Older Adults' Perceptions of the Causes and Consequences of Healthcare Overuse: A Qualitative Study

Ariel R. Green, MD, MPH[1], Monica Tung, BA[2], and Jodi B. Segal, MD, MPH[3,4]

[1]Division of Geriatric Medicine and Gerontology, Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, USA; [2]Johns Hopkins University School of Medicine, Baltimore, MD, USA; [3]Division of General Internal Medicine, Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, USA; [4]Center for Health Services and Outcomes Research, Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD, USA.

BACKGROUND: Overuse of healthcare is pervasive in the United States, often exposing patients to harm with little likelihood of benefit. Older Americans are particularly vulnerable to overuse and impacted by it, yet it is unknown whether older patients perceive overuse as a consequential problem.

OBJECTIVE: To explore the experiences and perspectives of older adults with respect to healthcare overuse in order to develop a framework for understanding and reducing overuse in older adults.

DESIGN: Qualitative study using focus group methodology.

PARTICIPANTS: Five focus groups were held with people ≥65 years of age ($N = 38$) in four senior centers in Baltimore, Maryland, in 2016.

APPROACH: Transcripts were analyzed using qualitative content analysis to identify major themes.

KEY RESULTS: Of the 38 participants, 28 were women and 29 were African-American; 31 had at least a 12th grade education. While virtually all reported experience with what they perceived to have been healthcare overuse, some expressed concern that they had been denied appropriate care. They perceived overuse to have occurred when interventions were applied in the absence of symptoms (excluding cancer screening), did not improve symptoms, were discordant with their preferences, or were duplicative. Some defined overuse as interventions that were offered before less intensive options or too early in the course of disease. Suggested contributors to overuse were poor quality communication between patients and healthcare providers, and between different healthcare providers. Participants reported suffering from treatment effects, high costs, worry, and inconvenience from what they perceived to be overuse. They suggested that overuse may be reduced when the patient is involved in decision making and has a trusted primary care doctor.

CONCLUSIONS: The experience of older adults highlights potential sites of intervention to reduce healthcare overuse. Engaging patients in shared decision making and enhancing communication and knowledge transfer should be tested as interventions to reduce perceived overuse.

KEY WORDS: healthcare overuse; older adults; qualitative research.

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The continued growth in healthcare spending in the United States is unsustainable.[1] Moreover, spending is not correlated with indicators of high-quality care.[2,3] This disparity between costs and health outcomes has led many to conclude that healthcare services are overused in the U.S.[4–6]

Healthcare overuse has been defined as *the provision of care in circumstances where the potential for harm exceeds the potential for benefit*.[7] Excess use of health services puts patients at risk of adverse outcomes[6,8–10] and creates system-wide detriments.[11] Overuse is pervasive within the healthcare system, and is a target of recent efforts such as the Choosing Wisely campaign of the American Board of Internal Medicine (ABIM) Foundation. We suggest that older Americans may be particularly vulnerable to this phenomenon. Examples of overuse include cancer screening tests in patients with limited life expectancy,[12] treatments delivered at end of life that do not impact disease course or quality of life,[13] therapies delivered without recognition of the heterogeneity among older patients,[14] polypharmacy in multimorbid older patients,[15] and care coordination failures when multiple specialists are involved.[16] Given that the harms and benefits of interventions are often unclear, and patients are frequently unaware of these trade-offs, their perceptions of what constitutes overuse may differ from what clinicians or professional societies define as overuse.

We were interested in learning whether older adults *perceive* that there is overuse of healthcare services and whether they view it as problematic. Our goal was to illuminate the perspectives of older adults as a necessary first step to informing a framework for understanding, and ultimately reducing, healthcare overuse in older adults.

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METHODS

Study Design

We used focus group methodology. The Johns Hopkins University School of Medicine Institutional Review Board approved the study. Participants provided written informed consent.

Recruitment

We contacted coordinators at senior activity centers across Baltimore City to assess their willingness to have their centers be participating sites. We asked the coordinators to display a flyer inviting participants to attend a focus group at a specified date and time. The coordinators were made aware of our inclusion and exclusion criteria: participants needed to be over age 65, without significant dementia, and English-speaking. Each group was limited to fewer than ten participants.

