



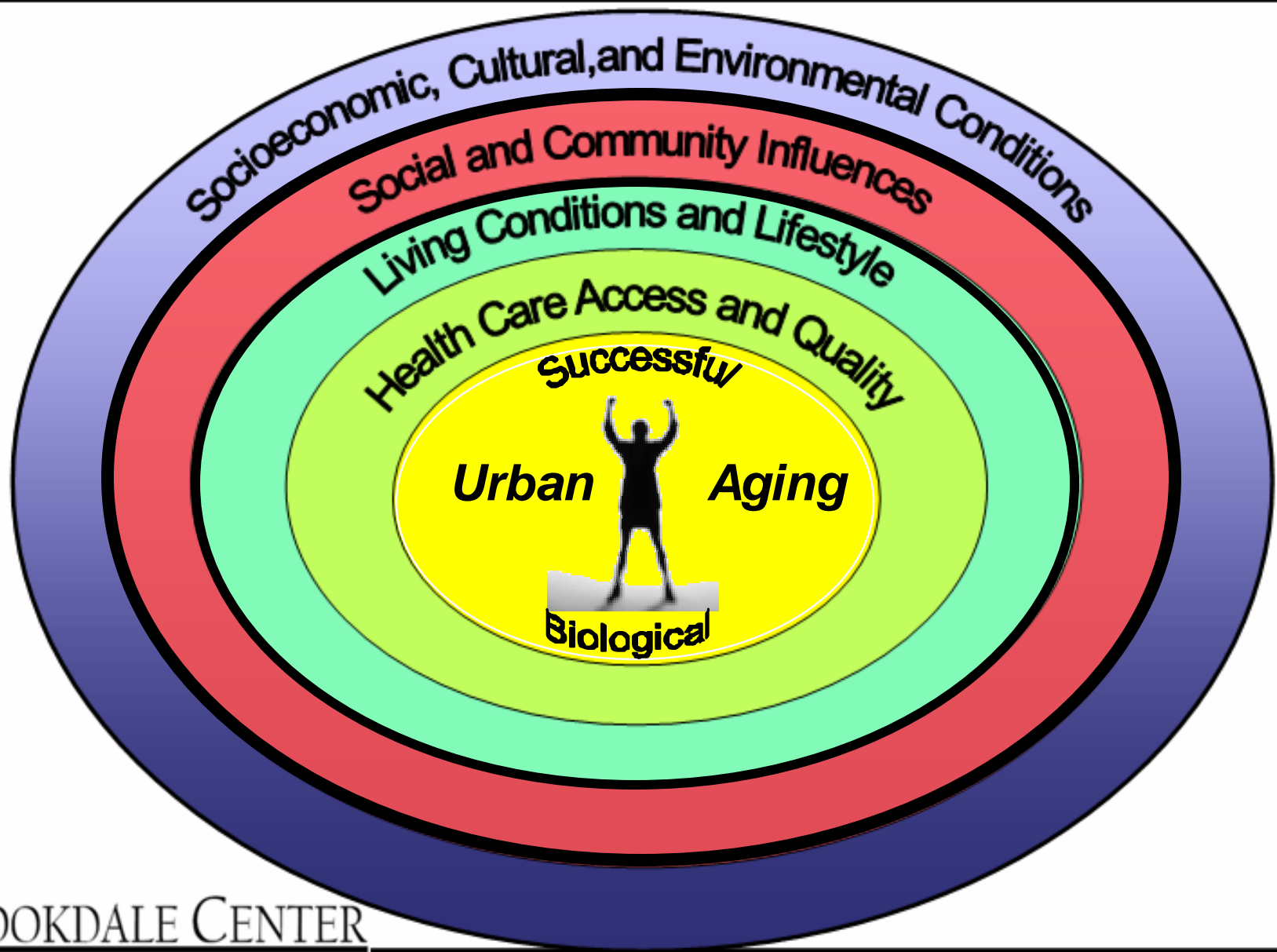
Bridging the Divide Between Health Care and Aging Services

