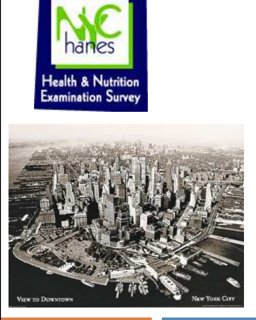

Inequalities among the Insured in Awareness, Treatment and Control of Hypertension and Hypercholesterolemia: Findings from the 2004 NYC HANES

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Presenter Disclosures

Quynh Nguyen

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"No relationships to disclose"

Background

- An abundance of previous studies have demonstrated the importance of health insurance on health and healthcare outcomes. Less research, however, has examined the magnitude of inequities in disease management among the insured.

Objectives

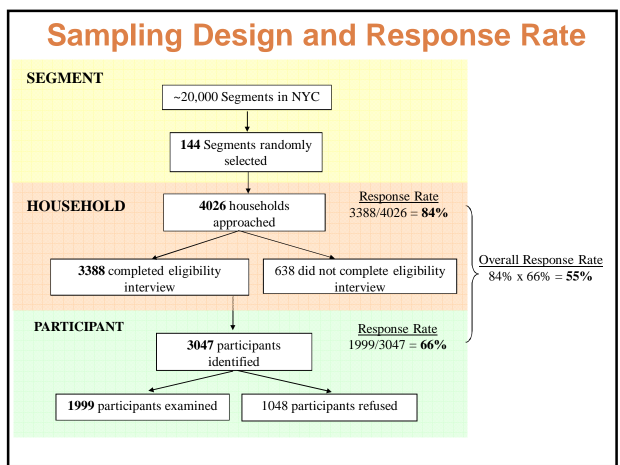
- Examine the impact of insurance type and possession of a routine place of care on chronic disease management among the insured
- Investigate sociodemographic inequalities in the management of hypertension and hypercholesterolemia among the insured

Hypotheses

- Having a routine place of care and having private health insurance will improve chronic disease management among the insured.
- We will continue to see sociodemographic inequalities in chronic disease management among the insured.

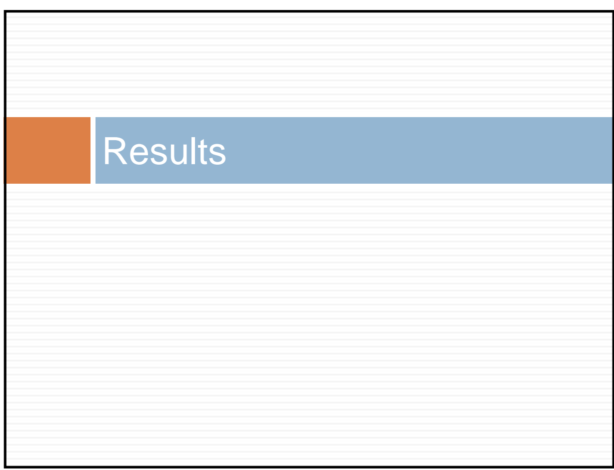
NYC HANES

- **Time Frame**: June – December 2004
- **Population**: non-institutionalized NYC adult residents aged 20+ years
- **Sampling**: Population-based, cross-sectional, 3-stage cluster sample
- **Sample size**: 2000 adults from ~4000 households in 144 neighborhoods
- **Examination data**: Collected at four field clinics



Study sample

- Our analysis was restricted to insured adults aged 20-64 (n=1356).
- In addition, we analyzed subsamples of people with hypercholesterolemia (n=240) and hypertension (n=212).



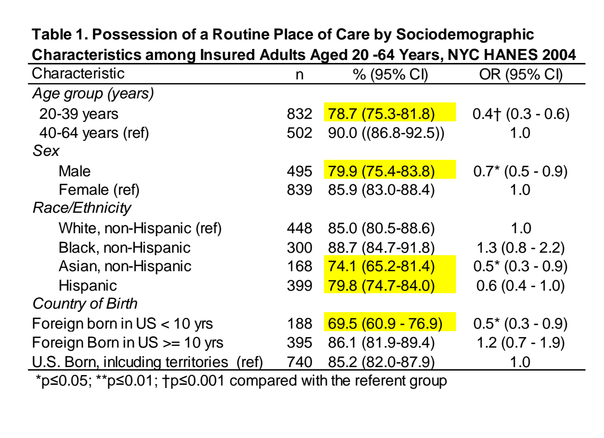


Table 1. Possession of a Routine Place of Care by Sociodemographic Characteristics among Insured Adults Aged 20 -64 Years, NYC HANES 2004

