

Comparative Analysis of Vaping Use Disorder (VUD) and CDC Proxy Codes: A Demographic Perspective

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Introduction

- Vaping is associated with various medical consequences, including e-cigarette or vaping-associated lung injury (EVALI).
- In response to a surge in EVALI cases in October 2019, the CDC introduced coding guidance to proxy EVALI in an attempt to capture and track patients with this rapidly evolving disease.¹
- Subsequently, in April 2020, an emergency code for vaping use disorder (VUD) (U07.0) was introduced to enhance the characterization of these injuries.

Objective

- This study aims to compare and profile the population of patients with the VUD and CDC proxy codes.

Methods

Study Design

- This retrospective cohort study utilized Komodo’s Healthcare Map™ to compare patients with CDC proxy codes from October 2019 to March 2020 to those with U07.0 from April 2020 to October 2020.
- The Healthcare Map is a claims-based dataset that includes both open and closed medical and pharmacy claims data for more than 330 million unique patients in the US.

Inclusion/Exclusion Criteria

- The analysis included all patients, resulting in 167,375 with CDC proxy codes and 9,391 with VUD.

Key Study Variables

- Demographic characteristics were delineated by age, gender, and race/ethnicity, with significance assessed using the chi-square test.

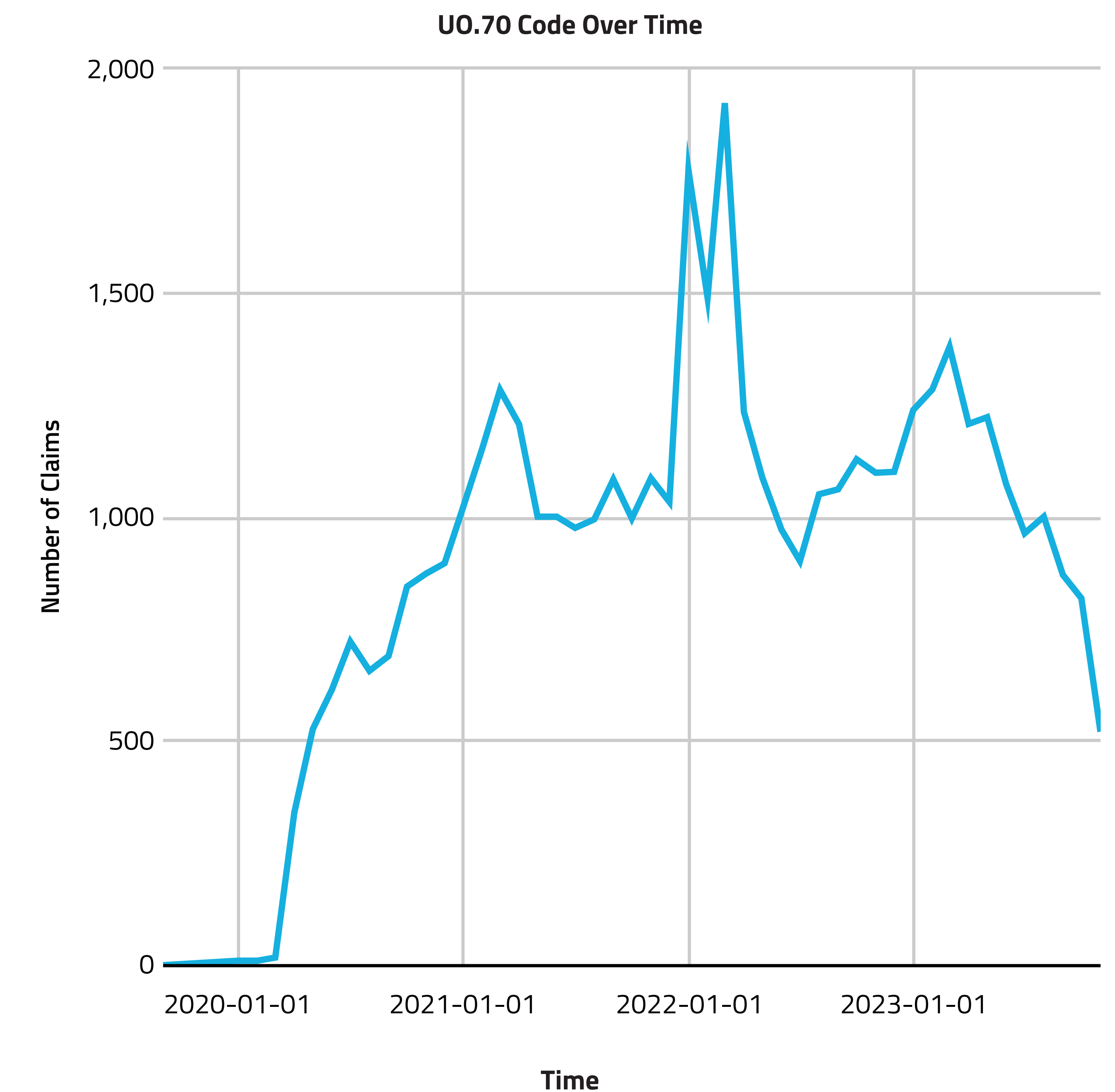
Results

VUD patients were significantly younger (40.9% age 25 or under) compared to CDC proxy code patients (14.6%, $p < 0.00001$), with a mean age of 38.9 years versus 58.4 years ($p < 0.00001$). VUD patients were more likely male (47.4% versus 53.8%, $p < 0.00001$) and less likely Black (16.3% versus 11.0%, $p < 0.00001$).

Table 1. Demographics of Patients Using Proxy Codes Versus the VUD Emergency Code

	CDC proxy		Vaping	Chi-square
Age				
0-15	18,120	10.83%	373	3.97%
16-25	6,298	3.76%	3,470	36.95%
26-40	12,510	7.47%	2,130	22.68%
41-65	55,809	33.34%	2,325	24.76%
66+	74,418	44.46%	1,082	11.52%
				<0.000001
Gender				
F	86,383	51.61%	4,276	45.53%
M	79,293	47.37%	5,052	53.80%
				<0.000001
Race/Ethnicity				
White	87,525	63.86%	4,373	65.71%
Black or African American	22,386	16.33%	732	11.00%
Hispanic or Latino	17,471	12.75%	957	14.38%
Asian or Pacific Islander	5,060	3.69%	270	4.06%
Other	4,615	3.37%	323	4.85%
				<0.000001
Total patients	167,375		9,391	

Figure 1. Use of U07.0 Since the Introduction of VUD Emergency Code in April 2020.

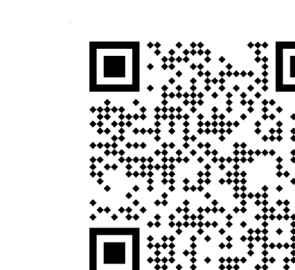


Conclusion

The CDC proxy codes captured a significantly larger population over the same time as the VUD code. Patients diagnosed with VUD were younger, more likely to be male, and less likely to be Black, reflecting other studies in the literature and suggesting the emergency code better reflects the population at risk for vaping disorders. Implementation of emergency codes could facilitate more precise tracking of emerging trends, supporting real-world evidence initiatives that address social determinants of health. This specificity could enable public health researchers to target research and interventions more effectively toward vulnerable populations.

References

¹ Centers for Disease Control and Prevention. ICD-10-CM Official Coding Guidelines - Supplement Coding encounters related to E-cigarette, or Vaping, Product Use. CDC, 17 Oct. 2019, https://www.cdc.gov/nchs/data/icd/Vapingcodingguidance2019_10_17_2019.pdf. Accessed 1 Apr. 2024.



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