Affordable Care Act Medicaid Expansion: Impact on use of sexual and reproductive health services for women living in rural and urban Oregon

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Research Objective

- Examining the effect of Medicaid Expansion on the use of Sexual and Reproductive Health (SRH) services for Medicaid-enrolled women of reproductive age (WRA) living in rural and urban areas of Oregon.

Study Design

Data Sources and Study Population

- Oregon Medicaid enrollment files were linked to claims data to identify all WRA between 2008 – 2016.

Measures and Analysis

- SRH services identification: Using ICD-9 and ICD-10 codes, CPT codes, the Healthcare Common Procedure Coding System (HCPCS), and National Drug Codes (NDC) in Medicaid claims
- Outcomes: monthly rate of receipt of contraceptive services, counseling sessions, well-woman visits, STI screenings, and pap tests
- Key Independent Variables: urban/rural status (urban, large rural cities, and small rural towns, using Rural-Urban Commuting Area Category B); and an indicator for the post-Medicaid Expansion time period (2014-2016).
- Covariates: Age, race/ethnicity, month indicators
- Statistical analyses: multiple-group interrupted time series design and ordinary least square regression models

Results

Characteristics of Medicaid-enrolled WRA in Oregon by urban/rural status

- No statistically significant difference in average age between the urban and small rural town populations (25.9 vs. 26.0, p = 0.594) (Table 1).
- statistically significant difference in average age between the urban and large rural populations (25.9 vs. 25.7, p = 0.000) (Table 1).
- Women's average age statistically differed between the small rural town and large rural cities populations (26.0 vs. 25.7, p = 0.001) (Table 1).
- Race/ethnicity compositions between urban and small rural towns, large rural cities and urban populations, and small rural town and large rural city populations significantly differed ($p < 0.001$) (Table 1).

Table 1 – Characteristics of Medicaid-enrolled WRA and receipt of preventive services in Oregon by urban/rural status, 2008 – 2016.

Measure	Total (N = 392,111)		Urban (N= 301,246)		p-value[1]	Large rural city (N= 53,001)		p-value[2]	Small rural town (N = 15,659)		p-value[3]
	Mean or %	SD or Frequency	Mean or %	SD or Frequency		Mean or %	SD or Frequency		Mean or %	SD or Frequency	
Age (years)	26.2	8.6	25.9	8.5	0.594	25.7	8.6	0.<001	26.0	8.6	0.001
Race/ethnicity					<0.001			<0.001			<0.001
White	58.4	228,894	62.5	188,357		71.5	37,910		69.6	10,900	
Black	3.5	13,614	4.3	13,009		0.9	483		0.6	101	
Asian	2.7	10,677	3.2	9,597		0.8	435		0.6	88	
AI/AN	2.3	9,203	2.2	6,717		3.3	1,755		6.4	1,005	
NH/PI	0.7	2,573	0.7	1,995		0.4	219		0.4	56	
Hispanic	18.7	73,256	16.0	48,269		14.6	7,743		15.1	2,370	
Missing	13.7	53,894	11.1	33,302		8.4	4,456		7.3	1,139	
Preventive Services Receipt											
Contraceptive Services	32.2	126,159	34.4	103,671		34.6	18,339		31.1	4,867	
Contraceptive Counseling	25.9	101,606	27.8	83,817		27.9	14,810		23.6	3,696	
Well-woman visits	39.0	152,996	42.1	126,862		40.2	21,291		34.1	5,337	
STI Screen	20.3	79,480	22.4	67,555		17.5	9,291		14.4	2,261	
Pap Tests	31.9	124,988	34.2	103,037		33.9	17,947		28.26	4,426	

Note: AI/AN stands for American Indian/Alaska Native.
NH/PI stands for Native Hawaiian/Pacific Islander.
SD stands for standard deviation.
[1] p-values are associated with comparisons between urban and small rural towns population.
[2] p-values are associated with comparisons between urban and large rural cities population.
[3] p-values are associated with comparisons between large rural cities and small rural towns population.

Examining the effect of the Medicaid expansion on the use of Medicaid-financed SRH services

- A substantial increase in the trends of all SRH services in 2014 in both urban and rural areas (Figure 1).
- Following the implementation of Medicaid expansion, the average number of services used per woman increased for all five SRH services for women in both urban and rural areas (Table 2).
- With the exception of contraceptive services, the average number of SRH services/woman increased more for women living in urban areas than for those living in small rural towns (Table 2).

Figure 1 – Percentage Annual receipt of sexual and reproductive services for Medicaid-enrolled WRA in urban, large rural cities, and small rural towns of Oregon, 2008 – 2016

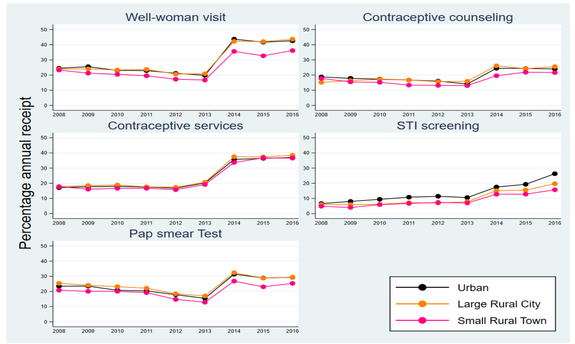

Table 2 – Receipt of sexual and reproductive health services among Oregon WRA in 2008 – 2016 by rurality status

Changes in the average number of services used per WRA	Contraceptive Services (1)	Contraceptive Counseling (2)	Well-woman visits (3)	STI Screening (4)	Pap Tests (5)
Urban	0.458***	0.175***	0.519***	0.098***	0.282***
	[0.394, 0.522]	[0.121, 0.229]	[0.467, 0.571]	[0.045, 0.151]	[0.239, 0.326]
Large rural cities	0.519***	0.090*	0.442***	0.148***	0.244***
	[0.445, 0.593]	[0.034, 0.146]	[0.378, 0.506]	[0.119, 0.177]	[0.193, 0.294]
Small rural towns	0.508***	0.165***	0.414***	0.082***	0.241***
	[0.418, 0.598]	[0.111, 0.220]	[0.361, 0.466]	[0.043, 0.121]	[0.182, 0.300]
N	324	324	324	324	324

Note: *p < .05; **p < .01; ***p < .001.
95% confidence intervals are in brackets.
The significance refers to the differences in SRH service use before and after Medicaid expansion.
All models controlled for month indicators.

Conclusion/Implications

- Although Medicaid expansion increased use of SRH services for all women, the policy was unsuccessful in reducing the gap in receipt of SRH services between WRA living in urban and rural areas.
- The findings warrant continued efforts to improve access to SRH services for rural populations.

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