

HEALTH CARE SERVICES UTILIZATION AMONG PEOPLE STRUGGLING WITH HOMELESSNESS



Samaritan
Health Services



Oregon State
University

Background

- **Housing and health and health care**
- **To what extent do housing insecure people use hospital services?
What are the patterns that can be observed?**
- **Benton, Linn, Lincoln counties**
 - **Samaritan Health Services and Community Services Consortium**
 - **OSU Policy Analysis Lab (OPAL)**
 - **Funded by IHN (local CCO)**

The Challenge

- **How to link existing, “silo’ed” data from different organizations while protecting people’s anonymity?**

The Solution

- **Privacy-preserving record linkage: use cryptographic ‘hashing’ algorithm to convert identifiable information (first name, last name, date of birth, sex) to deidentified string of 1s and 0s**
- **Algorithms are deterministic but irreversible**
- **SHS & CSC ran the hashing algorithms internally, sent deidentified data to OSU for analysis**

The Data We Assembled

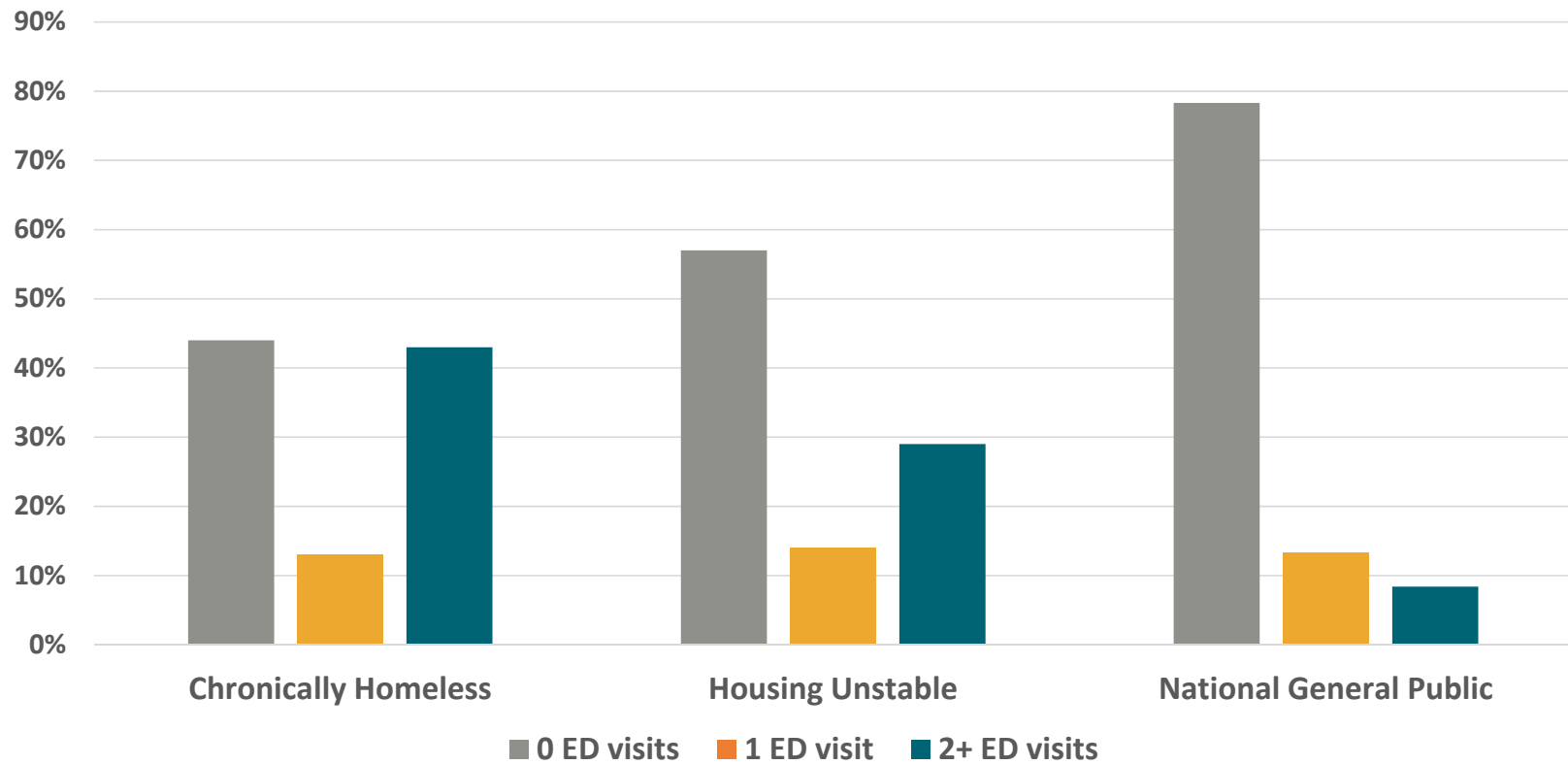
- From CSC: adults 18+ served by homeless services programs in 2022 (Linn, Benton, & Lincoln Counties)
 - From SHS: patients flagged as homeless* in Epic in 2022
 - ED visits & hospitalizations (complete coverage in the LBL region)
- *using custom registry – imperfect!*

Cohort Characteristics (2022)

