

CITIES, HEALTH AND WELL-BEING

NOVEMBER 2011

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Cities, Population Health and Health Care Systems: New York, London, Paris and Hong Kong



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Cities, Population Health and Health Care Systems: New York, London, Paris, Tokyo, Hong Kong

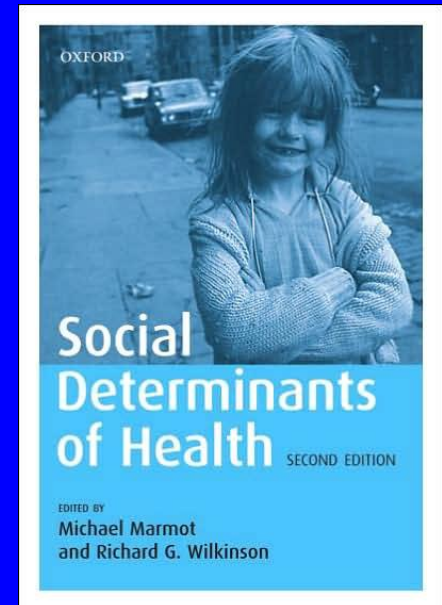
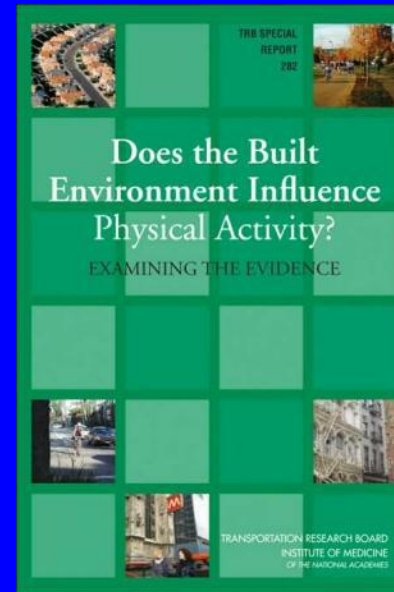
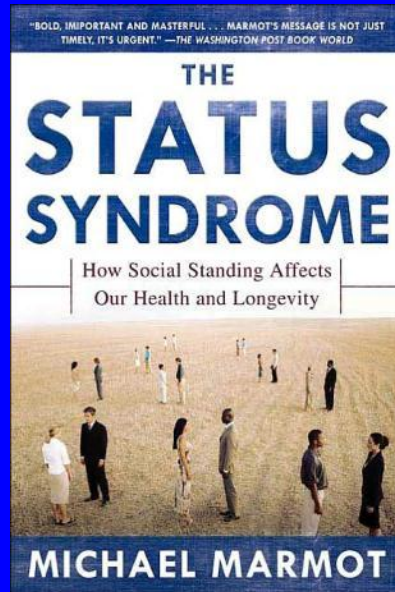
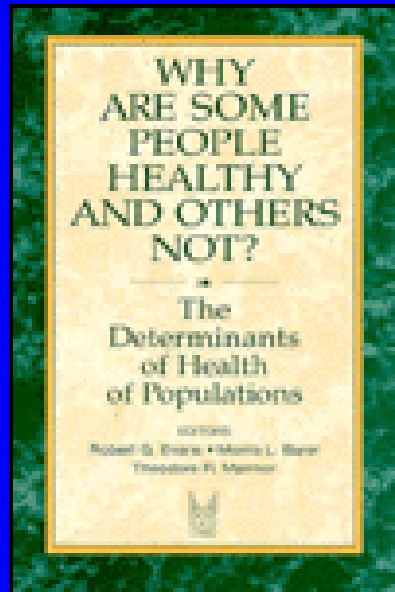
November 16, 2011

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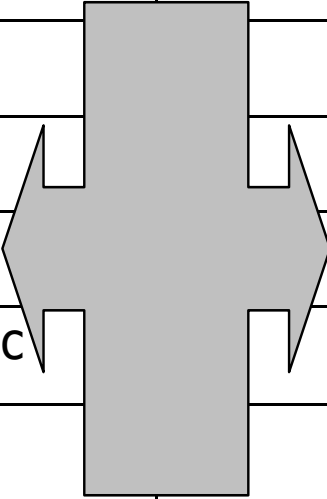
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Increasing Attention to the Social and Environmental Determinants of Health



Relationships Among Cities, Population Health and Health System Characteristics

Urban/Neighborhood Characteristics		Health System Characteristics
Economic base		Health care resources
Housing		Organizational factors
Transportation		Health insurance coverage
Socio-economic and demographic		Social safety-net
Physical environment		













