Published in final edited form as:

Heart Lung. 2013 ; 42(1): 19–25. doi:10.1016/j.hrtlng.2012.06.007.

Social Support among African Americans with Heart Failure: Is There a Role for Community Health Advisors?

Raegan W. Durant, MD, MPH^{a,b}, Qiana L. Brown, MPH, MSW^c, Andrea L. Cherrington, MD, MPH^a, Lynn J. Andreae, BA^a, Claudia M. Hardy, MPA^d, and Isabel C. Scarinci, PhD, MPH^a

^aUniversity of Alabama at Birmingham School of Medicine, Birmingham, AL

^bBirmingham Veterans Affairs Medical Center; Birmingham, AL

^cJohns Hopkins Bloomberg School of Public Health, Baltimore, MD

^dUniversity of Alabama at Birmingham Comprehensive Cancer Center, Birmingham, AL

Abstract

Objective—The study had two objectives: (1) to gather Community Health Advisors' (CHA) observations on the role of social support in lives of African Americans; and (2) based on CHAs' observations and existing literature, to develop a lay support intervention framework depicting how social support may address the needs of African American heart failure patients.

Methods—Qualitative data were collected in semi-structured interviews among 15 community health advisors working in African American communities in Birmingham, AL.

Results—Prominent themes included the challenge of meeting clients' overlapping health care and general life needs, the variation in social support received from family and friends, and the opportunities for CHAs to provide multiple types of social support to clients. CHAs also believed that their support activities could be implemented among heart failure populations.

Conclusion—CHAs' experiences with social support can inform a potential framework of a lay support intervention among African Americans with heart failure.

Keywords

heart failure; social support; African Americans; community health advisors

Raegan W. Durant, MD, MPH, Assistant Professor of Medicine, University of Alabama at Birmingham School of Medicine, 1717 11th Avenue South, MT 607, Birmingham, AL 35205, (205) 996-2866, rdurant@dopm.uab.edu

Qiana L. Brown, MPH, MSW, Graduate Student, 615 North Wolfe Street, Baltimore, MD 21205-2103, (410) 955-6878, qbrown@jhsph.edu

Andrea L. Cherrington, MD, MPH, Assistant Professor of Medicine, University of Alabama at Birmingham School of Medicine, 1717 11th Avenue South, MT 624, Birmingham, AL 35205, (205) 996-2885, cherrington@uab.edu

Lynn J. Andreae, BA, Research Assistant, University of Alabama at Birmingham School of Medicine, 1717 11th Avenue South, MT 102U, Birmingham, AL 35205, (205) 934-7159, ynn0506@uab.edu

Claudia M. Hardy, MPA, Program Director, University of Alabama at Birmingham Comprehensive Cancer Center, 1530 3rd Avenue South, NP 2500, Birmingham, AL 35294-3300, (205) 975-5454, chardy@uab.edu

Isabel C. Scarinci, PhD, MPH, Professor of Medicine, University of Alabama at Birmingham School of Medicine, 1717 11th Avenue South, MT 609, Birmingham, AL 35205, (205) 975-7177, scarinci@uab.edu

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Introduction

Heart failure accounts for over 1,000,000 hospital admissions annually and is the leading cause of hospital admission among Medicare beneficiaries.¹ The high morbidity due to hospital admissions among heart failure patients is even more pronounced among African-Americans, who are admitted to the hospital more frequently than other racial and ethnic groups.^{2–9} Though social support has been linked to heart failure outcomes, such as hospital use, self-care and quality of life,^{10–16} the availability of social support is often overlooked as an important influence on heart failure outcomes. Social support can be defined in many ways though most definitions make reference to the provision of assistance or guidance to someone in need.¹⁷ There are multiple types of social support including emotional, instrumental and informational support.¹⁸ Emotional support refers to gestures extended to someone to provide comfort or alleviate negative emotions such as stress.¹⁸ Instrumental support is the provision of tangible goods or services.¹⁸ Finally, informational support can be defined as information provided to assist another in problem-solving.¹⁹ All three types of social support have been targeted in multifaceted community-based chronic disease management programs.²⁰ Moreover, the majority of these community-based programs have utilized interventions delivered by trained laypersons, such as community health workers (CHW) or community health advisors (CHA), already living in the minority communities that are being studied.^{21–27} These trained laypersons help to bridge cultural gaps between minority communities and the health care system, often by increasing access to care, improving patients' knowledge of their chronic diseases, and facilitating patient self-care in traditionally underserved populations.^{20, 28} The use of trained laypersons increases the likelihood that these interventions are delivered in a manner that is accessible to their peers.²⁹ To date, support interventions delivered by CHWs for cardiovascular disease management in traditionally underserved communities have yielded mixed results.³¹ For instance, among hypertensive African Americans, CHWs provided both informational and instrumental support by delivering health information on blood pressure as well as linking patients with community resources for indigent health care, child care, and transportation.^{22, 32} These support interventions delivered by CHWs have been shown to have a broad array of positive effects including improved blood pressure control and adherence to health care visits.²² However, studies attempting to elucidate the necessary intervention components have shown no differences in blood pressure control when comparing lay hypertension interventions comprised of differing activities or intensity levels among African Americans.^{32–33} Despite the widespread implementation of programs delivered by CHWs and other types of trained lay personnel for hypertension, there are fewer examples of lay support interventions designed for patients with heart failure, and none that focus specifically on African Americans^{20, 30–31, 34}