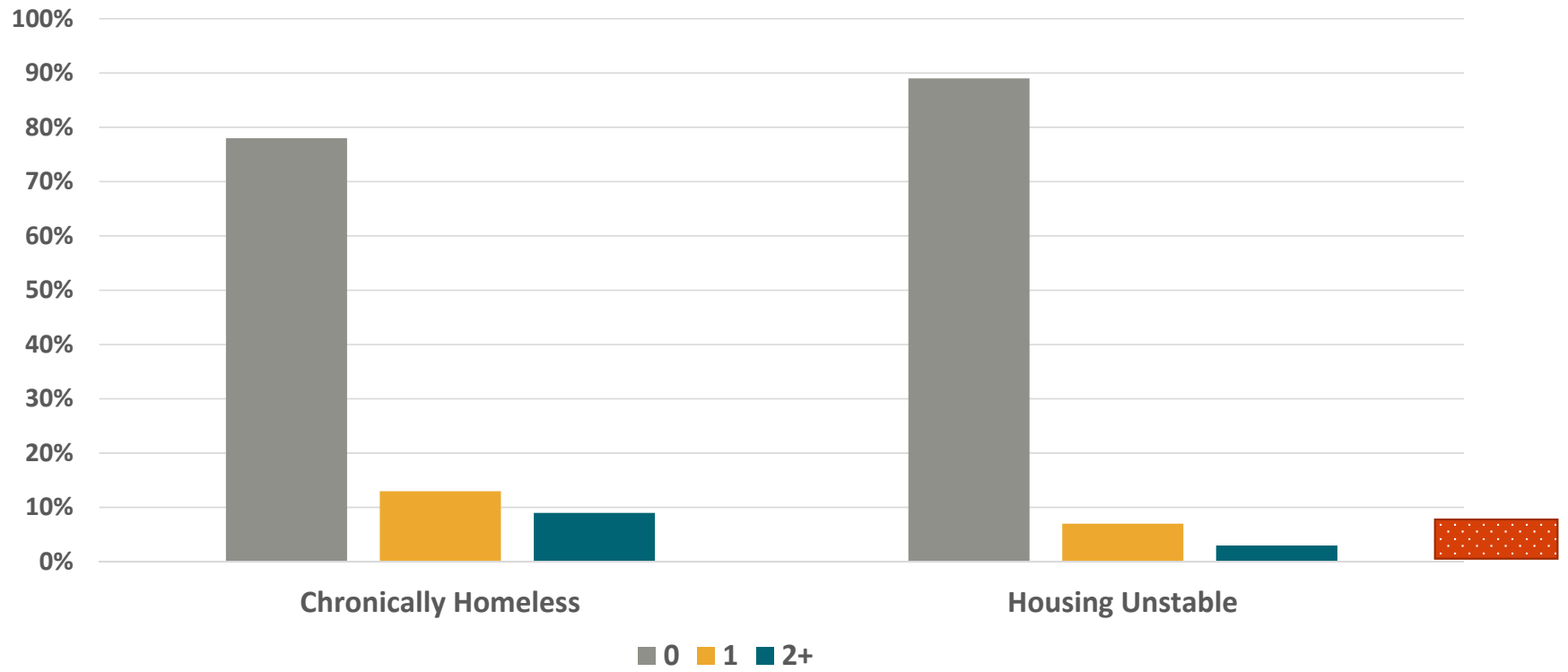
	SHCSC Data (N = 775)	Linn, Benton, Lincoln (PIT)	L,B,L 2020 Census
Woman	42%	40%	50%
Man	58%	60%	50%
Black, African American, African American Indian, Indigenous	4%	1%	.7%
Asian or Asian America	6%	5%	1.6%
Native Hawaiian or Pacific Islander	.5%	.5%	3%
White	.5%	.3%	.3%
Multi, unknown, other	88%	88%	84%
	1%	6%	7%
Hispanic/Latinx	11%	12%	9.4%
Veteran? Yes	12%	--	7.2%
Benton County	50%	37%	35%
Lincoln County	14%	20%	18%
Linn County	35%	43%	47%
Chronically homeless	21%		

“Lives in a place not meant for human habitation, a safe haven, or in an emergency shelter, and has been homeless and living as described for at least 12 months or on at least 4 separate occasions in the last 3 years.”

Previous Year Emergency Department Visits 2022



Hospitalizations in Previous Year 2022



**Distribution of Emergency Department Visits
by SHCSC Cohort (2022)**

	ED Visits (775 people)			
Visits	Chronically Homeless (166 people)	Housing Unstable (609 people)		
0	44% (73)	57% (348)		
1	13% (22)	14% (85)		
2-4	23% (39)	19% (116)		
5-6	6% (10)	3% (20)		
7-9	4% (7)	3% (21)		
10-12	5% (8)	1% (6)		
13+	4% (7)	2% (13)		
	100%	100%		

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**Distribution of Emergency Department Visits
by SHCSC Cohort (2022)**

Visits	ED Visits (775 people)		Percentage of all ED visits by the cohort (1,546 visits)	
	Chronically Homeless (166 people)	Housing Insecure (609 people)	Chronically Homeless	Housing Insecure
0	44% (73)	57% (348)	--	--
1	13% (22)	14% (85)	1% (16)	6% (94)
2-4	23% (39)	19% (116)	6% (94)	20% (310)
5-6	6% (10)	3% (20)	4% (63)	7% (109)
7-9	4% (7)	3% (21)	4% (63)	10% (156)
10-12	5% (8)	1% (6)	6% (94)	4% (63)
13+	4% (7)	2% (13)	8% (125)	23% (357)
	100%	100%		

12% of the cohort account for 66% of the visits made by homeless residents

Policy Considerations and Next Steps

- We've learned a little . . . We need to get the whole story
 - Link with public health and/or other health records
 - Find out how these patterns compare to general public
- Calculate costs associated with these patterns
- Consider tradeoffs of investing in housing for those with high health care utilization
 - Beware of cause/effect, and size of effect.

