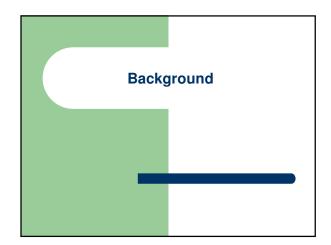
# Undiagnosed chronic disease: Rates and their association with access to preventive care among Los Angeles adults Malia Jones, MPH Anne R. Pebley, PhD Community Health Sciences UCLA School of Public Health October 31, 2011 APHA 139<sup>th</sup> Annual Meeting Session #3158.0 Washington, DC

# **Presenter Disclosures**

Malia Jones and Anne R. Pebley

- The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:
- No relationships to disclose.

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# **Background**

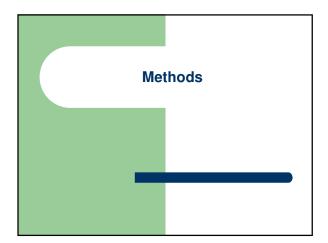
- People with undiagnosed chronic disease experience poor outcomes and complications of disease
- Regular access to preventive care can provide opportunities for diagnosis and early secondary prevention
- People without insurance are at highest risk for failure of diagnosis

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# **Research Questions**

- Does access to preventive care affect rates of diagnosis for three chronic diseases?
  - Hypertension
  - Obesity
  - Diabetes
- What population subgroups are at highest risk for undiagnosed disease?

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# **Data**

- Data: L.A.FANS Wave 2—a representative sample of Los Angeles County Adults, 2006-2008 (n=1,406)
- Data collected using in-person interviews and health assessments by trained interviewers

# **Key Variables**

- Diagnosis of chronic disease:
  - "Has a doctor ever told you that you have...

     ...diabetes or high blood sugar"

    - ...high blood pressure or hypertension"
    - ...excess weight or that you need to lose weight"
- Measured chronic disease status:
  - Diabetes = HbA1c ≥ 6.0
  - Overweight/Obesity = measured BMI ≥ 25 or 30
  - Hypertension = 4 NHLBI categories
- Access to preventive care:
  - Usual source of careInsurance status

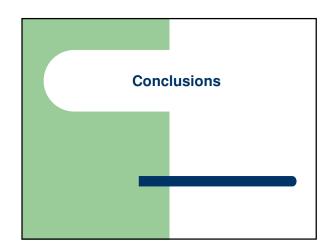
**Results** 

### **Descriptive Statistics** Mean(SD)/% Characteristic Age (years) Education (years) 49.9 (16.5) 13.5 (4.2) Family income (\$1,000) 60.3 (76.5) Male 50% White NH 35.4% Latino 41.0 Black 8.8 Other 14.8 US Citizen 81.6% 75.8% (40.2%) % of days covered by ins last 5 yrs No usual source of care 18.3%

Descriptive Statistics		
Characteristic	Mean(SD)/%	
Self-reported disease diagnosis		
Diabetes	10.4%	
Hypertension	28.4	
Excess weight	25.7	
Measured disease status		
Diabetes	18.0%	
Hypertension (Stage I or II)	18.4	
Overweight or obesity	71.4	

Rates	Rates of Undiagnosed Disease		
	Current measured Disease status	No self-reported diagnosis	Self-reported diagnosis
Diabetes	Normal	97.2%	2.8%
(n=288)	Elevated HgA1c	56.4%	43.6%
Hypertension	Normal	86.8%	13.2%
(n=840)	Prehypertens.	67.5	32.5
1	Stage 1 hypert.	45.3	54.7
	Stage 2 hypert.	46.9	53.1
Overweight	Underweight	100.0%	0.0%
(n=812)	Normal	95.9	4.1
	Overweight	86.3	13.7
	Obese	47.0	53.0

