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How older adults with multimorbidity manage their own care within a formal care coordination program?

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ABSTRACT

As the number of older adults with multimorbidity increases, care coordination programs are being designed to streamline the complex care older adults receive from multiple providers by improving health and reducing unnecessary costs. Well-coordinated care requires actions by both patients and providers. Yet little attention is paid to the what older adults do to manage their own care alongside a formal Care Coordination Program (CCP). This paper presents a qualitative descriptive study that explored what actions older adults took on their own to manage their care. Findings from this study identified that there were two actions older adults took to manage their care; they lived within their limits and they lived with grit. This study suggests that by recognizing what older adults do to self-manage their care within the context of a CCP, nurses can build on older adults' actions and provide person-centered strategies for care coordination.

Introduction

Over the next decade, health care spending is expected to grow 6.1% per year, due in no small part to the increased numbers of Medicare enrollees.[1] Not only is the number of Medicare enrollees increasing, so is the complexity of their care. Over 68% of Medicare beneficiaries have two or more chronic conditions, or multimorbidity; and over 36% had four or more chronic conditions.[2] To streamline the care of older adults with multimorbidity, organizations have designed new models to deliver care that improve health and reduce costs associated with their complex care. Care coordination programs are one example of these new models to reduce costs and burdens associated with older adults with multimorbidity.

Care coordination is a broad topic that incorporates more than just a transition from a hospital to another setting. A care coordination program (CCP) organizes patient care activities between two or more providers involved in a patient's care to facilitate or manage the appropriate delivery of health services across the continuum of care.[3] Evidence shows that care coordination programs for older adults with multimorbidity decrease costs for the most complex older adult patients by streamlining their care and improving health outcomes.[4] However, well-coordinated care requires actions by both patients and providers. Community-dwelling older adults with multimorbidity engage in a complex process of self-management actions of engaging within the healthcare system and using personal resources that are available to the individual to meet their specific needs.[5] Currently, there is a lack of understanding of what older adults uniquely do to manage their own care in addition to provider activities while in a CCP.

This study theorized that self-management mediated the patient care experience within a CCP. Self-management training or some variation of patient education has been promoted as an important intervention associated with CCPs.[6–8] In studies in which researchers asked patients with multimorbidity about their needs for their complex chronic illness care, assistance with self-management was repeatedly identified.[9–13] Shulman-Green and colleagues conducted a qualitative metasynthesis of 101 studies in which they identified three categories of commonly studied self-management processes for patients with at least one chronic illness. Those categories were: a) focusing on illness needs, b) activating resources, and c) living with a chronic illness (e.g. diabetes, cardiovascular disease, cancer).[14] Guidelines for patient management support the identification of patient preferences to deliver patient-centered care and the evidence supports the teaching of chronic illness self-management strategies in CCPs.[15]

As organizations aim to become patient centered and to provide care that helps improve their care, it is intuitive to build on what older adults are already doing on their own to manage their own care when they are being assisted within formal CCPs. The purpose of this article is to examine what older adults with multimorbidity in a CCP uniquely do on their own to manage their care in addition to provider activities within a CCP. The long-term goal of this study is to use the findings to support the development of person-centered care coordination strategies that acknowledge and build upon older adults' own management of care.

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Methods

Methodology. This study used qualitative descriptive methodology.[16] This method was used to recognize the variety of shared, everyday experiences among older adults with multimorbidity in a Care Coordination Program (CCP) that is based on the Care Coordination Model (CCM).[17] Thus, the research team moved beyond the participants' individual responses and interpreted common ideas into themes associated with older adults' self-management of their multimorbidity.[18]

To protect human subjects, approval from the associated university Institutional Review Board (IRB) was obtained prior to data collection.

