

Hospitalization rates among persons with HIV who gained Medicaid or private insurance in 2014

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BACKGROUND

- States with and without Medicaid expansion have likewise demonstrated overall increases in emergency department usage, but non-significant decreases in hospitalizations^{1,2}.
- The Ryan White HIV/AIDS Program (RWHAP), which provides coverage for outpatient medical services and support services (e.g. transportation and case management) to thousands of low-income persons with HIV (PWH), does not pay for inpatient care.
- Many PWH who relied on RWHAP alone gained Medicaid or private insurance coverage with the Affordable Care Act in 2014³.
- It is unknown whether such insurance transitions, which included inpatient coverage, affected hospitalization rates among PWH.

OBJECTIVE

To determine whether changes from RWHAP alone to Medicaid or private insurance in 2014 are associated with changes in hospitalization rates among PWH.

METHODS

Subjects:

- 1634 patients from 3 HIV Research Network sites: 2 in Medicaid expansion states, 1 in a non-expansion state
- Enrolled in RWHAP and without other coverage in 2013, consistently engaged in care through 2015

Outcome:

2015 Hospitalization rate(per 100 person years)

Statistics:

Negative binomial regression

Covariates: Gender, race, age, HIV risk factor, CD4 count, HIV viral load, clinic site, number of 2013 hospitalizations

RESULTS

Table 1: Baseline Characteristics of PWH, Stratified by 2015 Insurance Status (n=1634)

Characteristic	Remained uncovered and RWHAP-supported (N=1174)	Transitioned to Medicaid (N=352)	Transitioned to Private (N=108)
Characteristic	N (%)	N (%)	N (%)
Gender			
Female	284 (24%)	134 (38%)	28 (26%)
Male or transgender	890 (76%)	218 (62%)	80 (74%)
Race/ethnicity			
White or other	180 (15%)	83 (24%)	25 (23%)
Black	456 (39%)	250 (71%)	52 (48%)
Hispanic	538 (46%)	19 (5%)	31 (29%)
Age			
18-34	236 (20%)	40 (11%)	19 (18%)
35-44	403 (34%)	64 (18%)	16 (15%)
45-54	382 (33%)	145 (41%)	48 (44%)
55-64	153 (13%)	103 (29%)	25 (23%)
HIV risk			
Heterosexual or other	557 (47%)	165 (47%)	49 (45%)
MSM	582 (50%)	106 (30%)	52 (48%)
IDU	35 (3%)	81 (23%)	7 (6%)
CD4 count			
<200	87 (7%)	45 (13%)	5 (5%)
200-499	455 (39%)	129 (37%)	35 (32%)
500+	632 (54%)	178 (51%)	68 (63%)
Viral load			
≤400	1013 (86%)	274 (78%)	101 (94%)
>400	161 (14%)	78 (22%)	7 (6%)

