ARTICLES

Educational Preparation and Attributes of Community and Migrant Health Center Administrators

Leiyu Shi, Dr.P.H., Michael E. Samuels, Dr.P.H., Saundra Glover, Ph.D.

ABSTRACT: Based on a 1994 national survey of Community and Migrant Health Center (C/MHC) administrators, this study draws a profile of C/MHC administrators in terms of their personal and work characteristics, as well as their values and beliefs regarding successful C/MHC attributes and important managerial practices. Further, the study compares C/MHC administrators with different educational preparation in terms of their personal and work characteristics, values and beliefs, as well as their perceived deficiencies. The study results indicate that critical factors in C/MHC success, in order of ranked importance, were good organizational leadership, organization's value to community and efficiency. Successful managerial characteristics, in order of ranked importance, were vision for the future of organization, honesty/integrity and open to new possibilities. Administrators with more advanced degrees expressed less deficiencies and those with no college degree showed greatest deficiency on five of eight measures.

While studies abound on the attributes of hospital administrators (Bovender, 1986; Brown, 1987; Inderrieden, 1987; Sieveking, et al, 1992; Lishner, etal., 1994), critical factors in hospital success and needed managerial skills under prospective payment and managed care (Shortell, et al., 1994, 1995; Cleverly, 1995; Pointer, et al., 1995; Denis, et al., 1995; Burton, et al., 1995), little research has been conducted about administrators serving Community and

All communications and requests for transcripts should be directed to Leiyu Shi, Dr P H, Department of Health Administration, School of Public Health, University of South Carolina, Columbia, SC 29208

Health Centers (C/MHCs). The development of C/MHCs has ewed as an important approach to the problems of medically rved areas. For over three decades, C/MHCs have been providing care and preventive health services to populations in medically rved areas (Burton, et al., 1995; Freeman, et al., 1982). By definition, ly underserved areas are determined through the use of an Index of Underservice based on indicators such as infant mortality rate, primary care physicians to population, percentage of population 65 r and percentage of population below poverty level. Such desig- eas receive national priority in meeting their health care needs and ts for special federal health initiative programs (Community and Health Centers, for example). Traditionally, these areas have ced difficulty in attracting private physicians, particularly of pri- re specialties. As a result, C/MHCs rely heavily on nonphysician s such as nurse practitioners, physician assistants and certified idwives for services delivery.

MHCs incorporate the concepts of comprehensive and coordinated ervices along with continuity of care within a single institutional y providing integrated care, including primary and preventive care The organization of these services within the same setting and trative structure can also realize economy of scale and minimize sary duplication of administrative tasks and medical services. y various names–neighborhood health centers, community health family health centers, migrant health centers and rural health s–in 1993, there were 524 C/MHCs in the United States, serving six patients, about 25 percent of the nation's indigent population.[1,15] nts are drawn principally from minority groups: 31 percent black, t Hispanic and 5 percent other minorities. C/MHCs are critical to care by the nation's poor and underserved.

cent years, C/MHCs, like other health care institutions, are faced ncreasingly turbulent environment where medical costs are esca- ancial revenues are unstable and decreasing, competitions among s are intensified, organizations are volatile, and concern for quality ced (Zuvekas, et al., 1991). These environmental changes and ties confront C/MHC administrators with great challenges. Ad- ors who successfully overcome these challenges will play a vital e continued services to the nation's poor and underserved. But the critical factors associated with C/MHC success? What are the s of a successful C/MHC administrator?

[illegible] questions by surveying current senior

executives of C/MHCs. Specifically, the study serves two objectives. First, we draw a profile of C/MHC administrators in terms of their personal and work characteristics, as well as their values and beliefs regarding successful C/MHC attributes and important managerial practices. Such a profile should enable us to better understand today's C/MHC administrators and their perceived important attributes for the success of C/MHCs and management. Second, we compare C/MHC administrators with different educational preparation in terms of their personal and work characteristics, values and beliefs, as well as their perceived deficiencies. This comparison helps understand the association between educational preparation and administrator attributes and identifies the areas that continuing education should be focused on. The comparison will also benefit academic programs in health care administration to maintain relevance of their curricula to the skill requirements needed to cope effectively with the changing health care environment.