Discussion Guide

We began by interviewing three older adults to inform development of our discussion guide (Appendix 1). The interviews probed their understanding of the concept of overuse, explored wording choices, and gathered preliminary content to explore in greater depth. The discussion guide was iteratively refined to include open-ended questions about use and overuse of medical services. To prompt discussion, it also included descriptions of two scenarios of overuse: (1) "the doctor recommends a colonoscopy to screen for colon cancer in a sickly, 90-year-old man"; and (2) "the doctor prescribes diabetes medicines to a sickly, 90-year-old man to get his blood sugar into the normal range."

Focus Group Sessions

We used purposive sampling to achieve diversity with regard to race/ethnicity and socioeconomic status. All sessions were held in private rooms at the centers, and each session lasted approximately 75 min. Paired investigators moderated the audiotaped sessions (ARG and JBS for four sessions; ARG and MT for the fifth). One of the investigators, ARG, had prior experience moderating one-on-one interviews and focus groups. We used a brief questionnaire to collect demographic information from participants. Participants received a $25 gift card as compensation.

At the beginning of each session, we stated that our purpose was "to learn more about how people make decisions about their healthcare," and that "we particularly wanted to learn about something that has been in the news a lot recently – the concept of overtreatment, or harmful medical care. The terms "unnecessary care," "excessive care," and "overtreatment" were used interchangeably, after we instructed the participants to consider them equivalent.

The discussion explored participants' perceptions of whether they or an acquaintance had experienced overuse, the consequences of overuse, or factors contributing to overuse, and how participants make decisions about their healthcare. After each session, the investigators reviewed the major themes emerging from the discussion, and the questions were iteratively refined as needed.

Analysis

The audiotaped transcripts were professionally transcribed verbatim (Ubiqus; www.ubiqus.com). We used a combination of conventional and directed approaches for qualitative content analysis.[17] The conventional approach is appropriate when there is little existing theory about a phenomenon, as was largely true in this case. Rather than using preconceived categories, we allowed coding categories to flow from the data. With a directed approach, coding starts with an existing theory, and themes that either support or refute this theory emerge from the data. We expected that social influence would be a prominent theme and therefore developed a small set of codes to capture the social relationships contributing to overuse. Focus groups were added until the team members felt that thematic saturation had been reached.[18]

To begin, all three investigators independently reviewed one transcript and inductively developed codes to describe important topics. The investigators then agreed upon a preliminary coding scheme. Each investigator coded transcripts independently, and then the three met as a group in weekly sessions to achieve 100% consensus about the final coding of each transcript. The coding was revised iteratively as needed. We used ATLAS.ti version 8 textual data analysis software (ATLAS.ti Scientific Software Development, Berlin, Germany).

RESULTS

We held five focus groups in December 2016 at four senior centers in Baltimore City. The number of participants per group ranged from six to nine, with a total of 38 participants. Three of the centers were in lower-income, predominately black neighborhoods, and one was in a mixed-income, predominately white neighborhood. Of the 38 participants, 28 were women and 29 were African-American; 31 had at least a 12th grade education. Seven rated their health as fair, 20 as good, and 11 as very good or excellent. Virtually all of the participants reported that they or an acquaintance had experienced healthcare overuse. Content analysis revealed five major themes, presented below with representative quotes.

Theme 1: Definitions of Overuse

Participants described scenarios that they considered to be examples of healthcare overuse (Table 1). Screening tests were considered overuse by some participants, who did not feel that doctors should look for asymptomatic problems. Other participants were receptive to the idea of screening, at least for cancer,

