The Use of Emergency Department Services for Non-Emergent Conditions among Adults with Disabilities

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Introduction

The use of emergency department (ED) services for non-emergent conditions may signal difficulty in accessing outpatient health care services. A recent report from the National Center for Health Statistics showed that 80% of adults reported an ED visit due to a lack of access to other providers.[1]

An estimated 1 in 10 non-institutionalized adults aged 18 to 64 years in the U.S. experience a disability.[3] Adults with disabilities tend to use ED services more frequently than those without disabilities.[2]

The differences in ED use among specific populations may indicate disparities in access to health care.[4] Additionally, the populations that commonly experience negative health disparities are likely to become an even larger proportion of the American population.[5] Health insurance provides an important link to improved health outcomes by means of better access to health care.[6]

Study Objectives

This research is intended to explore the impact of race/ethnicity and insurance status on ED use among individuals with disabilities.

Hypothesis #1: Among individuals with disabilities, Blacks and Hispanics have higher odds of having a non-emergent ED visit than Whites.

Hypothesis #2: Among individuals with disabilities, the publicly insured have higher odds of having a non-emergent ED visit than the privately insured.

Study Population

Data were pooled from the Medical Expenditure Panel Survey (MEPS) for 2002 to 2007 on adults aged 18 to 64 years with a limitation defined by the Altman and Bernstein disability measure.[7] The Altman and Bernstein disability measure is based on the International Classification of Functioning that defines sensory, physical, cognitive, functional, mental health, and work-related disabilities.

Methods

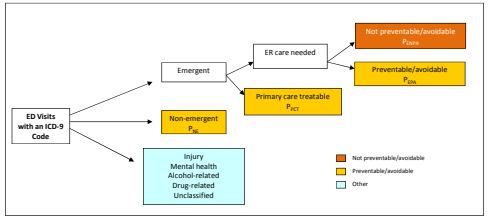
The study used the New York University (NYU) ED Classification Algorithm to categorize ED visits by clinical characteristics. Non-emergent medical conditions included the following four NYU categories:

1. ***Non-emergent*** –Immediate medical care was not required within 12 hours
2. ***Emergent/Primary Care Treatable*** – Care was required within 12 hours, but care could have been provided effectively and safely in a primary care setting (e.g., a diabetic patient with unstable glucose levels)
3. ***Emergent, ED Care Needed, Preventable/Avoidable*** – ED care was required but the emergent nature of the condition was potentially preventable or avoidable if adequate ambulatory care had been received in a timely manner (e.g., a hypertensive crisis or asthma flare-up)
4. ***Emergent, ED Care Needed, Not Preventable/Avoidable*** – ED care was required and ambulatory care treatment could not have prevented the condition (e.g., appendicitis)

Other Categories:

5. ***Injury*** – Injury was the principal diagnosis
6. ***Mental Health*** – Mental health was the principal diagnosis
7. ***Alcohol-Related*** – The principal diagnosis was alcohol-related
8. ***Drug-Related*** – The principal diagnosis was drug-related
9. ***Unclassified*** – The ED visit was not in one of the above categories

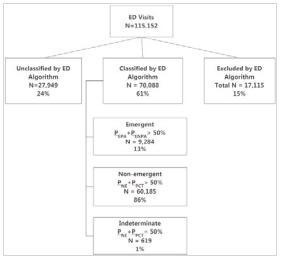
NYU Classification of ED Visits[5]



"P" stands for probability.

$P_{NE} + P_{PCT} + P_{EPA} + P_{ENPA} = 100\%$

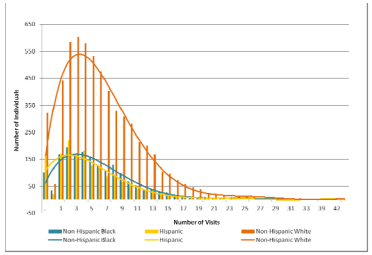
Categorization of ED Visits



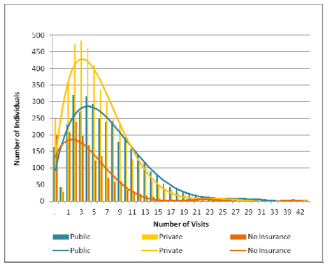
Preliminary Results

- Utilization patterns of non-emergent ED services are similar across races/ethnicities. Non-Hispanic White, Non-Hispanic Black, and Hispanic had utilization rates of 93%, 89%, and 94%, respectively.
- Non-Hispanic Blacks had significantly lower odds of using the ED for non-emergent conditions than Non-Hispanic Whites (Model 1). The odds ratio remains significant, adjusted for education level (Model 2).
- The difference between publicly and privately insured ED users is not statistically significant. The odds ratio remains insignificant when adjusted for other covariates (Model 3 and Model 4).
- Having a bachelor's degree, compared to having less than high school education (reference group), increase the odds of using the ED for non-emergent conditions by as much as 4 times (Model 2 & Model 4).
- Across all the models, females are at least 2 times more likely than males to use the ED for non-emergent conditions.

Distribution of Non-Emergent ED Visits by Race/Ethnicity, 2002-2007



Distribution of Non-Emergent ED Visits by Insurance Type, 2002-2007



Logistic Regression Models:[α,β,μ] Odds Ratio (p)

	Model 1	Model 2		Model 3	Model 4
Ref:	Non-Hispanic Whites		Ref:	Public Insurance	
Non-Hispanic Blacks	0.48** (0.00)	0.49* (0.05)	Priv Ins	1.18 (0.54)	1.03 (0.95)
Hispanics	0.84 (0.56)	2.31 (0.19)	No Ins	0.70 (0.18)	0.59 (0.19)
Female	2.69** (0.00)	2.20* (0.02)	Female	2.50** (0.00)	2.01* (0.04)
HS		2.08 (0.06)	HS		1.78 (0.14)
BA		4.33** (0.00)	BA		3.75* (0.01)
BA+		4.18 (0.18)	BA+		3.65 (0.23)
N	8,767	3,490	N	8,868	3,490

*p<0.05 **p<0.001

α: All models are adjusted for marital status, income level, and region.

β: Dependent variable is a binary indicator of having any non-emergent ED visit.

μ: Reference groups: White, public insurance, male, education less than high school.

Next Steps

- Control for additional variables, such as having a usual source of care and type of disability (basic vs. complex).
- Conduct a similar analysis using Maryland Medicaid claims data and compare the results.

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analysis to advance the health of vulnerable populations

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