Methods

Data

This research is based on data from a 1994 national survey of C/MHC administrators conducted by the authors under contract with the National Rural Health Association for the Health Resources and Services Administration, U.S. Public Health Service. The 1993 C/MHC directory was used as the sampling frame (USPHS, 1993). All C/MHCs in the contiguous United States (n=524) that were Federally Qualified Health Centers (FQHCs) were included. Non-FQHCs such as free clinics and other safety net outpatient providers were not studied. Like C/MHCs, these providers played a significant role in improving access to care in underserved areas.

The survey instrument was first mailed to administrators of all the C/MHCs in South Carolina (n=14) for a pre-test. The questionnaire was modified based on respondents' feedback and sent to executive directors of all C/MHCs in the contiguous United States. All nonrespondents were sent an additional mailing, and the remaining nonrespondents were contacted by telephone and urged to fax back their responses. Overall, 85 percent of C/MHC administrators (n=443) responded to the survey. Based on Bureau Common Reporting Requirements (BCRR) forms submitted to the Bureau of Health Care Delivery and Assistance as part of the requirement of receiving federal funding, we did not find significant differences between responding and nonresponding C/MHCs in terms of center size (either

ed by budget, total staff, or medical staff) and scope of services
d. However, administrators from rural C/MHCs were more likely
nd than those from urban C/MHCs (91% versus 75%).

RES

ey questionnaire was designed based on an extensive review of the
e regarding administrators of health care institutions and our pilot
South Carolina C/MHC administrators. The following five major
ents regarding administrators' attributes were included: (1) demo-
characteristics; (2) work characteristics; (3) values regarding critical
or C/MHC success; (4) beliefs regarding important managerial
ristics for a successful C/MHC administrator; and (5) perceived
needs for additional knowledge and skills.
iographic characteristics consisted of respondents' age (year of
ex (male and female), race (white, black, Hispanic, and other),
educational degree attained (MD, Ph.D. and other doctoral degree,
of Health Administration-MHA, Master of Public Health-MPH,
f Business Administration-MBA, other Masters degree, bachelors
IA, and without bachelors degree), and year of graduation from the
educational degree.
k characteristics included years of current employment as an
rator, average hours worked per week, current annual salary, and
distribution of time in various activities including medical staff,
nical staff, board relations, reading/professional development,
nt activity, community matters, team building, crisis intervention,
ing, federal C/MHC report activity, professional association, and
espondents were asked to describe the percentage of time per
stributed to each of the above activities and verify their answers by
up the responses to 100 percent.
es regarding critical factors for C/MHC success were measured
tems asking respondents to identify the primary function of C/
items) and the most critical factors in C/MHC success (11 items).
tors were obtained through an extensive review of the hospital
and focus groups with C/MHC administrators. These items are
in the Results section. A 5-category agreement scale was used to
responses with 5 indicating "totally agree", 4 "somewhat agree",
re", 2 "somewhat disagree", and 1 "totally disagree".
fs regarding important managerial characteristics for a successful
administrator were based on respondents' assessment of the
[illegible] of 25 characteristics in identifying a successful C/MHC

administrator. A 5-point rating scale was used for each response with 5 indicating "most important" and 1 "least important". The characteristics are reported in the Results section.

Training needs for additional knowledge and skills used eight items including communication skills, leadership skills, financial management, human resources management, strategic planning, policy development, formal degree program, and decision making skills. Respondents were asked to assess these areas using a 7-point scale with 7 as "most needed" and 1 "least needed".