Table 1 Participant Definitions of Overuse

Participant Definitions of Overuse	Example
Intervention or test that is applied in the absence of symptoms	Just [because] a person is overweight and someone in their family had diabetes doesn't necessarily mean that you should go looking for it, especially if you're not experiencing some of the things that you experience with diabetes or a blood sugar high.
Intervention that is offered too early in the course of the illness	The doctor tells me he wants me to do this reflux pill, one a day for the rest of my life. I said, "Why don't I just change my eating habits?"
Intensive or invasive intervention that is offered as the first recommended treatment	There's lots of other alternatives other than surgery. But the urologist, who is a very well-known doctor in a fancy building here…he wants to operate…My doctor said it was absolutely not necessary.
Intervention for which the perceived harms outweigh the benefits	I have negative reactions to many medications…A doctor will give me an alternative of the same medicine and…I'm not taking it. I'm fortunate enough to be able to survive without all that stuff…I'm not taking something that's going to hurt me and I know it's going to hurt me.
Intervention or test that the patient does not perceive as necessary	Overtreatment, to me, is when the doctor is prescribing something that…I really don't need…Maybe I voiced that to him, but they'll say, "to be on the safe side."
Treatment that is offered with no explanation of rationale	Blood, all the time…I just don't see it. And then when I get the results back, they are the same. Nothing has really changed, and I don't see why every time I go to the doctor, I have got to give blood.
Test that is duplicative	I get blood tests from all kinds of doctors, but then when I go to my regular doctor, he says, "Well, we don't want to use that one. We want to have our own blood work done." And I'm thinking, well, you know, I had it done somewhere else. You don't need…it 2 weeks later.
Intervention that is discordant with the patients' preferences	"Are you the one that's supposed to get the tetanus shot?" And I said, "I told the doctor I didn't want one." But she [suggested] you should have one because you have not had one since 1968. That's what I didn't like, when she was trying to push it on me.
Intervention that proves to have little benefit (in retrospect)	You go to the doctor to be healed so you can get off of these pills. I was on a pill for acid reflux for 16 years, and you know, I just felt that that was overuse, because… somewhere along the line, I should not have to take anything.

which appeared more threatening to them than conditions such as diabetes. This is illustrated by the following example:

> *My doctor is telling me that it's important because… my brother had it… But she leaves it up to me. She [doesn't] make that decision for me… she just said, "Let me know when you're ready." I haven't been ready in the last 6 years… I think it's important… But I just don't like the thought of it.*

Participants defined overuse as intensive or invasive interventions that were offered as the first recommended treatment or too early in the disease course. For example:

> *I went to see an orthopedic doctor for the first time because I have arthritis in my knee…Her first response was, "Has anyone spoken to you about a knee replacement?" She didn't even stop to talk about other options.*

Participants also defined overuse as treatments that do not cure illness and must be taken chronically. Many participants cited duplicative testing—in particular, frequent blood testing—as an example of overuse. Participants were likely to perceive laboratory testing as overuse when it was offered without explanation.

Theme 2: Consequences of Overuse

Participants reported that they or acquaintances had suffered physical harms from interventions that they, in retrospect, perceived to be overuse (Table 2). Tests and treatments that

Table 2 Consequences of Overuse

Consequences of Overuse	Example
Physical harms	The amount of money they made, they spent, was half a million dollars… And she was tortured. (Participant whose mother died after several months of what proved to be futile care in an ICU)
High costs to patients and insurance companies, and downstream avoidance of needed services	Doctors are prompting their patients to go for this test, that test, do this, do that… That hurts the patient's pocket. It's the money that they are looking for. It's much more now for the money than for the patient's good health.
Being inconvenienced	I didn't go the first time. When I came back to him to see him the next time, he scolded me, and I had to go…It's not just that going there is dissatisfying, but it was so difficult for me to go, and I knew that this was going to happen, so why did he do that?
Patient discomfort from high medication counts or reliance on electronic devices	She just doesn't feel safe. She feels as if—one doctor gave her the CPAP…and another doctor gave her the [Life]Vest, and she kind of feels torn as to whether or not they discussed it. And, like I said, they are both electric, and [they are] both plugged up to the wall and you are asleep.
Uncertainty and worry	I have had so many blood tests. She assumes, because of certain symptoms that I am showing, I may have this. And then it comes back negative. The next time I go…every 3 months…another. "Maybe you may have this." It's like a guessing game. And I'm a human pincushion.

led to no perceptible benefits for the patient were described as overuse. For example, one participant reacted to the hypothetical scenario of a frail 90-year-old man being prescribed antidiabetic agents to achieve normal blood glucose levels:

> *They'll keep prescribing things over and over and over, and it's not doing anything for us. It's just making us feel bad.*

Another consequence of perceived overuse was patient discomfort from high medication burden or reliance on electronic devices. In addition to physical and psychic pain, participants cited high out-of-pocket costs as a consequence of perceived overuse. One participant observed that even when patients are shielded from high out-of-pocket costs, they pay the price of overuse because insurance companies pass the costs on to patients through increased premiums:

> *I'm paying—no matter what it is, I'm paying the cost. When the cost goes up, my premiums and everything go up.*

Theme 3: Contributors to Overuse

Participants identified several contributors to overuse (Table 3). The most commonly cited contributor was inadequate communication between healthcare providers and patients, and between healthcare providers involved in a patient's care. Many participants described poor patient–doctor communication that led them to have unrealistic expectations of benefits and to choose treatments that they might not have chosen if they had been well informed. Participants also expressed the belief that overuse happens because of inadequate communication between different healthcare providers involved in a patient's care.

