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Primary Care Clinicians' Experiences With Treatment Decision Making for Older Persons With Multiple Conditions

Terri R. Fried, MD; Mary E. Tinetti, MD; Lynne Iannone, MA

Background: Clinicians are caring for an increasing number of older patients with multiple diseases in the face of uncertainty concerning the benefits and harms associated with guideline-directed interventions. Understanding how primary care clinicians approach treatment decision making for these patients is critical to the design of interventions to improve the decision-making process.

Methods: Focus groups were conducted with 40 primary care clinicians (physicians, nurse practitioners, and physician assistants) in academic, community, and Veterans Affairs-affiliated primary care practices. Participants were given open-ended questions about their approach to treatment decision making for older persons with multiple medical conditions. Responses were organized into themes using qualitative content analysis.

Results: The participants were concerned about their patients' ability to adhere to complex regimens derived from guideline-directed care. There was variability in beliefs regarding, and approaches to balancing, the benefits and

harms of guideline-directed care. There was also variability regarding how the participants involved patients in the process of decision making, with clinicians describing conflicts between their own and their patients' goals. The participants listed a number of barriers to making good treatment decisions, including the lack of outcome data, the role of specialists, patient and family expectations, and insufficient time and reimbursement.

Conclusions: The experiences of practicing clinicians suggest that they struggle with the uncertainties of applying disease-specific guidelines to their older patients with multiple conditions. To improve decision making, they need more data, alternative guidelines, approaches to reconciling their own and their patients' priorities, the support of their subspecialist colleagues, and an altered reimbursement system.

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Author Affiliations:

Department of Medicine (Drs Fried and Tinetti) and Program on Aging (Ms Iannone), Yale School of Medicine, New Haven, Connecticut; and Clinical Epidemiology Research Center, Veterans Affairs Connecticut Healthcare System, West Haven (Dr Fried).

OPTIMIZING THE CARE OF older persons with multiple medical conditions is a complex task, with clinicians receiving potentially contradictory recommendations regarding how to tailor care for these patients from the medical literature. On the one hand, there is a growing evidence base that older persons with multiple conditions have poorer outcomes when treated according to disease-specific guidelines compared with other patients.¹⁻⁶ There are several reasons for these poorer outcomes. First, the presence of comorbid conditions may result in persons receiving less benefit from therapy directed at a particular condition.^{1,2} Second, the presence of these conditions may also increase the likelihood that the individual will experience adverse effects with any given intervention.^{3,4} Finally, the polypharmacy that generally accompanies multimorbidity confers an

increased risk of adverse drug events, independent of the chronic conditions.^{5,6} On the other hand, editorials and clinical studies remind readers that the clinical trials providing the evidence base underlying these guidelines demonstrate that patients have improved outcomes with the medications recommended by these guidelines,^{7,8} and multiple studies have examined medication underuse and the failure to apply clinical guidelines to individual patients as a problem of poor quality care.⁹⁻¹¹ Clinicians are therefore charged with caring for an increasing number of older patients with multimorbidity in the face of the seemingly contradictory evidence of the harms and benefits of following disease guidelines.

In the face of this complexity, new approaches are needed to guide the care of older persons with multiple conditions. Ideally, the design of these approaches will not only incorporate the best evidence re-

garding how multimorbidity influences the outcomes of treatment but also be responsive to the needs and perspectives of the clinicians who provide the care for these patients. Little is known about how clinicians approach the care of older persons with multiple medical conditions. Understanding clinicians' experiences with these patients and their views on the challenges inherent to their care can help to inform the development of approaches that are acceptable to clinicians and are congruent with their practice patterns. The purpose of this study was to explore clinicians' perspectives of and experiences with therapeutic decision making for older persons with multiple medical conditions. Because we were interested in understanding how clinicians think about the care they provide, we used qualitative methods to allow participants to articulate the reasoning and strategies they use.

