ONLINE FIRST

Academic Medical Centers and Equity in Specialty Care Access for Children

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Objective: To test whether specialty clinics' academic medical center (AMC) affiliation was associated with equity in scheduling appointments for children with public vs private insurance. Academic medical centers are safety-net providers of specialty medical care and it is unknown whether equitable access is afforded by AMCs across insurance conditions.

Design: Audit study data were linked to data describing audited clinics.

Setting: Specialty clinics serving children residing in Cook County, Illinois.

Participants: From January-May 2010, 273 clinics were each called twice.

Main Outcome Measures: Logistic regression was used to examine associations between AMC affiliation and discriminatory denials of Medicaid–Children's Health Insurance Program (CHIP) (ie, nonacceptance of Medicaid-CHIP when accepting commercial insurance), controlling for clinics' specialty type, practice size, neighborhood poverty level, and physicians' credentials. Among clinics that accepted both insurances, linear regression was used to examine the association between wait times (days) for appointments and insurance status, adjusting for covariates. Tests for interaction terms were performed to identify changes in wait time for academic clinics across insurance status.

Results: Of the 273 paired calls to clinics, 155 (57%) resulted in discriminatory denials of Medicaid-CHIP. The odds of a discriminatory denial were 45% lower if a clinic was AMC affiliated (odds ratio, 0.55; 95% CI, 0.31-0.99). On average, academic clinics scheduled Medicaid-CHIP appointments with wait times 40 days longer than private insurance (β, 40.73; 95% CI, 5.06-76.41).

Conclusions: Affiliation with an AMC was associated with fewer discriminatory denials of children with Medicaid-CHIP. However, children with Medicaid-CHIP had significantly longer wait times at AMC-affiliated clinics compared with privately insured children. Academic medical centers' propensity toward serving publicly insured patients makes them candidates for targeted resource allocation, perhaps with incentives contingent on equitable appointment acceptance and wait times.

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When needed specialty care is denied or delayed, it can lead to adverse clinical outcomes for patients and systemwide workflow inefficiencies.[1-9] Studies suggest that providers of children's outpatient specialty services are less likely to accept Medicaid and the Children's Health Insurance Program (CHIP) than private insurance.[10-12] Identifying health care provider and system-level characteristics associated with acceptance of publicly insured children can inform the allocation of public resources.

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Academic medical centers (AMCs) share common features that may encourage AMC-affiliated specialists to provide equitable access to children with public and private insurance. Academic medical centers employ a large number of specialists who see pediatric patients[13,14] and operate with missions directed toward caring for low-income patients.[15-17] In addition, AMCs may be less sensitive to Medicaid-CHIP payment levels because of partial financial support of tuition, ability to cost-shift from high-profit to low-profit domains, self-insured malpractice coverage, and obligations to provide "community benefits" in exchange for preferential tax-exemptions.[18,19] Consistent with this rationale, the American Hospital Association found that, while composing only 6% of the nation's hospitals, AMCs provide 28% of all discharges of Medicaid enrollees.[20] In addition, AMCs constitute one-fifth of US "safety-net hospitals" (ie, ranked in the top

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10% for proportion of uninsured patients).[21] However, recent data highlight that low-income patients are encountering problems accessing specialty care at AMCs.[22,23]

Prior studies have found that self-employed health care providers are less likely to self-report Medicaid participation than health care providers working in institutional settings (eg, medical schools, hospitals, health maintenance organizations) but have not directly measured the effect of academic affiliation on specialists' participation in children's insurance.[24-26] These studies use physician surveys, a method vulnerable to recall biases and limited in the ability to identify more subtle aspects of health care provider participation. For example, health care providers who accept Medicaid-CHIP may limit the number of appointment slots available to publicly insured children, resulting in longer wait times. Audit studies can isolate the measurement of scheduling behavior and control for patient factors by observing real-life decision making rather than approximating decision-making behavior through surveys.[27] The objective of this study was to assess whether AMC affiliation reduces the likelihood of discriminatory denial or delay of appointments for needed specialty care among children with Medicaid-CHIP compared with private insurance. Ultimately, our goal is to clarify whether there is a need for additional investments to support AMCs' safety-net mission and increased monitoring for disparities in access for publicly insured compared with privately insured populations in health systems receiving federal funds.

