


A Triangulated Qualitative Study of Veteran Decision-Making to Seek Care During Heart Failure Exacerbation: Implications of Dual Health System Use

Charlene A. Pope, PhD^{1,2}, Boyd H. Davis, PhD^{1,3}, Leticia Wine, MS¹,
Lynne S. Nemeth, PhD², and Robert N. Axon, MD^{1,2}

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Abstract

Among Veterans, heart failure (HF) contributes to frequent emergency department visits and hospitalization. Dual health care system use (dual use) occurs when Veterans Health Administration (VA) enrollees also receive care from non-VA sources. Mounting evidence suggests that dual use decreases efficiency and patient safety. This qualitative study used constructivist grounded theory and content analysis to examine decision making among 25 Veterans with HF, for similarities and differences between all-VA users and dual users. In general, all-VA users praised specific VA providers, called services helpful, and expressed positive capacity for managing HF. In addition, several Veterans who described inadvertent one-time non-VA health care utilization in emergent situations more closely mirrored all-VA users. By contrast, committed dual users more often reported unmet needs, nonresponse to VA requests, and faster services in non-VA facilities. However, a primary trigger for dual use was VA telephone referral for escalating symptoms, instead of care coordination or primary/specialty care problem-solving.

Keywords

Veterans, decision making, heart failure, qualitative research, dual use

Introduction

Heart failure (HF) is a highly prevalent chronic disease afflicting over 5 million Americans.¹ There are approximately 650 000 new cases of HF per year in the United States, and adults aged 40 years and older face a ~20% lifetime risk of developing this disease.^{2,3} HF causes over 800 000 emergency department (ED) visits and over 1.1 million hospitalizations each year with total estimated costs for HF care reaching \$32 billion.^{4,6} Approximately 20.4% of Medicare patients hospitalized for HF are rehospitalized within 30 days.⁷ After HF hospitalization, overall 30-day mortality is approximately 8.8%, and HF patients have a 5-year mortality rate that approaches 50%.^{3,8}

A variety of factors predict HF hospitalization, hospital readmission, and mortality, including age, gender, New York Heart Association functional class, left ventricular ejection fraction, comorbid medical conditions, and measures of hospital quality.^{7,9-16} In addition, dual health care system use (dual use) is an emerging health system-related factor associated with higher health care utilization and worse outcomes for several diseases. For example, almost 20% of Medicare patients rehospitalized within 30 days after an HF hospital admission are admitted to different facilities on their second

stay.¹⁷ Thus, the decisions patients make regarding when and where to receive acute care for chronic conditions such as HF can have a significant impact on their subsequent health care utilization and outcomes.

Within the Veteran Health Administration (VA), dual use occurs when patients receive care from multiple providers or health care facilities as well as the VA. Dual use is particularly common in the VA health system where a majority of hospitalizations for cardiovascular disorders among older Veterans occur at non-VA facilities.¹⁸ Compared with VA-only users of acute care, Veterans with HF who were dual users had 15% higher adjusted rates of ED visits, 40%

¹Ralph H. Johnson Veterans Affairs Medical Center, Charleston, SC, USA

²Medical University of South Carolina, Charleston, USA

³University of North Carolina at Charlotte, USA

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Corresponding Author:

R. Neal Axon, Health Equity & Rural Outreach Innovation Center, Ralph H. Johnson Veterans Affairs Medical Center, 109 Bee Street, MSC 111, Charleston, SC 29401, USA.
Email: Robert.Axon@va.gov



higher rates of hospital admission for HF, and 46% higher rates of all-cause 30-day readmission.¹⁹ Although HF is a leading cause for hospital admission, readmission, costs, and mortality in the Veterans Affairs (VA) Health System,²⁰ there have been relatively few studies that have solicited Veteran perceptions of such HF-related issues.²¹ This article examines how Veterans make decisions to seek care as their symptoms escalate. In addition, though there are a few studies of dual use of VA and non-VA health services by Veterans with HF, we could locate none from the Veteran's perspective.²² Although a limited sample ($n = 25$), this exploratory, descriptive qualitative study compares the perspectives of Veterans who used only VA care, Veterans who described an unplanned use of non-VA service in a single emergency, and Veterans who identified as usual dual users. The patterns that appeared within the dual user group compared with the other 2 groups suggest specific descriptive evidence for the design and testing of future interventions, a potentially relevant pattern that may contribute to more patient-centered HF interventions to improve VA health services.