24
HOUR

FITNESS

FITNESS

24
HOUR

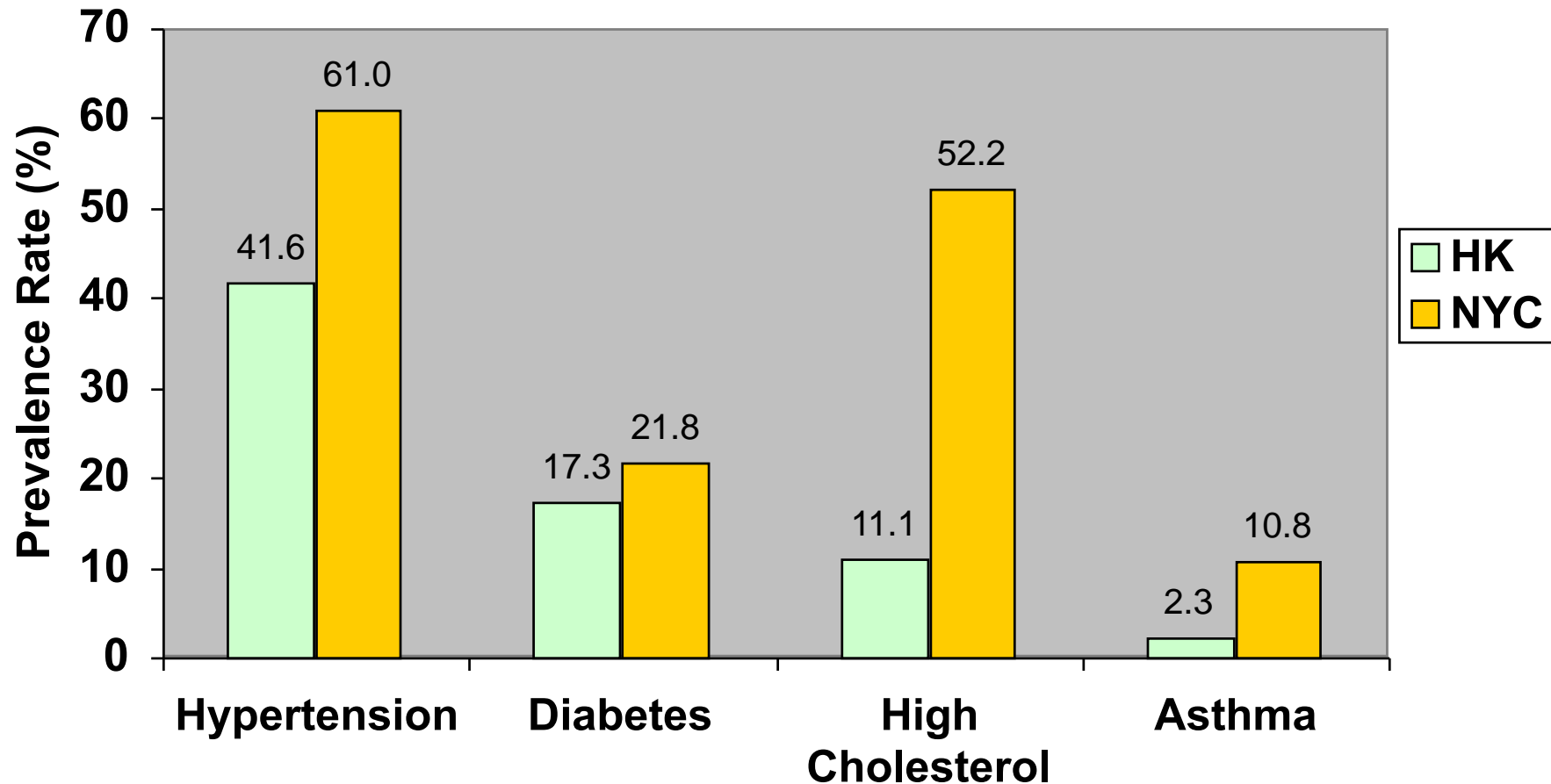
POINT LON
HANDICAP
TO UPPER
LOCATED
24 HOUR



Measures of Population Health: New York, London, Paris, Tokyo and Hong Kong (2000–2004)

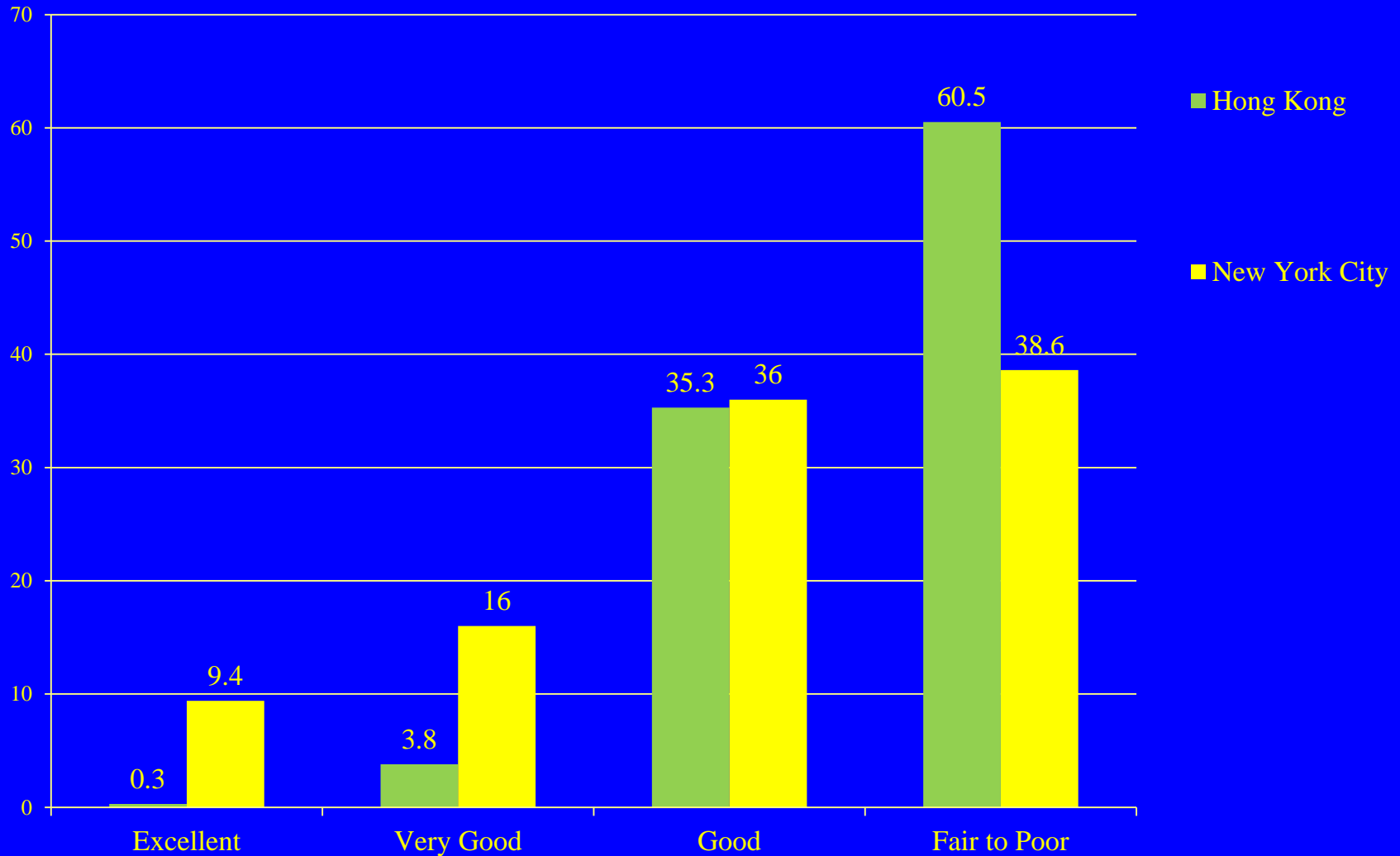
	Infant mortality (deaths before age 1 per 1,000 live births)	Life expectancy at birth: males (years)	Life expectancy at birth: females (years)	Life expectancy at 65: males (years)	Life expectancy at 65: females (years)
New York	6.2	74.5 (2000)	80.2 (2000)	17.0 (2000)	20.1 (2000)
Greater London	5.4	76.1 (2000–2004)	80.9 (2000–2004)	15.6 (1997–1999)	19.2 (1997–1999)
Paris and First Ring**	4.0 ¹	77.6 ³ (2002)	83.1 ³ (2002)	17.7 (1999)	21.7 (1999)
Tokyo (23 wards)	2.8 (2001–2004)	77.7 (2000)	NA	17.7 (2000)	22.2 (2000)
Hong- Kong	3.0 (2000)	78.0 (2000)	83.9 (2000)	17.35 (2000)	21.53 (2000)

