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Do patients have a voice? The social stratification of health center governing boards

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Abstract

Context To ensure community responsiveness, federally qualified health centres (FQHCs) in the United States are required to be governed by a patient majority. However, to the extent that these patient trustees resemble the typical low-income patients served by FQHCs, status generalization theory suggests that they will be passed over for leadership positions within the board in favour of more prestigious individuals.

Methods Using 4 years of data on health centre governing boards obtained from the Health Resources and Services Administration via a Freedom of Information Act Request, the likelihood of holding executive committee office is modelled as a function of trustee characteristics using Chamberlain's conditional logistic regressions.

Results The results indicate that representative patient trustees are significantly less likely than other trustees to hold a position on the executive committee or serve as board chair.

Conclusions Given the power of the board leadership to set the agenda, the reduced likelihood of representative patient trustees serving in leadership positions may ultimately limit the representative voice given to patients, making FQHCs potentially less responsive to their communities. These findings also have important implications for other settings where engaging and empowering patients is sought.

Introduction

In the United States, one of the world's leading representative democracies, efforts to engage and empower patients in new ways are currently unfolding as the Affordable Care Act promotes patient-centred medical homes and accountable care organizations that reward providers for delivering comprehensive, high-quality care to patients.[1,2] In addition to clinically focused patient engagement, efforts have been made to engage patients at the highest level, by inviting – and in some cases requiring – their participation in the governance of their local health-care organizations. While many of these efforts have been unsuccessful in the past,[3,4] patient governance has functioned as an explicit part of the federally qualified health centre (FQHC) programme since 1975.

FQHCs are federally funded primary care facilities, first established in 1965 as 'neighbourhood health centres', that serve a disproportionate share of uninsured and low-income persons and are a critical source of care for medically underserved populations in both urban and rural areas. As of 2010, there were 1124 FQHC grantees caring for nearly 20 million patients at some 8147 delivery sites.[5] FQHCs are required to have a patient majority governing board, meaning that at least 51% of the trustees must be patients of the centre, having had at least one visit in the preceding 2 years. Patient governance has been credited with making FQHCs more responsive to the needs of the communities and patients they serve,[6,7] but because these boards are self-perpetuating, the extent to which truly representative patients – who belong to a lower social class – are actually given a voice in the governance of FQHCs is unclear.

Patient governance – even where patients are in the majority – is not synonymous with patients having decision-making ability in practice.[8,9] The law requires only that 51% of the board be comprised of FQHC patients. It does nothing to ensure the active involvement of these trustees in decision making or preclude non-patient trustees from dominating the decision-making process. This may explain prior findings that community boards act in an advisory role, but lack real authority, and that policies favourable to the community can be passed, but implemented in ways that fail to benefit the community.[10–12] Similarly, patients may be prevented from holding positions of power within the board – particularly those on the executive committee – relegating them instead to low-priority committees.[13]

Because this may limit the representative voice given to patients, making FQHCs potentially less responsive to their communities, it is important to determine whether patient trustees are more or less likely than other trustees to (i) serve on the board's executive committee or (ii) serve as board chair and whether the likelihood depends on the extent to which patient trustees resemble the health centre's patient population.

Status generalization theory suggests that small groups tend to organize themselves hierarchically according to the status characteristics of the group members as understood within the larger societal context.[14–16] Indeed, there is evidence to suggest that trustees with professional expertise are viewed – both by themselves and others on the board – as more competent than community, lay or patient trustees, and that higher status individuals tend to exert greater influence over other trustees than their lower status counterparts.[17] Low social status can even make an individual feel that their opinion will not be valued enough to change the outcome of a decision, and this has been associated with decreased participation rates in a variety of settings ranging from jury deliberations[18] to voting behaviour.[19]

Using methods previously described elsewhere, patients can be further classified into two groups on the basis of the average annual income for a member of their self-reported occupation: Representative patients in low-paying occupations (e.g. retail sales, manual labour) who resemble the typical low-income FQHC patient and non-representative patients in high-paying occupations (e.g. medicine, law) who do not resemble the typical low-income FQHC patient.[20] Given that representative patient trustees belong, by definition, to a group with lower socio-economic status, while board leadership positions are inherently superior to non-leadership positions in the governance hierarchy[21] and are an indicator of trustee influence,[22] status generalization theory was used to hypothesize that:

- H1: Representative patient trustees will be less likely than other trustees to hold any board office (defined as chair, vice-chair, secretary or treasurer).
- H2: Representative patient trustees will be less likely than other trustees to serve as board chair.