Health Status Disparities among Older Adults Attending NYC Senior Centers

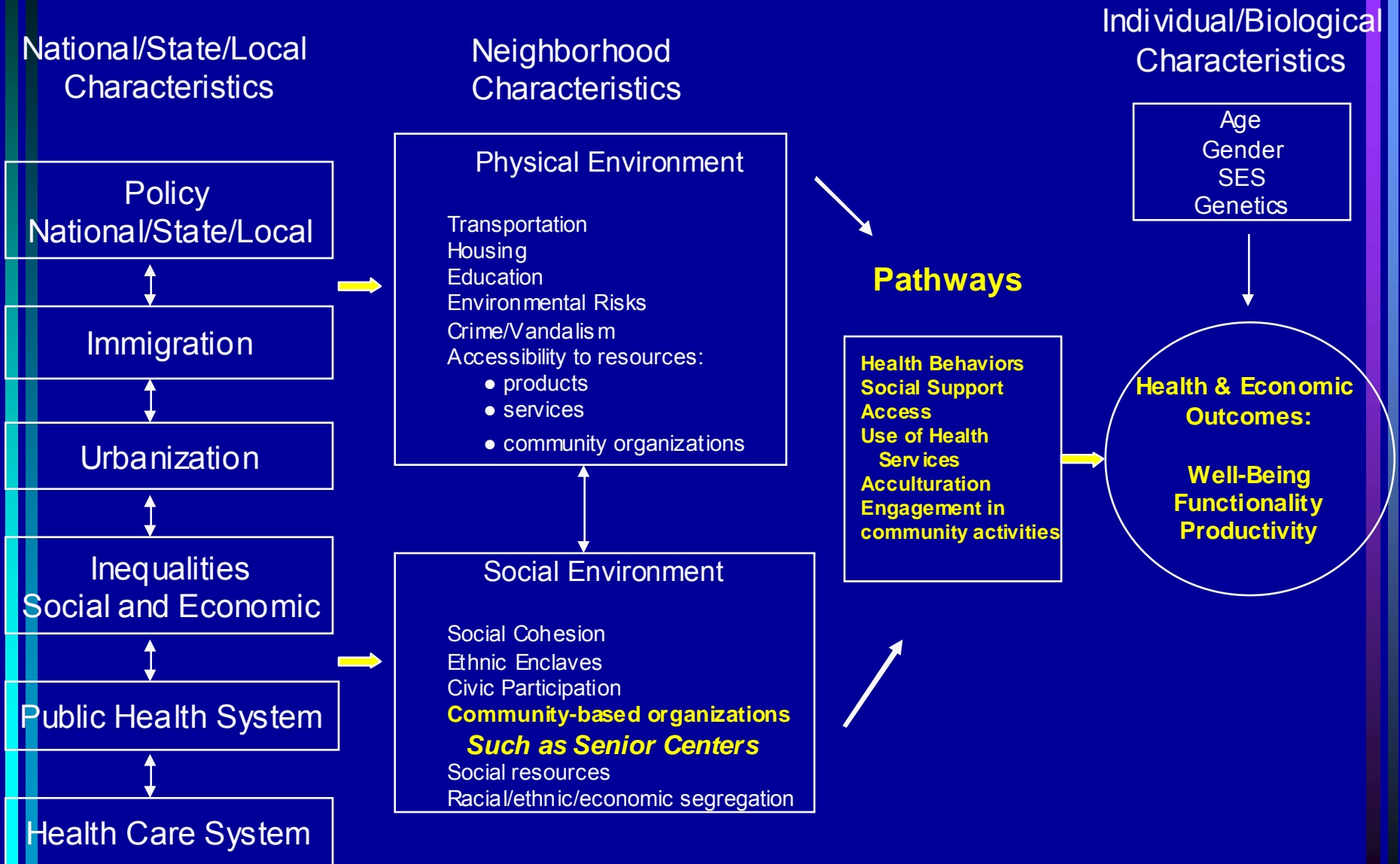
Marianne C. Fahs, PhD MPH
Professor

Rose Dobrof Acting Executive Director
Brookdale Center for Healthy Aging and Longevity
Hunter College, City University of New York

Conditions for Healthy Urban Aging



Conceptual Framework of Urban Aging



Economic Myths of Aging

- **Myth #1: Preventive medicine is not cost effective after age 65**
- **Myth #2: The elderly are a drain on the health care system**
- **Myth #3: The elderly are a drain on the economy**
- **Myth #4: Increased longevity will cause increased social costs associated with degenerative disease and disability**

What can Economics tell us?

A 10 year gain in life expectancy translates into nearly 1 additional percentage point of annual income growth

Bloom DL and Canning D. The Health and Wealth of Nations. Science 287. pp.1207-1209. 2000.

Health to income – lots of oomph!!!



Economic Gains from Longevity

Gains in life expectancy from 1970-2000

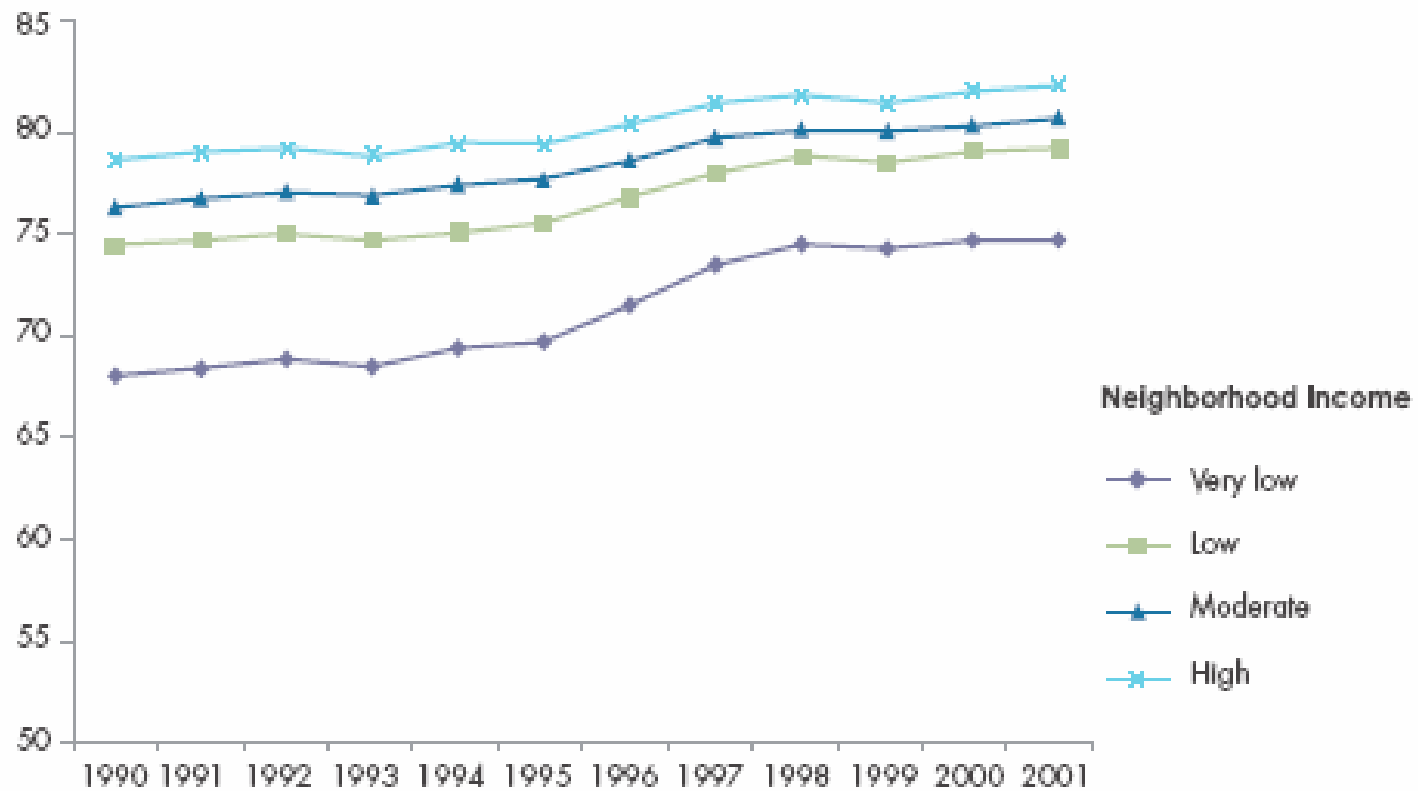
=

+ **\$3.2 trillion** per year to National
Wealth!

Murphy and Topel, NBER Working Paper No. w11405, June 2005.