Self-reported Chronic Conditions among Those Aged 65+* (2008)



*We did not have find comparable survey data for London

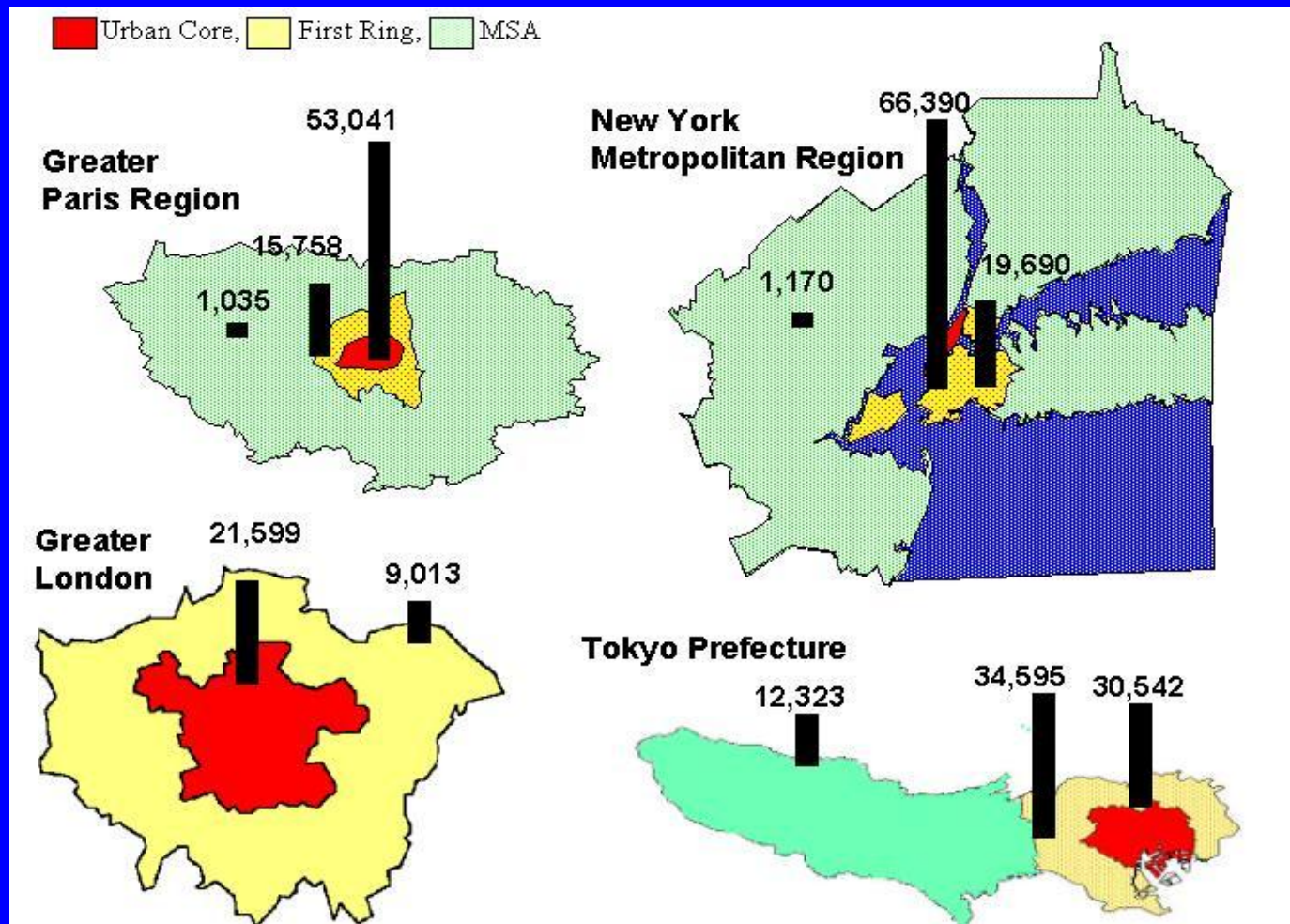
Self-Reported Health Status Population 65+, 2008



