Published in final edited form as:

Health Place. 2014 March ; 26: 143–148. doi:10.1016/j.healthplace.2013.11.008.

EXPLORING THE IMPACT OF A COMMUNITY HOSPITAL CLOSURE ON OLDER ADULTS: A FOCUS GROUP STUDY

Malamo Countouris, BS^a, Sandra Gilmore, RN^b, and Michael Yonas, DrPH, MPH^c

^aSchool of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

^bUPMC Staying at Home Program, Aging Institute of UPMC, University of Pittsburgh Medical Center (UPMC) and the University of Pittsburgh, 3600 Forbes Avenue, Pittsburgh, PA 15213, USA; telephone: 412-559-5419.

^cDepartment of Family Medicine, School of Medicine, University of Pittsburgh, 3518 Fifth Avenue, Pittsburgh, PA 15261, USA; telephone: 412-383-2277; may24@pitt.edu.

Abstract

The closing of hospitals has exacerbated challenges for older adults in accessing healthcare, especially those living in economically underserved settings. Through focus groups and a community-engaged approach, our study examined and documented the emergent health needs of older adults following the closing of a local hospital in an economically disadvantaged community. Focus groups were reconvened to assess progress and health needs over time. Analyses of the focus groups (n=37, mean age 77, 84% female) illustrated the impact of the closure and the emergence of the following dominant themes: perceptions of the hospital system, including feelings of abandonment and social isolation; transportation challenges in accessing health care resources; and lack of knowledge and literacy regarding available health care and obtaining health services. Discussion sessions with hospital administrators and participants afforded an opportunity for sharing data and additional assessment. The data and relationships developed with community participants and health system representatives resulted in the production of an information resource about access to health services, tailored for older adults.

Keywords

Access to care; Qualitative study; Elderly health; Health disparities; Health literacy; Hospital closure

INTRODUCTION

Throughout the recent past decades, hospital closures have been occurring more frequently across the United States and other developed countries (Rehnquist, 2003, James, 1999). The

telephone: 412-302-5406; malamoc@gmail.com; corresponding author.

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.

decision to close these hospitals was dependent on the profit status of the hospital, hospital occupation rate, and change in local population (Rice, 1987, Mayer et al., 1987). In addition to leaving local residents without a hospital, which is often the center of their community, the closures have negative effects on the community's overall health and on the residents' access to health care services (Continelli et al., 2010, Bindman et al., 1990), especially for persons over 65 years old (Muus et al., 1995, Buchmueller et al., 2006, Grant and Rice, 1983).

Several studies involving community residents and health care professionals have assessed the impact of rural hospital closures (Bindman et al., 1990, Muus et al., 1995, Rehnquist, 2003). In one study involving telephone survey interviews of community residents, investigators reported that the residents had poor access to emergency and hospital care and that some of them decided not to seek medical care because of the inconvenience of traveling to nonlocal facilities (Muus et al., 1995). In another study, investigators reported an increase in the number of individuals who no longer had a regular health care provider (Bindman et al., 1990). In additional surveys, health care professionals have reported that they believed hospital closures affected older adults disproportionately because these adults faced greater challenges obtaining transportation and traveling farther distances for health care (Reif et al., 1999, Muus et al., 1995, Buchmueller et al., 2006).

While these studies have provided valuable insights into the impact of hospital closures, research is needed to examine the impact of such hospital closures from the perspective of the older adults. Additionally, although some studies have shown effective principles to preventing a hospital closure such as strong influence of local leadership and effective use of external support (Barnett and Barnett, 2003), there are a lack of studies showing how to promote positive change in a community after a closure has occurred. Guided by principles of community engagement and qualitative research (Israel et al., 1998), our study was designed to involve older adults in focus group discussions to examine how the closing of their community hospital affected their health care access and resulting health care service needs. The data were used to develop culturally relevant, health literacy-sensitive resources, to build ties between community members, community outreach program leaders, and hospital system administrators, and thereby promote positive changes for the community.