Participant recruitment

Study participants were recruited from a Care Coordination Program (CCP) based on the Chronic Care Model (CCM) and associated with a large Midwestern primary care organization. The primary care organization incorporated over 300 physicians across 55 practice locations. Inclusion criteria included patients in the CCP with two or more chronic illnesses, aged 65 or older and in a Medicare Advantage program. Participants who did not meet those criteria and did not submit a phone number on the response form or who did not provide written informed consent were excluded. Participants had been in the program for at least six months. Participant recruitment was accomplished through mailing a recruitment packet to a list of individuals enrolled in the CCP within the previous six months. The recruitment packet included a letter from the primary care organization's CEO inviting patients to participate in the research study, information about the study, and a response form. Those willing to participate in the telephone interview were asked to sign the informed consent, provide a phone number to be contacted by the researcher for the telephone interview, and return the response form in a stamped envelope. The packet was sent to 893 older adults.

Sixty-six replied to the request to participate in the qualitative phone interview. Of those who agreed to participate, 11 could not be reached by phone, three refused when contacted, two were under age 65, and one had died after returning informed consent. Nineteen were not contacted because their response cards arrived after saturation had been reached and the study was closed. Thirty participants were interviewed.

Data collection. Semi-structured telephone interviews were conducted by the researcher. After informed consent was obtained, the telephone interview started with questions about the participant's experience with the care coordination program followed by questions such as

- Can you tell me what you do to manage your own experience associated with care coordination for your chronic conditions?
- What do you do to maintain your overall health?
- What strategies do you use to manage your experience with your chronic illnesses?

The telephone interviews were recorded and transcribed verbatim by the PI within one week. Data analysis started after the completion of three interviews. Data on the first three interviews was reviewed by two researchers to assess for accuracy of transcription; and was considered by the research team to be lacking in detail and therefore, subsequent interviews used probing questions to help participants provide richer details of their experience with self-management. When probing questions were asked it was generally to identify more specific details about what they did on their own, and in addition to the medical or specific interventions from their physician or care coordinator. The interviews lasted from 20 min to one hour but most were about 30 min in length. Field notes were taken during the telephone interview. Interviews were transcribed and transcriptions were uploaded into QSR International's NVivo.[19] Memos were added to the database when the researcher identified similar common experiences from the participant interviews.

Data analysis. Thematic analysis was used to analyze the data. The PI and the second research team member read each of the 30 transcripts in their entirety. They individually line-by-line coded the first three transcripts and discussed the line by line coding in the first 5 weekly meetings. They then separately created codes based on the line-by-line coding and met to compare our codes for the first 3 transcripts. They discussed the codes and reached consensus on the 16 codes that would be used for the coding template. Definitions were developed for each code and they then went back and individually coded the first 3 transcripts. They then met to compare codes and reached consensus about the coding of each text unit (sentence, paragraph or story). Using these codes and the corresponding definition, they independently coded each new transcript and met to compare the codes. Discrepancies were discussed, code definitions were refined and discussion occurred in weekly meetings to reach consensus on all codes for all transcripts. After the first 15 transcripts were coded using the coding template, they individually reviewed the codes to determine ways in which codes could be inform the development of themes. Codes were combined or refined based on thematic similarities. At weekly meetings they reviewed the themes developed individually, discussed them, compared emerging thematic ideas with data. Preliminary themes were identified and used by the two researchers to analyze all 30 transcripts. At subsequent team meetings data in each transcript that supported each theme were presented by each researcher and discussed. Data that contradicted a theme or suggested another theme were also discussed and themes were revised until all data clearly fit into a thematic area. The discussions yielded analytic thoughts which were recorded by the PI in a journal account of analytic decisions. Codes were compared and emerging themes developed using QSR's NVIVO.[18] Text units coded to each theme were used to determine attributes of the themes to determine common themes about older adults' self-management of their experience. The interrelationship of categories resulted in two themes and a total of 16 sub-themes. Two categories associated with living with grit were collapsed into the proactive self-managing health category.

Results

Sample

The sample included 30 older adults with multimorbidity in a CCP. Sample mean age was 77.3 (range 67–94). The sample was 70% female. All participants were high school graduates and 33% had bachelor or higher degrees. In addition, 80% of participants had enough or more than enough money to meet expenses each month. Slightly over half (n = 16) lived alone. Of those who did not live alone, 33% (n = 10) lived only with a spouse, 7% (n = 2) lived with a spouse and child, and 7% (n = 2) lived with only a child and no spouse. The most prevalent chronic illness diagnoses were arthritis (n = 22, 73%), high blood pressure (hypertension, n = 20, 67%) and diabetes (n = 12, 40%). The average health rating was 64.4 (out of 100, range from 20 (poor) - 95 (excellent)).