### Odds of disease diagnosis Diabetes (n=313) Overweight (n=1087) Hypertension (n=1124) Measured disease status 9.39 \*\* 1.04 \*\* 1.29 \*\* Female 1.26 0.98 Education 1.10 1.02 Insurance coverage 1.67 0.91 1.53 Usual Source of Care (ref:none) Clinic/HMO Doctor's office ER/Outpatient clinic 3.41 4.95 0.05 4.51 \*\* 3.52 \*\* 3.85 \*\* Comorbidity status 2.20 \*\* \* = significant at $\alpha$ = 0.05 \*\* = significant at $\alpha$ = 0.01



# Strengths & Limitations • Small samples, especially for diabetes • Unable to parse people whose present disease status is controlled by lifestyle/medication from those who have never had disease

# **Conclusions**

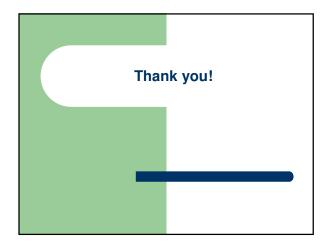
- We observe alarming rates of undiagnosed hypertension, obesity and diabetes
- Having a usual source of care is an important factor in accurate and timely diagnosis
- Health insurance had no effect in our models
- Improved access to doctors and basic diagnostic services among high-risk subgroups is key for secondary prevention

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# **Acknowledgements and Notes**

- This work was made possible by NICHD (R01 HD35944 and R01 HD41486)
- Expanded obesity results from this analysis are currently under review at the Journal of Immigrant and Minority Health

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Selected References		
١	1.	Centers for Disease Control and Prevention. Chronic Disease Prevention and Health Promotion. Available at: http://www.cdc.gov/chronicdisease/index.htm. Accessed January 2010.
- 1	2.	American Heart Association, Prevention, Secondary, Available at:
- 1		http://www.americanheart.org/presenter.jhtml?identifier=4723. Accessed February 2010.
- 1	3.	Agency for Healthcare Research and Quality. Economic Incentives for Preventive Care: Summary. In; 2004.
١	4.	Cohen JT, Neumann PJ, Weinstein MC. Does preventive care save money? Health economics and the presidential candidates. N Engl J Med 2008;358(7):661-3.
١	5.	Ahluwalia IB, Mack KA, Murphy W, Mokdad AH, Bales VS. State-specific prevalence of selected chronic disease-related characteristicsBehavioral Risk Factor Surveillance System, 2001. MMWR Surveill Summ 2003;52(8):1-80.
1	6.	Overview of L.A.FANS Survey Design. Available at: <a href="http://www.lasurvey.rand.org/design/">http://www.lasurvey.rand.org/design/</a> . Accessed Oct 2009.
١	7.	L.A. FANS: The Los Angeles Family and Neighborhood Survey. Available at: <a href="http://www.lasurvey.rand.org/">http://www.lasurvey.rand.org/</a> . Accessed Oct 2009.
- 1	8.	Standards of medical care in diabetes. Diabetes Care 2004;27 Suppl 1:S15-35.
١	9.	Rohlfing CL, Little RR, Wiedmeyer HM, et al. Use of GHb (HbA1c) in screening for undiagnosed diabetes in the U.S. population. <i>Diabetes Care</i> 2000;23(2):187-91.
1	10.	Centers for Disease Control and Prevention. Healthy Weight - it's not a diet, it's a lifestyle! About BMI for Adults. Available at: <a href="http://www.cdc.gov/healthyweight/assessing/bmi/adult-bmi/index.html">http://www.cdc.gov/healthyweight/assessing/bmi/adult-bmi/index.html</a> . Accessed
- 1		November 2010.
- 1		World Health Organization. BMI classification. Available at: http://apps.who.int/bmi/index.jsp?introPage=intro 3.html. Accessed February 2010.
		National Heart Lung and Blood Institite, Department of Health and Human Services, National Institutes of Health. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. NIH publication No. 98-4083 1998.
	13.	National Heart Lung and Blood Institite, Department of Health and Human Services, National Institutes of Health. Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 03-5231 2003.
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