

There were 11 participating board-certified staff general internists (mean age 47; 5 White; 6 female) who were experienced (mean time in practice = 18 years) and psychosocially oriented (based on above average scores on mindfulness [37.5] and physicians' psychosocial beliefs [72.1]).

Primary outcome

There was no difference in medication adherence between intervention and control participants at 4 weeks (45.8% vs 49.5%), or at 12 weeks (49.4% vs 51.1%), or change in adherence over time (**Table 2**). There was also no difference in blood pressure change or blood pressure control (4 weeks: 133/78 mm Hg vs 131/77 mm Hg; 12 weeks: 129/77 mm Hg vs 129/76 mm Hg).

Secondary outcomes

Immediately after the visit, there was no difference in patient satisfaction (78.6% vs 73.8% fully satisfied; $P = .63$). There were also no differences in the degree

Table 1. Baseline characteristics of 105 consecutive consenting participants with multiple chronic conditions presenting for periodic visits

VARIABLE	INTERVENTION		*P* VALUE
	PATIENT ACTIVATION CARD (n = 44)	USUAL CARE (n = 61)	
Age, y	65.6	66.5	.58
Sex, % female	52.3	54.1	.85
Ethnicity, %			.64
• Black	50.0	62.3	
• White	43.8	29.5	
• Hispanic	2.1	3.3	
• Other	4.1	4.9	
Marital status, %			.70
• Married	70.2	76.1	
• Single	2.1	1.5	
• Divorced	6.4	8.9	
• Widowed	21.3	13.5	
Systolic blood pressure, mm Hg*	139.0	136.0	.35
Diastolic blood pressure, mm Hg*	81.5	80.2	.49
Hypercholesterolemia, %†	40.9	42.6	.86
Arthritis, %†	50.0	57.4	.58
Diabetes, %†	27.3	41.0	.21
Heart disease (CAD or CHF), %†	9.1	13.1	.76
Depression or anxiety disorder, %†	13.6	19.7	.58
COPD, %†	9.1	6.6	.91
CKD, %†	11.4	14.8	.83
Current pain level‡	2.2	3.1	.13
Health literacy, % never or rarely need help§	97.7	88.5	.05
Median no. of medications	7	8	
Adherence, %‖	51.7	42.8	.10
Recent stress, %	41.9	43.3	.88
Patient preference for shared decision making, %	55.8	52.5	.74
Functional status, score¶	24.2	21.9	.03

CAD—coronary artery disease, CHF—chronic heart failure, CKD—chronic kidney disease, COPD—chronic obstructive pulmonary disease, VAS—visual analog scale.
*Blood pressure levels are an average of 3 measurements taken while patient is seated and after 5 minutes of rest.
†Data are from self-rated medical history.
‡Pain levels are based on scores from a 10-point VAS.
§This is a self-reported question about how often a patient needs help when reading instructions, pamphlets, or other written material from doctors or pharmacists.
‖Adherence is mean percentage based on pill count.
¶Functional status is assessed using the Medical Outcomes Study 6-Item Short Form Health Survey.

of shared decision making, patient trust, and physician perceived difficulty of the encounter (**Table 3**). However, ratings of patient activation from the transcribed audio-recordings found greater activation in the encounters of those receiving the activation card (4.4 vs 3.8, $P = .047$).

Discussion

In this randomized trial of hypertensive primary care patients, we showed that a previsit tool designed to activate patients to reflect on and prioritize their visit agenda improved activation of the patient during the encounter but did not translate into improved medication adherence, blood pressure control, patient satisfaction, or trust. Other dimensions of patient-provider interactions did not improve, such as the degree of shared decision making or the difficulty of the encounter as judged by the physician. This suggests that simple, patient-targeted tools for improving agenda setting and the patient-provider interaction, while able to slightly increase patient activation, are insufficient to make a clinically significant difference on relevant patient outcomes.

Table 2. Primary and secondary outcomes after 4- and 12-weeks' follow-up for patient activation card arm and usual care arm

OUTCOMES	4 WEEKS (N = 105)			12 WEEKS (N = 105)		
	PATIENT ACTIVATION CARD (n = 44)	USUAL CARE (n = 61)	*P* VALUE	PATIENT ACTIVATION CARD (n = 44)	USUAL CARE (n = 61)	*P* VALUE
Primary outcome, mean (SE)						
Adherence, %*	45.8 (29.0)	49.5 (26.1)	.51	49.4 (27.2)	51.1 (29.6)	.77
Change in secondary outcomes, mean (SE)						
Systolic blood pressure, mm Hg†	-6.04 (2.49)	-4.22 (2.08)	.57‡	-9.72 (2.85)	-6.18 (2.30)	.33‡
Diastolic blood pressure, mm Hg†	-3.25 (1.63)	-1.88 (1.48)	.54‡	-4.63 (1.37)	-2.85 (1.35)	.37‡
Trust in physician, score§	1.17 (0.58)	0.38 (0.51)	.31‡	0.62 (0.59)	1.05 (0.50)	.57‡
Functional status, score‖	0.29 (0.52)	0.87 (0.40)	.37‡	0.79 (0.61)	0.48 (0.46)	.68‡

SE—standard error.
*Adherence is mean (SE) percentage based upon pill count.
†Blood pressure levels are average (SE) of 3 measurements taken while patient is seated and after 5 minutes of rest.
‡*P* values are from an analysis of variance for between-group comparison of change in each variable after 4 and 12 weeks of follow-up.
§Changes in trust in physician scores were measured using the Primary Care Assessment Survey.
‖Changes in functional status scores were measured using the Medical Outcomes Study 6-Item Short Form Health Survey.