The qualitative analysis identified two themes associated with older adults and their management of their multimorbidity; 1) living with limits and 2) living with grit (See Table 1). One participant stated he managed his multimorbidity by living with limits, giving a name to that theme. Their limits were related to chronic illness symptoms including shortness of breath, functional abilities, and pain. Regardless of their clinical factors, subthemes were associated with how they managed limits associated with their multimorbidity.

Table 1
Key points for understanding the self-management of older adults with multimorbidity.

Living with Limits – Took actions to maintain or thrive despite the restrictions associated with their multiple chronic conditions.
Implementing physician's orders
Comparing themselves to others
Resignation
Using assistive devices
Limiting activities
Relying on family for support
Living with Grit - Had the resolve to be in control of as much of their chronic illness management as possible; used strategies to manage their holistic needs relative to their multimorbidity.
Maintaining a positive mental attitude
Staying active
Maintaining mental agility
Proactive self-managing health and well-being
Re-analyzing their insurance
Believing in higher power.

The second theme was living with "grit". Grit is associated with positive psychology and has been defined as perseverance, determination, and resolve to meet long-term goals.[20] Grit, in this analysis, was defined as working toward a long-term goal with intent and determination. Interviews indicated that grit was an important aspect of their self-management and managing the hardships associated with their multimorbidity.

Living with limits

Participants acknowledged that they "lived with limits" or restrictions in what they could or could not do because of their multiple chronic conditions. Although they acknowledged their limits, most of the characteristics associated with this theme identified how the older adults did as much as they could to self-manage within the confines of their unique situation. Their unique situations included functional changes that limited mobility, medical diagnosis such as diabetes and kidney disease that limited their diet, and shortness of breath and lack of energy. See Table 2 for subtheme names, definitions and characteristics associated with living with limits.

Implementing physician's orders. Participants identified how they adhered to the medical plan of care and followed the physician's recommendations closely. Almost all the participants identified that they managed their multimorbidity by taking their medications. Others identified how they watched their diets and avoided foods that might aggravate their conditions. They also noted that they had regular appointments with physicians, in some cases three or four appointments within a few weeks. Several noted that they valued second opinions from specialists to affirm their primary physician's diagnosis and plan of care. A man with advanced chronic obstructive pulmonary disease said:

> Well basically it's just a matter of medications that they give, there is no cure; as I understand for COPD. A lot of inhalers and those kinds of things so I just try to do what the pulmonary man says and the primary care doctor says.

Another man said:

> They kept me in the loop where we're connected to their website, so on and so forth. They monitor me quite often. I go in for blood tests, CT scans, breathing tests [and] that type of thing.

Comparing themselves to others. Almost half of the participants described how they gained a deeper understanding of their own situation by talking with others with similar issues. A few said that they attended support groups and that the best part of those groups was meeting with people who had similar conditions. They also contrasted how their situation was better or worse than their peers. One woman compared herself to her friends who had different ailments than her own and said:

> I know I'm old but it seems like everything else is good on my body except my back. I know a lot of people have cancer or have had cancer and they're gone now. I haven't had a bad heart, I haven't had things that other people have had but I can't seem to get this one thing straightened out. I haven't found anybody else; I've talked to people that have, you know, are bent over but they don't have pain.

Resignation. Many of the participants were resigned to the situation and accepted and submitted to the limitations brought about by chronic

Table 2
Living with limits.

