

Institutional collaboration and competition in community-based education

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Summary *We sought to determine whether competition for community-based training sites exists among health professions schools, and to examine faculty and senior administrators' perspectives on institutional collaboration for community-based education. Eight academic health centers (AHCs) in the USA were selected by objective criteria for their significant community involvement. Chief executive officers, vice chancellors, deans, and the individuals responsible for community-based education, research and community service responded to written surveys. The overall response rate was 79% (n = 91). Responses were subjected to quantitative and qualitative analyses. Leaders of community-based education reported that 'competition for community-based training sites' is a barrier to community involvement. 'Competition for community-based training sites' was positively related to 'call for increasing percentage of graduates to enter primary care careers' (0.30, p < 0.01) and negative related to 'collaboration exists between the community and your school/AHC' (-0.28, p < 0.05). Respondents reported that a moderate level of collaboration across schools exists. While medical school respondents reported having collaborative relationships with other health professions schools and with the community, nursing respondents reported medicine's performance at a significantly lower level. Public health and nursing faculty reported that they are competing with medical schools for sites they had traditionally used for their students. Competition for sites is an unintended outcome of the increased emphasis on community-based education in health professions curricula. We recommend AHCs form joint committees across schools to effectively address community-based sites as a limited resource, and to consider a wider range of community-based organizations as training partners.*

Key words: *Community-based education; collaboration; competition for training sites; health professions education; faculty and senior administrator perspectives.*

Introduction

For more than a decade, health professions schools in the USA have been shifting their clinical curricula from hospital-based to community-based settings. These shifts have largely been due

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to changes in the setting of health care delivery, health system demands for primary care clinicians and the recognition that community-based education is an effective way to teach students. To facilitate community-based education, federal agencies (e.g., Department of Education, Health Resources and Services Administration), foundations (e.g., W.K. Kellogg Foundation) and disciplinary associations (e.g., the Association of American Medical Colleges) have readily supported the notion of building partnerships and establishing linkages between health professions schools and community-based organizations (Seifer 1997).

This trend toward community partnerships supports the organizational change theory, resource dependency, which states that institutions will establish linkages in the external environment if they are unable to internally generate the resources necessary to maintain their core functions (Pfeffer & Salancik, 1978). Recent work by Kaluzny *et al.* (1995) on strategic alliances in health care also emphasizes the increasing need for health care organizations to partner to generate needed resources.

The need for such partnerships has led to substantial growth in the development of educational community-academic partnerships (US Department of Health and Human Services, 2001). For example, the number of student months of ambulatory community-based training through the North Carolina Area Health Education Center (AHEC) program increased from 693 in 1993–1994 to 3,805 in 2000–2001, and the number of sites increased from 225 in 1993–1994 to 1,181 in 2000–2001. This enterprise involves nearly 1,900 community-based clinical teachers (AHEC, 2002).

This growth in community-based training poses challenges for the participating community sites. A national study by Boex *et al.* (2000) demonstrated that community-based training sites have higher operating costs than comparable non-teaching sites. They also found that the ‘number of sites potentially available to them (schools or programs) is much smaller than they anticipated’, (Boex *et al.*, 2000, p. 422) and that teaching sites are typically educating students from a variety of disciplines.

In 1997, we conducted a study involving eight academic health centers that examined the external and institutional factors affecting the community involvement. Senior administrators reported that their AHC’s orientation toward community service and community-based education, research, and clinical care had increased in the last 3 years (1993–1996) and was expected to continue to increase in the next 5 years (1997–2002). Study respondents perceived competition for community-based training sites as one of the primary barriers to community involvement (Calleson *et al.*, 2002).

Given this environment, where there has been substantial growth in community-based education and there is also the perception by senior administrators that this trend will continue, we sought to determine the extent to which competition for sites exists among health professions schools, and to better understand its relationship with other institutional and external factors.