Some Useful Distinctions in Comparing Cities, Population Health, and Health Care Systems

City Categories	Units of Analysis
Megacity	Metropolitan Region
World City	Urban Core
Mid-size City	Central Business District
Smaller City	Suburbs
Distressed vs. Prosperous City	Neighborhoods

New York, London Paris and Tokyo: Units of Analysis



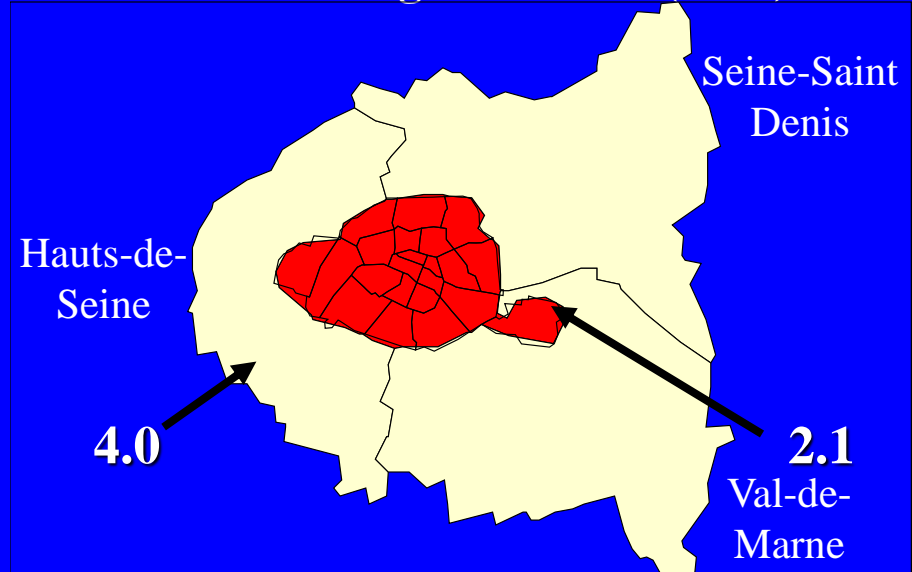
FOUR WORLD CITIES:

urban core and first ring populations (millions)

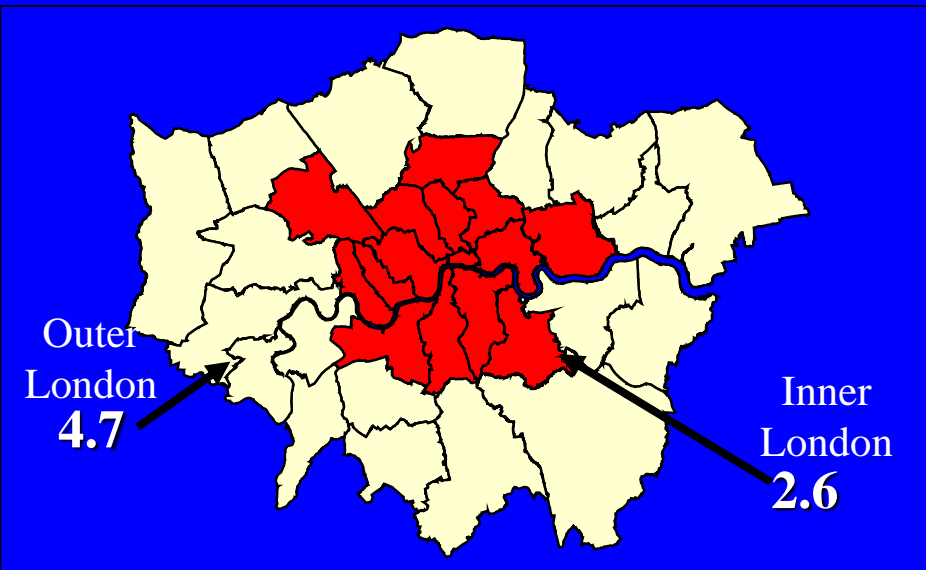
New York City 8.0 million (2000)