Theme	Definition	Characteristics
Implementing physician's orders	Adheres to the medical plan of care including taking prescribed medications.	1. Adhered to medication regimen 2. Had regular appointments with physicians 3. Counted on primary care physician's recommendations for second opinion
Comparing themselves to others	Talk about and think about how one person's situation is like another's.	1. Talked with others with similar conditions to learn from them 2. Attended support groups 3. Rationalized how their situation was better or worse than their friends and peers
Resignation	Accept and submit to the limitations brought about by chronic illness and aging.	1. Make the best out of the situation at hand. 2. Get depressed or down 3. Complain about pain 4. Rely on medical providers to take care of their health issues.
Using assistive devices	Use a variety of tools and resources to overcome their limitations.	1. Rely on assistive devices 2. Use calendar to keep track of medical appointments
Limiting activities	Restrict participation in personal interests.	1. Stay at home 2. Give up hobbies because of limitations 3. Spend excessive time in recliner 4. Forego shopping 5. Do activities more slowly

illness and aging. Some identified that they were resigned to the pain associated with their chronic conditions and searched for some sort of relief. Several said they tried to make the best out of the situation while others said they did get depressed or down on occasion. One person said he was resigned to both his advancing age and his chronic illnesses:

> Yeah, I get a little depressed, you know, and I actually think that the breathing has something to do too with process and forgetfulness; and you know I'm not getting any younger so a little dementia I'm sure has set in; so you have to take all those things into consideration I guess.

Using assistive devices. Living with limits imposed by multimorbidity requires use of a variety of tools and resources to manage physical limitations such as wheelchairs and walkers. Several participants identified that calendars, either printed calendars or electronic calendars on their smart phones, helped them manage their multiple medical appointments. One person identified his limits related to arthritis pain yet also identified how assistive devices helped with his mobility:

> What I do is bare existence – I'm limited because of arthritis everywhere and chronic pain; so I just live within my limits. I have to use canes, walkers, scooters; even around here, to be mobile around the apartment and the building I live in.

Limiting activities. Several participants identified that the management of their multimorbidity required a limit or restriction in participating in their personal interests. Some identified how they stayed at home or avoided activities so as not to have embarrassing symptoms away from home. A few identified they had to give up hobbies. For instance, one man said that he gave up fixing cars and was only able to read magazines about them. Several others identified that they forego shopping or did activities more slowly. One woman stated "I don't go in any of the stores unless I go in the wheelchair. I just can't walk and the pain becomes so bad and I become so bent over that I can't straighten up and it's so painful and I can't stand it." Another person stated how even normal chores were limited:

> I'd like to get out and take down Christmas decorations but it's too cold plus I just have too difficult a time breathing to accomplish much; so that's about where I'm at. Some days are better than others. Some days I can hardly walk from one side of the house to the other and some days I feel pretty decent.

Relying on family for support. Family members frequently were identified as helping older adults manage their limits. Spouses and adult children were often key caregivers. Daughters were most frequently identified but several participants identified that sons also provided support for their older adult parents. Children were often drivers for their parents and provided transportation to their frequent medical appointments. One woman explained how she negotiated with a specialist physician to reduce the number of office visits from four to three per year so she could reduce the number of times she had to ask her daughter for a ride. Most participants indicated appreciation for the support they received from their children. However, if

Table 3
Living with grit.

Theme	Definition	Characteristics
Maintaining a positive mental attitude	Belief that optimistic thinking improves current and future situations.	1. Look on the bright side
		2. Keep positive outlook and think good thoughts
		3. Plan good actions
		4. Positive about themselves
		5. consider the best in others
		6. Hopeful
		7. Manage moods
		8. Do not feel sorry for self
		9. Keep their spirits up
		10. Avoid negative thought
		11. Grateful
Staying active	Participate in events and maximize physical abilities.	1. Try new activities even if told they will not be successful
		2. Do not sit around
		3. Consider themselves a fighter
		4. Keep up with social events
		5. Volunteer
		6. Participate in hobby
Maintaining mental agility	Challenge their cognitive abilities to keep brain in shape.	1. Do spider solitaire, crossword puzzles, play bridge and other games
		2. Read the newspaper and stay on top of current events
		3. Have stimulating conversations with neighbors and friends
Proactive self-managing health and well-being	Identify, implement and manage self-identified wellness strategies and take responsibility for their own decisions.	1. Use patient portal for accessing their medical records
		2. Negotiate frequency of physician visits to decrease number over a year
		3. Analyze their diet to understand negative symptoms
		4. Serve as their own care coordinator
		5. Do not expect physician to take control
		6. Use their own remedy rather than prescribed therapy
		7. Arrange and pay for support including for housekeeping.
		8. Reside in condominiums or senior apartments; chose new location based on ease of access to grocery, hospital, etc.
Re-analyzing their insurance	Review and consider what insurance will cover their specific needs.	1. Review policy to maximize coverage for their needs.
		2. Re-enlist in current insurance company to maintain its care coordination program.
		3. Complain about how their insurance did not pay for a certain medical therapy.