We also sought to examine health professions school leaders’ perceptions of institutional collaboration on issues related to community-based education. The term *collaboration* is readily used in descriptions of best practices for community-academic partnerships in education and for interdisciplinary team collaboration in community settings (Connors *et al.*, 1996; Fagin 1992). *Collaboration* moves beyond cooperation and coordination; it involves extensive planning and ‘many levels of communication are created as clear information is a keystone of success’ (Mattessich & Monsey, 1992). Leadership of a project is shared and ‘resources are pooled or jointly secured for a longer-term effort’ and is managed by all who are involved (Mattessich *et al.*, 1992 p. 40). In this study, we use the term collaboration in relationship to organizational collaboration among health professions schools. We assumed that effective collaboration across health professions schools would ultimately mediate competition for community-based sites.

Method

Selection of Academic Health Centers

As described in our earlier paper (Calleson *et al.*, 2002), we used a two-stage sampling design to select the AHCs and the key respondents within each AHC. We selected eight academic health centers that had shown significant community involvement. Community involvement for this study was defined as AHC participation in community-based education, community-based research, community-based clinical care, community service and community and economic development.

The eight AHCs included two private and six public institutions and research and non-research-intensive institutions. We considered an AHC to be research intensive if the medical school was listed in the top 25 schools funded by the National Institutes of Health (1996) in the fiscal year 1996. Four of the eight AHCs in the study fit this profile.

Survey development

We developed six survey instruments to assess the different perspectives of leaders within the AHC. Each of the surveys contains numeric, forced-choice and open-ended questions. Three of the surveys were geared toward senior administrators (vice chancellors, CEOs, and deans). Topics covered in these surveys include the effect of external forces (i.e., public perception, managed care) on community involvement of AHCs. They also cover topics on the effect of institutional forces (i.e., leadership, mission, faculty rewards, availability of structures for service, faculty roles and rewards, degree of collaboration) on community involvement. The other three surveys were geared toward project-level leaders (faculty and staff). These project-level surveys focused on the topics listed above and three different types of community involvement: community-based education, community-based research, and community service.

Analyses

Quantitative analyses involved descriptive statistics, two sample t-tests and tests of relationships among the external and internal factors perceived to effect competition and collaboration. We analysed our data in the aggregate, by the discipline of the health professions school and by type of health profession school respondent (i.e., senior administrator and project-level leader).

The qualitative data on competition for community-based training sites were drawn from an open-ended question that asked respondents to identify and describe the greatest facilitator or barrier to their institution's community involvement. The data from the open-ended questions were analysed, coded, and summarized according to primary themes that emerged. We used these qualitative data to cross-check our findings with the quantitative data and to identify repeating themes that were not identified on the forced choice survey items. These data strengthened the validity of the research design and increased our understanding of the factors affecting the community involvement of academic health centers.

Study respondents

All eight AHCs that were invited agreed to participate in this study. Eight medical, six nursing, five pharmacy, three public health, four dentistry schools, and one school of allied health affiliated with these AHCs participated in the study. The response rate was 79%, with a total of

91 respondents (43 senior administrators; 57 project-level leaders). The response rate for senior administrators was 86%, and for project-level leaders, it was 75%.

Results

Competition for community-based training sites

We asked respondents to identify the external forces they perceived to facilitate and/or create barriers to AHC community involvement. Respondents perceived ‘competition for community-based training sites’ as a moderate barrier (mean = 2.67, SD = 1.09), based on a five point Likert scale ranging from 1 = ‘major barrier’ to 5 = ‘greatly facilitates’. The mean for respondents designated as project-level leaders in community-based education at the school-level, who are closest to the work itself, was lower than the overall mean of respondents (mean = 2.27, SD = 1.03).

In response to another set of questions in the survey, these project-level leaders of community-based education ranked ‘competition with other schools/programs’ second along with ‘lack of staff to coordinate community-based activities’ in an itemized list of challenges to community-based education. ‘Inadequate rewards for faculty’ and ‘inadequate release time for faculty’ were ranked first by these leaders (see Table 1).

Bivariate relationships between competition and external forces

The correlation data revealed significant relationships between competition for training sites and several other external forces. ‘Competition for community-based training sites’ was significantly related to ‘call for increasing percentage of graduates to enter primary care careers’ (0.30, $p < 0.01$), ‘recent cuts in state and federal funding’ (0.33, $p < 0.01$), and ‘fiscal uncertainty as it relates to the changing health care environment’ (0.34, $p < 0.01$). There was a significant negative relationship between ‘competition for community-based training sites’ and the variable ‘collaboration exists between the community and your school/AHC’ (-0.28 , $p < 0.05$).