Characteristic	n	% (95% CI)	OR (95% CI)
Age group (years)			
20-39 years	832	78.7 (75.3-81.8)	0.4† (0.3 - 0.6)
40-64 years (ref)	502	90.0 ((86.8-92.5))	1.0
Sex			
Male	495	79.9 (75.4-83.8)	0.7* (0.5 - 0.9)
Female (ref)	839	85.9 (83.0-88.4)	1.0
Race/Ethnicity			
White, non-Hispanic (ref)	448	85.0 (80.5-88.6)	1.0
Black, non-Hispanic	300	88.7 (84.7-91.8)	1.3 (0.8 - 2.2)
Asian, non-Hispanic	168	74.1 (65.2-81.4)	0.5* (0.3 - 0.9)
Hispanic	399	79.8 (74.7-84.0)	0.6 (0.4 - 1.0)
Country of Birth			
Foreign born in US < 10 yrs	188	69.5 (60.9 - 76.9)	0.5* (0.3 - 0.9)
Foreign Born in US >= 10 yrs	395	86.1 (81.9-89.4)	1.2 (0.7 - 1.9)
U.S. Born, inlcuding territories (ref)	740	85.2 (82.0-87.9)	1.0

*p≤0.05; **p≤0.01; †p≤0.001 compared with the referent group

Table 2. Awareness, Treatment and Contol of Hypertension among insured adults with the condition, ages 20-64

	Hypertension			
	Awareness (Logistic Regression)	Medication Among Aware (Logistic Regression)	Systolic Blood Pressure Among Aware (Linear Regression)	
	AOR (95% CI)	AOR (95% CI)	b	SE
Insurance type				
Medicaid/other public insurance	1.2 (0.4 - 3.8)	1.2 (0.4 - 3.0)	6.5*	3.2
Private insurance coverage (ref)	1.0	1.0	0	
Have a routine place of care				
No	0.8 (0.1 - 4.6)	0.2* (0.0 - 0.7)	16.2*	6.9
Yes (ref)	1.0	1.0	0	

*p≤0.05; **p≤0.01; †p≤0.001 compared with the referent group
N=212 with hypertension
Models controlled for age, sex, race/ethnicity, income, education, foreign-birth

Table 3. Awareness, Treatment and Contol of Hypercholesterolemia among insured adults with the condition, ages 20-64

	Hypercholesterolemia			
	Awareness (Logistic Regression)	Medication Among Aware (Logistic Regression)	Total Cholesterol Among Aware (Linear Regression)	
	AOR (95% CI)	AOR (95% CI)	b	SE
Insurance type				
Medicaid/other public insurance	1.4 (0.7 - 3.1)	2.4 (1.0 - 5.8)	-11.1	8.6
Private insurance coverage (ref)	1.0	1.0	0	
Have a routine place of care				
No	0.1† (0.0 - 0.3)	0.1** (0.0 - 0.6)	32.9*	12.9
Yes (ref)	1.0	1.0	0	

*p≤0.05; **p≤0.01; †p≤0.001 compared with the referent group
N=240 with hypercholesterolemia
Models controlled for age, sex, race/ethnicity, income, education, foreign-birth

Sociodemographic inequalities: Hypertension management

- Awareness of hypertension
  - Males were more likely than females to be aware (AOR: 3.3; 95% CI: 1.2-9.2)
  - Individuals with less than a high school education were less likely to be aware than those with more than a high school education (AOR: 0.3; 95% CI: 0.1-1.0)

Sociodemographic inequalities: Hypercholesterolemia management

- Adults aged 20-44 were less likely to be aware (AOR: 0.2; 95% CI: 0.1-0.5), treated (AOR: 0.2; 95% CI: 0.1-0.5), and had worse total cholesterol (+28 mg/dL) than older adults.
- Individuals with annual family incomes < $20,000 were less likely to be aware (AOR: 0.3; 95% CI: 0.1-0.8).

Limitations

- Only non-institutionalized populations
  - People in nursing homes and other institutions or group quarters were not surveyed.
- 55% survey response rate
  - Sample weights adjusted for age, race/ethnicity, gender, income, education, language spoken at home and household size.

Limitations cont'd

- Blood pressure measurements not taken at separate visits
  - Care guidelines for the diagnosis of hypertension are based on 2+ clinic visits
- We did not take into account co-morbidities and risk profiles when accessing treatment rates. (i.e. the ideal treatment rate is not necessarily 100%).

Conclusions

- Among the insured non-elderly, having a routine place of care was significantly associated with increased hypertension treatment and control; awareness, treatment, and control of hypercholesterolemia

Conclusions cont'd

- Younger aged adults, males, Hispanics and Asians, and foreign-born individuals < 10 years in the U.S. were less likely to have a routine place of care
- Among the insured, we continue to see inequalities in disease management by sociodemographics– controlling for routine place of care and insurance type

Conclusions cont'd

- To improve chronic disease management, we must focus more attention on persistent health inequities among the insured.
- In addition to expanding access to insurance coverage, we must address residual barriers to healthcare use and appropriate care.

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