Methods

The analysis uses available FQHC grant application data for the years 2003 through 2006. To receive federal grant funds, primary care organizations must demonstrate that they meet all FQHC programme requirements by filing a standardized section 330 grant application. In Exhibit D of these FQHC grant applications, each FQHC provides information on its governing board including the total number of governing trustees and their name, occupation, board tenure, position on the board (e.g. chair) and self-reported patient status. Hard copies of these applications, publicly available through the *Freedom of Information Act* request process, were manually scanned using a digital scanner, converted into Microsoft Excel format and read into Stata to create an electronic data set, which was subsequently cleaned and coded.[23]

The data set includes 31 168 trustees from 963 unique FQHCs. Many, but not all, FQHCs are observed in more than 1 year, resulting in a total of 2517 FQHC-year observations representing approximately 71% of all FQHCs over the study period. The number of trustees represented in each year is shown in Table 1.

These data were used to model the likelihood of serving on the board's executive committee and the likelihood of holding board chair as a function of trustees' patient status and tenure, while controlling for time-invariant FQHC-level effects. Patient status is defined as being either a non-patient, a non-representative (i.e. high-income) patient or a representative (i.e. low-income) patient. Both models were estimated using Chamberlain's conditional (fixed effects) logit model, because the number of positive outcomes per board per year is known to be fixed (each FQHC board has exactly one chair in any given year). Analyses were conducted at the trustee level with FQHC-year fixed effects. In short, only the differences between trustees at a given FQHC in a given year are used to predict the likelihood of a trustee holding a board leadership position at that FQHC in that year. An alternate modelling approach using either a bivariate probit or multinomial logit at the trustee level that failed to group observations by FQHC year would neglect the fact that trustees are first selected to join the board, and that executive committee officers are subsequently elected from among the current members to occupy a fixed number of positions. Other variables (e.g. board size) that might ordinarily vary over time within an FQHC are dropped from the model as there is no variation in these variables when the group is defined at the FQHC-year level. However, such factors are still controlled for in the model, as they are treated as fixed effects across individual observations.

Trustee tenure was included as a covariate, because it has previously been positively associated with trustee influence.[22] In addition, the bivariate association between tenure and board office indicated a strong linear trend depicted in Table 2. For this analysis, trustee tenure is converted to months. Trustees who have been on the board < 1 year, and for whom no specific month value is reported, are given an imputed value of 6 months ($N = 87$). If a trustee's tenure is reported as greater than some number of years, they are top-coded to the highest known value (e.g. >1 year = 12 months or > 10 years = 120 months). In addition, 301 trustees with missing data for tenure are given an imputed value of 6 months. No meaningful differences were detected between a model that omitted observations with missing data for tenure and the model that imputed a value of 6 months for observations with missing tenure.

Table 1 Sample by year

Year	Trustees
2003	6117
2004	3968
2005	10 547
2006	10 536
Total	31 168

Table 2 Trustee tenure by board office held

Board office held	Mean tenure (in months)
Chair	92.9
Vice-chair	78.2
Secretary	74.9
Treasurer	73.5
Non-officer	52.0

To specify the correct functional form of trustee tenure, three competing models were estimated for the model predicting the likelihood of holding executive committee office. The first included trustee tenure (AIC = 4.590), while the second model also included the quadratic form of the variable, tenure squared (AIC = 4.428). The third model treated tenure by using splines with knots at intervals that created quintiles containing equal numbers of trustees in each (AIC = 4.276). The Akaike information criteria values from each of the three models were compared, and the model with the greatest explanatory power, which modelled tenure using splines, was selected. The same analysis was repeated to confirm the correct specification for tenure in the model to predict the likelihood of serving as board chair. The results were similar (tenure only = 11.025; tenure squared = 10.667; splines = 10.279), and tenure is modelled using quintile splines.

Approximately 1% of observations were missing data on the board office variable. Specifically, 30 FQHCs (315 trustees) failed to identify their board chair, and 10 of these 30 (87 trustees) also failed to identify any executive committee officers. As a result, the value of the dependent variable was zero for all of these observations, and they were dropped from the analysis. The final estimate of the executive committee model was based on 31 081 trustees grouped into 2507 FQHC years, while the final estimate of the board chair model was based on 30 853 trustees grouped into 2487 FQHC years. Post-estimation correction of the standard errors in conditional logistic regression is controversial, and no changes in statistical significance were observed with the use of clustered errors, so the final model uses unadjusted standard errors.