Qualitative responses on competition. The open-ended responses on external forces affecting community involvement support the quantitative data about competition for community-based sites. A nursing faculty member wrote that competition for sites is the ‘most

Table 1. Challenges to Community-Based Education

Variable	Community-Based Education (n = 15)	
	n	%
Inadequate rewards for faculty	9	60
Inadequate release time faculty	9	60
Competition with other schools/programs	8	53
Lack of staff to coordinate community-based activities	8	53
Limited number of community sites	7	47
Rigid curriculum	4	23
Faculty disinterest	3	20
Lack of support by academic leaders	3	20
Community reluctance	1	7

significant NEGATIVE effect related to increased institutional community involvement. The respondent also indicated *'space and time limitations have decreased opportunities to place primary care nursing students'*. These responses also revealed that some respondents have experienced increased competition for sites with medical schools. A school of public health respondent noted that, *'Being a rural site with a concentration of health professional training in the area, students have to travel farther and farther for community-based sites'*.

Qualitative responses on the relationship between competition and external forces. Similar to the quantitative data on the relationship between competition and external forces, the qualitative responses highlighted the relationship between the increased call for more primary care and the increased need for training sites in community settings. Respondents described competition as an outcome of the call for more primary care clinicians. One dean of nursing wrote *'the state mandates primary care education for all medical students...this decreases the sites that had been available for nursing students'*. A respondent from a school of pharmacy commented, *'there are expectations that our pharmacists will be trained to provide pharmaceutical care in an ambulatory community setting. These expectations have encouraged us to work with community sites to identify and create appropriate training sites'*. A school of medicine respondent noted that with *'more emphasis on producing primary care physicians, [there is a] need for increasing ambulatory, community-based educational experiences'*.

Institutional collaboration for community involvement

All study respondents were asked to report their level of agreement whether collaboration exists (1) between the university and the AHC, (2) the medical school and the other health professions schools, (3) the community and the school with which they are affiliated, and (4) between the community and the AHC. Among the aggregate level data, we found a moderate level of agreement that collaboration does exist among these divisions (Table 2).

Group comparisons between medical (MD) and nursing (RN) school respondents, however, indicated that MD respondents perceived their level of collaboration across schools and with the community more favorably than did RN respondents. Overall, MD respondents had significantly higher means for collaboration between the *'the medical school and other health professions schools'* (3.30 MD; 2.61 for RN, $p < 0.001$) and *'the community and the AHC'* (3.56 MD; 2.95 RN, $p < 0.001$) (Table 3).

Types of community based education sites and incentives for community-based faculty

Project-level leaders of community-based education reported on the types of sites they use for their community-based curriculum. Community clinics ($n = 15$, 100%) and community hospitals ($n = 14$, 93%) ranked among the most frequently used sites. These respondents also reported the use of K-12 Schools ($n = 10$, 67%), public housing ($n = 9$, 60%), and religious institutions ($n = 7$, 47%) (see Table 4).

School-level leaders reported on the types of benefits provided to community-based faculty. The two most frequently cited benefits were *'adjunct faculty status'* ($n = 18$, 75%) and *'use of the university library'* ($n = 18$, 75%). The least frequently cited benefits were *'free or discounted access to continuing education events'* ($n = 7$, 28%), and *'financial compensation to the community-based organizations'* ($n = 6$, 25%) (see Table 5).