To inform the development of a lay social support intervention for African Americans, we sought the input of CHAs actively involved in health promotion activities within their given communities, anticipating that many of the support activities potentially provided by CHAs would transcend disease contexts. Therefore, the purpose of this paper is two-fold: (1) to gather CHAs' observations on the role of social support in lives of African Americans; and (2) based on CHAs' observations and existing literature, to develop a lay support intervention framework depicting how social support may address the needs of African American heart failure patients.

Methods

Study population

We conducted individual in-person, semi-structured interviews of 15 African-American volunteer Community Health Advisors trained as Research Partners (CHARPs) participating

in a community outreach program aimed at increasing cancer awareness and screening among members of predominately African American communities in Birmingham, Alabama (Deep South Network for Cancer Control).^{35–36} The CHAs were recruited via both letters mailed to their homes and oral presentations made at their regular monthly meetings. Our lone eligibility criterion was that CHAs had participated in the program as volunteers for at least six months.

Semi-structured interviews

Based on existing literature on social support and CHAs, we developed an interview guide (Table 1) focused on respondents' perceptions of both social support and needs among those persons in the community outreach program. Prior to each interview, we provided each CHA with a brief description of heart failure symptoms as well as principles of both heart failure therapy and self-care. In the interviews, we specifically inquired about CHAs' observations in the following 5 domains: 1) characteristics of CHAs' interactions with participants in the community 2) the medical and general life needs of community peers 3) the role of social support in participants' efforts to meet both health care and general life needs 4) CHAs' roles as providers of social support 5) the potential applicability of CHAs' activities in a support intervention in a heart failure population. Informed consent was obtained at the beginning of each interview, and participants were asked to complete a brief questionnaire assessing demographic information and the length of his or her involvement with the community outreach program. A trained African American interviewer conducted all the interviews between September 2008 and January 2009, and each lasted approximately 30 minutes. All interviews were digitally recorded and transcribed for content analysis. Participants received a \$25 Visa gift card after completing the interview. All research procedures were approved by the Institutional Review Board for the University of Alabama at Birmingham.

Data Analysis

All written transcripts were analyzed using grounded theory.³⁷ Three investigators independently reviewed each interview transcript, and drafted a list of codes according to his/her independent review of the response data. The three investigators then jointly discussed their respective code lists and consolidated the lists into a final codebook. The three investigators then independently reviewed the transcripts a second time, coding the data using the uniform codebook. Next the three coding investigators met to reconcile any differences in coding according to the codebook. At the completion of the coding, the codebook and relevant excerpts were reviewed by all three investigators to consolidate the data into a list of common unifying themes. As a means of corroborating our final themes, we conducted a single discussion group among 5 paid community health workers (CHW) participating in a breast and cervical cancer screening project. These CHWs coordinate community-based health promotion and research programs in their respective counties in Alabama. All CHWs worked in Alabama counties with majority African American populations. Response data from the CHW discussion group was compared to the themes emerging from the CHA interviews. All interview and discussion group transcript data were managed using N-VIVO 8.

Results

Characteristics of Study Population

All CHAs (N=15) interviewed were African American and 14 were female. All the CHAs were over the age of 40 and had been involved with the program for an average of 4.6 years (Table 2).

Interview Themes

The most prominent themes are listed in Table 2 and discussed below.

Clients have difficulties meeting health care and general life needs—CHAs almost uniformly shared their observations that clients in the community experienced difficulties meeting health care and general life needs. Barriers to satisfying health care needs included high medication costs and lack of transportation to doctors' appointments. Conversely, barriers to meeting general life needs included work obligations, household bills, and dependent care responsibilities. Feedback from CHAs revealed that, frequently, health care needs and general life needs were inextricably linked in the lives of their clients. Often the inability to meet general life needs seemed to exacerbate struggles to meet concurrent health care needs.

If you have one need and then have other needs that's going to be overwhelming, they are not going to be able to cope with the illness, so you have to make sure that all the needs are being met. You can't just do a piece of it. You have to do a whole list of things for the entire person.

The workplace was a frequently noted context of this complex linkage between clients' health care and general life needs. For example, multiple CHAs recalled examples of clients being unable to afford to take adequate sick leave to recuperate from an illness or returning to work and finding that they are no longer physically able to complete work duties. Despite these difficulties, CHAs reported that clients frequently continued to work under less than ideal circumstances for fear of losing their jobs altogether.

Variation in social support from family and friends—CHAs observed wide variation in social support provided by clients' family and friends. In many instances, the CHAs noted a lack of social support and social isolation simply due to a dearth of available nearby friends or family.