they did mention something negative about their children, it was that they wished they would see them more or talk on the phone more. One woman said that although she was able to give herself her own G-tube-inserted medications, she appreciated the fact that "My daughter puts my meds in a tray for me. My husband keeps that tray with medicine locked up and then my husband takes it out when it's time for me to have my medicine."

Living with grit

The second theme associated with older adults' self-management was living with grit and living with determination to meet a long-term goal. In this study, analysis identified that older adults with multimorbidity in a CCP were determined to be in control of as much of their chronic illness management as possible, and persevered through challenges associated with their multimorbidity using a variety of positive strategies. Grit was generally related to strategies aimed at managing their multimorbidity and using their physical, mental and spiritual resources. See Table 3 for subtheme names, definitions and characteristics.

Maintaining a positive mental attitude. Almost all participants articulated belief that optimistic thinking improved their current and future situations. Many said they looked on the bright side, had a positive outlook and tended to think good thoughts and plan good actions. They were positive about themselves and considered the best in others. They were grateful for what they did have; were hopeful and actively managed their moods and kept their spirits up despite living with multimorbidity. Two quotes identify the value of a positive attitude. One participant stated "Again it is positive attitude; and I try to think good thoughts and plan good actions. And, that's what helps me take that step above what my existence is." Another said,

> Positive attitude that's the biggest thing that got me through with my battles with cancer. It was a tough time. I got through it all right. I think about [how] I'd like to get out and golf again. Keep your attitude or you're going to lose the fight.

Staying active. Many participants described ways they stayed active. Staying active meant participating in as many outings and events as possible to maximize their physical abilities. Several were willing to try new activities, even if told they would not be successful. One person said he was a "fighter", which he explained meant that he would walk again, even after having a stroke. Some of the activities older adults participated in included volunteering, going to the gym and being active with a hobby. Another person identified how being active helped her "stay young." She said,

> I work real hard to stay active and to do the things …. So anyway that's why I think it's so important for elderly people to stay active. Because the minute you stop being active you become older.

Maintaining mental agility. Most participants identified that maintaining their cognitive functions, or mental agility, was a priority for their self-management. Participants identified that they that kept their brains in shape by playing spider solitaire, working on crossword puzzles, playing bridge and other games, reading the newspaper and staying on top of current events. One person explained,

> But I think with the aging process, if you keep your mind active and, you know, stay on top of current events and have a social life with other people; that's probably 50% of the lifestyle you need, along with the doctors. You know, it all fits into that pattern somehow.

Proactive self-managing health and well-being. Some participants described ways in which they were in control of their own health including managing wellness activities, taking responsibility for decisions, and staying on top of their patient portal. Two participants identified that they served as their own care coordinators. One person identified how he pre-planned his hip surgery to avoid going to a nursing home after his surgery unlike after his first hip replacement. Two people discussed how they took charge of their diet and avoided foods that caused unpleasant symptoms. One 80-year-old man described what being in control meant to him, "I mean I'm in charge of my body ultimately and I try to listen to my body and I've written poems about listening to your body so I don't think that is a bad thing."

Several participants discussed how they proactively strategized to maintain and improve their future health. They sought out their own education and read magazines and books, attended classes and were curious about research that would help them over time. They described how they identified their own healthy diet based on their personal research, maintained a healthy weight to avoid future bad outcomes, and actively participated in exercise including yoga. One person said she was proactively enrolling in a special program related to her insurance. Another said,

> Well, I feel that knowledge is power so I read about different health issues. Not only for myself but for the elderly, and I read my self-management diabetes every month. My friend's husband is diabetic and he gives me his magazines so I read all the information on that. And I try to be as up to date on the knowledge that is available to me so I can keep my A1C at 6% or around that and lower.