Table 2. Levels of agreement on collaboration by study respondents

Variable	AHC-Level		CEO-Level		School-Level		CB Research		CB Education		Comm. Service		Combined	
	Mean (n = 6)	SD	Mean (n = 10)	SD	Mean (n = 24)	SD	Mean (n = 18)	SD	Mean (n = 15)	SD	Mean (n = 18)	SD	Mean (n = 91)	SD
Collaboration exists between...	3.33	0.82	3.50	0.53	3.57	0.51	3.05	0.56	3.50	0.52	3.06	0.83	3.33	0.64
The university and the academic health center	4.00	-	3.44	0.53	3.21	0.59	2.94	0.75	3.17	0.59	2.81	1.05	3.16	0.75
The medical school and the other health professions schools	-	-	-	-	3.43	0.66	3.06	0.43	3.40	0.51	3.27	0.83	3.30	0.64
The community and your school*	3.33	0.82	3.13	0.35	3.43	0.75	2.93	0.64	3.25	0.45	3.13	0.91	3.21	0.68
The community and the academic health center														

Note This question is based on a four point scale ranging from (1) 'strongly disagree', (2) 'disagree', (3) 'agree', to (4) 'strongly agree'. *The AHC-Level and CEO-Level surveys did not include the starred item, 'the community and your school'.

Table 3. Levels of agreement on collaboration by medical and nursing school respondents

Variable	Medical School Respondents		Nursing School Respondents		<i>p</i>
	Mean (<i>n</i>)	SD	Mean (<i>n</i>)	SD	
Collaboration exists between...					
The university and the academic health center	3.47 (21)	0.60	3.18 (22)	0.73	0.16
The medical school and the other health professions schools	3.30 (23)	0.70	2.61 (22)	0.79	0.003*
The community and your school*	3.49 (24)	0.51	3.43 (21)	0.51	0.85
The community and the academic health center	3.56 (18)	0.51	2.95 (20)	0.69	0.004*

Note This question was based on a four point Likert scale ranging from (1) 'strongly disagree', (2) 'disagree', (3) 'agree', (4) 'strongly agree'. **p* < 0.05.

Table 4. Types of community sites used by the schools' community-based curriculum

Variable	Community-Based Education (<i>n</i> = 15)	
	<i>n</i>	%
Community clinics	15	100
Community hospitals	14	93
Private practice	12	80
Public Health Departments	12	80
For-profit agencies	12	80
Non-profit agencies	12	80
Managed Care Organizations	11	73
Social Service Agencies	10	67
Schools, K-12	10	67
Public housing	9	60
Other government agencies	8	53
Religious institutions	7	47

Table 5. Frequency and types of benefits received by community-based faculty

Variable	School-Level	
	<i>(n</i> = 24)	
	<i>n</i>	%
Adjunct faculty status	18	75
Use of the university library	18	75
Formal recognition (e.g. recognition dinner, university publications)	17	71
Financial compensation to the individual community-based faculty	15	63
E-mail access provided by the university	12	50
Certificate of recognition	11	46
Educational training opportunities provided by the university	11	46
Free or discounted access to continuing education events	7	28
Financial compensation to the community-based organizations	6	25

Limitations

There are two primary limitations to this study. The purposive sampling technique we used to select the AHCs limits the generalizability of the findings to the larger population of AHCs. To address this, we used multiple methods to triangulate the data and thereby strengthen the study's external validity. Second, we did not collect data that would allow us to examine if competition for sites is more problematic among the same professions (e.g., two nurse practitioner degree programs in the same region). We also recommend that further research examine the community's perspective on competition for community-based training sites.

Discussion

Competition for community-based training sites

We identified a significant relationship between 'the call for an increasing percentage of graduates to enter primary care careers' and 'competition for community-based training sites'. This finding shed light on an *unintended outcome* of the continued emphasis on community-based education. Efforts to meet the demand for more primary care professionals through community-based education has increased the number of community-based training sites required by these schools. Since these sites are a limited resource, we found that health professions school leaders, especially those at the project-level, are now finding that they must compete with one another to maintain access to these sites. Our findings are underscored by the most recent report on educational programs in US medical schools based on data from the 2000–2001 Liaison Committee on Medical Education (LCME) Questionnaire. Forty-one medical schools reported competition for community-based training sites from other area medical education programs (Barzansky & Etzel, 2001).

The LCME study also suggests that variability in the incentives offered to community-based sites for their role in teaching could further exacerbate competition for these sites. For example, the LCME study found that 40 out of the 125 medical schools make a monetary payment, 114 schools offered library access, 85 provided free or discounted continuing education and 36 supplied or discounted computers or software (Levy *et al.*, 1997). We also found a large degree of variability of incentives to community-based faculty in our study (see Table 5). If this variability across medical schools is also true across health professions schools at a given AHC—for example, if the medical school pays its community-based training sites but the nursing school does not—some schools may be at a distinct disadvantage in recruiting community-based training sites.