ANALYSIS

Univariate statistics were used to address the first study objective. Sample distributions and means were calculated to draw a profile of C/MHC administrators. Bivariate statistics were used to fulfill the second objective of comparing C/MHC administrators with different educational preparation in terms of their personal and work characteristics, values and beliefs, as well as their perceived deficiencies. The educational categories were recoded from eight to five categories due to sample size consideration and preliminary analysis that indicates similar results. The recoded educational categories were doctoral degree (combining MD, Ph.D., and other doctoral degree), management masters degree (combining MHA, MPH, and MBA), other masters degree, bachelors degree, and no bachelors degree. Chi-square statistics was used for categorical variables and analysis of variance for continuous variables. Respondents' rankings of the relative importance of attributes associated with successful C/MHCs and administrators were derived from their responses on the rating scales (either 7-point or 5-point scales). Respondents who assigned a higher score to a particular item than another were assumed to rank that item higher. Specifically, two rankings were calculated. The between-group ranking indicates relative ranking among respondents with different education degrees in terms of their perceived importance of a particular item. The within-group ranking indicates how respondents with the same education degrees perceived the relative importance of a particular item.

RESULTS

PERSONAL CHARACTERISTICS OF C/MHC ADMINISTRATORS

The demographic and some work-related characteristics of C/MHC

nistrators are displayed in Table 1. The mean age of administrators was They were most likely to be male (59%) and white (65%). Most of them dvanced degrees: 8 percent had Ph.D., 3 percent MD, 6 percent MHA, rcent MPH, 6 percent MBA, and 25 percent other masters degree. were more rural centers (63%) than urban ones (37%). On average, ndents had 9 years of experience as administrators, worked 50.5 hours k, and earned $58,150 in salary.

Table 1. Demographic and Job Related Characteristics of Community and Migrant Health Center (C/MHC) Administrators, 1994

	N	(%)	Mean	Standard Deviation
			47.7	7.5
	261	(59%)		
ale	179	(41%)		
	286	(65%)		
k	86	(20%)		
anic	52	(12%)		
r	13	(3%)		
Education Degree				
than BA	43	(10%)		
	122	(28%)		
r Masters Degree	109	(25%)		
	28	(6%)		
	64	(15%)		
	26	(6%)		
	14	(3%)		
	34	(8%)		
	279	(63%)		
n	164	(37%)		
Current Employment			9.0	6.8
Hours Worked per Week			50.5	9.0
Annual Salary			$58,150	33,063

EDUCATIONAL DEGREES AND PERSONAL CHARACTERISTICS

The relationships between educational degrees and personal characteristics are displayed in Table 2. Respondents with management related degrees (i.e., MHA, MPH, MBA), doctoral degrees, and bachelors degrees were significantly younger in age than those with no bachelors degree and those with other masters degree ($p<.01$). This finding indicates the employment trend in C/MHCs: earlier administrators were more likely to be without college education or with other masters degrees, whereas later hiring was more likely to be based on college education and management degrees.

Table 2. Education Degrees and Characteristics of Community and Migrant Health Center (C/MHC) Administrators, 1994

Variables	No Bachelors Degree	Bachelors Degree	Other Masters Degree	Mgmt Masters Degree	Doctorate Degree	P-value
Age						
-Mean	48.1	46.3	49.7	47.0	47.7	.0083
-Standard error	1.1	.7	.7	.7	1.1	
Sex						
-Male (%)	15 (6%)	65 (25%)	75 (29%)	74 (28%)	32 (12%)	.0013
-Female (%)	28 (16%)	56 (32%)	34 (19%)	44 (25%)	16 (9%)	
Race						
-White (%)	33 (12%)	80 (28%)	69 (24%)	77 (27%)	26 (9%)	.0163
-Black (%)	1 (1%)	20 (23%)	28 (33%)	23 (27%)	14 (16%)	
-Hispanic (%)	8 (15%)	18 (35%)	8 (15%)	12 (23%)	6 (12%)	
-Other (%)	0 (0%)	3 (23%)	4 (31%)	4 (31%)	2 (15%)	
Location						
-Rural (%)	38 (14%)	90 (33%)	56 (20%)	69 (25%)	23 (8%)	.0000
-Urban (%)	5 (3%)	32 (20%)	53 (32%)	49 (30%)	25 (15%)	
Years since receiving degree						
-Mean	28	20	18	15	15	.0000
-Standard error	1.4	.7	.8	.8	1.2	
Years of current employment						
-Mean	11.7	9.4	9.0	8.7	6.3	.0046
-Standard error	1.0	.6	.7	.6	1.0	
Average hours worked per week						
-Mean	45.2	50.2	49.9	51.9	54.1	.0002
-Standard error	1.3	.8	.9	.8	1.3	

us 60 percent white administrators had advanced degrees (p<.05). inistrators working in urban C/MHCs were better educated than e from rural C/MHCs: 77 percent urban administrators versus 53 ent rural administrators had advanced degrees (p<.01).