METHODS

Setting and Recruitment of Participants

Our study took place in a postindustrial, economically disadvantaged community in the suburbs of Pittsburgh, Pennsylvania, where the local community hospital was closed in January 2010. Of the 9,138 people who lived in the hospital zip code area, 1,330 (14.6%) were over 65 years old (United States Department of Commerce, 2010). While the median household income for the state of Pennsylvania was \$51,551, for the community it was \$22,747, with 36% living below the poverty level (United States Department of Commerce, 2011).

The hospital closure was controversial, leaving community residents without immediate access to hospital and emergency care and causing an increase in tension between

community members and hospital system administrators. The high political and social visibility and public discourse motivated by this hospital closure resulted in much media discussion as well as community-sponsored open protest meetings. For the purposes of this study, the authors were given broad and open access to key hospital system representatives who were knowledgeable and concerned about the closure and community reaction. These representatives had a desire to reach and inform community residents about how to meet their future health needs in the best manner possible.

To facilitate a credible, respectful, and culturally sensitive research engagement process, we used principles of community engagement by integrating the expertise of a community health outreach nurse with 13 years of experience who joined our research team providing ethical and community sensitive direction. The research team also consisted of a faculty investigator, medical student investigator, and student note-takers. The outreach nurse's expertise, insight, and exceptional experience in serving the health needs of older adults in the community enabled us to design and implement a community engaged research approach and helped us recruit participants from the community.

Individuals had to meet two inclusion criteria to participate in the study: they had to be 65 years old or older and they had to be residents of the hospital zip code area. Adults over 65 years old were chosen as a target population because adults in this age group tend to be more negatively affected by hospital closures (Muus et al., 1995, Reif et al., 1999). Residents of the hospital zip code area were chosen because a majority of the hospital's patient population lived in this zip code area (Procopio, 2008).

To notify residents about the study, we posted flyers and announcements in public places, and the outreach nurse helped contact and inform potential participants. We chose the times and locations for the study's focus group sessions to be maximally convenient for the participants. We informed participants in advance that they would receive a \$25 incentive during the first round of focus group sessions. This funding was provided by the University of Pittsburgh's Clinical and Translational Science Institute, and the study was approved by the University's institutional review board.

At the onset of the study, we reviewed the study inclusion criteria, aims, and parameters with the participants and obtained their informed consent. During data collection and analysis, we maintained confidentiality by using pseudonyms to protect the participants' identities.

Data Collection and Analysis

Overview—The study had four phases of data collection that developed as an iterative process and evolved over time (Figure 1).

For two of the phases, we chose focus groups as the means for collecting data from study participants. Focus groups have the advantage of generating discussions that can both support and generate new ideas (Krueger and Casey, 2000). They also encourage people who might not normally express their views within an individual interview setting to feel comfortable voicing their opinions (Krueger and Casey, 2000). For the convenience of

participants, we held the focus group sessions in four community locations (two independent living centers for older adults and two senior centers). Each session lasted 1-2 hours.

For each focus group session, our principal investigator acted as the facilitator, recorded the session, and made a verbatim transcript of the audiotape. QSR International's NVivo 9 qualitative data analysis software was used to organize and analyze the data (QSR International, 2012). With standard methods of transcript coding and qualitative analysis (Krueger and Casey, 2000), the principal investigator devised a codebook and applied the codes to detect common themes, suggestions, and ideas that appeared in the transcripts. A second investigator independently confirmed the coding.

For the other phases (Figure 1), we convened discussion sessions that involved senior hospital administrators and the residents who had participated in the focus group sessions.

Study Phases—Phase I consisted of focus group sessions that were convened 6 months after the hospital closure. The purpose of these sessions was to assess the closure's immediate impact and generate a discussion about the largest barriers to accessing health care. In each session, the principal investigator introduced the following field guide questions: In what ways did you utilize the local hospital and system of support services? How has the closure affected you and/or the community? What do you feel are the health care service needs in the community, and how could these needs be met? At the end of session, participants received a demographics questionnaire to complete.

Phase II consisted of a series of outreach and “member checking” sessions that took place 5 months after phase I. The purpose of these sessions was to present the phase I data to hospital system administrators and focus group participants and thereby strengthen the credibility and value of the data for addressing the health needs of older adults in the community. First, the data were presented to the administrators. Next, the data were presented to the focus group participants for member checking, discussion, and modification. Member checking is a technique employed by qualitative researchers to improve the accuracy, credibility, validity, and transferability of data (Jones et al., 2006).