Community-based education places increased strain on the community-based teachers themselves. Ultimately it could affect the recruitment of community-based teachers (Levy *et al.*, 1997). The LCME Report found that 115 medical schools reported difficulty in recruiting and retaining these volunteer faculty, with 110 schools attributing this difficulty to the efficiency demands of community-based clinical practice (Barzansky & Etzel, 2001). In other words, teaching students causes community-based clinical teachers to see fewer patients.

Institutional collaboration and competition for community involvement

We assumed that effective collaboration across health professions schools would ultimately mediate competition for community-based sites and that strains in collaboration would intensify competition for sites. We did find a moderate level of agreement among respondents that collaboration exists across the different schools in the AHC and with the community. However, when we compared differences in perspectives between medical school and nursing

school respondents, we found that medical respondents perceived their collaborations with other schools in the academic health center and with the community more favorably than nursing respondents perceived medicine's involvement. The negative relationship between the variables 'collaboration exists between the community and your school (or AHC)' and 'competition for community-based sites' supported our premise that strains in collaboration across schools intensify competition for sites.

Our analyses also showed that faculty and staff who are closest to developing and implementing community-based education sites perceive competition for sites as more of a barrier than do senior administrators. Faculty from health professions schools other than medicine (i.e., nursing, public health) perceive that they are now competing with medical schools for sites they had traditionally used for their students.

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Why do these perceptions exist?

Why do these different perceptions across schools and levels of leadership exist? First, institutions of higher education are *loosely coupled* (Weick, 1976). In such an organization, individuals and events in the organizations are 'responsive, but each retains some identity and separateness'. (Weick, 1976, p. 3/ASQ). This leads to limited communication. As an example, The Pew Health Professions Commission described health professions schools at a single AHC as increasingly isolated from one another, a trend that 'is counter to the increasing interdependence of the health professions in the "real" world' (Grant *et al.*, 1995, p. vii).

In addition to being loosely coupled, the health professions schools are also hierarchically structured. While hierarchies are designed to facilitate effective division of labor and efficient coordination of tasks within an organization, they have also been found to hinder communication and problem solving (Starr, 1982). As a result of these two organizational phenomena, the leadership of health professions schools are often limited in their ability to make collaboration and effective communication across disciplines a reality.

Second, AHC reporting structures may have an effect on how institutional leaders perceive issues related to collaboration and competition. For example, when medical school deans report directly to the chancellor and the other health science school deans report to the provost, tensions can arise regarding perceived and actual access to leaders with the greatest decision-making ability. Even the use of the term *academic medical center* rather than the term *academic health center* reinforces the historical perceptions of the primacy and power of medicine over the other disciplines (Fagin, 1992; Hoy & Miskell, 1991).

The Association of Academic Health Centers found that AHCs are most effective in mission management when one of the positional leaders at the AHC serves an 'integrator function' across all the health science schools (Association of Academic Health Centers, 1999, p. 1). This function provides the AHC with the potential to increase communication across schools and with communities with whom they have partnered, and can mediate existing tensions across schools. In this study, an associate vice provost served in this role and four of the AHCs

had either a university-wide or health affairs outreach council that served this integrator function.

Finally, differences in professional culture across health professions schools can have an important effect on expectations for what constitutes effective collaboration. In a landmark article by Mirahi & Abramson (1985), the authors argue that ‘sources of strain’ at the practice level are due to important differences in the socialization and training processes of each profession. For example, social work and nursing rank teamwork and relationship building as core competencies and values of the profession (Fagin, 1992; Mirahi *et al.*, 1985). While medicine is increasingly moving towards these same competencies, this profession places greater emphasis on the clinical diagnosis and treatment of the individual patient and on the physician as team leader.