Table 3. Postvisit patient-centred outcomes for patient activation card arm and usual care arm

OUTCOMES	PATIENT ACTIVATION CARD (N = 51), MEAN (SD)	USUAL CARE (N = 69), MEAN (SD)	*P* VALUE*
Patient satisfaction, score†	23.8 (2.3)	23.6 (1.9)	.63
Trust in physician, score‡	33.7 (3.19)	32.2 (4.23)	.07
Degree of shared decision making, score§	4.7 (2.24)	4.3 (2.18)	.35
Doctor rating of encounter as difficult, %‖	18.6 (8)	24.6 (15)	.47
Patient activation, score¶	4.4 (1.57)	3.8 (1.53)	.047

**P* values are from between-group comparisons after doctor visit.
†Patient satisfaction was measured using a 5-point Likert scale with 5 questions ranging from *excellent* to *poor*.
‡The Primary Care Assessment Survey was used to measure trust.
§Patient perception of the degree of decision making was measured on the 20-point Reynolds Intellectual Assessment Scales Composite, ranging from 0 (doctor oriented) to 20 (patient oriented).
‖Doctor rating of encounter as difficult was measured using Difficult Doctor-Patient Relationship Questionnaire-10.
¶Patient activation is a composite score (1 = low, 10 = high) based on ratings in 6 dimensions: relationship symmetry, control of session by patient, patients' questions, directedness and confidence in decision making, specific information giving, and patient focus as determined by independent duplicate coding blinded to allocation arm.

These findings are consistent with prior studies, which have shown minimal to no effects of brief interventions to improve patient-provider interactions,[8] including 2 focused on improving hypertension control.[36,37] While there is limited evidence that better patient-provider relationships are associated with improved adherence,[2,3] optimizing those relationships requires more than a simple previsit tool. Given the complexity and bidirectional dynamic of patient-provider interactions, it seems clear that improving this interaction will require more complex interventions that involve both sides of the dyad. This will likely require interventions to develop physician communication skills, patient education on a broader scale, sociocultural enhancement of the system and process of care, as well as previsit tools tailored to the needs of patients at the point of care.

The high health literacy of this population (only 8% had low literacy, compared with 30% to 40% in other studies) could have limited the data's ability to show an effect. Low literacy has been shown to result in poor patient-provider communication[38-41] and poorer health outcomes.[42,43] However, studies suggest that health literacy and patient activation are separate constructs that have low correlation with each other,[15,44] and that patient activation predicts outcomes better than literacy.[15]

There are several strengths of this study. First, we created our tool using focus groups of physicians and patients. Second, we randomized participants. Third, we studied multiple dimensions of the interaction with both direct observation and immediate postvisit validated surveys. Finally, we looked at clinical outcomes, measured longitudinally to capture latent effects.

Limitations

This study also has several limitations. First, it was a small sample size from a single academic medical centre, using experienced clinicians who were psychosocially oriented and who had long-term relationships with their patients. It is possible that larger effects could be seen in other settings where potential for improvement in interactions is greater, for instance in less established relationships, such as in acute care, first-visit primary care, or among patients with physicians who are more biomedically oriented. Second, many patients declined to participate. It is likely that those who agreed to participate are different from those who declined (ie, they could be more activated). It is possible that our intervention would have had greater impact on patients who chose not to participate. Third, some imbalances in our baseline variables could indicate ineffective randomization and reflect our small sample size. As a result, it is possible that some of these differences could have resulted in confounding that masked any possible effects, though adjusting for imbalance did not show such effects. Fourth, we gave our control providers a 1-hour training session on addressing patient concerns. This could have reduced the study's impact, although previous studies on patient-provider communication have found that longer and more intense training is required to change provider behaviour.[36,44] Fifth, it is possible that dimensions of activation were missed in our directly observed ratings of patient-provider interactions, and could have been detected if we had used the Patient Activation Measure.[14] Finally, this was a very brief intervention focused on patients. This tool could be more effective in the context of a more complex intervention that involved acculturation and repeated use of the tool by both patients and physicians over longer periods.

Conclusion

A single previsit tool designed to prompt patients to develop a prioritized agenda slightly improved patient activation but did not affect other patient-centred outcomes. More robust patient and physician interventions are needed to optimize visit communication in ways that improve outcomes.

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Contributors

All authors contributed to the concept and design of the study; data gathering, analysis, and interpretation; and preparing the manuscript for submission.

Competing interests

None declared

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