Table 3 Descriptive statistics of FQHC trustees

Mean board size	13.2 trustees
Range board size	5–29 trustees
Hold board office	29.2%
Hold board chair	8.0%
Mean board tenure	60.3 months
Median board tenure	36 months
Boards with $\geq$ 1 physician	33.7%
Board with $\geq$ 1 representative patient on executive committee	51.6%
Board with $\geq$ 1 non-representative patient on executive committee	81.1%
Expertise	
Business / management	24.8%
Patient	17.4%
Other white collar	11.2%
Other blue collar	9.8%
Education	9.7%
Other health care	9.3%
Government	5.6%
Social work	4.3%
Law	4.3%
Physician	3.3%

N = 31 168 trustees (963 Unique FQHCs) (2517 FQHC years)

Results

Descriptive statistics for the study sample are shown in Table 3. On the average 13-member board, the mean tenure for a trustee is just over 5 years; however, this average is pulled upward by a small number of trustees who have served for more than 20 or even 30 years. Most trustees have not served such lengthy terms, as the median board tenure of 3 years indicates. Trustees are drawn from a variety of backgrounds, but the majority of trustees have experience in business and/or management, which likely serves them well in overseeing the governance of an organization. Trustees also come from other professional backgrounds, including education, law and health care. In fact, one in three FQHC governing boards have at least one physician member. Finally, while more than 17% of trustees identified their expertise as ‘patient’, it is important to note that this response is ambiguous and not necessarily synonymous with that trustee being a patient at the FQHC. While the latter may be true, in the board data many individuals self-identified as non-patients, but listed ‘patient’ – rather than their own occupation – as their area of expertise, possibly to signify

Table 4 Results of a model to predict holding executive committee office

	Odds ratios Pr(executive committee officer = 1 | X)
Non-representative patient	1.097**
	(0.0371)
Representative patient	0.580***
	(0.0223)
Tenure 1 (1 – 12 months)	1.196***
	(0.0186)
Tenure 2 (12 – 24 months)	1.078***
	(0.00559)
Tenure 3 (24 – 48 months)	1.036***
	(0.00232)
Tenure 4 (48 – 96 months)	1.007***
	(0.00110)
Tenure 5 (96 – 420 months	1.002***
	(0.000398)
Pseudo-R2	0.1284
Observations	31081

Robust standard errors in parentheses.
***$P < 0.001$, **$P < 0.01$, *$P < 0.05$.

Table 5 Results of a model to predict serving as board chair

	Odds ratios Pr(Chair = 1 | X)
Non-representative patient	1.187**
	(0.0646)
Representative patient	0.552***
	(0.0370)
Tenure 1 (1 – 12 months)	1.216***
	(0.0515)
Tenure 2 (12 – 24 months)	1.094***
	(0.0133)
Tenure 3 (24 – 48 months)	1.054***
	(0.00435)
Tenure 4 (48 – 96 months)	1.010***
	(0.00171)
Tenure 5 (96 – 420 months	1.003***
	(0.000543)
Pseudo-R2	0.1422
Observations	30853

Robust standard errors in parentheses.
***$P < 0.001$, **$P < 0.01$, *$P < 0.05$.

that their knowledge of the community's needs is the basis for their service on the board.

The results from two Chamberlain conditional logistic regressions are presented as odds ratios in Tables 4 and 5, with statistically significant Wald tests indicated by asterisks. As hypothesized, representative patient trustees are less likely than non-patient trustees both to hold a position on the executive committee (OR = 0.58) and even less likely to hold the position of board chair (OR = 0.55). Based on the results of a Wald test, they are even less likely to hold either position when compared to non-representative patients (Chair: $\chi_1^2 = 147.99$, $P < 0.0001$; Any Executive Committee Position: $\chi_1^2 = 299.48$, $P < 0.0001$). Conversely, while no directional hypothesis was made, non-representative patient trustees are more likely than non-patient trustees to hold a position on the executive committee (OR = 1.1) and even more likely to hold the position of board chair (OR = 1.19).

In terms of predicted probabilities, using the average of the probabilities method, non-patients have an 8.9% chance of being chair, non-representative patients have a 10.3% chance of being chair, and representative patients have a 5.2% chance of being chair, which is roughly one-half the probability of their non-representative counterparts. For context, on the average 13-member board, a given individual's probability of being chair by chance alone is 7.7% (1 out of 13).

For all trustees, tenure was positively associated with the likelihood of holding office. However, the marginal effect of tenure decreased at successively higher levels of tenure. For instance, for trustees who have served on the board for < 1 year, each additional month of tenure is associated with nearly a 22% increase in the odds of being chair. For trustees who have served at least 1 year, but < 2 years, each additional month of tenure is associated with a 9.4% increase in the odds of being board chair. Between 2 and 4 years of board service, each additional month of tenure is associated with a 5.4% increase in the odds of being board chair. Then, between 4 and 8 years of board service, the marginal effect of each additional month of tenure has diminished to a 1% increase in the odds of being board chair. After a trustee has served for more than 8 years, each additional month spent on the board increases the odds of serving as board chair by just 0.3%. The effects of tenure were similar, but not quite as large, in the model predicting holding any executive committee office.