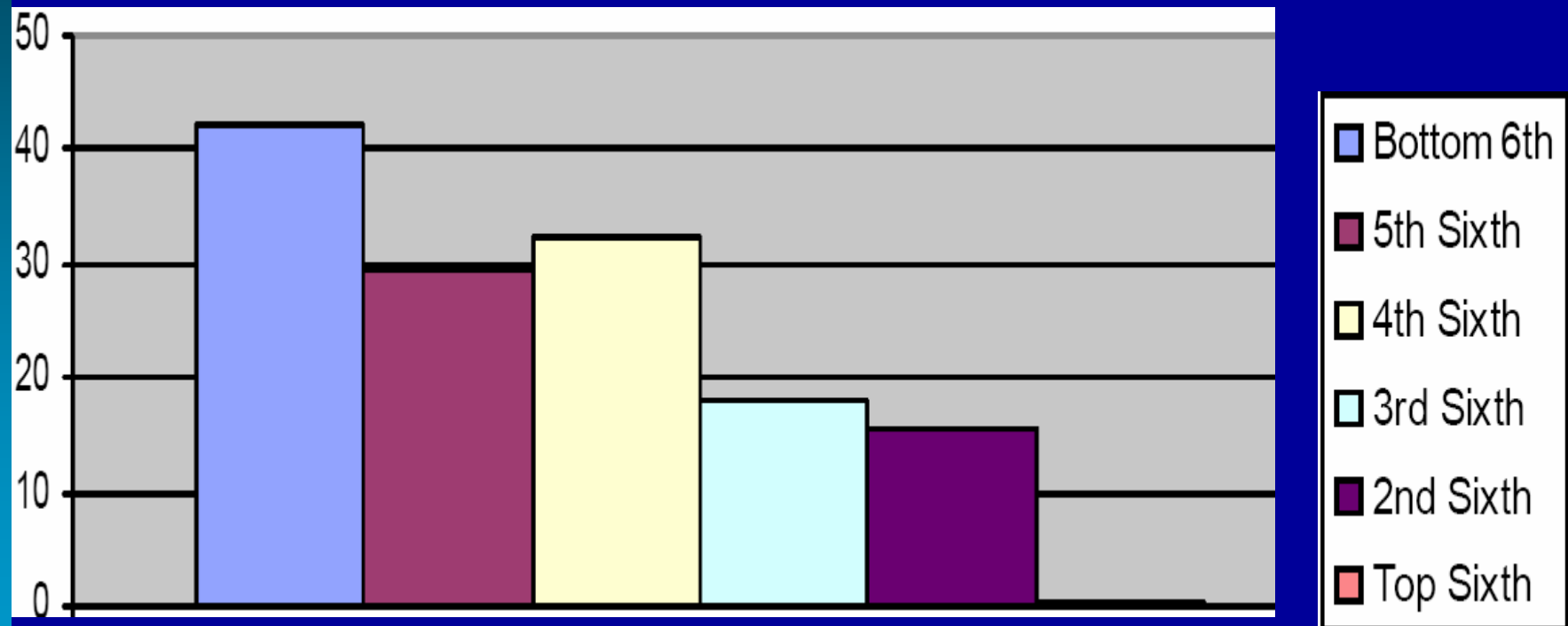
Life Expectancy Varies By Neighborhood Income Level

Life expectancy at birth (years)



Sources: Bureau of Vital Statistics, NYC DOHMH, 1990-2001; U.S. Census 1990 and 2000/ NYC Department of City Planning

Percentage increase in NYC diabetes hospitalization rates by neighborhood income, 1995 to 2005.



Source: Assessing and Addressing Income Disparities in the Health of New Yorkers.
Office of the New York City Comptroller. September 2007

STRIKING DISPARITIES

Number of hospitalizations per 100,000

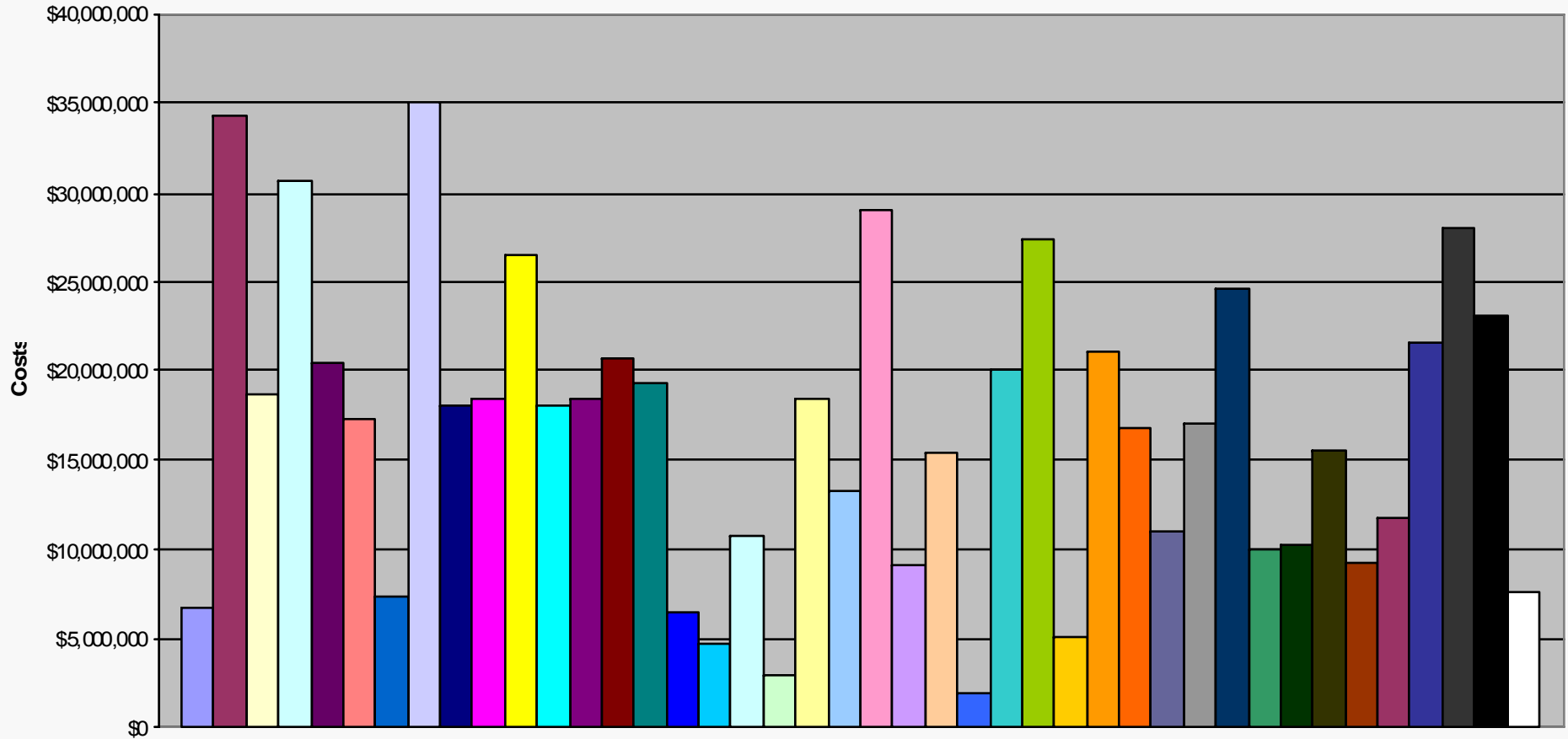
- Bottom sixth = 204.2
- 5th sixth = 78.0
- 4th sixth = 66.5
- 3rd sixth = 36.2
- 2nd sixth = 24.0
- Top sixth = 0.6

Hospital Charges in New York City For Diabetes and Related Complications

➤ **\$ 2,000,000,000**
per year!