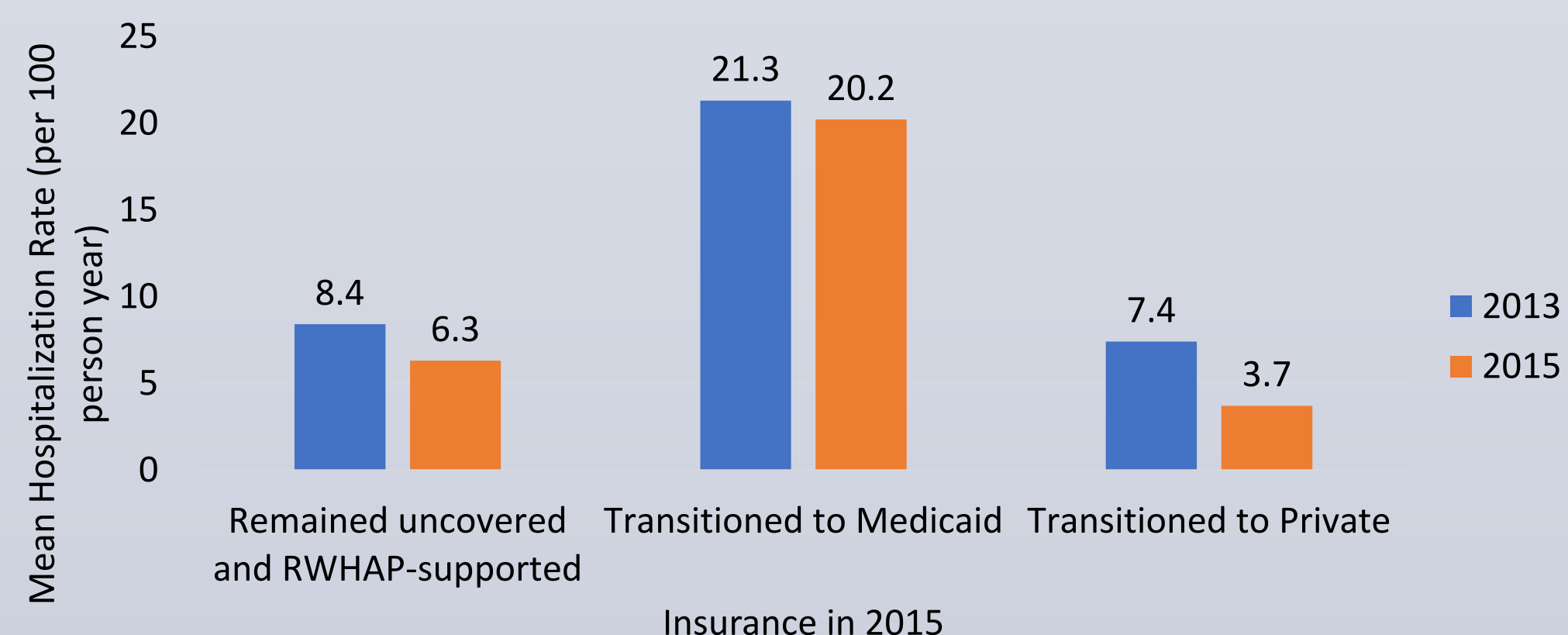
Table 2: Factors Associated with 2015 Hospitalization (n=1634)

Characteristic	Univariate IRR* (95%CI)	Multivariate IRR* (95% CI)
Insurance in 2015		
Remained uncovered and RWHAP-supported	-	-
Transitioned to Medicaid	3.20 (1.94-5.29)	1.26 (0.71-2.23)
Transitioned to Private	0.59 (0.21-1.62)	0.48 (0.18-1.28)
Gender		
Female	-	-
Male or transgender	1.37 (0.84-2.23)	0.86 (0.47-1.58)
Race		
White or other	-	-
Black	1.33 (0.76-2.34)	1.19 (0.62-2.27)
Hispanic	0.60 (0.31-1.17)	0.83 (0.40-1.72)
Age		
18-34	-	-
35-44	0.90 (0.38-2.14)	0.91 (0.45-1.83)
45-54	1.32 (0.68-2.57)	1.51 (0.75-3.07)
55-64	2.15 (1.04-4.43)	2.18 (1.08-4.41)
Risk factor		
Heterosexual or other	-	-
IVDU	2.28 (1.14-4.57)	1.77 (0.68-4.60)
MSM	1.40 (0.84-2.33)	1.68 (0.92-3.05)
CD4 count		
<200	7.09 (3.92-12.83)	5.00 (2.60-9.61)
200-499	1.51 (0.86-2.65)	1.26 (0.71-2.22)
≥500	-	-
VL ≤400	0.26 (0.16-0.44)	0.55 (0.32-0.94)
# of hospitalizations, 2013	2.85 (1.94-4.19)	1.97 (1.44-2.68)

*IRR: Incidence Rate Ratio

Model also adjusted for site, data not shown

Figure 1: Mean Hospitalization Rates in 2013 and 2015



CONCLUSIONS

- Switching to Medicaid or private insurance was not associated with 2015 hospitalization rates
- Gaining inpatient coverage does not appear to increase inpatient utilization among PWH
- This is consistent with overall trends among the general population²
- Older age (55-64 years old), CD4 <200, VL >400, and number of 2013 hospitalizations were associated with higher rates of 2015 hospitalizations
- There were pre-existing differences in hospitalization rates among the three groups even though they were all uncovered and RWHAP-supported in 2013

Limitations:

- Limited number of sites
- Sample size
- Hospitalizations only captured in the corresponding hospital systems

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