Supplementary Online Content

Tinetti ME, Naik AD, Dindo L, et al. Association of patient priorities–aligned decision-making with patient outcomes and ambulatory health care burden among older adults with multiple chronic conditions: a nonrandomized clinical trial. *JAMA Intern Med*. Published online October 7, 2019. doi:10.1001/jamainternmed.2019.4235

This supplementary material has been provided by the authors to give readers additional information about their work.

eAppendix. Patient Priorities Care: Health Priorities Template (Example)

Current Function and Support:

80+ yrs., Resides in own home with spouse, independent with ADLs

Health trajectory (Current understanding of how health will likely change over the next few years):

"I want to just get up in the morning"

Matters most (Values):

Independence and Mobility—live in own home, be able to get up and get out

Connection with others—children, grandchildren, husband

SMART Health Outcome Goals:

1. I want to keep living in my own home, be able to get up and get dressed—back pain and dizziness makes this difficult

2. I want to be able to maintain my own home—back pain and dizziness are a current barrier to this

3. I want to continue to keep planning and cooking meals—back pain makes this difficult

Healthcare Preferences:

Helpful care: The medications, self-management tasks, clinical visits, tests, or procedures, that I think are helping me most with my health goals and I can do them without too much difficulty

1. I do bed exercises to help my back
2. I check my blood sugar once a month maybe, only once in a while
3. My eye drops are helping my Glaucoma, I want to keep seeing

Difficult or bothersome care: The medications, self-management tasks, clinical visits, tests, or procedures that don't think are helping my goals and are bothersome or too difficult for me. I would like to talk with my doctor about whether these are helping my goals. If not, can I stop them or cut back? If they are helping, is there a way to make them less bothersome or less difficult?

1. I've had too many surgeries, I have several screws in my back
2. I am getting lightheaded and I don't know if it is because of some of my medications or my diabetes

Specific ask (One Thing): The one thing about my healthcare I most want to focus on is (*fill in a health problem that you think is keeping you from achieving your health outcome goal OR the healthcare task that is most bothersome or difficult*) so that I can do (desired activity) more often or more easily.

I want less back pain and dizziness **so that I can** keep living at home and do more with my husband around the house.

Example of Patient Priorities-aligned Decision-making for this patient*

This patient has multiple conditions and medications, several of which, including blood pressure and pain medications could be causing her dizziness. Previous evaluations have been unrevealing. Trying to identify the "cause(s)" of her dizziness and completely alleviating her dizziness and pain would be extremely difficult at best and perhaps impossible given the potential direct tradeoff between symptoms of dizziness and pain. Without knowing her goals, and healthcare preferences *("I am getting lightheaded and I don't know if it is because of some of my medications or my diabetes*), her clinicians may work at cross purposes if they focus either on completely eliminating her symptoms (e.g. more pain medications which may cause more dizziness or fatigue) or attempting to manage all her conditions separately (e.g. increase antihypertensive or diabetic medications which may worsen dizziness). By focusing on the activity most important to her, evaluation and management can focus on whether she felt she was better able to do more with her husband (an initial strategy would be to have her identify a more specific desired outcome such as walking around the block daily with my husband). The Specific Ask does include asking the patient to identify a condition or treatment that they feel may be a contributing factor (this patient felt it may be some of her medications). Knowing the patient's health outcome goals, healthcare preferences, and Specific ask allows her clinicians to **Start with one thing** (e.g. reducing a medication that may be contributing to her dizziness), **Conduct serial trials** (e.g. further medication adjustments; refer to PT or prescribe gradual increased physical activity for her back given the fact she is ok with bed exercises), **Use her priorities in communication and decision-making** (e.g. *"We have reduced a few of your blood pressure medications and tried an activity program, tell me how it is going; have you been able to walk around the block*

with your husband which is what you said was most important to you?, if so, we can leave things as they are. If not, there are other things we can try"), **Collaboratively negotiate with other clinicians** (e.g. agree with cardiologist, endocrinologist, orthopedist, or pain specialist to use patient's specific outcome goals, healthcare preferences, and Specific Ask in discussing tradeoffs and deciding on diagnostic or therapeutic interventions such as reducing or changing medications or holding off on further imaging as she feels she has already had too many back procedures). These strategies provide guidance in how to get started and align care in the face of uncertainty, complexity, and tradeoffs.