(in 2004 dollars)

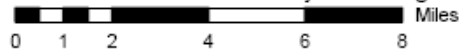
Total Hospital Costs for Diabetes and Related Chronic Conditions By NYC Neighborhood, 2004



- Neighborhood
- Bayside - Little Neck
 - Bedford Stuyvesant - Crown ★
 - Bensonhurst - Bay Ridge
 - Borough Park ★
 - Canarsie - Flatlands
 - Central Harlem - Morningsid
 - Chelsea - Clinton
 - Coney Island - Sheepshead B ★
 - Crotona - Tremont
 - Downtown - Heights - Slope
 - East Flatbush - Flatbush ★
 - East Harlem
 - East New York
 - Flushing - Clearview
 - Fordham - Bronx Park
 - Fresh Meadows
 - Gramercy Park - Murray Hill
 - Greenpoint
 - Greenwich Village - Soho
 - High Bridge - Morrisania
 - Hunts Point - Mott Haven
 - Jamaica ★
 - Kingsbridge - Riverdale
 - Long Island City - Astoria
 - Lower Manhattan
 - Northeast Bronx
 - Pelham - Throgs Neck ★
 - Port Richmond
 - Ridgewood - Forest Hills
 - Rockaway
 - South Beach - Tottenville
 - Southeast Queens
 - Southwest Queens
 - Stapleton - St. George
 - Sunset Park
 - Union Square - Lower East S
 - Upper East Side
 - Upper West Side
 - Washington Heights - Inwood
 - West Queens ★
 - Williamsburg - Bushwick
 - Willowbrook

2004 Total Hospital Days by Neighborhood for Principal Diagnosis of Diabetes or Related Chronic Conditions *

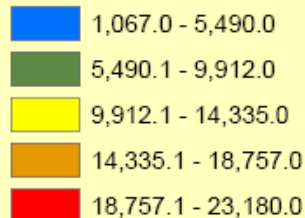
using
NYS SPARCS 2004 data
and presented by
New York City UHF Neighborhoods



Produced by: Hunter College/CUNY
School of Health Sciences

Urban Public Health and Brookdale Center on Aging

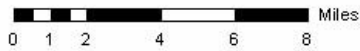
Legend



* Other chronic disease due to diabetes: Neurological symptoms; Peripheral vascular disease; Cardiovascular disease; Renal complications; Endocrine complications; Ophthalmic complications, and; Other
Diabetes Care 26:917-932, 2003



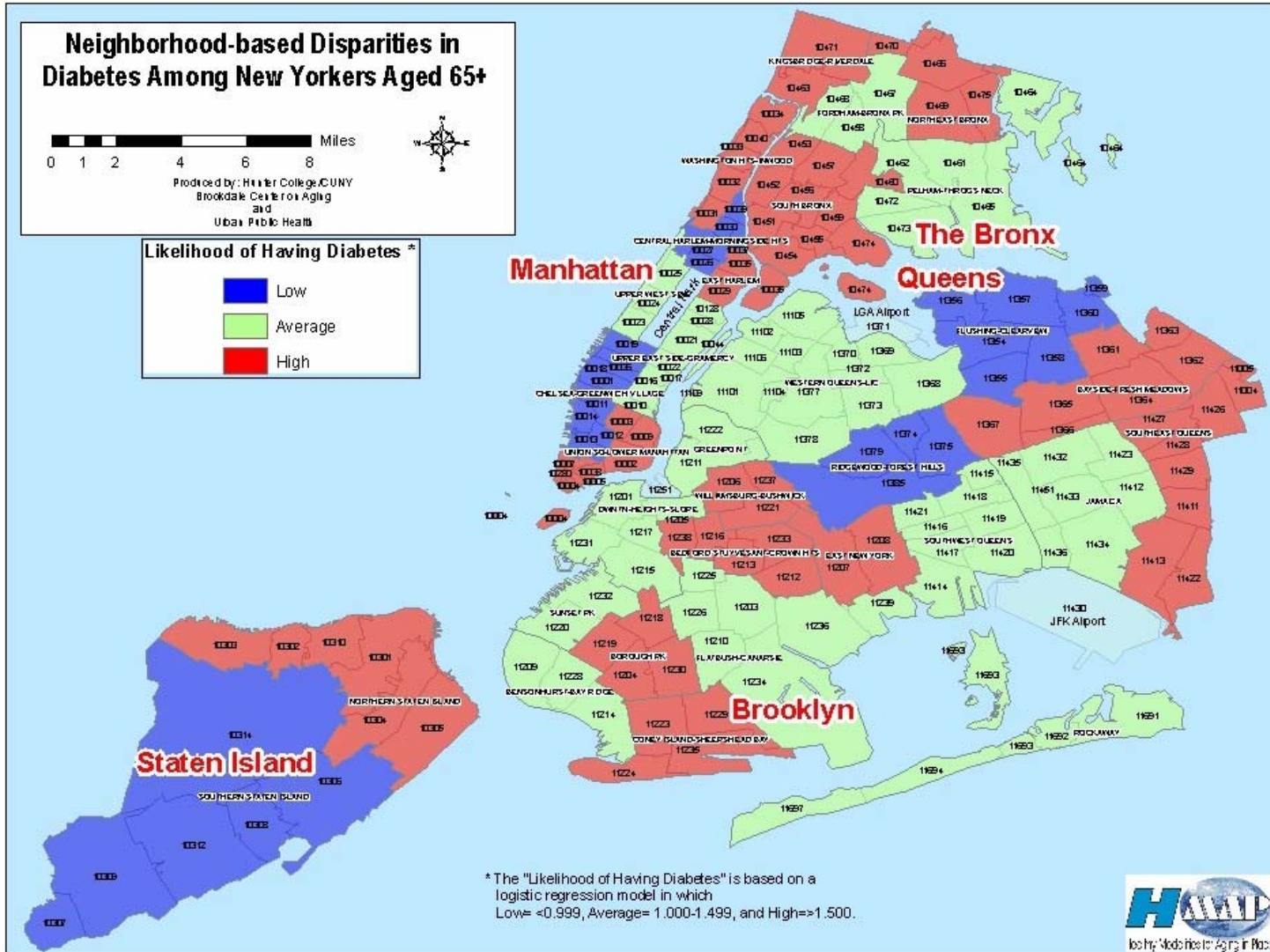
Neighborhood-based Disparities in Diabetes Among New Yorkers Aged 65+