METHODS

STUDY DESIGN AND SETTING

This study leveraged audit study data from 273 specialty clinics, collected from January through May 2010, which determined that children with Medicaid-CHIP are more likely to be denied needed outpatient specialty services than children with private insurance.[12] The study took place in Cook County, Illinois, where Medicaid and CHIP are implemented under a single Primary Care Case Management program with identical reimbursements that are lower than commercial health insurance plans.[28] Using an audit method, trained research assistants posed as mothers attempting to schedule outpatient appointments of moderate severity (ie, same billing code) for children referred for 7 pediatric health condition scenarios across 8 specialties (allergy-immunology/pulmonary, dermatology, endocrinology, neurology, orthopedics, otolaryngology, and psychiatry). Each clinic was called twice using standardized scripts varying only in the child's reported insurance status (Medicaid-CHIP vs Blue Cross Blue Shield), which allowed for an isolated measurement of the effect of insurance status on health care provider acceptance of new patients (see Audit Study Scripts, eAppendix; http://www.archpediatrics.com). Real appointments were made and then cancelled at the end of the call. The present investigation linked this audit data set to relevant characteristics of the sampled clinics.

SAMPLING METHODS

The audit study's sample of 273 clinics was randomly selected from an exhaustive list of all specialty clinics with any evidence that they provided care to children (ages, 0-18 years) residing in Cook County.[12] Health care provider information was gathered from state-provided physician licensure data, cross-

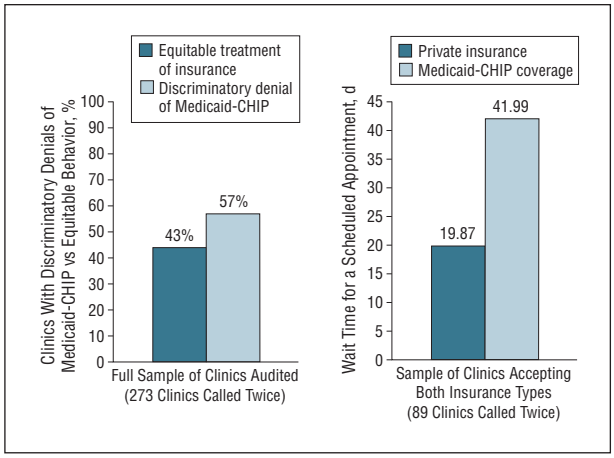

Figure. Distribution of dependent variables for each sample. Note: A 1-sample binomial test confirmed that the proportion of discriminatory denials significantly differs from 50% (95% CI, 0.43-0.49). Mean wait time difference was reported previously.[12] Also note that wait time data are highly skewed. For privately insured children, the median (SD) wait time was 8 (34.0) days (skewness = 4.4, with the range at the 10th and 90th percentiles of 1 and 46 days), whereas, the median (SD) wait time for Medicaid–Children's Health Insurance Program (CHIP)–insured children was 13 (75.1) days (skewness = 3.3, with the range at the 10th and 90th percentiles of 2 and 121 days).

referenced with lists of physicians submitting specialty claims for children and lists of specialists provided by a children's hospital and the American Academy of Pediatrics. Because several specialists can practice at 1 clinic and 1 specialist can practice at several clinics, the unit of analysis is the "clinic," defined as a unique telephone number used for scheduling. Randomly sampled clinics within each of the 7 health condition scenarios were stratified by location to reflect the sampling frame. The integration of explanatory variables with audit data was approved by the institutional review board. Clinics in the larger sampling frame received a debriefing letter that notified them that they may, or may not, have been contacted in the audit study and clinic identity would never be disclosed.

VARIABLES AND MEASURES

Our dependent variables were derived from the audit data set. A "discriminatory denial of Medicaid-CHIP" is a dichotomous variable assessed by whether an appointment was denied to a Medicaid-CHIP–enrolled child when their privately insured counterpart successfully obtained an appointment at the same clinic for the same medical condition. Discriminatory denial was coded as "positive" for 155 paired calls (56.8%); the remaining 118 (43.2%) were categorized as "negative." Of the 273 paired calls, 5 pairs (1.8%) resulted in discriminatory denials of private coverage (ie, favoring Medicaid-CHIP) largely owing to our inability to provide private insurance numbers, whereas we could provide "active" dummy Medicaid-CHIP identification numbers. Sensitivity analyses excluding these 5 clinics did not change the results, so we present the model with all 273 clinics and consider these clinics as nondiscriminatory. We assessed delays in access among the subset of 89 clinics (32.6%) that accepted both insurance types. "Wait time" for an appointment was a continuous dependent variable derived by subtracting the appointment date from the call date. The distribution of dependent variables in each sample is displayed in the **Figure**.

