



BACKGROUND AND PURPOSE

- Sexually transmitted infections (STIs) reached an all-tin in the United States (US) in 2019, totaling almost \$16 bi direct medical costs¹
- Increasing rates of STIs are not distributed equally acros and ethnic groups
- Rates of STIs among racial/ethnic minority popul particularly African Americans, are up to eight times compared to non-Hispanic white populations^{1,2}
- In 2018, Black individuals accounted for 13% of population but made up 42% of new HIV cases, while H individuals accounted for 18% of the population but m 26% of new HIV diagnoses³
- STIs have also disproportionately increased among residents compared to urban residents in the past two deca
- South Carolina is among the top five states with the higher of STIs in the US, while an estimated 1 in 86 resider acquire HIV in their lifetime^{5,6}

Purpose:

To estimate the associations between three notifiable ST (chlamydia, gonorrhea, syphilis), HIV, racial and ethnic identity, and rurality in South Carolina

METHODS

- Retrospective study using the South Carolina M administrative claims data for the two most recent and co state fiscal years of data available (fiscal year 1: July 2019 2020; fiscal year 2: July 2020 to June 2021)
- All Medicaid beneficiaries with at least one claim for HIV services during the study period were included analysis
- Using a unique identifier, we identified all claims for beneficiaries across each fiscal year
- Main outcomes were ICD-10-CM confirmatory diagno chlamydia, gonorrhea, syphilis, and HIV claims
- Current Procedural Terminology (CPT) codes for service procedures related to these diseases were used in conju with ICD-10-CM codes to increase accuracy when availabl
- Any patient with at least one claim for a relevant dia throughout the two-year study period was considered one of these diseases
- Two main independent variables of interest were:
- Race/ethnicity (non-Hispanic white, non-Hispanic) and other/unknown)
- Rurality (Urban vs Rural according to the rural commuting area codes)
- Multivariable logistic regressions controlling for paties demographic & clinical characteristics and county-level variables

residents

Rural-Urban and Racial Disparities in HIV and STIs in South Carolina from 2019 to 2021