Phase III involved hospital administrators, members of the hospital system's Outreach and Communications Department, and focus group participants. It began shortly after phase II. The purpose was to receive feedback about a health resource and access information guide that had been mailed to community members, revise and update it to better address the needs of the community, and increase its readability to make it more useful for older adults. During the phase III discussions, community members were asked about content and also about factors affecting readability, such as font size, font type, and background color (Hartley, 1994). After the discussions were completed, the health resource guide was revised and reviewed with focus group participants.

Phase IV consisted of two focus group sessions that were convened 2 years after the hospital closure. In each session, the principal investigator introduced the following field guide questions: How does the closure continue to affect you and the community almost 2 years later? What do you feel are persistent health care service needs in the community, and how

could these needs be met? Do you have any thoughts or comments about the design, readability, or organization of the new resource guide for seniors?

RESULTS

Study Sample

The 37 participants in the focus groups that were convened 6 months after the hospital closure had a mean age of 77.3 years. Most were African American (78%), were female (84%), had a high school education (60%), had an income under \$20,000 (92%), and were living in an apartment (55%). The 14 participants in the focus groups that were convened 2 years after hospital closure had a mean age of 70.5 years and had characteristics similar to those of the groups convened at 6 months (Table).

Phase I Results

Qualitative analysis of data from focus group sessions convened 6 months after closure revealed that the following thematic elements were dominant in the discussions: emotions and perceptions of the hospital system, challenges regarding transportation, and knowledge about finding care and obtaining health services (Figure 2).

Participants expressed an overall sense of anger and resentment toward the closing of the local hospital and feelings of abandonment and fear. As one participant summarized the situation, “There’s no hospital. There’s no doctor. There’s no urgent care. There’s no nothing. [The hospital system] literally abandoned this whole valley.” And, as another stated, “They build their other hospitals everywhere else, [but] because we’re poor they don’t care about us.” Several worried about older patients in particular. For example, one woman said, “I think the impact is much greater on seniors in this area than anything.... They’re saying go ahead, you old folks, and die anyhow.... We’re living too long. And heck with the old folk.”

However, when asked about perceptions of the care received, participants recalled many examples of good care provided by the various divisions of the hospital. According to one participant, “You always got good treatment. That was for sure. It didn’t matter, you know, your race or anything. They treated you good.”

Participants discussed their concerns about difficulties accessing health care, which would now require extra time, money, and negotiation of logistics. “It’s pretty difficult for me to get to other hospitals that are in this area,” one participant noted, “because there are times that I don’t have the transportation to get to there.” Even for mobile older adults, utilizing public transportation would present a challenge, since taking a bus to another hospital would require multiple transfers and at least 45 minutes. Participants pointed out that unlicensed cabs (“jitneys”) are often unavailable, unpredictable, or too expensive for older adults to afford. As one explained, with jitneys “it’s \$6 down and \$6 back... and I don’t have money all the time.”

Having received health care at the local hospital for most of their lives, participants did not know where they would receive health care now. For example, as one participant commented, “Myself, I really don’t know where to go anymore.” In particular, participants

did not know what hospitals were closest, how to contact physicians or make appointments, or how to find a new primary care physician. In many cases, their solution was just not to attempt to obtain care.

Participants mentioned many services that they missed, including those of specialists (e.g., cardiologists, urologists, and neurologists), testing for blood work and imaging, psychiatric and detoxification units, a place to have procedures and operations performed, and a cafeteria in which to socialize and eat. In all of the focus groups, participants articulated their fear that there would no longer be a close place to go for emergencies. “We don’t have no place to go. We might die before we get where we’re going.”

One participant summarized her impression of the impact of the closing, “[This] hospital...was the center of this community, and people really, really depended on it.”