Methods

Most studies of dual use to date have analyzed secondary data to establish patterns of health care utilization and to measure health care outcomes.²³⁻²⁸ However, much less is known regarding the subjective factors leading Veterans to seek care across health care systems. To better understand care seeking decisions among Veterans with HF and to explore differences in decision making between single and dual system users, we conducted a qualitative study of Veterans with HF at 2 VA medical centers. This study drew from both conventional qualitative content analysis and constructivist grounded theory to explore perceived similarities and differences between Veterans who had single and dual use of VA and non-VA services as broadly as possible.^{29,30} Rather than apply a preestablished theoretical framework, grounded theory supplies a logic of data collection, constant comparison of developing concepts, and reflective analysis that generates an emerging framework in its final results.³¹ Separate coders applied the 2 primary qualitative methods and negotiated a consensus between content analysis and grounded theory-based findings, using the computer-assisted qualitative content analysis program and Web-based corpus analysis tool Wmatrix for triangulation.³²

Study Data and Interpretation

Selection of Participants

Veteran subjects for this analysis were recruited from VA Medical Centers in the southern United States. Beginning in May 2014, approved by the VA Central Institutional Review Board (CIRB), we created a purposive sample of subjects identified through 3 mechanisms: (1) review of existing

patient registries of those previously receiving care for chronic HF, (2) review of inpatient census documents for patients hospitalized with HF, and (3) posting advertisements in patient care areas of our facilities. Potentially eligible patients lived in specific geographic regions, had a diagnosis of HF, and had received treatment within the preceding year. They were mailed a letter of recruitment or approached in inpatient settings (after an introduction facilitated by clinical staff). Individuals responding with interest to these recruitment efforts were contacted by a study team member who screened subjects for eligibility to participate by reviewing questions related to inclusion/exclusion criteria. Subjects with limited English proficiency or who were unable to provide individual informed consent were excluded from participation in semistructured interviews, as they would likely be unable to complete study procedures. Subsequently, consenting participants were scheduled for interviews conducted in person or via telephone.

Semistructured Interviews

Interviews were developed using constructivist grounded theory.³⁰ After obtaining basic demographic information, open-ended questions explored how Veterans perceived their heart condition, how they managed HF, what influenced their decision to seek emergency assistance, and how they made the choice to use VA- versus non-VA services, based on a standard interview guide shown in Table 1. Two interviewers with previous experience in qualitative studies conducted semistructured interviews lasting 30 to 60 minutes, using principles of qualitative interviewing. Interviews were digitally recorded, transcribed, and entered into NVivo Version 10 software for coding.^{33,34}

Qualitative Analyses

Two coders planned parallel coding for the broadest perspective possible, using separate approaches to coding in a first pass, and then negotiated and refined codes in a process of consensus coding.³⁵ The first coder used classic qualitative content analysis to explore the text from a health services perspective by selecting codes deductively in response to the research question, pretesting codes on a few transcribed interviews, applying the codes completely, and creating a case by case variable matrix from emerging categories.³⁶ Using a more inductive approach, the second coder used constructivist grounded theory, reexamining language for specific views, values, what actions were represented, relationships implied, positions taken, and what was unsaid.³⁰

Transcriptions were coded line by line, grouped into categories, and subsequently examined for emerging themes using constant comparison. Veterans were initially sorted into single- versus dual-users of services for purposes of analysis. During analysis, it became evident that a sizable

Table 1. Interview Guide.