The primary independent variable of interest is clinics' affiliation with an AMC. Specialty clinics were considered AMC-affiliated if at least 1 of the clinic providers had an AMC listed

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Table 1. Characteristics of Specialty Clinics in Audit Study Sample, Each Called Twice Varying Reported Insurance Type (Public vs Private)[a]

Characteristic	Total Clinics Called Twice (N=273)	Subset of Clinics Scheduling Appointments for Both Calls[b] (n=89)
Clinic is affiliated with academic medical center, %[c]	50.92	66.29
Neighborhood poverty level of clinic location, mean (SD)	10.36 (10.66)	14.91 (12.64)
Practice size (No. of specialists) of clinic, mean (SD)	1.84 (1.83)	2.18 (2.62)
Years of experience of all clinic specialists, mean (SD)	27.41 (11.15)	27.05 (11.81)
Clinic employs any foreign medical graduates, %	32.97	40.45
Clinic employs any board-certified specialists, %	88.28	85.39
Clinic employs any pediatric board-certified specialists, %	27.11	29.21
Specialty type, %		
Allergy-immunology/pulmonary diseases	16.12	22.47
Dermatology	16.48	14.61
Endocrinology	8.42	13.48
Neurology	13.55	16.85
Orthopedics	14.65	8.99
Otolaryngology	15.75	17.98
Psychiatry	15.02	5.62

Abbreviation: CHIP, Children's Health Insurance Program.

[a] From January through May 2010, each randomly sampled clinic was called twice (separated by approximately 4 weeks): once reporting Medicaid-CHIP coverage and once reporting BlueCross-BlueShield coverage.

[b] Of the 273 clinics audited, 89 accepted both insurance types, 24 denied both insurance types, 155 denied Medicaid-CHIP but accepted private, and 5 denied private and accepted Medicaid-CHIP.

[c] Specialty clinics were considered affiliated with an academic medical center if at least 1 specialist had an academic medical center listed as their primary hospital affiliation in the FY2008 Illinois physician licensure database.

as their primary (first) hospital affiliation in the Illinois physician licensure database. A hospital was considered an AMC if it appeared on the Association of American Medical Colleges' (AAMC) list of Member Teaching Hospitals and Health Systems or if its Web site states an AAMC-listed health system affiliation.[29] Compared with the United States in general, there was an overrepresentation of AMCs in the study setting; 34.9% of the 86 hospital affiliations on the sampling frame's physician licensure data were considered AMCs. Prior research has identified a number of other relevant variables associated with health care provider participation in public insurance. Measured control variables in the present study were the neighborhood poverty level of clinics' location,[15,24,30] practice size,[30,31] and health care providers' credentials as signaled by their international medical graduate status,[15,24,25,32] board certification status,[15,24,25,32,33] and years' experience.[15,24] The neighborhood poverty level of clinics is a continuous variable of the percentage of families with children younger than 18 years living below the poverty level in the clinic's neighborhood. Clinic "neighborhood" was defined by geocoding all clinic addresses in ArcGIS (version 10.0; ESRI) and generating a circular 1-mile radius around each clinic. The mean poverty percentage was calculated for all zip codes captured within the 1-mile radius. The 2000 Decennial Census Summary File 3 (QT-P35) was used to determine the poverty status of families with children per zip code.[34] According to the list of specialists developed for the audit sampling frame,[12] the practice size of clinics was defined as the number of specialists of a single type sharing the same clinic telephone number for scheduling appointments. Health care providers' medical school location (domestic vs international), specialty board certification status (within the relevant specialty), pediatric board certification status, and year of medical school graduation were derived from the FY2008 physician licensure database. Years of experience were determined by subtracting 2010 from a health care provider's year of medical school graduation.

Owing to the nature of audit designs, there were no missing data on dependent variables. For variables relying on licensure records, data were sporadically missing. If board certification status was missing, these cases were counted as not having board certification. When medical school name, year of medical school graduation, and hospital affiliation were missing, those physicians were searched using Google. In all cases, we were able to find medical school name and year of graduation. When a physician's hospital affiliation could not be found on Google, these cases were considered unaffiliated with an AMC.

