Primary and Dental Care Utilization Among Children with Neurodevelopmental Disorders in Federally Qualified Health Centers

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Background:
Children with neurodevelopmental disorders (NDDs) face barriers to consistent healthcare access, including lower rates of preventive primary and dental care. Federally Qualified Health Centers (FQHCs) serve as a critical access point for medically underserved populations, yet little is known about their role in improving healthcare utilization for children with NDDs. **Objective:** To assess whether children with NDDs receiving care at an FQHC, defined as having at least one visit, have higher odds of well-child care visits (WCC) and dental visits compared to those receiving care in non-FQHC settings.

Methods:
We conducted a cross-sectional analysis using Medicaid claims data from 2018, examining children aged 2–18 years diagnosed with NDD. The primary exposure was receiving care at an FQHC. The primary outcomes were (1) at least one WCC in the past year and (2) at least one dental visit in the past year. Multivariable logistic regression models, adjusted for demographic and socioeconomic factors, were used to estimate odds ratios (OR) and 95% confidence intervals (CI) for healthcare utilization.

Results:
Among children with NDDs, 64.1% had a well-child visit and 59.0% had an annual dental visit. Those receiving their primary care at FQHCs had higher odds of WCC (OR = 1.62, 95% CI: 1.61–1.63, $p < 0.001$) and dental visits (OR = 1.19, 95% CI: 1.18–1.20, $p < 0.001$) compared to those in non-FQHC settings. In adjusted models, younger children had higher odds of well-child visits, with those aged 6–8 years having 36% greater odds than children aged 2–5 years (OR = 1.364, 95% CI: 1.355–1.373, $p < 0.001$). Adolescents aged 15–18 years had the lowest odds (OR = 0.563, 95% CI: 0.560–0.567, $p < 0.001$), a pattern also observed for dental visits. Female children had slightly higher odds of WCC (OR = 1.10, 95% CI: 1.09–1.11, $p < 0.001$) and dental visits (OR = 1.11, 95% CI: 1.11–1.12, $p < 0.001$) compared to males. Non-metropolitan residence was associated with lower odds of well-child (OR = 0.88, 95% CI: 0.88–0.89, $p < 0.001$) and dental visits (OR = 0.83, 95% CI: 0.83–0.84, $p < 0.001$). Children in Medicaid managed care had higher odds of both services compared to those not in managed care. Regional differences were evident. Compared to the Northeast, children in the South had higher odds of well-child (OR = 1.48, 95% CI: 1.48–1.49, $p < 0.001$) and dental visits (OR = 1.64, 95% CI: 1.63–1.65, $p < 0.001$), whereas children in the Midwest and West had lower odds of both services.

Conclusion:
Children with NDDs who receive their primary care at FQHCs have significantly higher primary and dental care utilization than those in non-FQHC settings. These findings underscore the

critical role of FQHCs in improving healthcare access for children with developmental conditions. Policies to expand FQHC services and Medicaid support may further enhance health equity in this population.

Table 1. Demographics and Insurance by FQHC Status

Variable	Total (%)	FQHC (%)	Non-FQHC (%)	p-value
Age 2-5	20.3	22.1	19.8	<0.001
Age 6-8	20.5	19.8	20.7	0.048
Age 9-11	22.9	23.1	22.8	0.087
Age 12-14	19.3	18.5	19.5	0.032
Age 15-18	17.0	16.5	17.2	0.210
Male	67.4	65.8	67.8	0.015
Female	32.6	34.2	32.2	0.015
Urban	79.1	75.2	80.2	<0.001
Non Metropolitan	20.9	24.8	19.8	<0.001
Northeast	18.5	19.2	18.3	0.321
Midwest	23.3	21.1	23.8	0.019
South	38.4	39.6	38.1	<0.001
West	19.7	20.1	19.8	0.102
Medicaid Managed Care	87.9	90.5	87.1	<0.001
No Medicaid Managed Care	12.1	9.5	12.9	<0.001
CHIP Enrollment	16.1	18.4	15.5	0.003
No CHIP Enrollment	83.9	81.6	84.5	0.003

Table 2. Adjusted Odds of Well-Child and Dental Visits

Variable	aOR Well-Child Visit (95% CI)	aOR Dental Visit (95% CI)
≥1 FQHC Visit	1.143 (1.137–1.149)***	1.191 (1.184–1.197)***
Ref: No FQHC Visits	—	—
Age 6-8	1.364 (1.355–1.373)***	1.294 (1.286–1.303)***
Age 9-11	1.262 (1.254–1.270)***	1.205 (1.197–1.212)***
Age 12-14	0.986 (0.980–0.993)*	0.986 (0.979–0.992)***
Age 15-18	0.563 (0.560–0.567)***	0.735 (0.730–0.740)***
Ref: Age 2-5	—	—
Female	1.098 (1.093–1.103)***	1.111 (1.106–1.116)***
Ref: Male	—	—
Non-Metropolitan Residence	0.879 (0.875–0.884)***	0.834 (0.829–0.838)***
Ref: Urban Residence	—	—
Medicaid Managed Care	1.193 (1.185–1.200)***	1.290 (1.282–1.298)***
Ref: No Medicaid Managed Care	—	—
CHIP Enrollment	1.115 (1.109–1.122)***	1.122 (1.116–1.129)***
Ref: No CHIP Enrollment	—	—
Midwest	0.945 (0.939–0.951)***	0.908 (0.902–0.914)***
South	1.484 (1.475–1.492)***	1.640 (1.630–1.650)***
West	0.901 (0.895–0.907)***	0.891 (0.885–0.897)***
Ref: Northeast	—	—

Note: $p < 0.001 \rightarrow ***$, $p < 0.05 \rightarrow *$

Dina Ghanim is a third-year medical student at Kaiser Permanente Bernard J. Tyson School of Medicine. Dina is interested in Pediatric Dermatology and increasing health care access and utilization for underserved patient populations.

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