While most were independent or relied only on their family, a few recognized that they needed additional assistance and took charge of arranging and paying for support, including for housekeeping and several used a podiatrist to cut toenails. One woman described her experience hiring help:

> They don't do real heavy, deep cleaning but they dust and polish everything and it smells good and it looks good when they leave. I only get them three hours. It's $25 an hour and I don't have that much money.

Many participants relocated to smaller, lower maintenance homes. Generally, the new home was a condominium or senior apartment that did not require the older adult to manage the landscaping activities. One person identified that he picked his apartment based on ease of access to grocery, hospital, etc. A woman in her 80s explained that she formerly had a large house with a large lot that she "spent a fortune on" so moved to a suburban condominium that eliminated her management of lawn care and snow removal.

Although many participants wanted to move their residence to a place that was more manageable, one participant stated that her long-term goal was to stay in her home as long as possible. She said the CCP was helping her meet that goal.

Re-analyzing their insurance. Several participants discussed what their insurance covered and what it did not, and made decisions about re-enrolling in their plan based on their past experiences. They made choices about providers based on which providers were in their plan. In some cases, they were concerned about increased costs associated with any change and other consequences. One person said he and his wife re-enrolled in their Medicare plan because they liked their care coordinator. This participant stated,

> She is very persistent in what she tells me to do… she has a way of when she says you're to do this, I do it. And I have never seen her. It's been all on the phone but I just know that I'm going to get the straight scoop. She lets me know what's going on. I just got

> new insurance in 2016 and my wife and I were both Medicare and we picked [insurance company name] again. …. they've done a good job for us. The price is comparable so we're not changing. It's coming out of my pocket now so hey, for an extra $2 a month, I'll spend it on something I want.

Believing in higher power. Some participants identified that their faith in a higher power helped them overcome difficulties. Specific activities included attending church services or religious programs, participating and volunteering in church activities, relying on prayer and believing in miracles. One man stated,

> Well I believe there is a higher power, OK. And that it helps when you don't have a lot of control over lots of things. And so therefore, there has to be some kind of divine intervention or some place along the line.

Another 80-year-old woman said, "But I think mentally, if you're spiritually healthy, you're mentally healthy…"

Discussion

In this study of older adults in a CCP, findings suggest that older adults self-manage their care by living within their limits and living with grit. Older adults' self-management of their care and daily activities is especially important for those with chronic illnesses.[21] Participants took an active role in managing their care in addition to the care coordination services they received as part of the CCP. Threaded throughout the themes were desires to stay in control of their health on their own, actively engage in life and manage their own living arrangements, their relationship with their children and the time and energy they devoted to others. Although the participants in this study recognized the limits associated with their aging and multimorbidity, they identified gritty strategies that they used to live beyond the boundaries set by their situation. Older adults in this study lived beyond their limits through positive attitudes and proactive actions for holistic self-management including but not limited to maintaining a positive attitude, staying active, being in control of their own health including analyzing their insurance, and maintaining mental agility.

Previous research has identified that perceived problems that limit active self-management of chronic conditions included depression, problems controlling weight, difficulty exercising, fatigue, poor communication with health care providers, lack of support from family, pain and financial problems.[22] It seems intuitive that when adults are asked about their multimorbidity, their focus will be on challenges and barriers rather than perspectives that are positive and proactive. For instance, although both the Corser and Dontje study and the present study identified perspectives of adults with multimorbidity, there were interesting differences in the findings about self-management.[9] Corser and Dontje conducted a focus group study with 18 adults aimed at understanding their perspectives on self-management of multimorbidity and identified complexities and challenges associated with their self-management.[9] The present study took a different approach and did not ask about "complexities and challenges" but rather the participants were prodded to provide data about what worked for them and hence the proactive strategies identified may be a result of that data collection technique. It is possible that the focus group data collection method used by Corser Dontje also had an impact on the different findings from their study compared to the present study.[9] In focus groups, one participant's comments may affect the whole sample; which does not occur in individual telephone conversations with participants.