METHODS

PARTICIPANTS

The participants were clinicians who had completed training and who belonged to general internal medicine primary care practices. We purposefully sampled practices from academic, community, and Veterans Affairs (VA) settings in the greater New Haven, Connecticut, area to ensure the inclusion of participants who were practicing medicine under different care systems and who had a diverse set of constraints informing their approach to the care of older persons with multiple conditions. Five focus groups were conducted. Of these, 2 were conducted with community primary care practices, 1 of which consisted of 3 physicians and a nurse practitioner; the second group consisted of 3 physicians. There were 2 focus groups conducted with the primary care practices of the VA Connecticut Healthcare System, West Haven. The first of these focus groups consisted of 7 physicians and 1 pharmacist, 1 nurse practitioner, and 1 physician assistant, and the second focus group consisted of 3 physicians. The final focus group was conducted with the full-time general medicine faculty members at Yale School of Medicine, New Haven. This group consisted of 20 physicians who had widely varying distributions in the time that they spent performing clinical work, administration, and research and whose practice sites included primary care clinics at several urban hospitals and the VA Connecticut Healthcare System. Participants received a meal but no other reimbursement. The study protocol was approved by the Human Investigation Committee of the Yale School of Medicine and the Human Subjects Subcommittee of the VA Connecticut Healthcare System.

DATA COLLECTION

The focus groups were moderated by a single investigator (T.R.F.), who used a discussion guide. The guide began with an opening statement informing participants that they were asked to participate because of their experience in caring for older persons with multiple medical conditions and that they would be asked to talk about the approaches they took in caring for this population of patients. The first questions asked participants to think broadly about treatment decision making for these patients. The participants were asked to think about their patients who had multiple medical conditions and were potentially taking multiple medications and to reflect on how their approach to treatment decision making compared with their approach for younger patients and patients without multiple conditions. They were also

asked to think about how they applied clinical guidelines to these patients and whether there were patient factors that influenced the way in which they used the guidelines.

The follow-up questions were designed to serve as prompts to promote additional discussion related to treatment decision making. The participants were asked (1) what they believed to be the status of evidence used to inform the care of this group of patients; (2) about their approach to polypharmacy in this patient population; and (3) about their approach to the patient who, after being prescribed a medication as recommended by clinical guidelines, such as a statin for hyperlipidemia, returned with a symptom attributed by the patient to the medication. The focus group sessions lasted approximately 60 minutes.

DATA ANALYSIS

The focus groups were audiotaped and transcribed by an experienced medical transcriptionist. Content analysis was used to code small portions of the text representing unique concepts. Initially, 2 investigators independently coded 2 of the focus group transcripts and developed a coding structure. The structure was developed inductively, as codes were assigned based on repeated close readings of the text. The investigators met to compare the structures and their application to the text. Differences in both the identification of codes and the application of codes to text were resolved through discussion. A single investigator coded the remaining transcripts, and 2 investigators met to discuss the relationship of the codes to one another within and across transcripts to identify themes arising from the examination of the relationships among the codes.

RESULTS

OVERVIEW

A number of themes were identified that described clinicians' approaches to treatment decision making for older persons with multiple medical conditions. These were (1) concerns about patients' ability to adhere to complex medical regimens; (2) variability in beliefs regarding the harms and benefits of guideline-directed care; (3) variability in approaches to balancing trade-offs between harms and benefits; (4) involvement of patients in the decision-making process; and (5) barriers to clinicians' preferred approaches to decision making.

CONCERNS ABOUT PATIENTS' ABILITY TO ADHERE TO COMPLEX MEDICAL REGIMENS

Participants in every focus group cited examples of tailoring their approach to the care of older persons with multiple conditions because of concerns that the patients would not be able to adhere to more complex regimens. These concerns stemmed from a consideration of such factors as patients' cognition and availability of social support (**Figure 1**).