Produced by: Hunter College/CUNY
Brookdale Center for Aging
and
Urban Public Health

Likelihood of Having Diabetes *

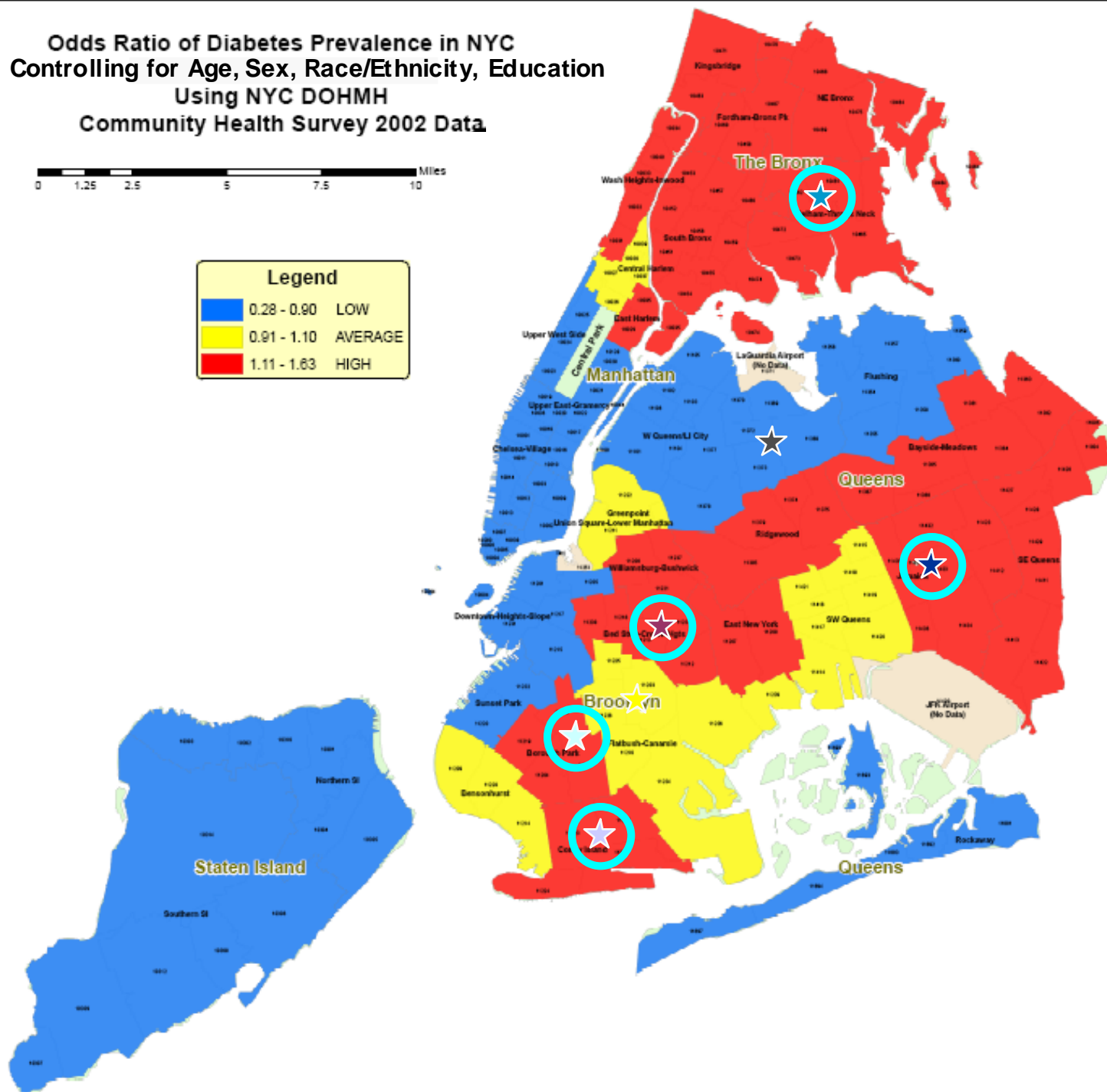
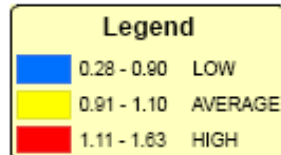
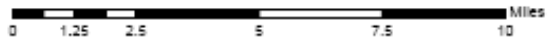
- Low
- Average
- High



* The "Likelihood of Having Diabetes" is based on a logistic regression model in which Low= <0.999, Average= 1.000-1.499, and High=>1.500.



Odds Ratio of Diabetes Prevalence in NYC
 Controlling for Age, Sex, Race/Ethnicity, Education
 Using NYC DOHMH
 Community Health Survey 2002 Data.



Re-inventing Senior Centers?

A community focal point on aging where older persons as in individuals or in groups come together for services and activities that enhance their dignity, support their independence and encourage their involvement in and with the community.

-The National Council on Aging (1979)

What's missing?

- Health!

How Many?

- No Formal Census
- US AOA estimate (2004):

10,000-16,000

- Research to date is limited for policy and practice

“To have evidence-based practice you need practice-based evidence.” [2]

- [2] Green LW. Public Health Asks of Systems Science: To Advance Our Evidence-based Practice, Can You Help Us Get More Practice-Based Evidence? *American Journal of Public Health* 96:3. 2006. 406-409.

Senior Center Health Indicators Demonstration Project

- Representative sample of centers and participants
- Year 1 = Baseline Health Indicators Assessment
- Year 2 = Evidence-based interventions
in collaboration with Senior Centers
- Year 3 = Follow up Health Indicators Assessment