STATISTICAL ANALYSIS

Characteristics of the 273 clinics in the full study sample and the subset of 89 clinics that accepted both Medicaid-CHIP–enrolled and privately insured children were summarized using descriptive statistics. Logistic regression was used to investigate the associations between discriminatory denials of Medicaid-CHIP and clinics' academic affiliation after adjusting for all control variables and specialty type. For the subset of 89 clinics that accepted both insurance types, multivariate linear regression was used to examine the association between the wait time (days) for the appointment and insurance status, adjusting for all control variables and specialty type. Because each of the 89 clinics scheduled 2 appointments (1 per insurance type), there are 178 observations in this analysis. We also tested insurance status interaction terms for academic affiliation, neighborhood poverty level, and specialty type, while controlling for practice size and the years of experience, foreign medical graduate status, board certification status, and pediatric board certification status of clinical staff. For the wait time models, we adjusted standard errors for clustering by clinic to account for there being 2 observations per clinic. Because of the skewed nature of the wait time data, we tested the robustness of our results to quantile regression analysis at the median and top-coding wait time at 121 days. All tests were 2-sided, and $P < .05$ was considered statistically significant. All analyses were performed using Stata/SE11.0 (StataCorp).

RESULTS

Table 1 presents the characteristics of the clinics in the full audit study sample (n=273) and the subset of clinics that scheduled appointments for children of both insurance types (n=89). Approximately half (50.92%) of 273 clinics were affiliated with AMCs. Although most (88.28%) clinics employed 1 or more board-certified specialists, only 27.11% employed at least 1 pediatric board–certified specialist. On average, there were approximately 2 specialists per practice. Clinics were located in neighborhoods with approximately 10.36% of families living in poverty. A third of the clinics had at least 1 specialist who graduated from a non-US medical school, and the mean years since medical school graduation of spe-

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Table 2. Odds of Denying a Child With Medicaid-CHIP While Accepting a Child With Private Insurance by Specialty Clinic Characteristics[a]

Characteristic (N=273)	OR (95% CI)
Clinic is affiliated with academic medical center	0.55 (0.31-0.99)
Neighborhood poverty level of clinic location	0.95 (0.92-0.98)
Practice size (No. of specialists) of clinic	0.91 (0.77-1.08)
Mean years of experience of all clinic specialists	1.00 (0.98-1.03)
Clinic employs any foreign medical graduates	0.72 (0.39-1.32)
Clinic employs any board-certified specialists	1.65 (0.68-4.03)
Clinic employs any pediatric board–certified specialists	0.44 (0.22-0.88)
Specialty type	
Allergy-immunology/pulmonary diseases	1 [Reference]
Dermatology	1.41 (0.53-3.76)
Endocrinology	0.70 (0.23-2.14)
Neurology	0.87 (0.33-2.26)
Orthopedics	2.45 (0.75 -7.98)
Otolaryngology	1.06 (0.40-2.77)
Psychiatry	0.55 (0.21-1.40)

Abbreviations: CHIP, Children's Health Insurance Program; OR, odds ratio.
[a] An overall (Wald) test indicated there were not differences in discriminatory denials of Medicaid-CHIP across all of the specialty types (P=.30).

Table 3. Adjusted Associations Between Wait Time (Days)[a] for Scheduled Appointments by Insurance Status and Specialty Clinic Characteristics Among Clinics That Scheduled Appointments for Both Insurance Types[b]

Characteristic	β (95% CI)
Covered by Medicaid-CHIP vs private insurance	22.12 (6.12 to 38.13)
Clinic is affiliated with academic medical center	29.18 (9.55 to 48.82)
Neighborhood poverty level of clinic location	−0.05 (−0.83 to 0.72)
Practice size (No. of specialists) of clinic	2.39 (−1.12 to 5.90)
Mean years of experience of all clinic specialists	0.24 (−0.52 to 1.00)
Clinic employs any foreign medical graduates	−16.84 (−35.69 to 2.01)
Clinic employs any board-certified specialists	1.03 (−24.94 to 27.00)
Clinic employs any pediatric board–certified specialists	1.42 (−23.88 to 26.72)
Specialty type	
Allergy-immunology/pulmonary diseases	
Dermatology	20.97 (−3.53 to 45.48)
Endocrinology	67.09 (23.22 to 110.97)
Neurology	23.75 (1.32 to 46.17)
Orthopedics	−15.15 (−43.52 to 13.22)
Otolaryngology	18.26 (−7.56 to 44.08)
Psychiatry	7.22 (−16.83 to 31.28)

Abbreviation: CHIP, Children's Health Insurance Program.
[a] Wait time is the number of days separating the date of the telephone call and the date of the scheduled appointment.
[b] A total of 178 telephone calls were made to 89 clinics. Standard errors were adjusted for clustering by clinic (ie, 2 wait time observations per clinic). An overall (Wald) test indicated there were significant differences in wait time across all of the specialty types (P = .003).

cialists practicing in clinics was 27.41 years. The subset of 89 clinics that scheduled appointments for both insurance types had a higher representation of AMC-affiliated clinics (66.3%), clinics with at least 1 pediatric board-certified specialist (29.21%), and clinics with at least 1 foreign medical graduate (40.45%). On average, clinics that scheduled appointments for both Medicaid-CHIP and private insurance were located in neighborhoods with approximately 14.91% of families living in poverty.