VARIABILITY IN BELIEFS REGARDING THE HARMS AND BENEFITS OF GUIDELINE-DIRECTED CARE

In contrast to the consensus about the need to tailor therapy based on the patient's ability to adhere, there was substantial variability in beliefs about the likelihood of the ben-

Concern	Representative Quotation
Historical evidence of inability to adhere	Also I factor in adherence to even a basic treatment. If they cannot manage a basic treatment, the one I am giving them, I am not going to complicate it further by adding something to get to the goal range.
Difficulty understanding medications	Whenever [patients] are confused about what medications they are on that suggests a problem. When they can not tell you what the medications either by name or description, and they are confused about when they are supposed to take them
Availability of social support	Often what you are doing is assessing someone's personality and their abilities to integrate complicated information and goals and if you have a patient who is limited you are obviously not going to push the meds nearly as hard unless there is somebody else in the picture who can administer them. I look at their functioning as a whole and also whether or not they live alone, their support system, have help.

Figure 1. Concerns about older persons' ability to adhere to complex medication regimens, leading to modification of treatment.

efits vs the harms of guideline-directed care. Some clinicians cited concerns about the possibility of the harms outweighing the benefits of guideline-directed care, whereas other clinicians believed that guideline-directed care would produce the best outcomes (**Figure 2**). Clinicians also raised concerns about the lack of data regarding the benefits vs the harms of this care and about the focus of guidelines on outcomes that might not be of greatest importance to their patients. Participants who raised issues of the trade-offs between the benefits and the harms or of the lack of data spoke of these issues as reasons to deviate from guideline-directed care.

VARIABILITY IN APPROACHES TO BALANCING TRADE-OFFS BETWEEN THE HARMS AND THE BENEFITS OF GUIDELINE-DIRECTED CARE

Those clinicians who were concerned about the trade-offs between the benefits and the harms of guideline-directed care had a wide variety of approaches as to how they could be balanced. These different approaches and representative quotations included prioritizing the patient's problems, stratifying risk for individual diseases, and modifying guidelines in anticipation of certain adverse effects (**Figure 3**). Clinicians also spoke about the lack of available tools to help them quantify benefits and harms as well as about their inability at times to find a strategy for balancing benefits and harms.

INVOLVEMENT OF PATIENTS IN THE DECISION-MAKING PROCESS

Clinicians offered differing descriptions of how they involved their older patients in the process of decision making (**Figure 4**). Several clinicians spoke of conflicts between what they wanted to do for the patient and what the patient wanted, and they presented different approaches to dealing with these differing goals.

BARRIERS TO CLINICIANS' PREFERRED APPROACHES TO DECISION MAKING

Regardless of how they balanced competing outcomes and attempted to involve patients in the decision-making pro-

Interpretation	Representative Quotation
Guideline-directed care beneficial	Blood pressure is an interesting topic because there is decent literature out there that shows you are bringing patients' blood pressure down even in patients over age 75 helps to prevent strokes, and that is the biggest problem for these patients. With high blood pressure, the evidence is that an elderly person who is 80 years old, treating their blood pressure is going to keep them healthy, and we know that lowering blood pressure will result in favorable benefits. We also have that information in regards to cholesterol.
Lack of evidence for benefit	The evidence in which our guidelines come from doesn't really include people [with multiple conditions.] Those people are excluded from the large-scale trials that we base these recommendations on. We don't know. No one can tell you the added benefit of having an additional agent for blood pressure if somebody is already on ten. So OK BP of 140/90. Do you get that benefit if it is the 6th drug that gets you to the BP goal, you know? We have not answered that question. We don't know because the trials are...you know even if there are many drug trials they don't get to the fourth drug. They don't get to the real life.
Potential for increased risk of harm	I do think it is reasonable to assume an older person will benefit in similar kind of measures. I think we are flying blind in the risk assessments. It is much harder for me to figure out how risky a certain treatment or a combination of treatments are in an older person. I have a lot of elderly people who fall, and so there you go treating blood pressure in the office and then they are hypotensive at home.
Lack of data for outcomes most important to patients	The benefits that we are reporting offering of the patient are exclusively benefits based on trials where the patient like this [with multiple conditions] were not studied all that much. [The trials] are largely looking at mortality and morbidity and don't necessarily take into consideration the patient's perspective on the benefits that they would hope to receive...lack of pain is probably as important an outcome as saving a life.