The structured survey instrument

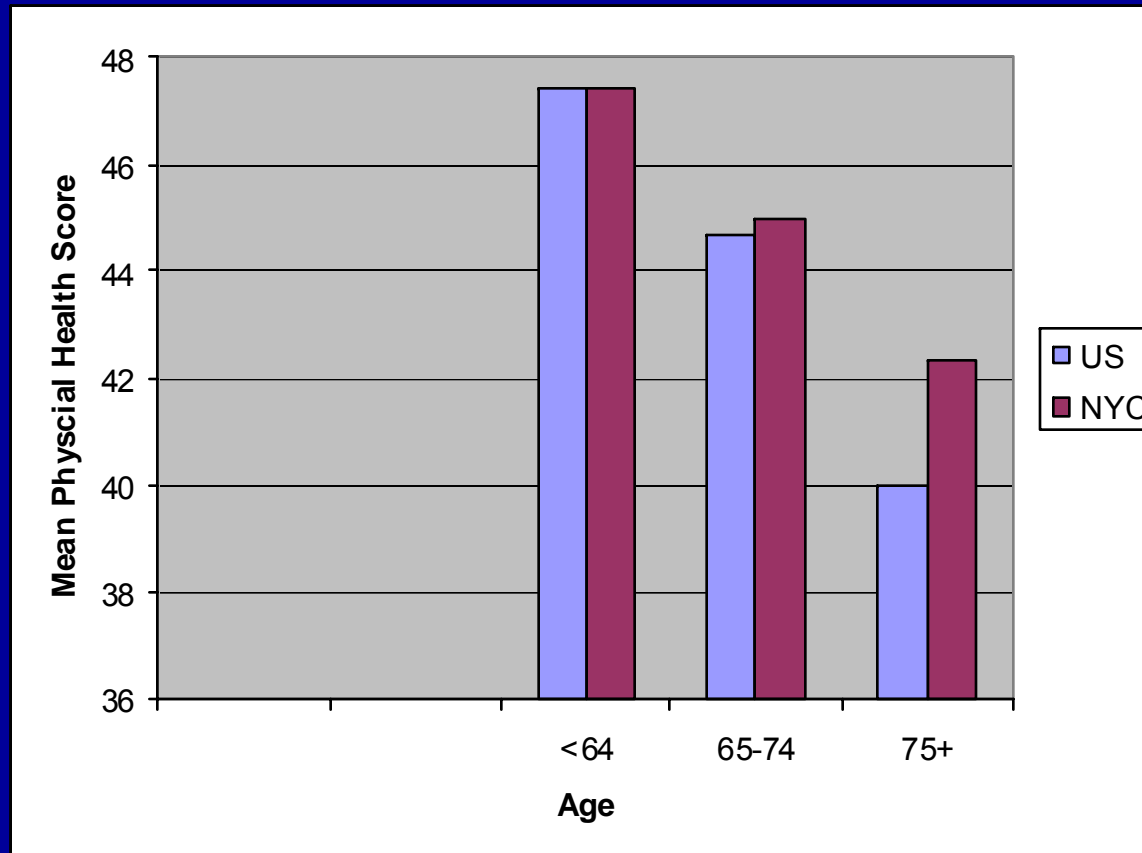
Standardized questionnaire items from validated national and local surveys

- functional status
- mental and physical health status
- social networks
- health literacy
- access to health care
- cancer screenings
- demographic and socioeconomic characteristics

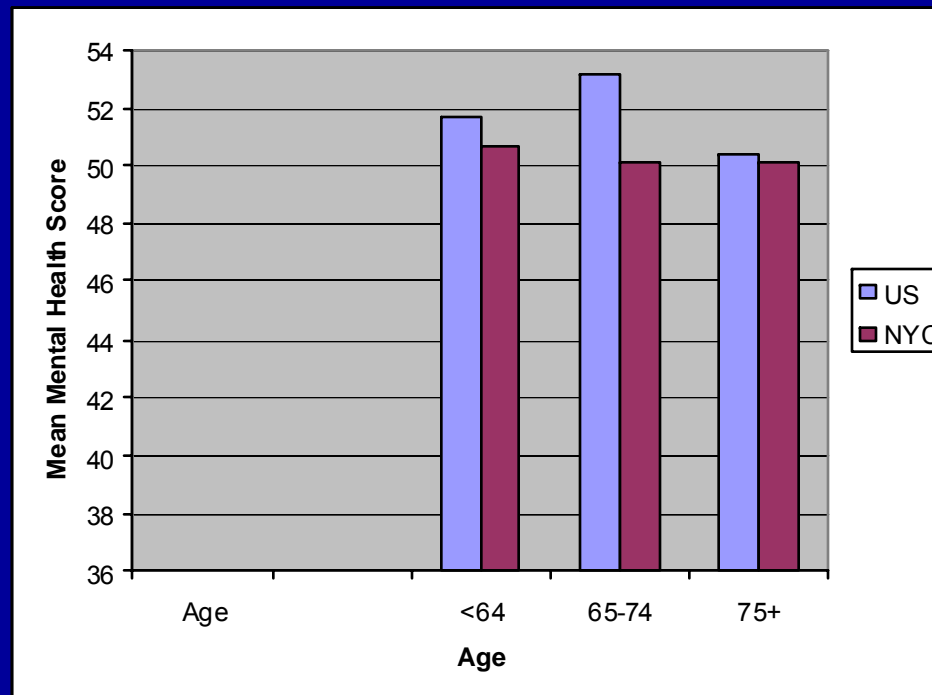
PILOT = TEN SENIOR CENTERS stratified by Borough and Race/Ethnicity

| Borough | Site | Race/Ethnicity |
|---------------|----------------------|--------------------------|
| Brooklyn | Ft Greene | Black |
| | United | Latino |
| Bronx | Dora and Harry Simon | White |
| | James Monroe | Black |
| Queens | Korean American | Korean |
| | United Hindu | Guyanese |
| Staten Island | Cassidy Coles | White |
| | West Brighton | Black, Latino, and White |
| Manhattan | Beatrice Lewis | Black |
| | City Hall | Chinese |

Physical Health Score (SF 36)



Mental Health Score (SF 36)



SF 36 By Race/Ethnicity

| | Asian (n = 173) | Black (n=126) | Latino (n=95) | White (n=78) | Total (n=483) |
|--------------------|--------------------|------------------|------------------|-----------------|------------------|
| PCS - NS (mean) | 45.3 | 43.8 | 43.2 | 43.3 | 44.3 |
| MCS *** (mean) | 48.8 | 52.5 | 46.9 | 52.9 | 50.2 |