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158,731 Medicaid bAverage age was	eneficiaries 27.0 years (s	with at least standard o	ast one cla deviation	aim for S =10.1), fe	TIs and emales (l/or H (86.6%	(IV))	•	Medicaid Chlamy Syphilis	beneficiario dia: 9,985 (s: 870 (0.5%	es with at lea 6.3%), Gonc), HIV 1.28	ast one enco orrhea: 5,009 1 (0.8%)	unter for (3.2%)	
Non-Hispanic B	lack race/et	hnicity (4	2.6%), ur	ban area	s reside	ents (66	5.6%)	•	Non-Hist	anic Black	beneficiarie	s had highe	r propor	
Common comor	bidities:								STIs and	HIV. comp	ared to their	non-Hispan	nic White	
 Congestive he 	art failure (3	.6%). Hv	pertensio	n (2.9%).	Obesit	tv (2.2)	%)	•	Chlamvdi	a and gono	rrhea were n	nore prevale	ent amon	
8			L		•			•	Syphilis a	nd HIV wei	re more prev	valent among	g urban	
	Table 1: St	ratified an	nalyses of	Medica	id benef	ficiarie	es' char	acte	eristics by S	TIs and H	IV claims	د	5	
				Cł	Chlamvdia			rhea	Svnhilis			HIV		
				Yes	<u>N</u>	0	Yes	6	No	Yes	No	Yes	No	
	Ν		158,371	9,985	148,	746	5,00	9	153,722	870	157,861	1,281	157,450	
	0/0			6 3%	937	70/0	3 2%	/0	96 8%	0.5%	99 5%	0.8^{0}	99.2%	
	Age - average	re (SD)	27.0 (10.1)	22.4(6.2)	27.3(10.4)	24.2.(7	7.6)	27.1 (10.3)	33.2 (14.1)	26.9 (10.2)	45.8 (12.8)	26.8 (10.	
	Age groups	(%)) 21.3 (10.1)		•••)				1310 (1210)		
	0 to 17		17.3	20.9	17.	.1	16.7	7	17.3	5.4	17.4	1.3	17.4	
	18 to 24	29.9	52.0	52.0 28.4		44.9		29.4	25.1	29.9	6.0	30.1		
	25 to 34	33.2	22.7	33.	.9	29.6		33.4	34.9	33.2	16.1	33.4		
	35 to 44	13.5	3.6	14.	.2	6.8		13.7	14.9	13.5	19.4	13.5		
	45+		6.0	0.8	6.4	4	2.0		6.2	19.7	5.9	57.2	5.6	
	Gender (%)													
	Male		13.4	11.4	13.5		15.0		13.3	35.5	13.3	48.3	13.1	
	Female		86.6	88.6	86.	.5	85.0)	86.7	64.5	86.7	51.7	86.9	
	Race/ethnic	ity (%)												
	Non-Hispanic White		24.5	17.2	25.	.0	15.0	5	24.8	18.8	24.5	8.2	24.6	
	Non-Hispanic Black		42.6	50.4	42.	.1	53.5	5	42.2	46.8	42.6	56.4	42.5	
	Other		32.9	32.5	32.	.9	30.9)	33.0	34.4	32.9	35.4	32.9	
	Area of residence (%)							_						
	Urban		66.6	61.4	66.	.9	62.2	2	66.7	73.2	66.5	69.1	66.5	
	Kural Top comorbidition (0/)		33.4	38.6	33.	.1	37.8	3	33.3	26.8	33.5	30.9	33.5	
	CHF				2 -		2.2		2 <i>(</i> ¥	0.4	2 (11 7	2 5	
	Hypertension			2.1	Э. Э.(/ 0	5.5 2.6		3.0- 2.0¥	8.4 6.0	<i>3</i> .0 2.9	11.7	2.5 2.8	
	Obesity		2.9	1.3	2.2	ע €	2.0 2.6		2.) 2.2¥	0.9 3 ()	2.0 2.2¥	$\frac{10.3}{2.0}$	2.0 2.2¥	
	Notes: All bivar	iate compariso	ns were statistic	cally significan	t at the p<0.	01 level, ex	xcept for asso	ociati	ions with $^{\text{¥}}$ p<0.05	5.0		2.0		
Table 2. Multiveriabl		analwaaa									17	T ?!. 1!.		
Table 2. Multivaliable	Chlamadia	anaryses	rhoa Symbilia UIV			7				<u>ke</u>	y Finding	<u>gs</u>		
			n volue	$\sim OR$ p-1			n volue	•	Non-His	panic Blacl	c and other t	acially and	ethnically	
Race / ethnicity	aon p-value	aOK	p-value	aon p-	Value	aOK	p-value		were sign	paine Black	ore likely to	have at leas	t one clai	
Non-Hispanic White	Ref	Ref		Ref		Ref			onorrhe	a and HIV	Compared t	have at leas	anic whit	
Non-Hispanic Black	1.88 < 0.001	1.99	< 0.001	1.25 0.0)77	2.51	< 0.001		D 11401 400	a, and more	compared i	u mono 1:1-01	ante win	
Other	1.34 < 0.001	1.39	< 0.001	1.22 0.0)69	2.31	< 0.001		Kural res	idents were	signincanti	y more likel	y to nave	
Area of residence									chlamydi	a and gono	rrhea compa	ared to urba	n resider	
Urban	Ref.	Ref.		Ref.		Ref.			In contra	st, rural res	sidents had a	a lower likeli	hood of	
Rural	1.14 0.002	1.14	0.007	0.80 0.0)42	0.74	0.031		for syphi	lis and HIV	compared t	to those resi	ding in u	
Notes: All models control for patie	nt and county-level o	ovariates, aOR	Adjusted Odd	s Ratio										
DISCUSSION											ACKNOW	LEDGEM	ENTS a	
										1. https://www.cdc.gov/std/statistics/prevalence_2020_at_a_glance.htm				
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Our findings highli	ght the need	tor progr	amming	and inter	vention	is spec	cific to		2. ht	tps://www.cdc.gov/	/nchhstp/newsroom/	2021/2019-STD-surv		
Our findings highlight	ght the need	tor progr nority res	idents po	and inter	vention v in the	is spec rural §	south		2. ht 3. ht 4. Pi	tps://www.cdc.gov/ tps://www.cdc.gov/ nto CN. Dorn LD ('nchhstp/newsroom/ 'hiv/group/racialethn Chinchilli VM. Du P. (2021/2019-STD-surv ic/africanamericans/ Chlamydia and gonori	'diagnoses.html thea acquisition	

ons of each type of counterparts rural residents sidents

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REFERENCES

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