Figure 2. Differing interpretations regarding harms and benefits of guideline-directed care.

Approach	Quotation
Prioritizing problem list	Even if I know that there is a benefit to x in hypertension or y in diabetes, [what is] the relative benefit when there are multiple of them going on? So this particular patient right here today, would it be better to treat their depression than to get their A1C down? If people are superbly loaded with issues I focus on the one thing that might make a difference and the one thing that they are not going to forget.
Stratifying patient's risk for given disease outcome	If it is a 70 year old person...you can determine if they might have a 20% or 30% risk of another MI in the next ten years, and that person I would try other statins, try Co Q10, try other things. Someone with established coronary artery disease, you may push harder to do what you can to keep them on a statin...but on the other hand, with a low-risk person I would probably just bag it. Well, I tend to use the data to help me go outside the guidelines, so if someone is 87 years old and their cholesterol doesn't add but potentially 3% to their risk, I don't worry about it too much.
Modifying guideline-directed interventions in anticipation of adverse events	I sort of you know tone those goals down. I am not looking for a Hemoglobin A1C of 7 anymore...so I take the pressure off of them and I start removing those medications especially the ones that cause hypoglycemia.
Inability to quantify benefits and harms	Without any evidence base or calculators that...quantify this [likelihood of risk or benefit] the way Framingham quantifies cardiovascular risk, we are only kind of quantifying other stuff. I don't think that there is any good way to make that decision [regarding risks and benefits] other than your own clinical gut instinct or intuition.
Inability to find strategy to balance risks and benefits	You look at the medication list and want to reduce it but then you can't find things you can eliminate.

Figure 3. Variability in approaches to balancing trade-offs and competing outcomes.

Clinician-patient interaction	Representative Quotation
Conflicts between clinician and patient goals	I get kind of aggravated that half of the medicines that I think are totally rubbish are the ones that the patient really wants to take. They are hoping for a drug that you don't want to give them.
Clinician's role to convince patient to accept clinician's goal	I have been doing a lot of carotid ultrasounds. If I have somebody where I really cannot convince them, I look for thickening and the plaque in their carotids, and sometimes then they will do it. I will say, "Look, this is a marker for atherosclerosis, and you can have a heart attack or a stroke." So then a lot of times they will do it.
Clinician's role to reconcile goals	So I try to balance what the patient wants and what the patient feels is important with what I want and what I feel is important, which are sometimes very much in line. And then sometimes not really related at all to each other.

Figure 4. Involvement of patients in the decision-making process.

Barrier	Representative Quotation
Unrealistic expectations of patients and families	Sometimes the problem is that the patient or more commonly the patient's family members who don't appreciate what the risks and benefits are. I don't think that the patient is always right. I have so much more information that he does. There is total asymmetry of information. He knows but he wasn't able to utilize that information.
Quality measure-driven care	Another factor that we experience at the VA is these electronic reminders that tell you to do things...What I do really depends on who is in front of me...So the reminder comes up and it makes no sense. This guy's LDL is 101.8...Should I go from 40 to 80 of simvastatin? And what's the risk and benefit there?
Interactions with specialists	I think a lot of arguing about antiplatelet agents. The cardiologists, you know, don't mind if they bleed to death. You know who is going to be there when they have the GI bleed. Well I will be and the patient will be. So we all look at our own organ system and maybe I look at the organ system as being an overall medical...approach.
Insufficient time and reimbursement	One of the challenges of caring for these patients is seeing an elderly person who is depressed with multiple chronic illnesses, in pain, and wants to quit smoking. You get a 15 minute visit and it is difficult for the physician and unsatisfying for the patient. There is a lot of phone interaction, a lot of people that aren't in the room get involved and clearly the expectation is that, despite the fact that you know it is only a 15 minute office visit on the schedule, they really do intend to deal with everything and...Medicare doesn't pay for the 45-minute physical that allows us to deal with multiple problems in our patients.