Mirahi & Abramson (1985) argue that differing levels of expectation for these competencies can lead to ‘sources of strain’ among health professionals in interdisciplinary settings. In our study, we found that Mirahi and Abraham’s analysis of practice-level strain among health professionals also applied to organizational-level strain across health professions schools. For example, while medicine perceived that it is collaborative with other health professions schools and with the community, nursing perceived medicine’s performance at a significantly lower level.

Despite these organizational forces and long-standing historical and cultural differences across health professions schools, we believe that much can be done to *mediate* competition for sites and to foster collaboration in community-based education. Below are a set of policy recommendations to guide institutions and community sites in this work.

Recommendations for AHCs and Health Professions Schools

- (1) *Work towards gaining cooperation across the health professions schools and establish institutional mechanisms to accomplish this goal.* We recommend that leaders of health professions schools focus initially on increasing cooperation by forming a joint committee of health professions schools to address the limited resource of community-based sites and to consider a wider range of available sites. This could be a positive step towards mediating competition for community-based sites, creating an open dialog about existing tensions across the disciplines, and fostering interdisciplinary community-based training. Many states have strong Area Health Education Center systems that serve in such roles. Others are beginning to create ‘offices of community-based education’ or interdisciplinary clinical education initiatives that could serve such roles (Calleson *et al.*, 2002).
- (2) *Create two-way lines of communication between senior and project level leaders.* We recommend that two-way lines of communication and problem solving be fostered between senior and project-level leaders. It is the senior level leaders that have the greatest potential to serve the ‘integrator’ function across the schools (Association of Academic Health Centers, 1999, p. 1) especially as it pertains to increasing communication and addressing ways to decrease competition for community-based sites. It is incumbent upon project-level leaders to convey their issues and concerns to senior leadership. An AHC-wide committee such as suggested above could, for example, report directly to a vice chancellor of health affairs.
- (3) *Consider a wide range of community-based organizations as educational partners.* Although the number of community-based training sites is inevitably limited, the number grows significantly when one considers a broader range of sites. The health professional schools in our study report educational partnerships with more traditional sites including community health centers, managed care organizations and private clinician

offices. We also found that health professions schools have developed community-based sites with school-based clinics, voluntary health agencies (e.g., Salvation Army, local chapters of the American Red Cross or Cancer Society) and K-12 schools (see Table 4). These community-based agencies have been shown to be valuable partners for community-based health professions education (Gelmon & Holland, 1998).

- (4) *Approach community-based organizations as partners, not simply as 'training sites.'* Community-based organizations may be more willing to participate in health professions education if they are regarded as partners in the process (Gelmon *et al.* 1998). The service-learning methodology, in which students provide community service that is tied to explicit learning objectives and community-identified needs, preparation and reflection, is one tested approach to community-based education in the health professions (Seifer, 1998). Principles of good partnerships between communities and health professional schools may serve as a useful guide (Community Campus Partnerships for Health website, 2002).

Recommendations for community-based training sites

- (1) *Be a catalyst for interdisciplinary collaboration.* Whether community-based organizations already serve as training sites for students in different schools and disciplines, or are being approached to serve in such roles, they are in a unique position to foster interdisciplinary collaboration. Sites already serving as multidisciplinary training sites, for example, could convene their faculty contacts at each of the schools for the purpose of exploring interdisciplinary training opportunities, the streamlining of course requirements, and equity across the incentives provided by each discipline. Sites that are being approached by multiple schools could similarly convene the faculty involved. By initiating such dialogue, community-based training sites can assist their campus partners in 'getting their collective act together' when approaching new community sites for training.
- (2) *Advocate for a partnership relationship with health professional schools.* When approached by a health professional school to serve in a teaching role for students, community-based organizations should pursue a partnership relationship (see recommendation 4). These organizations should carefully consider their available resources, their needs and concerns before agreeing to participate.

Conclusion

There will always be a competition for resources, even in community-based education. We must work towards cooperation across health professions schools so that our good intentions to provide effective training sites for students does *not* have adverse effects in creating strain for institutions and community-based clinical teachers and ultimately, patient care. Increasing cooperation, communication, considering a wider range of sites are important principles for institutions. Similarly, community-based teachers can take an active role in initiating conversations about the resources (i.e., time, space, funding) they need for community-based education.

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