Many participants said that financial incentives for physicians and for insurance and pharmaceutical companies are a driver of overuse. Lastly, participants expressed the belief that conceptualizing a procedure as "routine" may lead to overuse.

Theme 4: Strategies for Reducing Overuse

Several potential strategies emerged for reducing overuse (Table 4). Some participants suggested that overuse is less likely when they are involved in shared decision making with the clinician. Although some participants expressed the belief that primary care visits are too short to be meaningful ("*I don't see the purpose of primary doctor now, because you only got 15 minutes. What can you do in 15 minutes?*"), many indicated that having a trusted clinician—usually a primary care provider—reduced the likelihood that overuse would occur.

Theme 5: Underuse of Healthcare

Though the topic of the focus groups was "excessive or unnecessary medical care," many participants expressed

Table 3 Contributors to Overuse

Contributors to Overuse	Example
Ineffective communication between healthcare providers and patients	You come in. They examine you. They ask you questions. If you don't have any questions, the visit is pretty much over…Sometimes you leave the visit wanting to have said something or ask something.
Inadequate communication between healthcare providers involved in a patient's care	I had a girlfriend… she took in a shopping bag loaded with pain [medicines]… She would not take what was prescribed for her because she [said] it was too much, she could not handle it… But if they would just talk to each other, she would not have gone in with a shopping bag loaded with painkillers… Nobody carried on any conversations back and forth to anybody.
Unrealistic expectations of benefit	They kept coming to me and saying, "You want to sign for this treatment?" And I kept signing it… I was thinking about help. I was under the impression that she could survive.
Financial incentives for physicians, insurance and pharmaceutical companies	The more prescription[s]…that he writes…he gets a certain percentage.
Conceptualizing interventions as "routine"	I was getting a colonoscopy every 5 years… When I got to be 80…" Come in for another colonoscopy." Colonoscopies are very unpleasant. I don't want to do it again. So [I] got referred to a second gastroenterologist. He looked at the record, and…he said, "Your age—you don't have to do it anymore." But I mean, the first guy, all he knows is, well, he says it's a routine thing…and I get a lot of money for this procedure, so we'll keep asking the person to come in.

Table 4 Participant Ideas about Strategies to Reduce Overuse

Strategies for Reducing Overuse	Example
The involvement of a trusted primary care doctor in a patient's care can reduce unnecessary testing and interventions.	He [the doctor] will tell me straight up, "You don't need that," you know, "No, don't do that."… So it's good when you have a person that you can believe in and trust. And nine times out of ten the advice and information that he's giving you is correct.
Overuse of services may be lessened by involvement of the patient in decisions about treatment and testing.	I think, for myself, when I'm given options, I weigh it and…if I have a little bit of knowledge or I may go and get some knowledge…So far, all the doctors I've come across have been willing to go along with me on it…not push me, but just stay in contact with me about it.
Services may be avoided if the patient is allowed to make the choice about therapy. (In this discussion, however, patients seem not to differentiate between unnecessary treatment and treatment that is simply not preferred.)	I thought about it, and I prayed on it, and I thought about it. I said, All this other medicine I take? I know what to eat… Let's be real. We know what to eat to get the vitamins in our body. I said, I'm not even going to get this [the vitamin].

concern that they had been denied care that they deemed appropriate, such as imaging studies or referrals to specialists. For example, one participant observed, "*They [the primary care doctor] need to send you to a specialist and not try to do it themselves. Get those tests so they can find out what's wrong.*" Some participants also expressed dissatisfaction with efforts to reduce unnecessary emergency department visits, and a belief that doctors profit by keeping patients out of emergency departments.

DISCUSSION

We have characterized the experiences and perspectives of older adults with respect to their perceived overuse of healthcare services, to begin developing a framework for understanding and reducing overuse in older adults. We found that the majority of participants perceived that they had experienced overuse and found it problematic. They offered several definitions of overuse and reported suffering physical harms, anxiety, financial cost and inconvenience from what they perceived to be overuse. When we asked participants to reflect on the causes of overuse, the most frequently cited contributor was poor quality communication—between patients and healthcare providers, and between healthcare providers involved in a patient's care. They suggested that overuse may be reduced when the patient is involved in decision making and has a trusted primary care doctor.