Administrators with advanced degrees received their degrees more atly than those with only college undergraduate or without college ees (such as high school diploma) (p<.01). Administrators with ad- ed degrees served fewer years as administrators than those without nced degrees (p<.01). For example, those with doctoral and manage- masters degrees served an average of 6.3 and 8.7 years respectively, reas those without college education served an average of 11.7 years. finding shows that earlier hiring of administrators was more likely d on experience and later hiring on education as well as experience. inistrators with more advanced degrees tend to work longer hours those with less advanced degrees: administrators with doctoral de- s worked 54.1 hours a week on average compared with 45.2 hours a by those without college degrees (p<.01). Administrators with more nced degrees also earned higher salary: on average, those with doctoral ees earned $69,629, those with managerial masters degree $60,818, but without college education only $38,227 (p<.01).

Table 3 compares administrators with different educational degrees heir time distribution of activities. Overall, administrators spent more on team building (13%), followed by medical staff (12%), professional iation (11%), board relations (10%), other clinical staff (10%), efficiency other grant activity (9%), federal C/MHC report activity (8%), enter- ng (7%), reading/professional development (6%), crisis intervention and community matters (1%). Administrators with more advanced ees tend to spend significantly more time on team building: administra- with doctoral degrees spent 16.5 percent of time versus 9.9 percent by those without college education (p<.01). Other observed differ- in time distribution were not statistically significant

CATIONAL DEGREES AND PERCEIVED C/MHC SUCCESS FACTORS

Table 4 displays respondents' rankings on the primary function of C/ Cs and the most critical factors in C/MHC success. Administrators with rent education degrees were consistent in their rankings on the primary ion of C/MHCs: to provide health services to the poor, followed by iding geographic access to services, and becoming self-supporting. inistrators with more advanced degrees considered self-supporting ... to grant support) to be more important than those with less

Table 3. Education Degrees and Distribution of Time by Community and Migrant Health Center (C/MHC) Administrators, 1994

Variables	No Bachelors Degree	Bachelors Degree	Other Masters Degree	Mgrl Masters Degree	Doctorate Degree	P-value
Team building						
-Mean %	9.9	13.0	11.7	13.2	16.5	.0030
-Standard error	1.6	.9	1.0	.9	1.5	
Medical staff						
-Mean %	13.8	11.6	11.0	12.2	13.7	.3387
-Standard error	1.5	.8	.9	.8	1.3	
Professional association						
-Mean %	4.4	4.5	4.0	4.0	3.9	.8050
-Standard error	.6	.4	.4	.4	.6	
Board relations						
-Mean %	11.5	10.7	10.4	12.0	9.5	.1602
-Standard error	1.0	.6	.6	.6	1.0	
Other clinical staff						
-Mean %	10.3	7.5	8.2	7.1	6.9	.0955
-Standard error	1.1	.6	.7	.6	1.0	
Other grant activity						
-Mean %	9.1	10.5	7.2	10.3	10.5	.0513
-Standard error	1.5	.9	.9	.9	1.4	
Federal CHC report activity						
-Mean %	10.8	9.7	7.5	8.1	8.7	.1238
-Standard error	1.3	.8	.8	.8	1.2	
Entertaining						
-Mean %	1.2	1.2	1.2	1.4	1.5	.8015
-Standard error	.4	.2	.2	.2	.3	
Reading/professional development						
-Mean %	7.2	6.5	5.8	7.0	7.0	.5235
-Standard error	1.0	.6	.6	.6	.9	
Crisis intervention						
-Mean %	7.5	8.3	8.9	9.4	7.3	.6447
-Standard error	1.5	.9	.9	.9	1.4	
Community matters						
-Mean %	8.2	10.8	11.4	10.0	10.7	.1931
-Standard error	1.2	.7	.7	.7	1.1	

inced degrees. Rural urban comparisons indicate that urban administrators, controlling for educational background, rated higher providing graphic access to services (4.7 vs. 4.5, p<.05) and providing health ices to the poor (4.5 vs. 4.2, p<.05) than rural administrators.