If they are divorced and the children are grown, they feel like they have no one to take care of them if they get down.

Among those with larger social networks, family members often lent instrumental support such as transporting loved ones to clinic appointments, picking up prescription medications from the pharmacy and assisting with household duties such as cooking and cleaning. CHAs less frequently recounted observations of clients receiving emotional support from family members or friends. CHAs sensed that clients were sometimes timid about sharing their fears about their health with family members so as not to burden their loved ones. Furthermore, CHAs observed that some familial relationships could be sources of negative support and pose barriers to a client satisfying his/her health care and general life needs. For instance, one CHA recalled a client trying to adhere to a low-sodium diet while the family member, primarily responsible for meal preparation, continued to cook meals with high sodium content. This example highlighted the challenges faced by clients trying to adhere to lifestyle recommendations while depending on other household members who had yet to modify their own health behaviors.

CHAs provide social support to clients—CHAs reported providing informational, instrumental and emotional support to clients. The most frequent example of informational support provided by CHAs was educating clients about available community resources, ranging from government agencies to local charities, which might help them meet their needs. CHAs shared information on opportunities for indigent health care, free transportation services to medical appointments, and qualifying for food stamps. Many CHAs also recognized the difficulty that many clients may have accessing available care or

wading through public or private sector bureaucracies when applying for need-based assistance. Therefore, many CHAs took extra steps, beyond just informing clients about available resources, and actually helped them access those resources.

Some people need to be pointed in the right direction, where others need you to do the legwork for them.

CHAs also provided instrumental support directly to clients by assisting with grocery shopping and donating clothing. In addition to providing instrumental support directly to clients, CHAs also helped to optimize the support provided by clients' family members by encouraging them to provide instrumental support, such as transportation to and from clinic appointments. In particular, clients may have preferentially relied on CHAs, rather than family members, for emotional support, including listening to medical concerns and providing encouragement.

They can talk to someone that's not too close to them easier than they can people that are close to them initially.

CHAs also focused on encouraging clients to be proactive in their self-care as a means of coping with fear associated with their medical problems so that they could "address the issues" and "have some control".

CHA interactions with clients vary—CHAs reported interacting with clients in the community in a variety of circumstances. For example, CHAs more frequently recounted one-on-one interactions with clients, but the CHAs also shared experiences taking place in group settings. Interactions with clients were often spontaneous in the context of gatherings for other purposes, such as church activities. Based on word-of-mouth referrals, clients sought out the CHAs who had developed reputations in the community as sources of health information

Many CHAs noted that interactions with clients ranged from the simple sharing of health information to devoting extra time and energy to assist some clients in actually meeting their needs. Despite a willingness of some to lend heavy assistance to clients, many CHAs were wary of the hazards of creating an unhealthy dependency on outside assistance among their clients. Other CHAs recalled their conscious efforts to give measured health information so as not to overstep the boundaries of their lay knowledge.

Yes. I tell them, 'I'm not a doctor, don't have a degree in medicine at all but I give them the guidelines for certain problems and give them symptoms of certain problems. I say, 'If you have these symptoms, then you need to seek medical help.'

CHAs specifically avoided trying to "play doctor", and instead, viewed their assistance as complementary to the recommendations and care provided by health care professionals.

CHAs used commonalities with clients to establish and optimize relationships with clients—CHAs and their clients often shared common residential communities, social networks, experiences and cultural perspectives, allowing CHAs "to establish rapport and a relationship with the client". Once trust was established, shared backgrounds and perspectives continued to facilitate communication between CHAs and clients throughout their relationships.

It's good to have some common ground, even if it's not personal, because it frees you up to talk about things, even if it's something as simple as we went to the same school, just something to open up conversation that may be unrelated to the issue.

One additional pivotal link between CHAs and their clients seemed to be a shared sense of spirituality. Practically, many interactions with clients took place informally at church. Yet,

the influence of spirituality was not limited to church events as CHAs reported weaving spiritual themes into health education messages (e.g. quoting Biblical scripture to support health-related messages or offering prayer for clients) regardless of the venue.

CHAs shared suggestions for a lay support intervention among African Americans with heart failure—Multiple CHAs suggested that the first step in formulating an intervention would be to assess the needs of the clients in the community. One CHA suggested that a needs assessment would not only provide important information for investigators and lay health workers, but also increase self-awareness among clients so that they could identify the barriers preventing them from meeting their health care needs. CHAs also recommended that clients' participate in group activities as a source of emotional support from other persons with heart failure who may be facing similar challenges. Others suggested that group activities, such as a healthy cooking class, should be geared more toward providing informational support to clients. CHAs also emphasized the need to engage persons, other than themselves, who might be sources of social support for potential clients. As an example, one CHA emphatically stressed the need to "drill" health information into clients' relatives. Beyond reaching family members and other loved ones, CHAs suggested that any program take advantage of existing community resources, such as church-based health ministries, for more widespread dissemination of health information.