Discussion

The results of this study demonstrate that merely including patients on the governing board is not sufficient to ensure that they have a voice in the decision-making process, as important leadership roles are much more likely to go to non-patients and non-representative patients than to representative patients. Previous studies have concluded that patients are actively involved in FQHC governance. They have found that patients and non-patients are equally likely to serve as board chair[22] and even that patients are *more* likely than non-patients to serve as board chair.[24] These studies have failed to take into account the complexity of patient status. The current study acknowledges that not all patients are alike and was able to use data on trustee occupation to dichotomize patients into representative and non-representative groups, which reflect how socio-economically similar they are to the typical FQHC patient.

The distinction is important, because it reveals that there are in fact two classes of patient trustees that serve in different capacities. After accounting for this difference, patient trustees are no longer equally as likely as non-patients to hold an executive committee office or serve as board chair. Instead, the higher class – the non-representative patients – were more likely than non-patients to hold these positions, while the lower class – the representative patients – were less likely than non-patients (and therefore even less likely than non-representative patients) to hold these positions. This is a notable finding, because members of the board's executive committee have more authority and influence on decision making than other trustees. For example, members of the executive committee, especially the chair, often set the agenda for board meetings, and the executive committee has the legal authority to act on behalf of the full board by making decisions as necessary between regular meetings of the board.

The idea that the non-patient minority might wield a disproportionate share of power over the patient majority is not a new one.[9] Therefore, it is worth considering if what is most needed at present is not more inclusion of representative patients, but more exclusion of non-representative patients and non-patients. Privileged groups may need to be excluded from representation to varying degrees so that the voices of the disadvantaged might actually be heard and acted upon. As political scientist Suzanne Dovi puts it, 'Not only do some voices need to be brought in, some voices need to be muted'.[25]

Given the findings from this study that representative patient trustees are less likely to hold leadership positions on the board, in conjunction with earlier findings that when representative patients *do* hold board leadership positions, it can positively affect service provision,[26] policies to strengthen the patient governance provision and its implementation – perhaps mandating a certain proportion of representative patients or requiring at least one representative patient trustee on the executive committee – should be considered.

Moreover, these findings are likely to be instructive in any context where the input of patients, community members or consumers is sought to give voice to the concerns of the marginalized or those who otherwise lack the political capital and other resources to advocate for themselves. Without an explicit intervention to require the involvement of such groups, a pluralist view of governance suggests that those with the most resources will dominate the agenda and wield the most power.[27] Yet, it seems that even legal requirements to include representatives of such groups are ultimately subject to interpretation, making them difficult to enforce. Ultimately, other factors, which this study does not manage to disentangle, lead groups whose members possess varied socio-economic statuses to defer more often to the higher status members of the group. Thus, even in a board comprised entirely of low-status patient members, there may be some voices that go unheard. Overcoming this seemingly inherent tendency poses an enormous challenges to any and all attempts to obtain input from marginalized populations.

Limitations

This study is not without limitations. After estimating each model, model fit was assessed using a specification link test, which provided no evidence of specification error. However, this test cannot identify misspecification via omitted variables, and it is possible that certain individual-level factors such as race, gender and education level – for which data are unavailable – may be important predictors. To the extent that these factors are correlated with both the included right-hand side variables and the dependent variable of interest, the coefficient estimates will be biased.

It is impossible to know for certain the magnitude of any potential bias, but the direction of the bias can be reasoned. For instance, the coefficient on representative patient status would be biased downward by the omission of years of education, which is likely to be negatively correlated with representative patient status, but positively correlated with serving as board chair. The same is true of male gender. In the case of non-white race, which is likely to be positively associated with representative patient status, but negatively associated with serving as board chair, downward (i.e. negative) bias would also be expected. For all of these measures, the reverse is true for non-representative patient status, which would then suffer from upward (i.e. positive) bias.

The magnitude of the bias depends on the strength of the associations between the omitted and included variables. For instance, because the categorical patient status variable relies on occupation and income data, it is likely to be highly correlated with years of education. However, education explains much of the variation in income.[28] Therefore, while the direct effect may be biased, the indirect effect is not biased. In other words, the occupation and income data used to distinguish representative and non-representative patients are really a proxy for other closely related, but omitted factors.

Conclusion

As Dr. H. Jack Geiger, co-founder of the United States health centre movement, once wrote: 'The communities of the poor – places the public are taught to regard as sinkholes of pathology – are full of untapped human resources, people with drive and intelligence and the commitment to achieve if given half a chance'.[29] The results of this study cannot determine whether or not representative patients have the potential to govern. However, they clearly indicate that representative patients are not as likely to hold board leadership positions, which raises a host of questions about the ability of patients to express a collective voice in the representation of their community health centres.

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Conflicts of interest

The author reports no conflicts of interest related to this work.

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