Specialty clinics affiliated with AMCs were less likely to have discriminatory denials of Medicaid-CHIP after adjusting for practice size, neighborhood poverty level of clinic location, physicians' credentials, and specialty type (**Table 2**). In our sample, 46.8% of academic-affiliated clinics had a discriminatory denial of Medicaid-CHIP vs 67.2% of clinics not affiliated with AMCs. A clinic's affiliation with an AMC was associated with a 45% decrease in the odds of denying an appointment to a child with Medicaid-CHIP (odds ratio [OR], 0.55; 95% CI, 0.31-0.99). In addition, as specialty clinics' neighborhood poverty level increased, the likelihood of having discriminatory denials of Medicaid-CHIP decreased (OR, 0.95; 95% CI, 0.92-0.98).

For the assessment of wait times (**Table 3**), callers reporting Medicaid-CHIP coverage had wait times that were 22 days longer than callers reporting private insurance, even after adjusting for relevant covariates (β, 22.12; 95% CI, 6.12-38.13). Independent of insurance status, scheduling an appointment at AMC-affiliated clinics resulted in wait times for appointments that were 29 days longer than calls to nonaffiliated clinics (β, 29.18; 95% CI, 9.55-48.82). For the assessment of wait times by insurance type (**Table 4**), AMC-affiliated clinics scheduled appointments with wait times that were on average 40 days longer for children with Medicaid-CHIP than appointments offered to privately insured children (β, 40.73; 95% CI, 5.06-76.41). The result of longer wait times for children with Medicaid-CHIP coverage at AMC-affiliated clinics was highly robust to alternative specifications. However, the finding that wait times were 40 days longer, on average, at AMC-affiliated clinics for Medicaid-CHIP callers relative to privately insured children seems to have been driven by a higher number of cases

Table 4. Wait Time (Days) for Children With Medicaid-CHIP (vs Private Insurance) by Specialty Clinic Characteristics[a]

Characteristic	β (95% CI), d
Clinic is affiliated with academic medical center	40.73 (5.06 to 76.41)
Neighborhood poverty level of clinic location	−1.34 (−2.74 to 0.06)
Specialty type	
Allergy-immunology/pulmonary diseases	
Dermatology	16.34 (−13.49 to 46.17)
Endocrinology	65.08 (−23.10 to 153.27)
Neurology	15.76 (−21.55 to 53.07)
Orthopedics	5.84 (−21.51 to 33.19)
Otolaryngology	51.93 (7.51 to 96.36)
Psychiatry	14.26 (−16.11 to 47.64)

Abbreviation: CHIP, Children's Health Insurance Program.
[a] Interaction terms were from a linear model of wait times for appointments. The model also included as control variables clinic practice size and the years of experience, foreign medical graduate status, board certification status, and pediatric board certification status of clinical staff. A total of 178 telephone calls were made to 89 clinics. Standard errors were adjusted for clustering by clinic (ie, 2 wait time observations per clinic).

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with long wait times for the Medicaid-CHIP callers, since median wait times were longer by 8 days ($P = .09$).

COMMENT

Using an audit study data set with high internal validity to test health care provider acceptance of insurance, we found that a specialty clinic's affiliation with an academic medical center attenuated (but did not eliminate) discriminatory behavior in scheduling appointments for children with public vs private insurance in Cook County, Illinois. Nearly half (46.8%) of AMC-affiliated clinics in our sample denied an appointment to a child covered by Medicaid-CHIP while accepting a child with private insurance who had the same demographic and clinical presentation. However, this was a significantly lower rate of discriminatory denials than that observed in clinics without an AMC affiliation (67.2%). After adjusting for the relevant characteristics of clinics, AMC affiliation was associated with a 45% decrease in the odds of denying Medicaid-CHIP while accepting private insurance. Although our results indicate that the organizational structure of AMC-affiliated clinics is associated with greater equity between public and private insurance acceptance, wait times for appointments within academic clinics still differed significantly by insurance status. Moreover, at academic clinics, wait times were on average 40 days longer for publicly insured children than for children with private insurance. However, median wait times were only 8 days longer, suggesting that while most are providing equitable access, some AMC-affiliated clinics may be de facto denying care through long wait times.