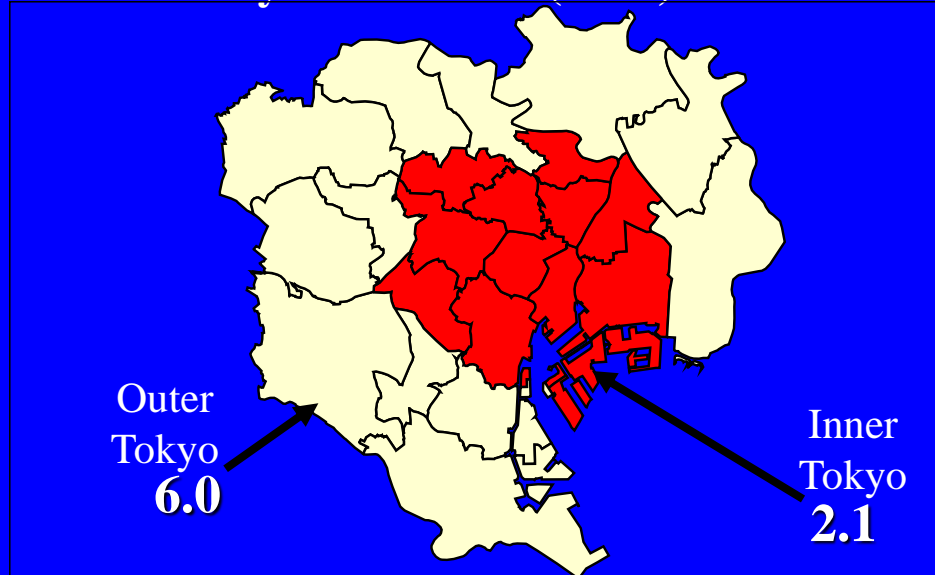
Paris and First Ring 6.2 million (1999)



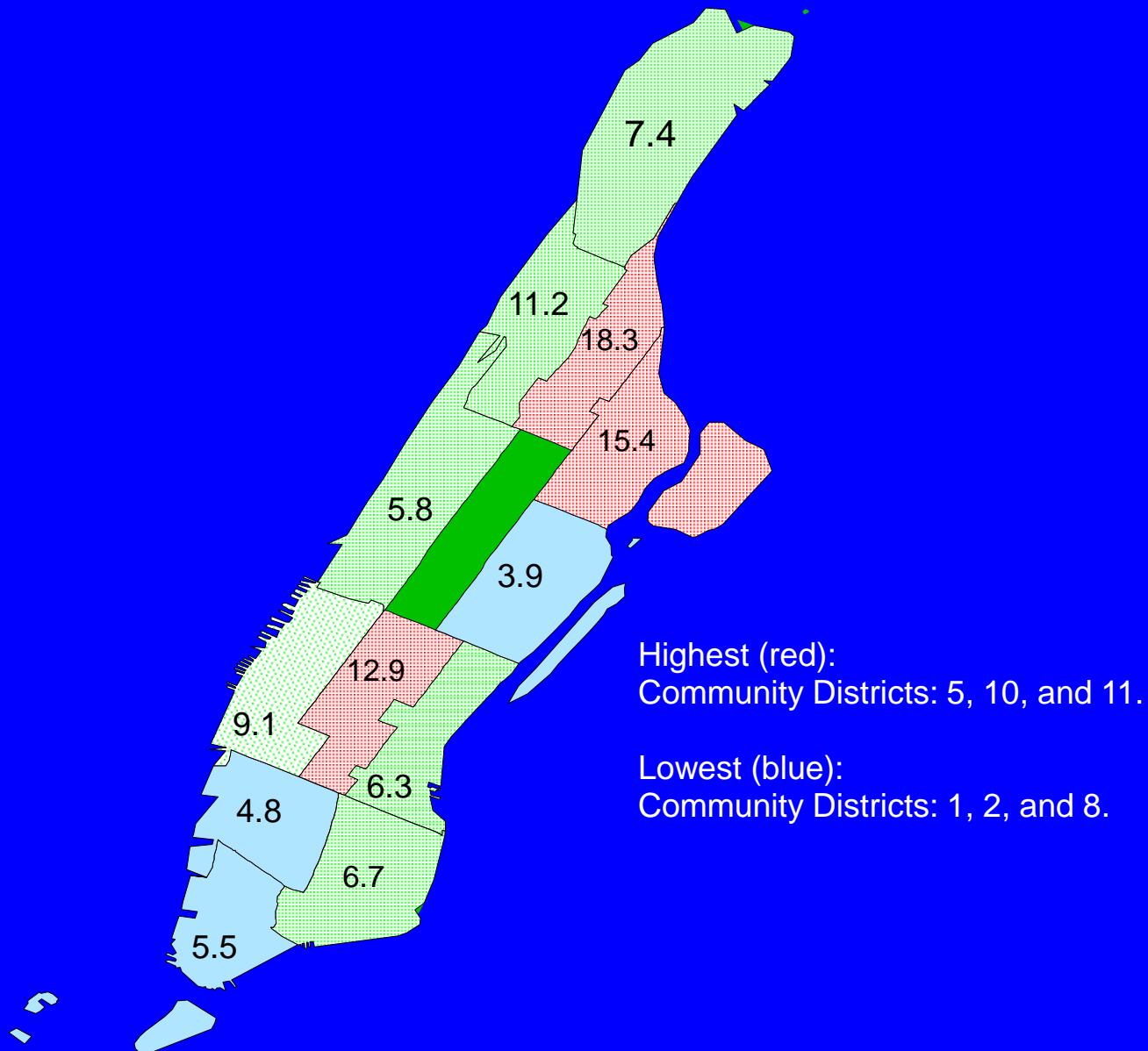
Greater London 7.3 million (2000)