Our single discussion group comprised of CHWs confirmed the above themes highlighted in our interviews. CHWs particularly endorsed the dual burden of meeting both health care and general life needs. In addition, they shared their frequent observations of socially isolated African Americans, many of whom lack social support and are forced to pay others for assistance such as transportation to a clinic appointment or to the grocery store. Finally, discussion group participants also echoed CHAs' observations about the value of needs assessments among clients and their families to not only determine their highest priority needs, but also to give clients and families some role in deciding what forms of assistance may be most beneficial for them.

Discussion and Conclusions

Summary of Findings

The feedback from CHA interviews revealed that African American clients often face substantial challenges meeting both health care and general life needs. Moreover, these two types of needs are often intertwined. While family and friends are often available for assistance, clients still lack social support in their efforts to meet their needs. CHAs are able to provide social support for clients, but the type and extent of social support varies. CHAs believe that many social support activities can be applied to a lay support intervention among African American heart failure patients.

Assessments of Clients' Health Care and Non-health Care Needs

In order to design feasible and acceptable community-based interventions among minority populations, investigators often perform needs assessments among potential clients and other stakeholders in the target communities. Through their valuable insight as residents of the target communities, these groups have provided feedback on community health care needs and priorities as well as community barriers to high quality health care.^{38–40} Our results demonstrate that CHAs already engaged in particular communities may provide insight complementary to the information typically sought from other community members. Though the CHAs were involved in more general efforts focused on increasing cancer awareness and minority trial participation among African Americans, many of the health care and general life needs of African Americans with heart failure are probably comparable

to those in populations in other disease contexts.^{41–42} Our data reveal not only that CHAs directly observe a wide spectrum of clients' health care needs, such as filling prescriptions and getting transportation to clinic appointments, but also that clients often confide in CHAs regarding difficulties meeting general life needs as well. Identifying the broader group of general life needs may be important when designing community-based interventions since unmet general life needs could potentially hinder progress toward reaching health care goals as much, if not more, than unmet health care needs. While few, if any, interventions would serve as a panacea for all social factors adversely affecting the health of traditionally underserved populations, the feedback from the CHAs about non-health related challenges would help investigators avoid the mistake of developing myopic heart failure interventions which fail to account for the entire spectrum of needs of African Americans.

CHAs as Providers of Social Support

Based on their feedback, CHAs provide a great deal of social support to clients in the community, most frequently in the form of informational support. The potential benefits of social support for heart failure patients have been established in previous randomized controlled trials utilizing health care professionals such as nurse health educators.^{43–44} In prior studies, nurse health educators have utilized home visits and telemonitoring for close follow-up of heart failure patients after discharge, resulting in decreased readmission rates and costs as well as increased adherence to self-care behaviors.^{43–44} Though this type of informational support is similar to the support that our CHA respondents provide to their clients, very few randomized controlled trials have tested comparable lay support interventions among African American heart failure patients.^{34, 45} Though the data on lay health workers in heart failure populations is sparse, previous studies of support interventions among African Americans with hypertension have utilized CHWs.²² Given the overlapping prevalence of hypertension and heart failure as well as common principles of therapy for both diseases,¹ the previous programs tested among African Americans for blood pressure lowering provide an ideal template for similar heart failure interventions. These lay interventions for hypertension often include educating patients, skill-building related to self-care, assisting with logistical issues (e.g. child care, transportation) and increasing access to existing community resources.^{31–33} These examples of educational, informational, and instrumental support mirror the types of support the CHA interviewees recalled providing in their interactions with clients in the community. Furthermore, similar types of social support were endorsed by CHAs as potentially effective components of a lay support intervention for African Americans with heart failure. Though the lay health workers in many previous studies were paid CHWs, they were still trained laypersons from their target communities, much like the CHAs we interviewed.^{35–36} Obviously, as interventions become more complex or time-intensive, investigators have to determine adequate compensation to CHAs for their time and effort.⁴⁶ Additional work may need to be done to determine the optimal balance between the benefits of lay volunteers versus the limitations of a workload that could be reasonably expected in the absence of monetary compensation.⁴⁶ The overall success of CHWs in providing social support in hypertension interventions in a similar manner to that provided by our CHA participants raises the possibility that comparable programs might be feasible with lay health workers among heart failure patients.

CHAs Optimize Existing Social Support

In addition to providing social support directly to clients in the community, the CHAs noted that they often tried to facilitate and optimize the social support provided by family members or friends of the clients. Unlike physicians and other health care providers, CHAs may have a unique perspective to identify the relationships in clients' home environments that either facilitate the achievement of health care goals or potentially pose additional challenges for the client.²⁹ Given the potential influence on patients' behaviors and

outcomes, the inclusion of significant others, extended family, and friends is often vital to the success of any community-based intervention.^{34, 47} Due to the same cultural commonalities shared with clients, the CHAs may be uniquely suited to engage clients' family members and friends in efforts to improve the health of the client.²⁹ In fact, previous support interventions among African Americans with hypertension and diabetes have specified the mobilization of social support from others as a primary focus of CHWs' activities.²² In addition to the obvious benefits of receiving social support from loved ones, CHAs also recognized the importance of identifying sources of negative support among their clients. Though familial relationships, in particular, may potentially be static and unlikely to change, CHAs' awareness of both positive and negative social support can prove invaluable in setting expectations for clients' net benefit from a social support intervention.