Phase II Results

During phase II discussions, senior hospital administrators were eager to hear the results of the focus groups. They noted that they, too, had strong emotions regarding the hospital closure and that they had exerted a great effort to keep the facility open but eventually had to accept the view that there was no other option than to close it. We discussed new initiatives by the hospital system geared towards facilitating access to remote healthcare services by the affected community. Based on the data from the phase I focus group session, it was clear that there was limited knowledge, utilization and community awareness of the resources.

During the “member checking” discussions, the participants indicated that the feelings and opinions described in the phase I results were accurate and had not changed. A representative from a hospital system–based community outreach program who was responsible for facilitating allocation of health resources attended the discussions, described the post-closure services and resources that were being provided by the hospital system, and distributed a health resource and access information guide

A few participants reported that they had used some of the new resources provided by the hospital system, such as a free, health system–sponsored transport service that could be taken from the old hospital location to the closest community hospital and doctors’ offices and said that they were pleased with the result. However, most participants had not heard of the other new services funded by the hospital system such as additional hours at the federally qualified health center, the hospital system-based community outreach program, and the new location of the community dental center.

Participants found the descriptions of some of the services in the health resource and access information guide to be confusing. For example, they were not sure how to access the federally qualified health center with its irregular hours for urgent care and limitations on qualifications for care. Their questions and concerns about available health care services led to additional clarification and the recommendation that available resources continue to be discussed in future sessions. Some participants said they felt that news announcements and newspaper articles were effective ways to tell the community about new resources.

After discussing the phase II data, the administrators expressed a desire to modify some of their previously developed resource tools to better accommodate the needs of older adults, and they followed through by incorporating participants' suggestions into the revisions of their community health resource guide, as described in following section, for phase III.

Phase III Results

Phase III was designed to elicit feedback from community residents about the revised health resource and health access information guide. Although the guide had been mailed earlier, only one of about 40 participants noted they had taken the time to read it. This limited the number of additional suggestions about content. When participants were asked about factors affecting readability, they indicated that they were able to read a 12-point font but found that a 14-point font was easier. The majority preferred Arial type to Times New Roman type. When asked about print colors (black versus other) and background colors (yellow, cream, or white), they said they preferred black print on a bright yellow background. Some offered suggestions about which sections of content to highlight.

This feedback, along with information gathered from a literature review on improving readability for older adults, were subsequently discussed and developed in meetings with hospital system communications representatives, community-based organization staff, and academic faculty at the University Of Pittsburgh School Of Medicine. The collaborative effort resulted in additional changes to the guide. The new guide was in development for 9 months. The final product was then disseminated to older adult residents in the community center, churches, and local assisted living facilities.

Phase IV Results

In the two focus group discussions held 2 years after the hospital closure, the following thematic elements were again dominant: emotions and perceptions of the hospital system, challenges regarding transportation, and knowledge about finding care and obtaining health services (Figure 2).

In general, participants were concerned that the hospital system's focus centered on money and were afraid that there would be a monopoly on hospitals and insurance options. In particular, participants felt that the "human touch" of the hospital system had been eliminated. Emphasizing this, one stated, "[It's] always about the money...not a person's health. I think that should have been their first priority: a person's health." Participants also felt that more could have been done before the hospital was closed. As one asked, "Why didn't they find out before they tore down the hospital what we needed?"

Members in the two focus groups had differing opinions about the revised resource guide, which showed the hospital system logo on the cover. Members of the first group said that they would have a negative reaction to the logo but would still read the guide. Members of the second group, however, said that they would promptly throw the guide in the trash as soon as they saw the logo.

In both groups, feelings of sadness, fear, abandonment, hopelessness, and powerlessness persisted. As one participant said, "They have forgotten about us all here." In addition, the

participants seemed less enthusiastic about taking action because they felt helpless. According to one, “But now the building is not there, and it's just like everything has just been wiped out. So we're kinda like at a low, a low point.” And according to another, “I think we all are just like, haven't given up, but it's like the dream is gone.”