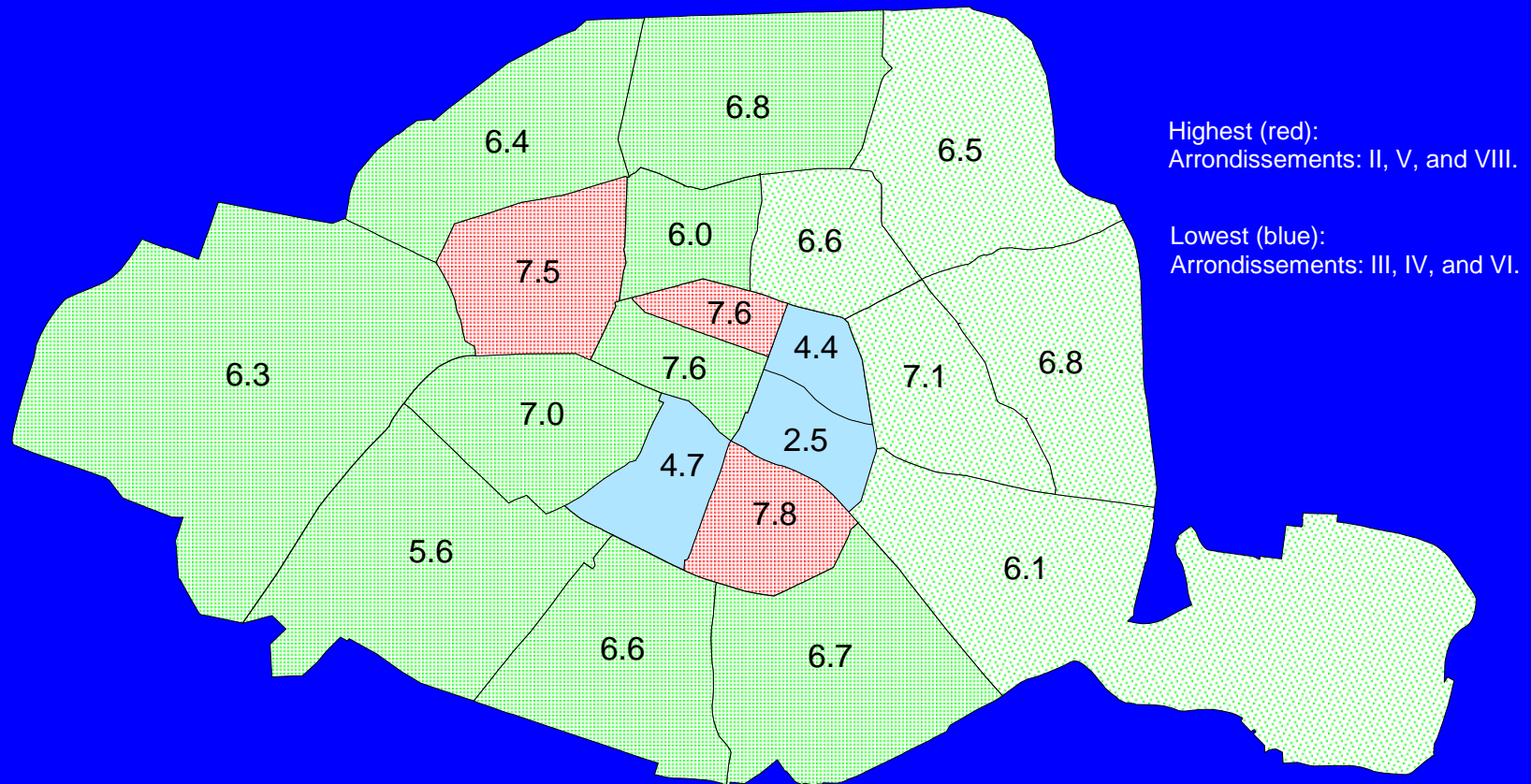
Central Tokyo 8.1 million (2000)