Owning the condition	<ul style="list-style-type: none"> • What do you call your heart condition? • Have you ever been told you have (congestive) heart failure? What does that mean to you? • How do you usually manage your heart condition at home?
Seeking care	<ul style="list-style-type: none"> • What do you think makes your heart condition worse and causes something that sends you to seek care? • Describe an incident that caused you to go to the emergency room or hospital with a problem related to your heart condition • How did you make the decision about when and how to seek care for your heart condition? • Did you go to your primary care or heart specialist before or after your visit to the ED/hospital? How was that experience? • What role did your primary care provider play in your decision to finally go to the ED?
Quality of care	<ul style="list-style-type: none"> • What has been your experience with seeking care for a problem with your heart failure at ED? How did you decide between going to a VA or a non-VA hospital? • When you were seen in the ED, how did the ED physician decide whether to admit you to the hospital or to send you home? • How did you decide for or against being hospitalized at a VA hospital? • Are you currently or have you previously been enrolled in the VA telehealth program for heart failure? How is/was that experience?
Summary reflection	<ul style="list-style-type: none"> • How would you describe the quality of care you received for your heart condition? • How easy/hard is it to get care for your heart condition at different places? • How do you think choosing either a non-VA hospital or a VA hospital during an acute episode of your heart failure affects how people treat you at the hospital—or affects what happens next with your heart failure? • Considering both good and bad aspects of your hospitalization for your heart condition, what changes could the VA make in the future that would help you take care of your heart condition and/or help you stay out of the hospital? • What additional comments would you like to share with us at this time?

Note. ED = emergency department; VA = Veterans Health Administration.

number of Veterans initially categorized as dual-users had instead accessed non-VA services only during a critical incident and then returned to acting as VA single-users for follow-up care by preference.

Computer-Assisted Qualitative Content Analysis

As an additional point of comparison for triangulation, a third coder, an applied linguist, used an online linguistics-based tool, Wmatrix, to compare computer-assisted qualitative content analysis and grounded theory findings of the texts, with quantitative comparison of language patterns between the 2 sets of health service research coders. Wmatrix helped identify significant conceptual themes, commonalities, and differences suggested by word use as a complementary analysis to the consensus reached by the initial content analysis and grounded theory coding. Wmatrix tags every word in a text by its part of speech and also its semantic category and measures their frequencies of use for comparisons.³² In comparing language used by single- versus dual-users, Wmatrix provides a means to apply log-likelihood analysis to identify statistically significant keywords and key semantic fields (such as Time or Emotion). The identification of significant keywords and semantic fields is complementary to the analysis of themes identified by content analysis and grounded theory, refining their identification and reducing potential investigator bias.

Table 2. Subject Characteristics.

Characteristic	Interview subjects
Gender, n (%)	
Male	24 (96)
Female	1 (4)
Race/ethnicity, n (%)	
Non-Hispanic, white	10 (40)
Non-Hispanic, black	12 (48)
Other	3 (12)
Age range, n (%)	
51-60	3 (12)
61-70	11 (44)
71-80	9 (36)
81-90	2 (8)
Dual use category	
Only Veterans Health Administration Users	9 (36)
Consistent dual users	6 (24)
One-time dual users	10 (40)

Study Results

Sample Characteristics

As depicted in Table 2, our sample consisted of 25 predominantly non-Hispanic black and non-Hispanic white male

Veterans aged 51 to 88 years. Nine subjects were only VA users, six were committed dual users, and 10 were inadvertent one-time dual users.

Findings From Grounded Theory Analysis

In reviewing all interviews, we noticed that participants in all groups exhibited low levels of engagement with their primary care providers for problem solving, which can contribute to increased use of the ED for symptom management in general and during the early stages of an exacerbation. Symptom escalation was often not perceived as recognized by Veterans. Self-management was clearly a concern, as shown in the patterns we identified for consistent only-VA users, consistent dual users, and inadvertent one-time dual users. This last category of Veterans, inadvertent dual users, often sought care in response to a critical incident. They described being pressured by family or from a member of their social network to seek care at the closest available facility for rising symptoms, fear, or a feeling of being overwhelmed. Several were taken to non-VA facilities by the emergency medical service they contacted for transportation. Often patients had not called VA Primary Care for consultation about emerging symptoms, a consistent pattern across users, but waited until the ED was the necessary choice. Table 3 exemplifies precipitating factors leading Veterans in all 3 categories to seek care.