On the one hand, some participants reported using the transport service that had been introduced by the hospital system to take them to the closest community hospital and doctors' offices in a neighboring borough. These participants had positive feedback about the service. On the other hand, many participants still had concerns about transportation. Although most members of the first group had found a way to get to doctor appointments, they reported difficulties traveling farther than neighboring boroughs. Participants in the second group complained that it was harder now to get to their doctors' offices than it had been immediately after the hospital closure. Taking the bus had become more challenging because of route cuts and the necessity for a high level of mobility and maneuverability. As one stated, “I have doctors' appointments there, and I been canceling them left and right because of the buses. I can't even get a bus over there, you know.” Participants also expressed concerns about parking costs at nearby hospitals and the lack of options for returning home from the hospital.

Although the lack of knowledge about where to go for health care services was a frequent concern 6 months after the hospital closure, it was not brought up as often 2 years after the closure. Now participants seemed to have a better idea of where to go for care. One participant shared, “Well, it took a minute, but we're gradually getting our help.”

Participants mentioned that they still miss the cafeteria and emergency care but have found a way to get necessary testing, such as blood work and imaging. Although they had gained access to physicians, they expressed frustration with changing doctors and having to repeat their medical history to new physicians. As one commented, “When I went to the family center, I got about five or six doctors, and each time they leave and then somebody else comes in. I mean, that's bad. It's ridiculous.” This sentiment was not new with the hospital closure, but participants noted it as an important issue that has not been well addressed in the community.

Some participants expressed a need for a resource center, a place to obtain information about local health care services. They felt that a resource guide would be useful only if it could catch people's attention. One participant summarized the lack of health services by saying, “So much has been taken from the community...and nothing really put back in.”

DISCUSSION

In this qualitative study, we created a transferrable model for evaluating the effects of a community hospital closure on older adult residents of the community. By beginning to identify the most important aspects of the hospital that were lost, the community learned what avenues to pursue to maintain good health care. Presenting the results to participants provided a forum for sharing information regarding health care resources available in the community and fueled the evaluation and modification of a health resource and access

information guide for the community. The study provided a framework for continuing a longitudinal discussion with the community and the hospital administration on the effects of a community hospital closure over time.

Through the focus groups with older adult residents at 6 months after the closure, we identified major thematic elements regarding the impact on the community and challenges to obtaining care. In addition to feelings of injustice and powerlessness, residents had a lack of knowledge about where to go for health care and were avoiding seeking care. Health care services and efficient transportation to health care providers were identified as critical needs in the community.

By conducting a second round of focus groups 2 years after the hospital closure, we were able to compare changes in perceptions and feelings. In general, the tone of the second round of focus groups was more subdued, and the participants seemed to have less enthusiasm to participate. The groups were more difficult to facilitate, since participants had less to say. This may have been due to their feelings of hopelessness and powerlessness, or it may have been a result of their gaining access to the health care resources they need. While some found a way to obtain services such as doctor appointments, imaging, and lab work, they still expressed a need for an emergency room and a place for communal eating. Many continued to have feelings of abandonment, hopelessness, and powerlessness and to have concerns about transportation.

Our results are in accord with the findings of previous studies. Like our focus group study, other studies with local residents after a hospital closure found that many residents failed to seek medical attention because it was inconvenient to do so (Muus et al., 1995) or delayed treatment because of difficulties in finding new providers (Bindman et al., 1990). In a survey of health professionals after a hospital closure, researchers found that transportation challenges were a major issue (Reif et al., 1999). Similarly, we found that identifying new ways to get to doctor offices, hospitals, and emergency care was of major concern to our study participants.

Several limitations of our study deserve mention. First, although the study methods are transferrable, the generalizability of results may be limited by the fact that the data were obtained only for one hospital closure in one community and one subset of the population. We have yet to purposively sample other community populations also affected by the closure such as those with chronic diseases, families and children, or health care providers. Additionally, although focus groups do in theory allow everyone to offer their thoughts, it was a challenge during these groups for the facilitator to manage the stronger personalities and ensure that everyone's opinions were heard. The data were collected at a time when the community was emotionally charged. Thus, negotiating the implication of such a substantial change in health care during the focus groups resulted in intense discussions and open and honest reflection on the personal and community implications of the closing of the local hospital on older adults.