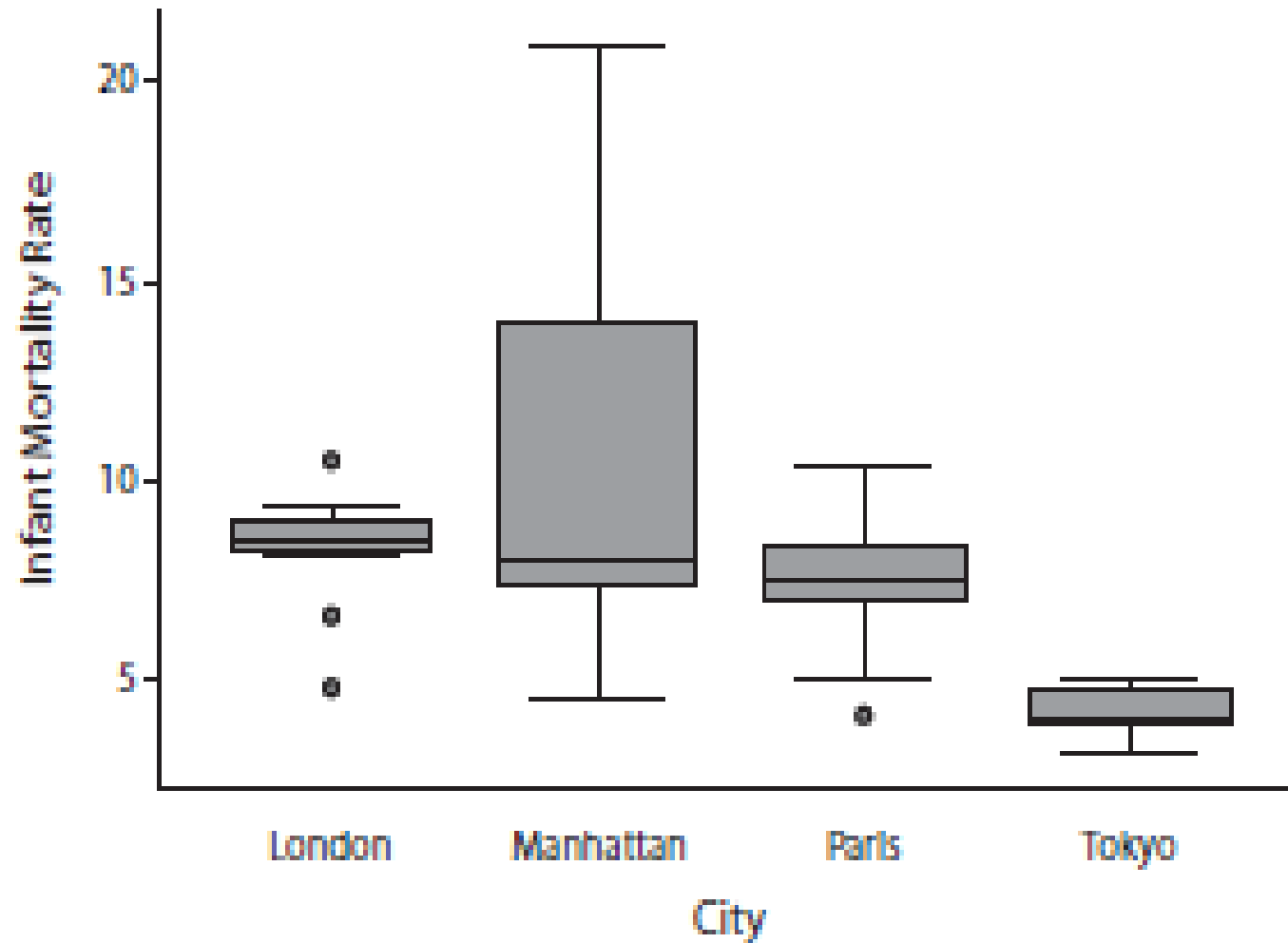
Manhattan: Infant Mortality 1988-1997



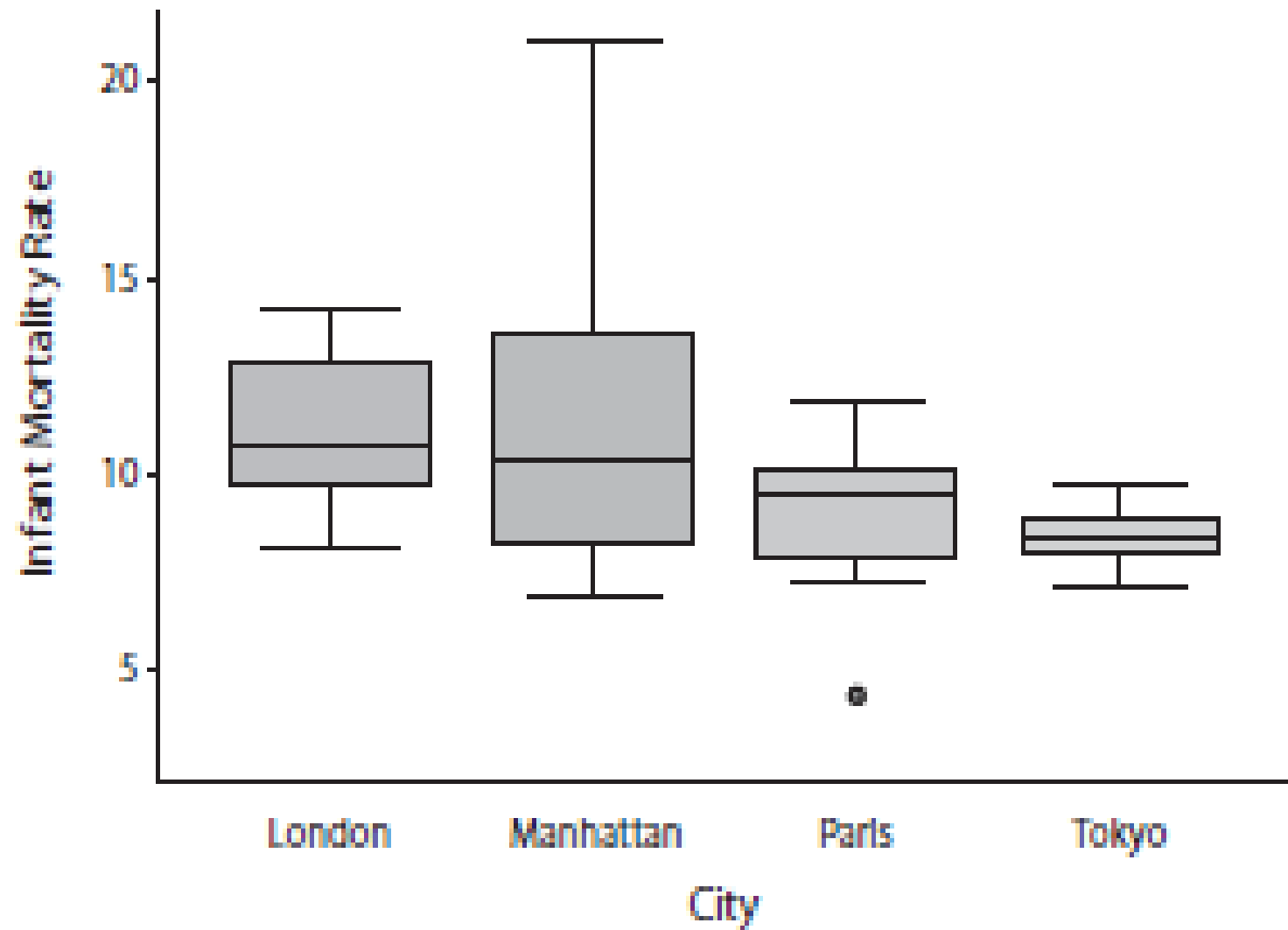
Infant Mortality Rate in Paris By Arrondissement 1988-1997