Our finding that academic clinics are more willing to serve low-income patients (ie, fewer discriminatory denials) is tempered by evidence of discriminatory service provision (ie, wait time disparities). In addition, there is evidence of capacity or efficiency limitations in AMCs, as children of both insurance types faced longer wait times for appointments at AMC-affiliated clinics than in nonaffiliated clinics. The literature indicates that the most effective policy approach to improve equity is to increase reimbursement rates for Medicaid-CHIP services.[24,35-37] However, if state budget constraints make this strategy unfeasible, AMCs' propensity toward serving publicly insured patients may make them candidates for targeted resource allocation, perhaps with incentives contingent on evidence of equitable access.

Among the objectives of the Patient Protection and Affordable Care Act[38,39] is the development and testing of new models for care delivery and the modification of incentives so as to tie Medicare payments to health care providers' organizational structure and performance measurement.[40,41] One suggested model is the accountable care organization (ACO), which organizes health care providers into networks to distribute bundled payments and coordinate care across settings.[42] There are several challenges that AMCs may face in ACO formation, including the establishment of more centralized leadership and hierarchal structures, as well as more widespread integration of specialty services with primary care.[43] However, large medical institutions like AMCs may more readily qualify as ACOs because there is already some degree of integration across practice settings (eg, multiple service domains, self-insured malpractice coverage, shared electronic medical records).[44] There is concern that the formation of ACOs could reinforce health disparities if their catchment areas are based solely on geography and wealthy practices align to further concentrate wealth in particular sites of care.[41] Our findings corroborate the hypothesis by Pollack and Armstrong[41] that AMCs could be a valuable "counterweight" to mitigate the risk for increased health disparities as ACOs develop.[41] In this light, AMCs are a kind of "low hanging fruit" that are both ripe for ACO development and also willing to care for low-income patients. A clear opportunity exists for the Centers for Medicare and Medicaid Services to provide additional incentives for AMCs to become ACOs and partner with federally funded community health centers to serve as the specialty care safety net for low-income primary care practices.[45] In addition, our findings identify the need for measuring and monitoring equity of service provision across public and private insurance types as part of ACO oversight. Our observation of divergent patterns of access equity and inequity depended on the dimension of access studied: appointment acceptance vs wait times. This suggests that government oversight and scholarly research must investigate both opportunity-denying and opportunity-diminishing behavior.

Like any secondary analysis, there are limitations to our study. There are characteristics of clinics that are known correlates of health care provider participation in public insurance that were not measured. For example, health care providers from underrepresented minority racial groups are more likely to accept Medicaid, even after accounting for medical school prestige and years of experience.[46,47] Health care providers' attitudes and beliefs regarding low-income patients may influence their decisions to participate in Medicaid.[33] We also did not examine differences in discriminatory behavior between self-employed vs institutional practice types among nonacademic clinics. There is the risk that a physician may list an AMC affiliation on his or her licensure data without being a member of the medical staff. By only counting physicians as AMC-affiliated if their primary (first) affiliation was an AMC, we believe we reduced the risk of including loosely affiliated physicians in this count. Further research is needed to address whether variation in wait times for specialty care affects children's long-term health outcomes and exacerbates existing health disparities across a variety of health conditions. Clearly, wait time alone does not capture the extent of the stress experienced by families seeking care for a sick child. Finally, there are limitations to generalizing our results outside of the study's setting, which has a high density of both specialists and AMCs. A national, more generalizable, study is needed to understand patterns of insurance type disparities and delivery system organizational structures.

CONCLUSIONS

Compared with specialty clinics that were not affiliated with an academic medical center, clinics with AMC-

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affiliated health care providers were more likely to give children with Medicaid-CHIP an opportunity to see a specialist. However, while they are less likely to outright deny an appointment, academically affiliated clinics were more likely to schedule children with public insurance with longer wait times than privately insured children. Research and oversight that measures and monitors outcomes related to health care access disparities, along with other quality measures, is needed as we make adjustments to our health care delivery systems. Likewise, future investigations must broaden the conceptualization of access to include both appointment acceptance and wait times.

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Online-Only Material: The eAppendix is available at http://www.archpediatrics.com.
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