Note: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ NS=Not Significant

PHQ-2 by Race/Ethnicity

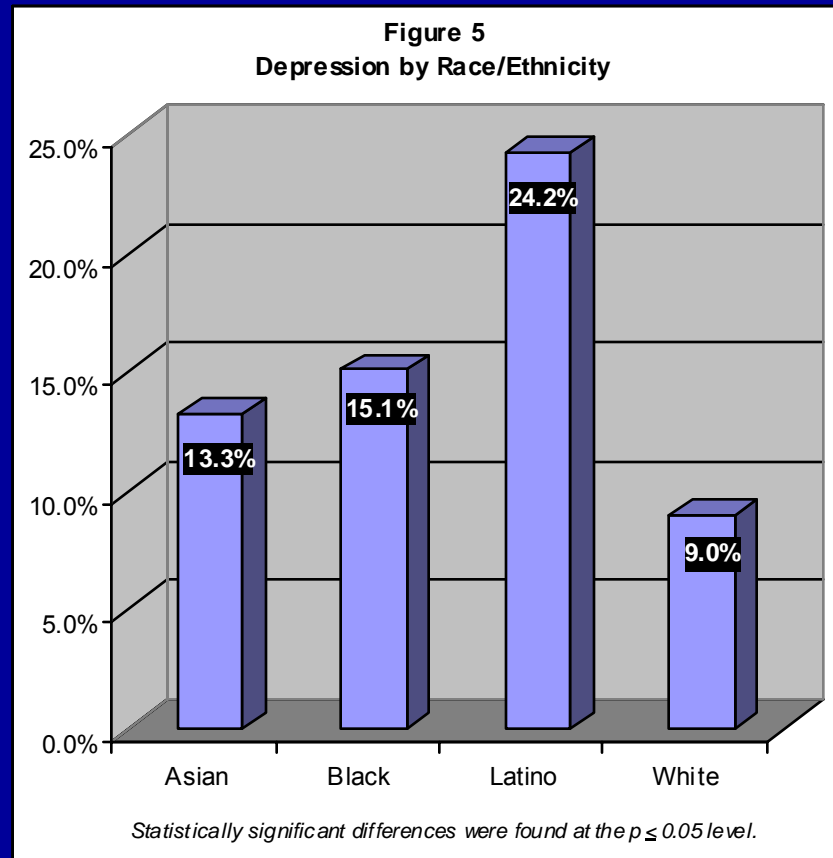
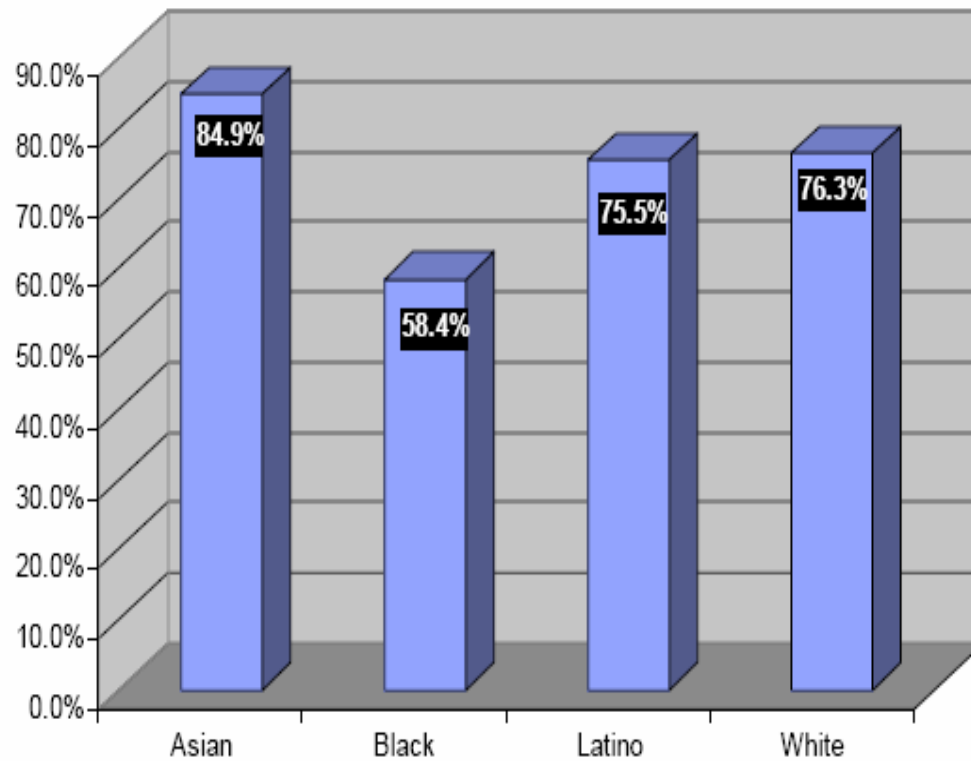


Table 14: Prevalence of Health Problems by Race/Ethnicity

| | Asian (n = 173) % | Black (n=126) % | Latino (n=95) % | White (n=78) % |
|----------------------------------|-------------------------|-----------------------|-----------------------|----------------------|
| Hypertension* | 59.1 | 66.4 | 73.7 | 56.4 |
| High Cholesterol | 57.9 | 51.3 | 61.1 | 43.9 |
| Arthritis | 43.5 | 54.8 | 57.9 | 53.8 |
| Heart disease | 26.0 | 32.8 | 29.8 | 32.0 |
| Diabetes | 24.7 | 23.8 | 37.2 | 20.5 |
| Osteoporosis | 24.8 | 17.6 | 26.6 | 31.2 |
| Asthma* | 8.9 | 16.7 | 21.0 | 14.1 |
| Chronic Bronchitis or Emphysema | 12.4 | 13.5 | 23.2 | 10.3 |
| Ulcer | 13.8 | 11.2 | 8.5 | 7.7 |
| Fracture of spine, hip, or wrist | 13.5 | 7.2 | 5.3 | 11.5 |
| Cancer*** | 2.9 | 8.2 | 12.6 | 14.3 |
| Stroke | 7.6 | 8.8 | 6.3 | 5.1 |
| Broken hip | .6 | 1.6 | 4.2 | 3.9 |
| Tuberculosis* | 1.8 | 5.6 | 1.0 | 0.0 |