Framework for CHAs to Provide Social Support to Address Clients' Needs

Based on the CHAs' observations of both social support and clients' needs, we developed a framework describing the relationship between clients' needs and the social support provided by CHAs (Figure 1). Clients' needs exist along a continuum including both health care and general life needs. While a single support intervention would likely be more specifically focused on clients' health care needs, CHAs do provide instrumental, emotional and informational support, which often also addresses a broader group of general life needs of their clients. For example, a CHA provides emotional support, which directly helps clients meet the health care need of coping with the emotional burden of living with a chronic disease. That same emotional support may indirectly buffer some of clients' stress from the challenges of meeting more general life needs, such as work or dependent care responsibilities.⁴⁸ For those general life needs that are not addressed, directly or indirectly by a support intervention, investigators must be aware of these potential barriers to the feasibility and acceptability of the intervention, and ultimately the effectiveness in achieving desired patient outcomes.

Study Limitations

This study is not without limitations. Due to the dearth of community-based support interventions aimed at African Americans with heart failure, we did not have access to a group of CHAs working with this specific disease population. However, the social support activities, such as assistance with medications and transportation, referral to local community resources and informal counseling, would likely be pertinent regardless of the disease focus.²⁰ Furthermore, CHAs endorsed the applicability of their activities in a heart failure population comprised of African Americans. Given the limited availability of a pre-existing group of CHAs or other lay health workers focused on heart failure, we opted to focus on a group of CHAs doing similar work in the communities where we envision designing and implementing a heart failure support intervention in the future. We had a relatively small sample size, but we had reached thematic saturation at the time interviews were halted. In addition, we used triangulation to confirm our findings among a separate group of similarly engaged trained laypersons working in health promotion in African American communities. Therefore, we believe that additional interviews would have been less likely to reveal novel ideas or themes. Finally observations of actual heart failure patients or other potential stakeholders were not included in this analysis. While CHAs can serve as important sources of information on social support among African Americans, we would suggest that feedback from CHAs be combined with similar assessments among other stakeholders, such as patients and caregivers, to inform, more fully, the development of a support intervention among African Americans with heart failure.

Conclusions

In summary, CHAs can provide valuable insight that informs the development of a framework for a support intervention among African Americans. CHAs or other similarly trained lay health workers can potentially provide social support directly to clients and optimize the social support provided by others. In turn, these activities, perhaps, could be applied in African American heart failure populations. CHAs and other lay health workers increasingly should be considered as primary sources of information when developing support and other community-based interventions among African American heart failure patients.

Acknowledgments

This project was funded by grants from the National Institute on Aging (Deep Resource Center for Minority Aging Research, P30AG031054) and the National Cancer Institute (Deep South Network for Cancer Control, U01CA114619).

References

1. Roger VL, Go AS, Lloyd-Jones DM, Adams RJ, Berry JD, Brown TM, et al. Heart disease and stroke statistics--2011 update: a report from the American Heart Association. *Circulation*. 2011; 123:e18–e209. [PubMed: 21160056]
2. Alexander M, Grumbach K, Remy L, Rowell R, Massie BM. Congestive heart failure hospitalizations and survival in California: Patterns according to race/ethnicity. *American Heart Journal*. 1999; 137:919–27. [PubMed: 10220642]
3. Curtis LH, Greiner MA, Hammill BG, Kramer JM, Whellan DJ, Schulman KA, et al. Early and Long-term Outcomes of Heart Failure in Elderly Persons, 2001–2005. *Archives of Internal Medicine*. 2008; 168:2481–8. [PubMed: 19064833]
4. Davis SK, Liu Y, Gibbons GH. Disparities in trends of hospitalization for potentially preventable chronic conditions among African Americans during the 1990s: implications and benchmarks. *Am J Public Health*. 2003; 93:447–55. [PubMed: 12604494]
5. Deswal A, Petersen NJ, Urbauer DL, Wright SM, Beyth R. Racial variations in quality of care and outcomes in an ambulatory heart failure cohort. *American Heart Journal*. 2006; 152:348–54. [PubMed: 16875921]
6. Evangelista LS, Dracup K, Doering LV. Racial differences in treatment-seeking delays among heart failure patients. *Journal of Cardiac Failure*. 2002; 8:381–6. [PubMed: 12528090]
7. Kalogeropoulos A, Georgiopoulou V, Kritchevsky SB, Psaty BM, Smith NL, Newman AB, et al. Epidemiology of Incident Heart Failure in a Contemporary Elderly Cohort: The Health, Aging, and Body Composition Study. *Archives of Internal Medicine*. 2009; 169:708–15. [PubMed: 19365001]
8. Lafata JE, Pladevall M, Divine G, Ayoub M, Philbin EF. Are There Race/Ethnicity Differences in Outpatient Congestive Heart Failure Management, Hospital Use, and Mortality Among an Insured Population? *Medical Care*. 2004; 42:680–9. [PubMed: 15213493]
9. Mathew J, Wittes J, McSherry F, Williford W, Garg R, Probstfield J, et al. Racial differences in outcome and treatment effect in congestive heart failure. *American Heart Journal*. 2005; 150:968–76. [PubMed: 16290973]
10. Bennett SJ, Perkins SM, Lane KA, Deer M, Brater DC, Murray MD. Social support and health-related quality of life in chronic heart failure patients. *Qual Life Res*. 2001; 10:671–82. [PubMed: 11871588]
11. Chin MH, Goldman L. Correlates of Early Hospital Readmission or Death in Patients With Congestive Heart Failure. *The American Journal of Cardiology*. 1997; 79:1640–4. [PubMed: 9202355]
12. Happ MB, Naylor MD, Roe-Prior P. Factors contributing to rehospitalization of elderly patients with heart failure. *J Cardiovasc Nurs*. 1997; 11:75–84. [PubMed: 9200021]