Overall, respondents rated good organizational leadership as the most al factor in C/MHC success, followed by organization's value to munity, efficiency, organizational stability, reputation, effectiveness, munity support, physician retention, board support, third-party reimement, and grant support. Good organizational leadership was ranked ie most critical factor by those with advanced degrees. Those with elors degree ranked organization's value to community as the most al factor, and those without college degree ranked organizational ility as most important. Third-party reimbursement and grant support ranked at the bottom by all groups. Rural urban comparisons indicate administrators at both settings were consistent in their overall ranking e critical factors in C/MHC success. However, controlling for educaal background, urban administrators rated higher than their rural terparts on organizational leadership (4.7 vs. 4.5, p<.05), efficiency (4.6 .4, p<.05), effectiveness (4.6 vs. 4.4, p<.05), community support (4.5 vs. <.05), physician retention (4.5 vs. 4.3, p<.05), Board support (4.4 vs. 4.2, 5), and third-party reimbursement (4.4 vs. 4.1, p<.05).\

CATIONAL DEGREES AND PERCEIVED CRITICAL MANAGERIAL RACTERISTICS

Table 5 shows the top 15 managerial characteristics perceived to be rtant for a successful C/MHC administrator. Overall, respondents ed vision for the future of organization as most important, followed by sty/integrity, open to new possibilities, understanding external envinent, mission oriented, taking responsibility, concern for others, persis- fairness, knowing where to get information, high energy, people ted, achievement oriented, business oriented, and creativity. The two rs considered least important were understanding organization's his- and being competitive.

The rankings between rural and urban administrators were similar. inistrators with different education degrees shared very similar rankings e top three characteristics but differed significantly on other character-. Those with more the advanced degrees ranked external environment, being persistent significantly higher than those with less advanced ees (4 to 8th versus 11 to 13th place). Those with less advanced degrees ed taking responsibility and being fair significantly higher than those

Table 4. Education Degrees and Ranking the Values and beliefs of Community and Migrant Health Center (C/MHC) Administrators, 1994

Variables	No Bachelors Degree	Bachelors Degree	Other Masters Degree	Magt Masters Degree	Doctorate Degree
The primary function of a C/MHC is to:					
Provide health services to the poor					
-Between group ranking	2	5	4	1	3
-Within group ranking	1	1	1	1	1
Provide geograpgic access to services					
-Between group ranking	5	2	3	4	1
-Within group ranking	2	2	2	2	2
Become self-supporting (without grant)					
-Between group ranking	5	4	3	2	1
-Within group ranking	3	3	3	3	3
The most critical factors in C/MHC success is:					
Good organizational leadership					
-Between group ranking	2	5	4	3	1
-Within group ranking	4	2	1	1	1
Organization's value to community					
-Between group ranking	1	4	3	5	2
-Within group ranking	3	1	2	2	5
Efficiency					
-Between group ranking	2	5	3	4	1
-Within group ranking	5	3	5	3	3
Organizational stability					
-Between group ranking	1	5	3	4	2
-Within group ranking	1	4	3	4	4
Organization's reputation					
-Between group ranking	1	5	4	3	2
-Within group ranking	2	5	6	5	6
Effectiveness					
-Between group ranking	2	5	4	3	1
-Within group ranking	7	6	4	6	2
Community support					
-Between group ranking	1	5	4	3	2
-Within group ranking	6	8	7	7	7
Physician retention					
-Between group ranking	4	3	5	2	1
-Within group ranking	11	7	9	8	8
Board support					
-Between group ranking	1	5	4	3	2
-Within group ranking	8	10	8	9	9
Third party reimbursement					
-Between group ranking	1	3	4	5	2
-Within group ranking	9	9	10	10	10
Grant support					
-Between group ranking	1	4	5	2	3
-Within group ranking	10	11	11	11	11

ith more advanced degrees (5 to 7th versus 7 to 11th place).