* This is one example of decision-making used to illustrate the approach. It is not necessarily what occurred for this patient.

eTable 1: Tasks and Times Associated with Patient Priorities Care[a]			
Tasks	**HIT & office staff**	**Patient Priorities Facilitators[c]**	**Clinicians**
Startup & Training			
HIT	Identify patients[b]; Build & imbed priorities template & phrases (1-2 days)		
Clinician and staff training & preparation	1-hour office staff training and periodic check-ins (~ 1-hour total)	2-hour initial training; ~4-hours feedback over first 3 months	2-hour initial training; 20-minute huddles twice monthly over 10 months Total: ~ 8 hours over 12 months
Implementation			
PPC invitation visit	Schedule priorities identification visit; send EHR message to notify Priorities facilitator (5 minutes per patient)		Discuss Patient Priorities Care; answer questions; ask pt. to schedule visit with Priorities Facilitator (5 minutes per patient)
Patient health priorities identification prework[d]		Review patient's EHR; contact clinician via message if questions; notify clinician if patient declines (15 minutes per patient)	
Patient health priorities identification visit[e]		Identify pt.'s health priorities (~20-25 minutes per patient)	
Document and transmit patient priorities		Complete Priorities Template in EHR; message clinician (10 minutes per patient)	
Clinician-facilitator communication about priorities		Contact clinician by EHR, email or phone if concerns [Required for 10/163 (6% patients]	Communicate with facilitator via task if concerns [Required for 10/163 (6%) patients]
PPC activation visit / call		Prior to first post priorities identification clinician visit to update priorities and prepare patient to interact with clinicians around their priorities (5-15 minutes per patient)	
First clinician visit after patient health priorities identification	Provide Priorities Template to patient if needed prior to PCP visit (~1 minute per patient)		Review and discuss Priorities Template; align decision making with patient priorities; Document using EHR phrases; Add patient's priorities to Problem List (12-15 additional minutes per patient)
PPC cardiology referral[f]			Refer to cardiology if appropriate, including Priorities Template and patient priorities-based question [5 minutes; Occurred for 58/163 (35 %) patients over 15 months]
Primary care-cardiology			Communicate by message or phone if there are differing

communication about priorities			perspectives on plan [5-15 minutes; occurred in about 10 patients]
Ongoing patient priorities care			Review priorities with patient; provide care based on patient priorities; document changes in care using EHR phrases; Update priorities or refer to facilitator if change in health [5-10 minutes per patient for second visit. No additional visit time for PPC was required after thesecond visit.
Total time for PPC tasks for over 15 months	**Training**: 1-hour for office staff **Ongoing PPC tasks**: < 10 minutes per patient spread over all visits 1-2 days HIT time	**Training**: ~ 6 hours per facilitator **Ongoing PPC tasks**: - 25-40 minutes for priorities identification & patient activation; - 15-25 minutes for EHR review; priorities documentation and transmittal	**Training**: ~8 hours per clinician over 10 months **Ongoing PPC tasks**: 30-33 minutes per patient over first two PPC visits; no additional time after second PPC visit.

Abbreviations: APN, advance practice nurse; HIT; health information technology; MA, medical assistant; PPC, Patient Priorities Care

[a] Times reflect additional time required to carry out tasks related to PPC; times are based on interviews with the relevant staff or clinicians. Time is per patient unless stated otherwise. A total of 163 patients participated in PPC of whom 58 also received care from a cardiology participating in PPC.

[b] The HIT staff used eligibility characteristics available in the primary care practice's administrative data, to generate the list of patients cared for by each participating clinician who met eligibility criteria.