13. Krumholz HM, Butler J, Miller J, Vaccarino V, Williams CS, Mendes de Leon CF, et al. Prognostic importance of emotional support for elderly patients hospitalized with heart failure. *Circulation*. 1998; 97:958–64. [PubMed: 9529263]
14. Luttik ML, Jaarsma T, Moser D, Sanderma R, van Veldhuisen DJ. The importance and impact of social support on outcomes in patients with heart failure: an overview of the literature. *Journal of Cardiovascular Nursing*. 2005; 20:162–9. [PubMed: 15870586]
15. Richardson LG. Psychosocial issues in patients with congestive heart failure. *Prog Cardiovasc Nurs*. 2003; 18:19–27. [PubMed: 12624569]
16. Sayers S, Riegel B, Pawlowski S, Coyne J, Samaha F. Social Support and Self-Care of Patients with Heart Failure. *Annals of Behavioral Medicine*. 2008; 35:70–9. [PubMed: 18347906]
17. Hupcey JE. Clarifying the social support theory-research linkage. *J Adv Nurs*. 1998; 27:1231–41. [PubMed: 9663875]
18. Finfgeld-Connett D. Clarification of social support. *J Nurs Scholarsh*. 2005; 37:4–9. [PubMed: 15813580]
19. Langford CP, Bowsher J, Maloney JP, Lillis PP. Social support: a conceptual analysis. *J Adv Nurs*. 1997; 25:95–100. [PubMed: 9004016]
20. Viswanathan, M.; Kraschnewski, J.; Nishikawa, B.; Morgan, LC.; Thieda, P.; Honeycutt, A., et al. Outcomes of Community Health Worker Interventions. RTI International–University of North Carolina Evidence-based Practice Center, Agency for Healthcare Research and Quality; 2009.
21. Babamoto KS, Sey KA, Camilleri AJ, Karlan VJ, Catalasan J, Morisky DE. Improving diabetes care and health measures among hispanics using community health workers: results from a randomized controlled trial. *Health Educ Behav*. 2009; 36:113–26. [PubMed: 19188371]
22. Brownstein JN, Chowdhury FM, Norris SL, Horsley T, Jack L Jr, Zhang X, et al. Effectiveness of community health workers in the care of people with hypertension. *Am J Prev Med*. 2007; 32:435–47. [PubMed: 17478270]
23. Cornell CE, Littleton MA, Greene PG, Pulley L, Brownstein JN, Sanderson BK, et al. A Community Health Advisor Program to reduce cardiovascular risk among rural African-American women. *Health Educ Res*. 2009; 24:622–33. [PubMed: 19047648]
24. Gary TL, Bone LR, Hill MN, Levine DM, McGuire M, Saudek C, et al. Randomized controlled trial of the effects of nurse case manager and community health worker interventions on risk factors for diabetes-related complications in urban African Americans. *Preventive Medicine*. 2003; 37:23–32. [PubMed: 12799126]
25. Kim S, Koniak-Griffin D, Flaskerud JH, Guarnero PA. The impact of lay health advisors on cardiovascular health promotion: using a community-based participatory approach. *J Cardiovasc Nurs*. 2004; 19:192–9. [PubMed: 15191262]
26. Krieger J, Collier C, Song L, Martin D. Linking community-based blood pressure measurement to clinical care: a randomized controlled trial of outreach and tracking by community health workers. *Am J Public Health*. 1999; 89:856–61. [PubMed: 10358675]
27. Krieger JW, Takaro TK, Song L, Weaver M. The Seattle-King County Healthy Homes Project: a randomized, controlled trial of a community health worker intervention to decrease exposure to indoor asthma triggers. *Am J Public Health*. 2005; 95:652–9. [PubMed: 15798126]
28. Zuvekas A, Nolan L, Tumaylle C, Griffin L. Impact of Community Health Workers on Access, Use of Services, and Patient Knowledge and Behavior. *Journal of Ambulatory Care Management*. 1999; 22:33. [PubMed: 11184887]
29. Perez LM, Martinez J. Community health workers: social justice and policy advocates for community health and well-being. *Am J Public Health*. 2008; 98:11–4. [PubMed: 18048789]
30. Brownstein JN, Bone LR, Dennison CR, Hill MN, Kim MT, Levine DM. Community Health Workers as Interventionists in the Prevention and Control of Heart Disease and Stroke. *American Journal of Preventive Medicine*. 2005; 29:128–33. [PubMed: 16389138]
31. Viswanathan M, Kraschnewski JL, Nishikawa B, Morgan LC, Honeycutt AA, Thieda P, et al. Outcomes and Costs of Community Health Worker Interventions: A Systematic Review. *Medical Care*. 2010; 48:792–808. [PubMed: 20706166]