Figure 5. Barriers to clinicians' preferred approaches to decision making.

cess, the clinicians cited a number of barriers to making what they identified as being the highest-quality decisions for or with their patients (**Figure 5**). These barriers included unrealistic patient and family expectations, the questionable application of quality measures, involvement of specialists, and lack of time and reimbursement.

VIEWS OF ACADEMIC VS COMMUNITY CLINICIANS

Each of the major themes and specific examples arose in at least 1 focus group that was composed of academic clinicians and at least 1 that was composed of community clinicians, with 1 exception. The issue of quality measures was raised only by clinicians in the focus groups conducted at the VA Connecticut Healthcare System.

The perspectives of primary care clinicians regarding the treatment of their older patients with multiple medical conditions highlight the complexity of caring for this group of patients. The clinicians' experiences suggest that they struggle with the uncertainties of applying disease-specific guidelines to their older patients with multiple conditions and creating strategies for optimizing decision making and improving patient outcomes. Many clinicians were concerned about their patients' ability to adhere to complicated medical regimens. There were variable beliefs regarding the benefits and harms of guideline-directed care. While some clinicians believed that this approach would provide the best outcomes, others were concerned (1) that guidelines were developed based on evidence obtained from younger patients; (2) that they failed to target outcomes of greatest concern to their patients, such as quality of life; and (3) that the application of multiple guidelines could result in adverse events. The participants used a variety of strategies to balance the benefits and harms of guideline-directed care, including prioritizing the patient's problem list and performing risk stratification for individual diseases, but they also cited the lack of availability of outcome data and noted that they sometimes could not figure out how to achieve a balance. They cited conflicts in their own and their patients' goals, and they varied in their approach to resolving them. They identified a number of barriers to caring for older patients with multimorbidity, including unrealistic patient and family expectations, pressure to adhere to quality measures, and lack of time and reimbursement.

The considerations expressed by clinicians in this study reflect the current concerns, debates, and uncertainty in the growing medical literature on the care of older persons with multiple conditions. Their experiences illustrate that apprehensions about the potential adverse consequences of guideline-directed care are not merely theoretical,⁴ but rather are being observed by clinicians caring for older persons with multiple conditions and are influencing treatment decision making. These observations corroborate previous reports of the limitations of currently conducted randomized clinical trials to detect the full range of adverse effects of treatments in older adults with multimorbidity.¹² There is growing evidence from cohort studies to suggest that these adverse effects include ones not traditionally associated with medications, as, for example, the association between number of medications taken and weight loss and impaired balance.⁶ The comments of 1 clinician also highlighted the notion that traditionally studied outcomes, such as mortality, may not be the outcomes of greatest importance to patients. This observation is supported by studies of older persons demonstrating the importance of outcomes such as maintaining physical and cognitive function and relief of symptoms.¹³⁻¹⁵ Clinicians in this study, however, also pointed to guideline-directed care as based on the best available evidence for optimizing outcomes in older persons with multiple conditions. The variability in clinicians' views on the applicability of disease guidelines to their older patients with multimorbidity and the

benefits and harms associated with guideline-directed care reflects the ongoing uncertainty regarding the clinical strategies that will provide the best outcomes.¹⁶ In addition to the studies demonstrating the risk of adverse outcomes associated with guideline-directed care, evidence also suggests that the patients who are at the highest risk for these adverse outcomes may also be the ones most likely to derive benefit from the intervention.¹⁷

Clinicians' descriptions of how they involve patients in the decision-making process illustrate the challenges of implementing the principles of patient-centered care. These descriptions included the negotiation between patients' and clinicians' values and goals, which were characterized as sometimes being in conflict. Implicit in the decision-making process for some clinicians was the belief that any amount of risk reduction for a given disease-specific outcome, such as myocardial infarction, warranted intervention. However, some studies have demonstrated that, when presented with numerical data regarding risk reduction, many patients would be willing to take medication only if the amount of risk reduction exceeded the actual benefit provided by commonly prescribed therapies.^{18,19} Moreover, other clinicians noted that the reduction in risk for a disease-specific outcome might not be what was most important to the patient, an observation supported by studies indicating that the adverse effects of medications may be as, if not more, important to patients than their primary effects.^{20,21} Disagreement between patients or caregivers and clinicians regarding the goals for an individual patient's care has also been demonstrated quantitatively.^{22,23} Although the authors of these studies suggest that these findings indicate a lack of clinicians' awareness of the patient's priorities, the clinicians in the present study presented a more complex picture. They cited concern about patients' and families' inaccurate understanding of harms and benefits, and they described performing testing to help patients understand their risk.