Both the exclusively single users and inadvertent one-time dual users had specific reasons for selecting VA care, keyed to its perceived quality, as shown in Table 4. Although often concerned about delays with specialty care, they were less concerned about wait-time for general VA services.

Consistent dual users who planned to remain in that category reported that they had their own insurance and did not feel limited to either the VA or to the closest available medical care. Like single and inadvertent one-time users, they waited until escalating symptoms, such as lack of breath, caused them to seek care, and displayed little personal agency, being content to go wherever an ambulance, family member, or friend took them. They were more likely to cite lack of access to VA primary care and difficulty scheduling as main reasons for choosing non-VA care, keyed to frustration with access to services, as shown in Table 4.

Findings From Computer-Assisted Content Analysis

Using Wmatrix for triangulation, semantic fields identified for both single and dual users shared many similarities, as members of each group were being asked similar questions. In both groups, word usage falls into identical conceptual or semantic clusters keyed to *identity* in the interview questions. These conceptual clusters included comparisons of hospitals and their staffs, listing of symptoms leading to hospitalization, reports on what clinicians had told them, descriptions

contrasting ease or difficulty in gaining admission to medical treatment, listing of chronic conditions including HF, how the heart condition escalated, highlights in the Veteran's heart disease story, and evaluation of the hospitals and their care.

Dual-users' words were significantly more likely to fall into the category for *Evaluation*. To further examine the category of *Evaluation*, we extracted the answers by all 25 Veterans to the question, "Can you describe the quality of care you received" and compared those against the full text of all of the interviews. That comparison underscored that speakers were inclined to report what others said about their condition, and had strong concerns about getting appointments and being seen in a timely fashion. For the 50 words identified as semantically evaluative in the responses to *Quality of Care*, we noted that *Okay* was used to close a question-answer sequence, *Well* was used to open a topic or to signal slight hesitation before giving an opinion, but the other words characterized the quality of care as being of high value. Interestingly, Veterans who were dissatisfied with the VA did not use words such as *Poor*; instead, they launched immediately into uninterrupted monologues on one of 3 conceptual themes: the difficulty of obtaining appointments, of getting clear answers, or being seen within a time they saw as reasonable. Overall, the theme of symptom escalation emerged as a precipitating factor that triggered ED use, yet had a described trajectory open to intervention. However, the Veterans' statements suggest a lack of recognition or response early in the symptom cycle.

The theme of symptom escalation emerged as a precipitating factor that triggered ED use (as seen in Table 3), yet had a described trajectory open to earlier problem solving or intervention. However, the Veterans' statements suggest a lack of recognition or willingness to respond early in the cycle.

I started sweating at night, I mean, a whole lot of sweat. And I got kind of skeptical, but then the sweating and then it started turning into that real bad feeling.

This typical example suggests a process that was noticed, reflected upon, escalated, but not acted upon until the final "bad feeling," without primary care consultation. Another dimension of this decision-making process reflects a lack of care coordination within the multiple services often needed for persons with HF, reflected in this example in which the physician in the primary care clinic goes unmentioned or mistakenly identified as one of many specialists.

Interviewer: "Did you go to your primary care doctor or heart specialist before or after your emergency department visit?"

Veteran: "Well, the emergency department, they admitted me into the hospital and then the heart specialist came by and determined that's what it was and that I didn't need any special treatment or medication . . . Well, my primary care doctor is in nephrology, so I very seldom

Table 3. Factors Precipitating Veterans' Decisions to Seek Heart Failure Care.