32. Levine DM, Bone LR, Hill MN, Stallings R, Gelber AC, Barker A, et al. The effectiveness of a community/academic health center partnership in decreasing the level of blood pressure in an urban African-American population. *Ethn Dis.* 2003; 13:354–61. [PubMed: 12894960]
33. Ward HJ, Morisky DE, Lees NB, Fong R. A clinic and community-based approach to hypertension control for an underserved minority population: design and methods. *Am J Hypertens.* 2000; 13:177–83. [PubMed: 10701818]
34. Davis AM, Vinci LM, Okwuosa TM, Chase AR, Huang ES. Cardiovascular health disparities: a systematic review of health care interventions. *Med Care Res Rev.* 2007; 64:29S–100S. [PubMed: 17881625]
35. Lisovicz N, Johnson RE, Higginbotham J, Downey JA, Hardy CM, Fouad MN, et al. The Deep South Network for cancer control. *Cancer.* 2006; 107:1971–9. [PubMed: 16921494]
36. Scarinci IC, Johnson RE, Hardy C, Marron J, Partridge EE. Planning and implementation of a participatory evaluation strategy: a viable approach in the evaluation of community-based participatory programs addressing cancer disparities. *Eval Program Plann.* 2009; 32:221–8. [PubMed: 19232727]
37. Glaser, B.; Strauss, A. *The Discovery of Grounded Theory.* London: Weidenfield and Nicolson; 1967.
38. Davidson P, Cockburn J, Daly J, Sanson Fisher R. Patient-centered needs assessment: rationale for a psychometric measure for assessing needs in heart failure. *J Cardiovasc Nurs.* 2004; 19:164–71. [PubMed: 15191258]
39. Davis C, Darby K, Likes W, Bell J. Social workers as patient navigators for breast cancer survivors: what do African-American medically underserved women think of this idea? *Soc Work Health Care.* 2009; 48:561–78. [PubMed: 19860292]
40. Trettin L, Musham C. Using focus groups to design a community health program: what roles should volunteers play? *J Health Care Poor Underserved.* 2000; 11:444–55. [PubMed: 11057059]
41. Batts ML, Gary TL, Huss K, Hill MN, Bone L, Brancati FL. Patient Priorities and Needs for Diabetes Care Among Urban African American Adults. *The Diabetes Educator.* 2001; 27:405–12. [PubMed: 11912801]
42. Clark J, Lan V. Heart failure patient learning needs after hospital discharge. *Applied nursing research: ANR.* 2004; 17:150–7. [PubMed: 15343548]
43. Jaarsma T, Halfens R, Huijter Abu-Saad H, Dracup K, Gorgels T, van Ree J, et al. Effects of education and support on self-care and resource utilization in patients with heart failure. *Eur Heart J.* 1999; 20:673–82. [PubMed: 10208788]
44. Krumholz HM, Amatruda J, Smith GL, Mattera JA, Roumanis SA, Radford MJ, et al. Randomized trial of an education and support intervention to prevent readmission of patients with heart failure. *J Am Coll Cardiol.* 2002; 39:83–9. [PubMed: 11755291]
45. Riegel B, Carlson B. Is individual peer support a promising intervention for persons with heart failure? *Journal of Cardiovascular Nursing.* 2004; 19:174–83. [PubMed: 15191260]
46. Cherrington A, Ayala GX, Elder JP, Arredondo EM, Fouad M, Scarinci I. Recognizing the diverse roles of community health workers in the elimination of health disparities: from paid staff to volunteers. *Ethn Dis.* 2010; 20:189–94. [PubMed: 20503902]
47. Molloy GJ, Johnston DW, Witham MD. Family caregiving and congestive heart failure. Review and analysis. *European Journal of Heart Failure.* 2005; 7:592–603. [PubMed: 15921800]
48. Uchino B. Social Support and Health: A Review of Physiological Processes Potentially Underlying Links to Disease Outcomes. *Journal of Behavioral Medicine.* 2006; 29:377–87. [PubMed: 16758315]
49. Krumholz HM, Currie PM, Riegel B, Phillips CO, Peterson ED, Smith R, et al. A Taxonomy for Disease Management: A Scientific Statement From the American Heart Association Disease Management Taxonomy Writing Group. *Circulation.* 2006; 114:1432–45. [PubMed: 16952985]
50. Ahmed A. Quality and outcomes of heart failure care in older adults: role of multidisciplinary disease-management programs. *J Am Geriatr Soc.* 2002; 50:1590–3. [PubMed: 12383160]
51. Gonseth J, Guallar-Castillon P, Banegas JR, Rodriguez-Artalejo F. The effectiveness of disease management programmes in reducing hospital re-admission in older patients with heart failure: a