Participants perceived overuse when interventions were offered without adequate explanation, or when *screening* tests for chronic conditions such as type 2 diabetes were performed in the absence of symptoms. These findings highlight the need to improve communication between patients and healthcare providers.[19] There is no established best practice for how to discuss the rationale for laboratory tests or imaging studies with patients; time pressures on clinicians are a barrier to these discussions. The Agency for Healthcare Research and Quality has online toolkits for healthcare providers, which include templates designed to improve communication and increase patient understanding of health information, but it is not known how widely these are used or their effects.[20] Such tools could be evaluated in future studies to develop best practices on how to discuss the rationale behind laboratory tests and imaging studies with patients, or how best to communicate with patients in after-visit summaries.

Participants perceived overuse, in retrospect, when interventions did not improve their symptoms or when extended treatment regimens were required. They also perceived overuse when aggressive care was delivered at the end of life that did not improve quality of life or alter disease course. This may reflect another consequence of poor communication—patients perceive overuse because they are not being prepared to understand that uncertainty is part of medicine. As Simpkin and Schwartzstein note, doctors "make decisions on the basis of imperfect data and limited knowledge, which leads to diagnostic uncertainty, coupled with the uncertainty that arises from unpredictable patient responses to treatment and…outcomes that are far from binary."[21] We wonder whether this needs to be better conveyed to patients to enable them to adjust their expectations from clinical encounters.[22]

Although we reminded participants that the topic was overuse of healthcare, the conversation in each group often returned to participants' frustration with the healthcare system. Some participants revealed mistrust of healthcare providers and a perception that the doctor–patient relationship is unequal[23]; these beliefs appeared to be fueled by current events, such as the EpiPen price spike[24] and newspaper reports about a cardiologist who implanted hundreds of unnecessary cardiac stents.[25] Some participants viewed efforts to reduce overuse—for example, by preventing unnecessary use of emergency departments—with skepticism. Indeed, while virtually all participants related that they or an acquaintance had experienced over-testing or overtreatment, many participants also expressed concern that they had been denied appropriate care. This finding may be important for predicting the impact of efforts to reduce overuse, such as the Choosing Wisely initiative.[26–28]

Our study has some limitations. Focus groups rely on self-report and are prone to recall and social desirability biases. As with most qualitative research, the study was not designed to be representative of all older adults. Four of the five group sessions were held in lower-income, predominately black neighborhoods. Participants may have had below-average health literacy. In addition, they were community-dwelling older adults and well enough to participate in senior center activities; people in worse overall health or with acute symptoms may have different views on healthcare overuse. Although some degree of researcher bias is inevitable, we took several steps to minimize the influence of selective perception and interpretive bias: We wrote the interview guide with patient involvement, used independent coding of transcripts and triangulation among three researchers, and sought to identify and report discrepant evidence (i.e., quotes about underuse). Lastly, we were not able to confirm participants' experiences. Thus, we cannot say whether overuse occurred, only that participants perceived overuse to have occurred. Patients' perceptions of overuse may have important consequences: if people perceive that testing performed in the absence of symptoms constitutes overuse, they may defer screening. Conversely, if there is pervasive mistrust of healthcare providers, initiatives to prevent overuse are likely to be viewed as efforts to deny appropriate care.

CONCLUSIONS

Older adults identified numerous possible contributors to overuse. We encourage larger, nationally representative studies to test whether what was communicated by these participants are in fact determinants of overuse. If the findings of the

present study are confirmed, future work should address the contributors to overuse, possibly by improving communication training for healthcare providers and increasing resources and incentives for clinicians to engage patients in shared decision making. In addition, policy reforms to minimize financial drivers of overuse will undoubtedly be needed—for example, the removal of non-evidence-based interventions from coverage schedules and the realignment of incentives away from volume and toward quality of outcomes.[29]

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Corresponding Author: *Ariel R. Green, MD, MPH; Division of Geriatric Medicine and Gerontology, Department of Medicine Johns Hopkins University School of Medicine, Baltimore, MD, USA (e-mail: ariel@jhmi.edu).*

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