DUCATIONAL DEGREES AND PERCEIVED ADDITIONAL TRAINING EEDS

Table 6 reports administrators with different education degrees and eir perceived training needs. Overall, respondents expressed greatest aining needs in strategic planning, followed by financial management, adership skills, human resources management, communication skills, olicy development, decision making skills, and formal degree program. espondents with different education degrees all considered strategic lanning to be the most deficient area to improve. Administrators with octoral degree were better prepared than others on all areas measured (i.e., ey ranked last in terms of relative deficiency). Administrators with no ollege degree showed greatest deficiency on five of eight measures (i.e., rategic planning, financial management, leadership skills, human resources management, and policy development), those with managerial asters degree showed greatest deficiency on two measures (i.e., communication and decision making skills), and those with bachelors degree dicated the greatest desire for more advanced formal education.

UMMARY AND DISCUSSION

The current study has provided a profile of C/MHC administrators. C/HC administrators were likely to be in their middle age (45-50), male 9%), white (65%), and with advanced degrees (63%). On average, they d nine years of experience as administrators, worked 50.5 hours a week, d earned $58,150 in salary. They spent more time on team building (13%), edical staff (12%), and professional association (11%), and less time on mmunity matters (1%), crisis intervention (4%), and reading/professional development (6%).

C/MHC administrators shared the belief that the primary function of /MHCs was to provide health services to the poor. Critical factors in C/HC success, in order of ranked importance, were good organizational dership, organization's value to community, and efficiency. Successful anagerial characteristics, in order of ranked importance, were vision for e future of organization, honesty/integrity, and open to new possibilities. e greatest training needs, in order of ranked importance, were strategic anning, financial management, and leadership skills.

Comparing the educational pathways between C/MHC and hospital lministrators, we found that hospital administrators were somewhat

Table 5. Education Degrees and Ranking of 15 Managerial Characteristics by Community and Migrant Health Center (C/MHC) Administrators, 1994

Variables	No Bachelors Degree	Bachelors Degree	Other Masters Degree	Magt Masters Degree	Doctorate Degree
A vision for the future of the organization					
-Between group ranking	2	5	4	3	1
-Within group ranking	2	2	1	2	1
Honesty/Integrity					
-Between group ranking	1	5	4	3	2
-Within group ranking	1	1	2	1	2
Open to new possibilities					
-Between group ranking	1	5	3	4	2
-Within group ranking	3	3	3	3	3
Understands external environment					
-Between group ranking	4	5	3	2	1
-Within group ranking	11	11	6	5	4
Mission oriented					
-Between group ranking	4	5	3	1	2
-Within group ranking	13	6	4	6	8
Take responsibility, don't blame others					
-Between group ranking	1	5	3	4	2
-Within group ranking	5	5	7	7	10
Concern for others					
-Between group ranking	1	5	3	4	2
-Within group ranking	4	8	5	4	5
Persistent					
Between group ranking	1	5	4	3	2
Within group ranking	10	13	12	8	6
Fairness					
-Between group ranking	1	5	4	3	2
-Within group ranking	6	7	9	9	11
Knows where to get information					
Between group ranking	2	3	4	5	1
-Within group ranking	8	4	8	12	7
High energy, physical and mental stamina					
-Between group ranking	4	3	5	2	1
-Within group ranking	15	9	15	10	13
People oriented					
-Between group ranking	1	5	2	3	4
-Within group ranking	9	12	11	15	14
Achievement oriented					
-Between group ranking	1	5	3	2	4
-Within group ranking	14	15	14	14	15
Business oriented					
-Between group ranking	1	5	4	3	2
-Within group ranking	7	10	13	13	12
Creativity					
-Between group ranking	2	5	3	4	1
-Within group ranking	12	14	10	11	9