[c] The patient priorities facilitator is a member of the health care team who works with patients to help them identify their health priorities. The 2 facilitators in this pilot study included an APN and a case manager. Anyone with motivation interviewing skills can facilitate the priorities identification including MA, nurse, social worker, case manager, nurse, APN, physician's assistant, or physician.

[d] Health priorities identification is the values-based process developed to help patients identify their health priorities, that is, their health outcome goals given their healthcare preferences (the healthcare tasks they are willing and able to do to achieve their health outcome goals).

[e] The patient health priorities identification visit (with patient and facilitator) can occur on the day the clinician invites the patient to participate in PPC or can be scheduled for a separate day. If travel difficult for patient, can be done by phone or at home, although the latter is more time-consuming.

[f] Process varies whether new referral or ongoing cardiology care.

eTable 2. Baseline Comparisons of Participants Who Completed Follow-up Interview and Participants Lost to Follow-up by Group

eTable 2a Baseline Comparisons of Participants who Completed Follow-up Interview and Participants Lost to Follow-up by Group: PPC group

Demographics	Follow Up Interview Completed (N=145) Mean (SD) or N(%)	No Follow Up Interview (N=18) Mean (SD) or N(%)
Age	77.8 (8.06)	79.9 (7.57)
Sex		
Male	47 (32.6%)	7 (36.8%)
Female	97 (67.4%)	12 (63.2%)
Race		
Native Hawaiian or other Pacific Islander	1 (0.7%)	1 (5.3%)
White	140 (97.2%)	17 (89.5%)
Did not answer	3 (2.1%)	1 (5.3%)
Ethnicity		
Hispanic or Latino	2 (1.4%)	0
Non-Hispanic or Latino	128 (88.9%)	14 (73.7%)
Did not answer	14 (9.7%)	5 (26.3%)
Education Level		
Less than high school	14 (9.7%)	2 (10.5%)
High school / GED	58 (40.3%)	7 (36.8%)
Some college, technical or associates degree (2-year degree)	31 (21.5%)	2 (10.5%)
Bachelor's degree (4-year degree)	17 (11.8%)	1 (5.3%)
Graduate or post-graduate degree	8 (5.6%)	0
Did not answer	16 (11.1%)	7 (36.8%)
Insurance		
Medicare	65 (5.1%)	8 (42.1%)
Medicare Advantage	56 (38.9%)	9 (47.4%)
Tricare	1 (0.7%)	0
Medicare/Medicaid	22 (5.3%)	2 (10.5%)

eTable 2b Baseline Comparisons of Participants who Completed Follow-up Interview and Participants Lost to Follow-up by Group: Usual Care group

Demographics	Follow Up Interview Completed (N=191) Mean (SD) or N(%)	No Follow Up Interview (N=12) Mean (SD) or N(%)
Age	77.8 (8.06)	79.9 (7.57)
Sex		
Male	72 (37.7%)	4 (33.3%)
Female	119 (2.3%)	8 (66.7%)
Race		
American Indian or Alaskan Native	1 (0.5%)	0
Native Hawaiian or other Pacific Islander	5 (2.6%)	0
White	182 (95.3%)	12 (100.0%)
Did not answer	3 (1.6%)	0
Ethnicity		
Hispanic or Latino	5 (2.6%)	0
Non-Hispanic or Latino	183 (95.8%)	11 (91.7%)
Did not answer	3 (1.6%)	1 (8.3%)
Education Level		
Less than high school	9 (4.7%)	2 (16.7%)
High school / GED	83 (3.5%)	7 (58.3%)
Some college, technical or associates degree (2-year degree)	52 (7.2%)	
Bachelor's degree (4-year degree)	32 16.8%)	1 (8.3%)
Graduate or post-graduate degree	14 (7.3%)	1 (8.3%)
Did not answer	1 (0.5%)	1 (8.3%)
Insurance		
Medicare	91 (47.6%)	5 (41.7%)
Medicare Advantage	67 (5.1%)	4 (33.3%)
None/Self Pay	2 (1.0%)	0
Medicare/Medicaid	31 (6.2%)	3 (25.0%)