Themes of decision making	Representative quote
Symptom escalation: sweating	So after I started to have that real bad feeling and sweating because, I mean, I'd wake up soaking wet, and that's when I called the VA. From the sweating, and then when I got to feeling real bad, they got an 800 number to call the nurse, and I called them and explained to them what's going on.
Symptom escalation: breathing	That's more or less I just couldn't breathe. I couldn't catch my breath. I was just sitting there in the bed and I went to go use the bathroom. I came and sat down on the bed. I just couldn't catch my breath and I didn't know what was going on. That was when it first happened.
Symptom escalation: choices driven by providers	I didn't decide. The doctor in California decided, sent me to a VA after they found out that I was a Veteran. They decided to send me to a VA for better service and a cheaper service, and it was done for me. I did not decide because I had no idea of ever being sick.

Note. VA = Veterans Health Administration.

Table 4. Reasons for Choosing Care in Only-VA Users and Inadvertent One-Time Dual Users Versus Consistent Dual Users.

Theme	Representative quote
VA-only and one-time dual users	
Quality overall: overall satisfaction with quality of care	The doctor comes out there and she sees me and she knows I have an appointment. "Come on." Can I do that with anybody else? No. I'm very pleased with the service that I get for my heart . . . I would not change it for any other hospital.
Quality as equity: perceived equity as part of quality of care	Well, I mean, they go right to work on you. They just handle you very professionally. There's no color, creed or what have you. They handle you as a patient.
Quality in decisions: decision to choose VA based on quality of care	Right now the reason for my decision to come to the VA is because I just overall get better service. When I come to the VA, I feel that if I'm in a detrimental situation, I'll be seen. Going to the private emergency room, they don't get to you that quickly.
Quality as information: better communication with often named providers and can echo directives or explanations	The heart specialist and my diabetic specialist, nurses and doctors and all them made me extremely aware over the last four years of what I had to be aware of, the symptoms and when I need to get in here to the doctor. Weight gain, fast weight gain is another symptom of retaining fluid around my heart.
Quality as replacing insurance concerns	Money. I couldn't afford the outside insurance. Me and my wife, we spend over \$1000 a month, and I couldn't afford that . . .
Dual users	
Lack of access to primary care	I'm tired. I use the emergency room for my primary care physician, but that's not right. That's the only way I can get to see a doctor is go to the emergency room. You go down there and you sit and somebody says, "What are you in here for today?" And the other thing is the TAP [Telephone Advice Program] number or the nurse? The help for after hours? It doesn't matter what you say to them, when you're done they say, "Go to the emergency room."
Scheduling problems	I can't get an appointment. I had an appointment August 20th, believe it or not, made back in April, I think. But August 20th, that's how far ahead I had to go. But then I got a call Friday cancelling that. I said, "Where's he going to be?" "He's out of town." And she said, "When do you want to come back?" I said, "I do not give a damn. Send me a letter, whatever you want to," and hung up.

Note. VA = Veterans Health Administration.

see him. I see him once a month maybe when he makes his rounds up in the dialysis unit. Every decision I make I make it on my own because I've really never been to see a heart specialist. You understand? You know, they make appointments, they do an EKG and he looks at it and that's it. As far as sitting down and talking and explaining to me exactly what the problem is or what may have caused it, no, I never got that information."

Another theme that affected choice of care across the 3 groups was related to accessing care, especially through the VA Telephone Advice Program (TAP), the patient information service available at all VA medical centers 24 hours a day. Though committed dual users expressed some frustration, study participants in the other 2 groups referred to TAP rarely.

Others portrayed that some VA telephone access had improved.

The other thing I'm finding is that it used to be you'd wait an hour or so on the phone to talk to somebody at the VA. You don't have that wait period right now, which is a bit better. Nobody minds waiting 10 or 15 minutes, but you wait an hour, hour and a half to talk to somebody, that's . . . a bit much.

