

# Recent Preventive Health Screening History among Emergency Department HIV Self-Testing Kiosk Users

Jessica L. Tillman, PhD(c), MPH, BSN, RN<sup>1</sup>, Yu-Hsiang Hsieh, PhD, MSc<sup>2</sup>, Mary Jett-Goheen, BS, MT(ASCP)<sup>2</sup>, Ida Melissa Solis, MHS, BS<sup>2</sup>, & Charlotte A. Gaydos, MS, MPH, DrPH<sup>2</sup>

(1) Johns Hopkins University School of Nursing, Baltimore, MD (2) Johns Hopkins University School of Medicine, Baltimore, MD

## BACKGROUND

- Preventive health screening has emerged as a high-priority strategy to improve population health
- Hypertension, high blood cholesterol, diabetes, breast cancer, cervical cancer, and human immunodeficiency virus (HIV) are some Healthy People 2020 targets to increase healthy years of life
- The emergency department (ED) is an important healthcare safety net in the United States
- Purpose:** To examine the recent preventive health screening history of adult ED patients who engaged in kiosk-guided HIV self-testing

## METHODS

### Participants

- ED patients 18-64 years old were eligible for the study if they were: (a) not in extremis; (b) capable of providing informed consent; (c) not previously diagnosed with HIV; and (d) not tested for HIV within the previous six months

### Procedure

- Participants used a touchscreen tablet-based kiosk to complete a demographic and health history questionnaire prior to receiving instructions on how to self-administer a point-of-care HIV test

### Data Analysis

- Multivariate logistic regression models ( $\alpha = 0.05$ )
  - Covariates: gender, race, age, health insurance status
- Blood pressure and HIV screening history were analyzed for all participants. Other screening subgroups were based upon USPSTF and ADA recommendations

## RESULTS

Table 1. Participant demographics (N = 387)

	Male (n = 156)	Female (n = 231)
Age (Mean ± SD), years	42.5 ± 12.7	39.7 ± 12.3
Age (n, %)		
18-24 years	14 (9.0)	29 (12.6)
25-34 years	36 (23.1)	58 (25.1)
35-44 years	35 (22.4)	61 (26.4)
45-54 years	37 (23.7)	50 (21.6)
55-64 years	34 (21.8)	33 (14.3)
Race (n, %)		
White	37 (23.7)	38 (16.5)
Black	107 (68.6)	182 (78.8)
Asian	3 (1.9)	3 (1.3)
American Indian/Alaskan	2 (1.3)	0 (0.0)
Other	5 (3.2)	4 (1.7)
Bi- or multiracial	2 (1.3)	4 (1.7)
Ethnicity (n, %)		
Hispanic	5 (3.2)	5 (2.2)
Non-Hispanic	151 (96.8)	226 (97.8)
Currently Pregnant (n, %)		
Yes	N/A	7 (3.0)
No	N/A	218 (94.4)
I would rather not say	N/A	6 (2.6)
Insurance Type (n, %)		
Public insurance	73 (46.8)	122 (52.8)
Private insurance	43 (27.6)	71 (30.7)
No health insurance	32 (20.5)	33 (14.3)
Not sure	8 (5.1)	5 (2.2)

Table 2. Preventive health screening history (N = 387)

Screening Test	Yes (n, %, [95% CI])	No (n, %, [95% CI])
Blood pressure	329 (85.0%) [81.1, 88.4]	58 (15.0%) [11.6, 18.9]
Diabetes§	91 (59.1%) [50.9, 66.9]	63 (40.9%) [33.1, 49.1]
Cholesterol*†	106 (56.1%) [48.7, 63.3]	83 (43.9%) [36.7, 51.3]
HIV	191 (49.4%) [44.3, 54.5]	196 (50.6%) [45.6, 55.7]
Mammogram¶	35 (59.3%) [45.8, 71.9]	24 (40.7%) [28.1, 54.3]
Pap Test**	125 (56.3%) [47.1, 66.9]	97 (43.7%) [35.6, 53.1]

\*Men 35 years and older

§Men and women 45 years and older

†Women 45 years and older

¶Women 50 years and older

\*\*Women 21-64 years old

- Blood pressure measurement was the most frequently reported preventive health screening among men (n = 124, 80%) and women (n = 205, 89%)
- Women were more likely than men to undergo a hypertension (AOR = 2.28; 95% CI: 1.25-4.14) or diabetes (AOR = 2.25; 95% CI: 1.15-4.40) screening within the past 12 months
- Men and women with health insurance were 1.92 times more likely to have had their blood pressure checked than uninsured persons (95% CI: 1.01-3.66)
- The odds of receiving a cholesterol screening within the previous 12 months were 2.85 times greater (95% CI: 1.30-6.27) among insured persons. Health insurance coverage status was not significantly associated with other preventive health screening tests

## CONCLUSIONS

- Limitations**
  - Self-reported data are subject to recall bias and social desirability bias
  - Selection bias may have confounded the rates of HIV screening. By nature of our study enrollment criteria, participants were receptive to HIV testing—and possibly more receptive to HIV testing than the general population
  - Not all recommended screenings are annual. Participants may not have received a particular preventive health screening during the previous year, but received the screening within the recommended interval
- Reported screening rates suggest that there are unmet preventive health needs among ED patients
- Health insurance coverage and female gender were associated with increased odds of some, but not all, of the preventive health screenings of interest
- Innovative approaches such as using tablet-based kiosks to collect medical history information could facilitate identification of the preventive health needs of ED patients
- Healthcare-seeking behavior of ED patients and the role of the ED in providing preventive health services should be explored further