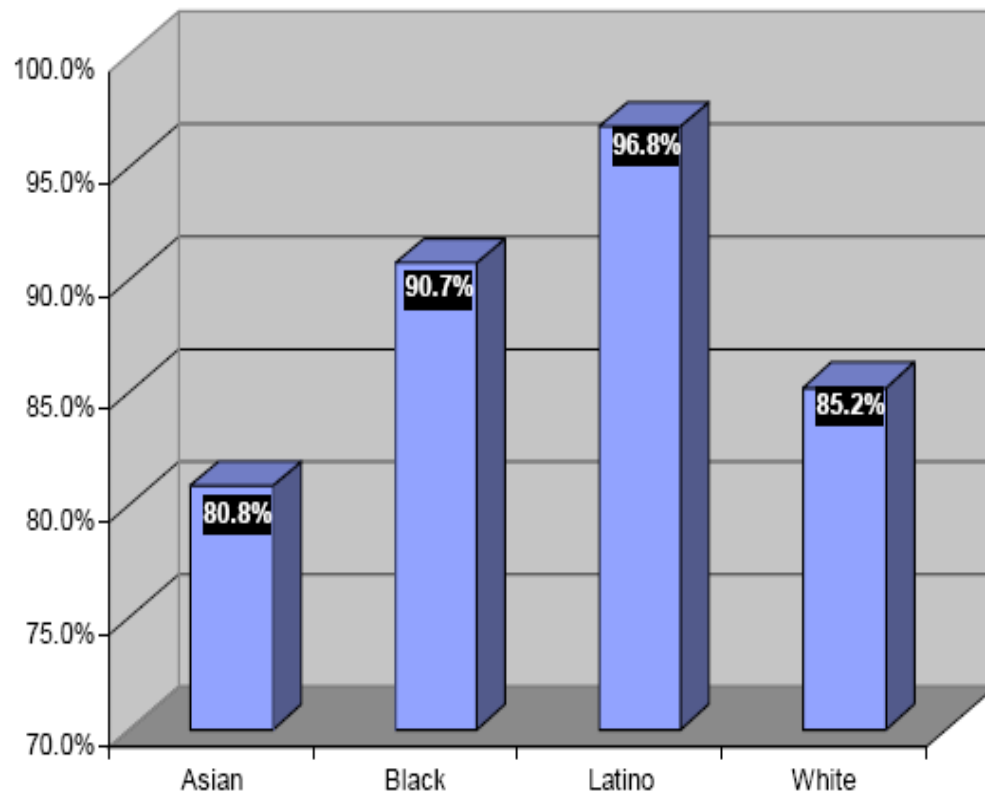
Note: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ NS=Not Significant

Figure 30
Flu Shot Within Past 12 Months by Race/Ethnicity



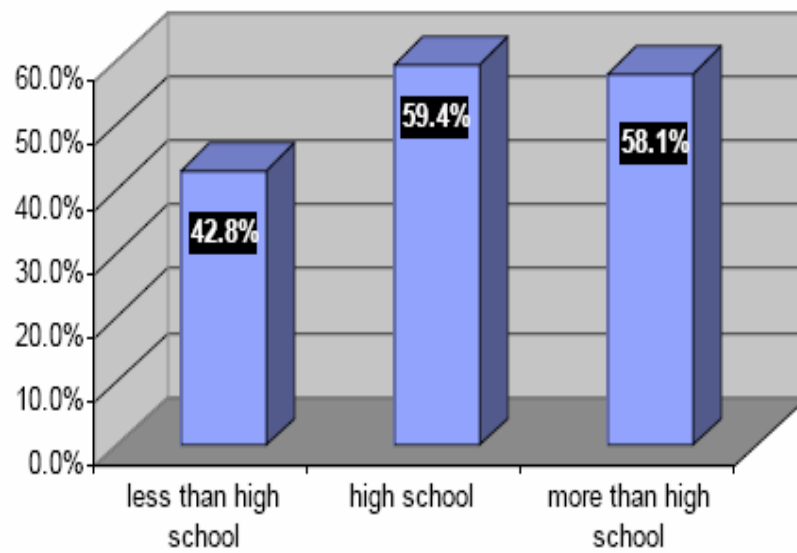
Statistically significant differences were found at the $p \leq 0.001$ level.

Figure 33
Ever Had Mammogram by Race/Ethnicity



Statistically significant differences were found at the $p \leq 0.05$ level.

Figure 36
Sigmoidoscopy or Colonoscopy by Education



Statistically significant differences were found at the $p \leq 0.01$ level.



The Brookdale Center Toolkit of Evidence-Based Policy Recommendations for Senior Centers in New York City

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| Health Concern | Recommendations | Exemplary Programs* |
|------------------|--|--|
| Cognitive health | <ul style="list-style-type: none"> • Mind-stimulating activities ¹⁻³ • Vitamin use • Exercise programs | <ul style="list-style-type: none"> • <u>A</u>dvanced <u>C</u>ognitive <u>T</u>raining for <u>I</u>ndependent and <u>V</u>ital <u>E</u>lderly (ACTIVE)¹⁻³ |
| Depression | <ul style="list-style-type: none"> • Depression screening ⁴⁻⁶ • Individual/Group counseling sessions • Exercise programs, Qi Chong • Cultural competency / Community partnerships | <ul style="list-style-type: none"> • Healthy PEARLS Program (Program to <u>E</u>ncourage <u>A</u>ctive <u>R</u>ewarding <u>L</u>ives for <u>S</u>eniors)⁴ • Healthy IDEAS (Identifying <u>D</u>epression, <u>E</u>mpowering <u>A</u>ctivities for <u>S</u>eniors) for a Better Life Project⁴⁻⁶ |
| Hypertension | <ul style="list-style-type: none"> • Hypertension screening / Annual physicals ^{7,8} • Diet modification ⁹⁻¹³ • Chronic disease self-management ^{4,14} • Stress management programs ¹⁵ • Cultural competency / Community partnerships ¹⁵ | <ul style="list-style-type: none"> • Heart, Body, and Soul Program ^{7,8} • DASH Diet (<u>D</u>ietary <u>A</u>pproaches to <u>S</u>top <u>H</u>ypertension)⁹⁻¹³ • Baltimore Church High Blood Pressure Program ^{4,14} • Chronic Disease Self-Management Program¹⁵ • Transcendental Meditation Program¹⁶ |
| Asthma | <ul style="list-style-type: none"> • Chronic disease self-management ¹⁴ • Cultural competency / Community partnerships • Risk factor assessment | <ul style="list-style-type: none"> • Plan, Do, Check, Act Program ^{4,16} • Chronic Disease Self-Management Program¹⁴ |
| Heart disease | <ul style="list-style-type: none"> • Diet modification ^{4,18} • Exercise programs ¹⁹ • Chronic disease self-management ¹⁴ • Cultural competency / Community partnerships ^{4,21} | <ul style="list-style-type: none"> • Compañeros en la Salud (Partners in Health) Project ^{4,18} • Aging 2000 Program (Take Charge of Your Health)¹⁹ • Women Take PRIDE in Managing Heart Disease Program²⁰ • Chronic Disease Self-Management Program¹⁴ • Hearts to G-d Program ^{4,21} |
| Tuberculosis | <ul style="list-style-type: none"> • Cultural competency / Community partnerships ^{4,16} | <ul style="list-style-type: none"> • Plan, Do, Check, Act Program ^{4,16} |

“The aging of the U.S. population is one of the major public health challenges we face in the 21st century.” [1]

[1] Julia Louis Gerberding, MD, MPH, Director, Center for Disease Control and Prevention, U. S. Department of Health and Human Services, quoted in *The State of Aging and Health in America 2007*. Centers for Disease Control and Prevention, and the Merck Company Foundation.

- Thank you!