The results of our study suggest that clinicians would benefit from a number of tools to assist them in decision making for older persons with multiple conditions. First, the concept of tailoring therapy based on a consideration of patients' ability to adhere has not received much attention in the medical literature. Such tailoring suggests the need for explicit assessment of the complexity of the interventions recommended by clinical guidelines and for simplified alternatives, so that patients and their families can be provided with treatment plans that are feasible for them to accomplish. Second, the clinicians who discussed the absence of risk calculators for patients with multiple conditions highlight the need for the development of methods to provide individualized assessments of harm vs benefit associated with different treatment strategies in order to determine optimal therapy depending on a patient's comorbidity profile.^{24,25} Finally, clinicians' efforts to inform and involve their patients in the decision-making process suggest that, despite the advances made in risk communication²⁶ and shared and informed decision making,²⁷ further work is required to create and disseminate clinical tools that are suitable for use in primary care practice to elicit priorities and goals in ways that ensure that both clinicians and patients and families feel that they have been understood.

The results also highlight the system and health policy challenges that must be met to improve the process of decision making. The experience of the clinicians who feel pressure to modify their practice based on their exposure to clinical reminders and quality measures supports efforts for modifying these metrics for persons with multiple conditions.²⁸ The primary care clinicians' concerns that their subspecialist colleagues may not consider the wider harms and benefits of organ-specific intervention reflect the fragmentation of care for patients who receive care for their multiple conditions from many physicians. It is important to find a way to provide patients with a unified approach to decision making that incorporates the perspectives of different clinicians. The final challenge concerns the limitations imposed by current reimbursement systems, which, as described by several participants, fail to acknowledge the complexities of caring for older persons with multiple conditions.

Because of the qualitative methods used in this study, conclusions cannot be drawn regarding the prevalence of clinicians' attitudes or regarding differences in these attitudes according to the nature or site of their practice. Although the study population included clinicians practicing in both academic and community settings, it is possible that clinicians agreeing to participate in a focus group may not be representative of all primary care clinicians. To decrease the burden on clinicians and to encourage their participation, we did not take additional time to collect descriptive information; therefore, we are unable to characterize our participants in terms of their own characteristics or those of their practices. Several of the probes used in the discussion guide, such as asking clinicians their response to a patient who develops an adverse effect to a medication, were not specific to the care of the older person. Notably, the inclusion of such questions resulted in several participants observing that their approach to balancing the benefits and harms of medications in older persons could be appropriate for many other patients in their practice.

The primary care clinicians represented in this qualitative study recognize the complexities of caring for older persons with multiple conditions and the need to provide individually tailored therapy. According to their own reports, they need more data, alternative guidelines, approaches to incorporating their patients' values, the support of their subspecialist colleagues, and an altered reimbursement system to accomplish this task. Addressing these needs will not be easy, but it is essential if we are to evolve a health care system designed to effectively and efficiently care for the ever-increasing number of older patients with multiple chronic diseases.

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Correspondence: Terri R. Fried, MD, Clinical Epidemiology Research Center 151B, VA Connecticut Healthcare System, 950 Campbell Ave, West Haven, CT 06516 (terri.fried@yale.edu).

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Study concept and design: Fried and Tinetti. *Acquisition of data:* Fried and Ianonne. *Analysis and interpretation of data:* Fried, Tinetti, and Ianonne. *Drafting of the manuscript:* Fried. *Critical revision of the manuscript for important intellectual content:* Tinetti and Ianonne. *Obtained funding:* Fried. *Administrative, technical, and material support:* Ianonne.

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