The proactive approach to self-management identified through this study may be counterintuitive to what nurses and other providers typically think about older adults. Loffler and colleagues hypothesized that older adults take a passive approach to coping with their chronic illnesses and passively wait to be told what to do by providers, but in their study of coping of older adults, they found instead that older adults were proactive in seeking information, adhering to lifestyle recommendations and questioning the benefits of medications.[10] The present study identified that older adults with multimorbidity proactively managed their health and wellness and used strategies such as starting new diets they read about and attending community classes on wellness. They also wanted to control where they lived to make their home easier to manage and hired help when they felt they needed it.

Unlike the Loffler et al., study participants in the present study rarely questioned the value of their prescribed medications and considered their medication regimen essential to living with their chronic illnesses.[10] Overall, the older adults had a respectful attitude with their physicians and counted on them to prescribe what they needed. However, this study suggested that in addition to what their physicians prescribed, they developed their own holistic strategies to integrate their body, mind and soul for their overall well-being. Health and wellness strategies identified by most older adults in this study included implementing physician's orders, using assistive devices, limiting their participation in activities, staying active and moving their residence. Older adults' attention to their mind or mental well-being included strategies such as comparing themselves to others, maintaining a positive mental attitude, and maintaining mental agility. Spiritual self-management strategies included believing in a higher power, going to church and participating in religious activities.

The generalizability of this study is limited by the fact that many of the patients were well-educated and had a high socio-economic status and therefore, the findings from this study may not be generalizable to less affluent populations. Transferability and interpretation of how various racial groups manage their own experience was also limited without data on race. Furthermore, the study may have been confounded by the fact that most of the practices providing primary care for the older adults in this study had achieved level 3 designation as a Patient-Centered Medical Home (PCMH). Since PCMHs have become known for their patient-centered strategies, these strategies may have impacted older adults' self-management.

Implications for policy and practice

The findings from this qualitative descriptive study provide insight into what older adults in a CCP do on their own to manage their care. The identification of holistic strategies for self-management from an older adult's perspective suggests implications for developing appropriate health policy associated with care delivery models for older adults. For instance, there is not direct Medicare reimbursement for many care coordination services with a high likelihood of success such as patient and care giver education, shared decision making and empowerment for self-management.[23] Yet that may be changing with Medicare's value-based payment initiatives that pay providers for reduced costs associated with overall care rather than just paying for a specific service.[24] Therefore, maximizing the older adult's unique self-management strategies may help lower costs and improve payment for services associated with a CCP. This study suggests that some older adults with multimorbidity in a CCP associated with the CCM framework and Medicare Advantage take an active role in their health care. Findings from this study shift the focus from providers to patients, and suggest that future development of health care policy for older adults should also shift to focus on the unique needs and abilities of older adults, and not solely on providers and their needs and abilities.

Translation of these findings may also help practicing nurses, especially care coordinators, realize that older adults can indeed manage the limits of their multimorbidity. This study identified common themes associated with older adult's self-management including aspects of living with limits and living with grit. Nurses must first appreciate that older adults can self-manage their multimorbidities then assess what each older adult does to self-manage. Such an assessment should lead the nurse to plan care with the older adult based on the older adult's strengths hence promoting even greater self-management. Using a shared decision-making approach with support for self-management has been found to promote adherence and lead to improved health outcomes.[25]

Future studies that evaluate self-care strategies in relation to healthcare utilization rates (such as emergency department usage) or other self-reported outcomes would inform value-based care delivery models. In addition, studies that identify specific nursing interventions that help older adults' self-management are also needed to refine person-centered care coordination strategies.

Conclusion

In the future, health care payment strategies through Medicare will continue to focus on decreasing costs by streamlining care for the older adult population. This study adds to the body of knowledge about what older adults do on their own to manage their care in addition to the care and treatment they receive from the healthcare system; in this study, a dedicated CCP. By recognizing what older adults do on their own, nurses can build on the older adult's strategies to provide a person-centered care coordination experience. Implications of this study suggest that nursing care should start with an assessment of older adults' unique experience related to their limits and their grit. A personalized assessment of limits and grit provides a foundation for holistic, person-centered care coordination that meets the older adult's specific needs.

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