Interestingly, we had an overwhelming majority of female participants in the focus groups. This may be because there are a higher percentage of women in the older adult population,

because women tend to be more social at the assisted living centers and community centers, or because women may have been more likely to have heard about and wanted to participate in the focus groups. A large majority (78%) of our participants were African American, which is a larger proportion than that of the hospital zip code area (59%) (United States Department of Commerce, 2010). This may be a result of the locations where we chose to recruit as there may have been more African Americans attending programs in those centers.

Our study also has a number of strengths worth noting. For example, in addition to demonstrating the effects of the hospital closure on the community, it demonstrated the benefits of using a community-engaging research process. With the help of a community health outreach nurse, participants were more than willing to attend the focus groups, despite their anxiety regarding the hospital closure. The participants valued having multiple points of contact with the research team and appreciated the sharing of results in follow-up discussion sessions.

Moreover, the discussion sessions provided a forum for communication between community-based organizations, health outreach nurses, and community members. They also provided an opportunity for hospital administrators to voice their opinions and get the message to the community that the decision to close was difficult for them and that they were still interested in helping the community. The back-and-forth discussions between community members and hospital administrators led to the development and production of a revised health resource and access information guide which helped residents feel that they were making a difference for the community as they saw their suggestions lead to action. These methods of communication with representatives from the community has been shown to have a greater impact in retaining resources in a community after a hospital closure (Barnett and Barnett, 2003).

Our study results and methods have potential implications for ordinary practices surrounding a hospital closure and for future research. The results suggest that involving the community in decisions before a hospital closure takes place may promote community engagement and prevent some health care disparities and negative emotions from occurring if and when the closure finally happens. These strong negative emotions can become a barrier to future understanding of resources and to patient adaptation to alternative ways to meet their needs. The various non-health roles of a community hospital should be taken into account so these roles can be continued by outreach programs if a closure occurs. Future research in the community might include disseminating a community-wide survey to obtain quantitative, generalizable data about the types of services that the local population perceives to be of greatest concern. Our methods provide a framework for gathering data and making recommendations to stakeholders, community-based organizations, and health care providers about what services would be the most beneficial to older adults and how these services could be presented most effectively in a resource guide for these adults.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

ACKNOWLEDGEMENTS

Research reported in this publication was supported by the National Center for Advancing Translational Sciences of the National Institutes of Health under Award Number TL1TR000145. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. Additional support was provided by the Pittsburgh Claude D. Pepper Older Americans Independence Center and by the Department of Communications at UPMC. Special thanks to Loren Roth, MD, Stephanie Studenski, MD, and Sean Logan Vice President of Community Relations, University of Pittsburgh Medical Center (UPMC) for their support, insight, and valuable perspective.