- systematic review and meta-analysis of published reports. *Eur Heart J*. 2004; 25:1570–95. [PubMed: 15351157]
52. Granger BB, Moser D, Germino B, Harrell J, Ekman I. Caring for patients with chronic heart failure: The trajectory model. *Eur J Cardiovasc Nurs*. 2006; 5:222–7. [PubMed: 16616643]
53. Gary TL, Batts-Turner M, Yeh HC, Hill-Briggs F, Bone LR, Wang NY, et al. The effects of a nurse case manager and a community health worker team on diabetic control, emergency department visits, and hospitalizations among urban African Americans with type 2 diabetes mellitus: a randomized controlled trial. *Arch Intern Med*. 2009; 169:1788–94. [PubMed: 19858437]
54. Cherrington A, Ayala GX, Amick H, Scarinci I, Allison J, Corbie-Smith G. Applying the community health worker model to diabetes management: using mixed methods to assess implementation and effectiveness. *J Health Care Poor Underserved*. 2008; 19:1044–59. [PubMed: 19029736]
55. Hill-Briggs F, Batts-Turner M, Gary TL, Brancati FL, Hill M, Levine DM, et al. Training community health workers as diabetes educators for urban African Americans: value added using participatory methods. *Prog Community Health Partnersh*. 2007; 1:185–94. [PubMed: 20208238]

Figure 1. Model of Social Support and African American Heart Failure Patients' Needs Based on Community Health Advisor Feedback*

*Italicized examples of support indicate additional potential to address corresponding italicized general life needs as well as health care needs.

Table 1**Content Domains and Corresponding Interview Guide Questions**

Content Domain	Interview Guide Questions
Characteristics of Community Health Advisors' (CHA) interactions with clients in the community	In your role as a CHA in the CHARP program, describe the ways that you have interacted with others in your community
Medical and general life needs of clients	How do the people you interact with as a community health advisor share with you their day-to-day needs related to their medical problems? How were you able to identify individuals' day-to-day needs related to their medical problems even when they did not specifically mention them to you? Prior to interacting or working with you, how well were people able to meet their day-to-day needs related to their medical problems or general health? Were there any general life needs , that individuals had trouble fulfilling?
Role of existing social support in clients' efforts to meet both health care and general life needs	Did they [clients] have family or friends to help them meet their needs?
CHAs' roles as providers of social support	In what instances did you observe an unfulfilled health-related need and directed a person toward existing community resources to help him/her fulfill that need? When you encountered others with unmet or unfulfilled health-related needs, in your role as a CHA, how were you able to help them meet these needs? Are there also other ways that you or CHAs like you could help others in the community meet their general life needs?
Potential applicability of CHAs' activities in a support intervention in a heart failure population.	Based on your experience, were there other ways that you or community health advisors like you could help others in the community meet their health-related needs?

Table 2

Characteristics of Community Health Advisors (N=15)

Characteristics of Study Population	n or mean $\pm$ SD
Gender	
Male	1
Female	14
Age	
41–50 years old	4
51–60 years old	5
61–70 years old	5
> 70 years old	1
Education	
High School	1
Some College	5
College Graduate	5
Professional or Graduate School	4
Number of years involved with cancer awareness program	4.6 $\pm$ 1.14

Table 3

Themes from community health advisor semi-structured interviews

Themes	
1	Clients have difficulties meeting health care and general life need <ul style="list-style-type: none"> Both types of needs are inextricably linked General life needs often conflict with health care needs
2	Variation in social support from family and friends <ul style="list-style-type: none"> Social support often limited if family and friends unavailable Family and friends may be source of negative social support
3	CHAs provide social support to clients <ul style="list-style-type: none"> Support provided directly to clients CHAs facilitate support provided by loved ones CHAs help clients access existing community resources
4	CHA interactions with clients vary <ul style="list-style-type: none"> Individual vs. group interactions Spontaneous vs. planned Varying levels of intensity
5	CHAs used commonalities with clients to establish and optimize relationships with clients <ul style="list-style-type: none"> Shared social networks, experiences, cultural perspectives Spirituality often a common link
6	CHAs shared suggestions for a lay support intervention among African Americans with heart failure <ul style="list-style-type: none"> Group and individual interactions may be of benefit for clients Engage family members and others in support intervention

CHA=Community Health Advisor