Intermittent insurance is a risk factor for emergency department use: Implications for the Affordable Care Act roll-out

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Disclosures

- No relationships to disclose

Too much ED use in the US?

Institute of Medicine (2007) *Hospital-Based Emergency Care: At the Breaking Point*

$38+

Billion In Overuse

HOSPITAL-BASED EMERGENCY CARE

AT THE BREAKING POINT

INSTITUTE OF MEDICINE

OF THE NATIONAL ACADEMIES

New England Healthcare Institute (2010) *A Matter of Urgency*

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Research questions

- As the US implements the Affordable Care Act…
  - What are the relevant predictors of ED use?
  - What are the potential impact of gaps in insurance coverage on ED use?

Data: Medical Expenditure Panel Survey

- A nationally representative survey of US non-institutionalized civilians, drawn from respondents to NHIS
- Overlapping panel design – 2 full years of data, 5 rounds
  - Panel 11: 2006-07 (pre-reform, pre-recession)
- Wide range of potential explanatory variables
- Monthly insurance coverage indicators and detailed costs
- Data limitations:
  - 3-digit ICD-9 codes
  - Modest sample size (<10,000)
  - ED use is underreported

Inclusion criteria and variable selection

- Respondents aged 18-64 at baseline
- Data from all 5 rounds

- Andersen's behavioral model of health services use
- Baseline: sex, race/ethnicity, education, English proficiency, perceived health, urban/rural residence, census region
- Longitudinal:
  - **Family income**: high = 400% of Federal poverty threshold (FPT)* or greater; middle = 200-399% of FPT; low = <200% of FPT
  - **Employment**: continuously employed, intermittently employed, continuously unemployed/not working (incl. retired/homemaker)
  - **Insurance**: continuous private, continuous public, intermittent, continuously uninsured

*In 2006, FPT for a family of four was $20,444

Descriptive characteristics

N	8,985
Weighted n	178,861,924
Mean age	41
Age range	18-64
Female	51%
Non-Hispanic white	67%
Hispanic (any race)	14%
Non-Hispanic African American	12%
Multiple/other race/ethnicity	7%
Limited English proficiency	6%
Rural residence	16%
Low income (<200% FPT)	34%
Middle income (200-400% FPT)	32%
High income (>400% FPT)	35%
Continuously employed	70%
Continuously unemployed	11%
Switched employment categories	20%
Continuous private insurance	48%
Continuous public insurance	13%
Intermittently insured	22%
Continuously uninsured	18%

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ED use and costs by insurance status

Measure	Overall	Cont., Private Only	Cont., Any Public	Inter-mittent	Uninsured
Unweighted N	8,985	4,272	1,158	1,974	1,581
2006					
ED visit rate / 100	13.7	10.1	19.0	15.3	10.4
Number of ED visits / 100	19.0	12.5	27.4	22.9	14.3
Mean weighted ED expenditures among those with a visit	$1,025	$1,321	$889	$900	$587
2007					
ED visit rate / 100	12.7	8.8	18.2	14.7	9.2
Number of ED visits / 100	17.6	11.1	26.8	21.2	11.5
Mean weighted ED expenditures among those with a visit	$919	$1,194	$784	$820	$569

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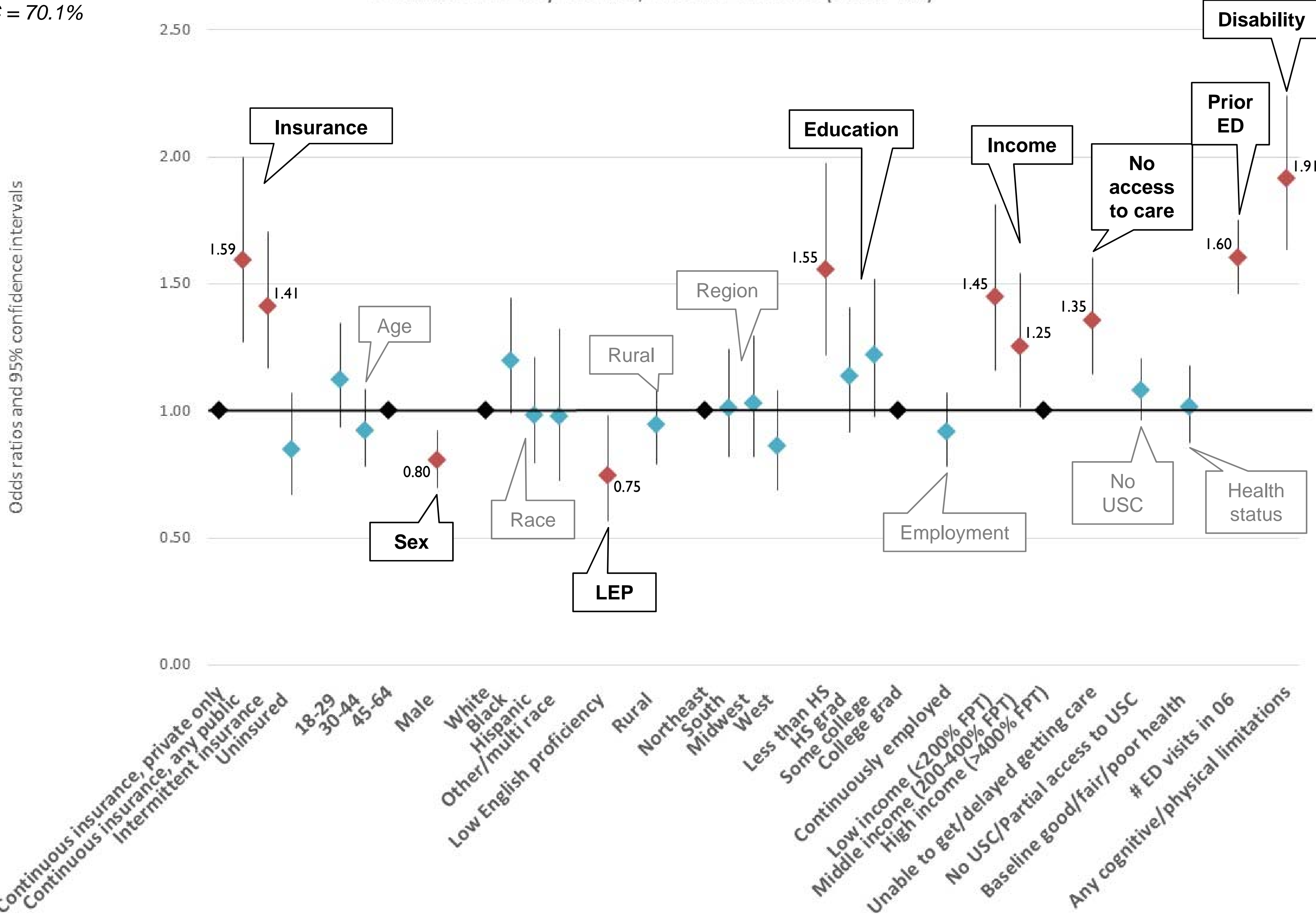
$R^2 = 9.1\%$
$AUC = 70.1\%$



Discussion

- Both gaps in insurance coverage and continuous public coverage are associated with significantly greater risk of reported ED use than continuous private coverage
- The ACA has increased Medicaid and private enrollment, yet maintaining continuous coverage may be difficult for many of the newly insured
- Combined with ongoing shortages of primary care providers, this could contribute to continued unsustainable growth in national ED use

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