REFERENCES

- BARNETT R, BARNETT P. "If you want to sit on your butts you'll get nothing!" Community activism in response to threats of rural hospital closure in southern New Zealand. *Health Place*. 2003; 9:59–71. [PubMed: 12753789]
- BINDMAN AB, KEANE D, LURIE N. A public hospital closes. Impact on patients' access to care and health status. *JAMA*. 1990; 264:2899–904. [PubMed: 2232084]
- BUCHMUELLER TC, JACOBSON M, WOLD C. How far to the hospital? The effect of hospital closures on access to care. *J Health Econ*. 2006; 25:740–61. [PubMed: 16356570]
- CONTINELLI T, MCGINNIS S, HOLMES T. The effect of local primary care physician supply on the utilization of preventive health services in the United States. *Health Place*. 2010; 16:942–51. [PubMed: 20691391]
- GAZMARARIAN JA, BAKER DW, WILLIAMS MV, PARKER RM, SCOTT TL, GREEN DC, FEHRENBACH SN, REN J, KOPLAN JP. Health literacy among Medicare enrollees in a managed care organization. *JAMA*. 1999; 281:545–51. [PubMed: 10022111]
- GRANT PR, RICE B. Transportation Problems of the Rural Elderly: A Needs Assessment. *Canadian Journal on Aging*. 1983; 2:107–124.
- HARTLEY J. Designing Instructional Text for Older Readers: A Literature Review. *British Journal of Educational Technology*. 1994; 25:172–188.
- ISRAEL BA, SCHULZ AJ, PARKER EA, BECKER AB. Review of community-based research: assessing partnership approaches to improve public health. *Annu Rev Public Health*. 1998; 19:173–202. [PubMed: 9611617]
- JAMES AM. Closing rural hospitals in Saskatchewan: on the road to wellness? *Soc Sci Med*. 1999; 49:1021–34. [PubMed: 10475667]
- JONES, SR.; TORRES, V.; ARMINIO, JL. Negotiating the complexities of qualitative research in higher education : fundamental elements and issues. Routledge; New York, N.Y.: 2006.
- KRUEGER, RA. Focus groups : a practical guide for applied research. Sage Publications; Thousand Oaks, Calif.: 1994.
- KRUEGER, RA.; CASEY, MA. Focus groups : a practical guide for applied research. Sage Publications; Thousand Oaks, Calif.: 2000.
- MAYER JD, KOHLENBERG ER, SIEFERMAN GE, ROSENBLATT RA. Patterns of rural hospital closure in the United States. *Soc Sci Med*. 1987; 24:327–34. [PubMed: 3563563]
- MUUS KJ, LUDTKE RL, GIBBENS B. Community perceptions of rural hospital closure. *J Community Health*. 1995; 20:65–73. [PubMed: 7699110]
- PROCOPIO, J. Steps to a Healthy Community Report. UPMC Braddock; Braddock, PA: 2008.
- QSR INTERNATIONAL. NVivo qualitative data analysis software. 10 ed.. QSR International Pty Ltd.; 2012.
- REHNQUIST, J. Trends in Urban Hospital Closure 1990-2000. SERVICES, D. O. H. A. H., editor. Washington D.C.: 2003.
- REIF SS, DESHARNAIS S, BERNARD S. Community perceptions of the effects of rural hospital closure on access to care. *J Rural Health*. 1999; 15:202–9. [PubMed: 10511756]
- RICE MF. Inner-city hospital closures/relocations: race, income status, and legal issues. *Soc Sci Med*. 1987; 24:889–96. [PubMed: 3616683]

UNITED STATES DEPARTMENT OF COMMERCE. 2010 Population Finder. COMMERCE, U. S. D. O., editor. United States Census Bureau; 2010.

UNITED STATES DEPARTMENT OF COMMERCE. Selected Economic Characteristics 2007-2011 American Community Survey 5-Year Estimates. COMMERCE, U. S. D. O., editor. United States Census Bureau; 2011.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

HIGHLIGHTS

- Engaged community and evaluated the impact of hospital closure on older adults.
- Generated a longitudinal discussion with community and hospital administration.
- Provided a forum for sharing information regarding available health care resources.
- Developed a tailored health access information resource guide.
- Provided informed recommendations to community organizations about needed services.

Figure 1.
Timeline of the study.

Figure 2.
Model of thematic elements of the study. Major themes are shown in boxes and subthemes are shown in circles.

Table

Sociodemographic Characteristics of Participants in Focus Groups Convened at 6 Months and 2 Years *

Characteristic	Number (%) of Participants at 6 Months	Number (%) of Participants at 2 Years
Age in years, mean	77.3	70.5
Race/ethnicity		
African American	28 (78)	11 (79)
White	8 (22)	3 (21)
Gender		
Male	6 (16)	3 (21)
Female	31 (84)	11 (79)
Highest level of education		
Completed 8th grade or less	1 (3)	2 (14)
Completed some high school	13 (37)	6 (43)
Graduated from high school	21 (60)	4 (29)
Completed some college (no degree)	0 (0)	2 (14)
Income		
<\$10,000	11 (42)	8 (62)
\$10,000-\$19,999	13 (50)	4 (31)
\$20,000-\$29,999	2 (8)	1 (8)
\$30,000-\$39,999	0 (0)	0 (0)
>\$40,000	0 (0)	0 (0)
Living arrangement		
House	11 (38)	5 (36)
Apartment	16 (55)	9 (64)
Assisted living facility	2 (7)	0 (0)

* Focus groups at 6 months included 37 participants (response rate of 96%). Focus groups at 2 years included 14 participants (response rate of 100%).