Discussion

In this article, we have presented findings from a qualitative study of decision making regarding care seeking among Veterans with HF. By using complementary approaches to analysis and interpretation, we identified key words, key themes, and prevalent discourse patterns. Not surprisingly, dual users chose negative words (including taboo words) to describe their experience, keyed primarily to a lack of satisfaction with delays in service, and resistance to being consistently sent to the ED when calling with a problem. They apparently had impersonal relations with providers, tending not to know their names. Feeling that quality of care was low, and having insurance of their own, they consistently chose care outside the VA whenever it was available or as more convenient geographically. Dual users were more likely to criticize the VA Telephone Advice Program known as the TAP line for providing nurses who invariably sent them to emergency care and were highly dissatisfied with not getting what they saw as clear answers. Single users tended to have no private medical insurance, and though sometimes irritated by consistent delays in getting appointments and receiving care, they felt that the care they received was well-worth it, even "wonderful" on occasion, primarily because of strong relationships with providers, whom they named and enjoyed seeing. They largely felt that providers gave clear answers, saw them as individual persons of importance, and were prepared to provide care for them.

Many of our findings echo key themes identified in other studies of care seeking decisions in HF patients.^{37,38} Many of our patients described confusion in interpreting symptoms or their severity until emergent care was necessary, a finding described previously.³⁹⁻⁴¹ Separate reports also describe avoidance-based coping, fear of hospitals, fear of being a burden, and depression as additional barriers to timely care seeking in HF.^{37,42} As modeled by only-VA users in our sample, healthy engagement in primary care has also been described previously as a positive factor in promoting HF self-management.⁴³ Although much of the qualitative literature to date focuses on factors associated with decisions to seek care and delays in care seeking, our study focused on the slightly narrower question of choice of care setting. However, to the extent that dual use is a marker of increased need for health care services, it is beneficial to better understand these discrete decisions.

Counter to a priori expectations, we discovered that patients fell into 3 distinct groups rather than 2 groups. In addition to consistent dual-users and only-VA users, we observed multiple patients to be inadvertent one-time dual

users. This third group typically responded to questions in the same manner as the only-VA group but had exposure to non-VA health care during times of acute HF exacerbation. The implications of this health care utilization pattern are as yet unclear, as compared with the other 2 groups. Yet the inadvertent one-time dual users presented opportunities for care coordination that could conceivably decrease avoidable ED use, a potential hypothesis for testing. Most studies of dual health care system used to date that examine secondary data have focused on categorical (yes/no) definitions of dual use. Our qualitative observations indicate that there may be important experiential and motivational differences between consistent dual users and inadvertent dual users, which could impact outcomes of care as well as potential interventions. This hypothesis will need further analysis and exploration using quantitative methods.

This study should be interpreted in light of certain limitations. Grounded theory methods consist of systematic guidelines for iteratively collecting and analyzing qualitative data to construct theories from interview data that are exploratory in nature.³⁰ This study involved interviews from 25 predominantly male Veterans from 2 VA medical centers. While our sample was adequate to achieve thematic saturation, extrapolation of our findings to other VA medical centers or to female Veterans should be done with caution. Other than grouping patients based on their dual use status, we did not make any attempts to assess clinical outcomes for patients in our sample. Thus, we cannot comment on the impact of dual use or single system use on quality of care or outcomes for these participants. Separately, our research team is also performing quantitative dual use analyses on a cohort of over 13 000 Veterans with HF, and these analyses should complement our qualitative findings.¹⁹

In closing, this qualitative study sheds new light on factors affecting decision making in Veterans with HF regarding the VA system of health care. These findings are timely given the Veterans Access, Choice and Accountability Act (VACA) and increased dual use among Veterans entitled.⁴⁴ Further study regarding the implications of inadvertent dual system use seems warranted. Future interventions to improve symptom recognition in HF, early and effective triage during exacerbation, and effective primary care engagement may enable decreased dual use in situations that may be less effective for Veterans as well as decrease preventable ED visits while managing HF.

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