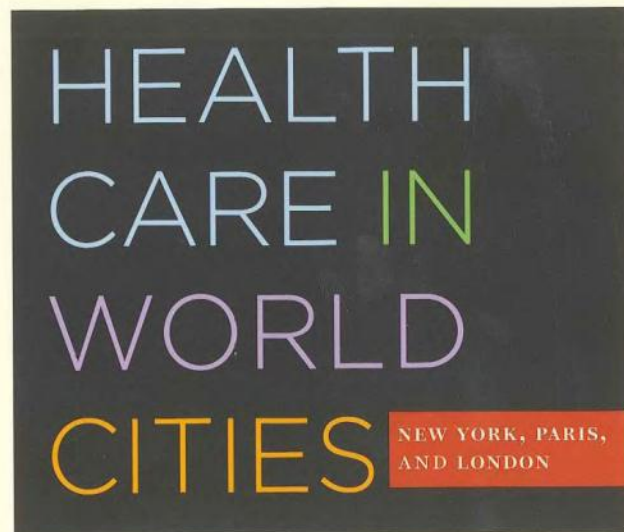
1988-1992



1993-1997



Health Outcomes and Health System Performance

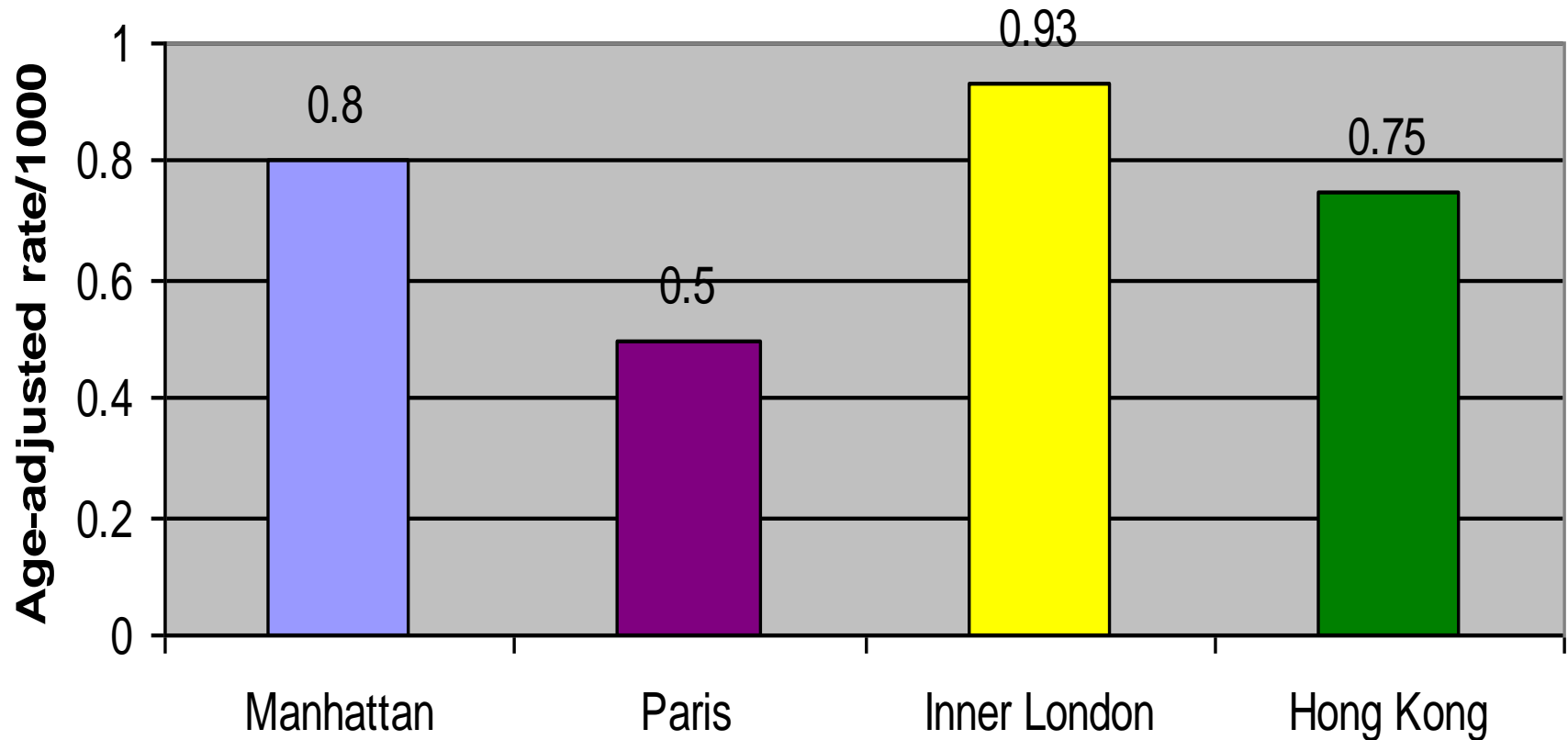


- Life expectancy at birth
- Probability of survival from specific diseases
- Premature Mortality
- **Avoidable Mortality**
- **Access to Primary Care**
- **Access to Specialty Care**

Defining “Amenable/Avoidable Mortality”

- Premature death (prior to 75 years) from diseases amenable to screening and medical intervention
- Examples include:
 - ischemic heart disease
 - several malignancies: breast, colon, cervix, skin
 - tuberculosis
 - Maternal deaths

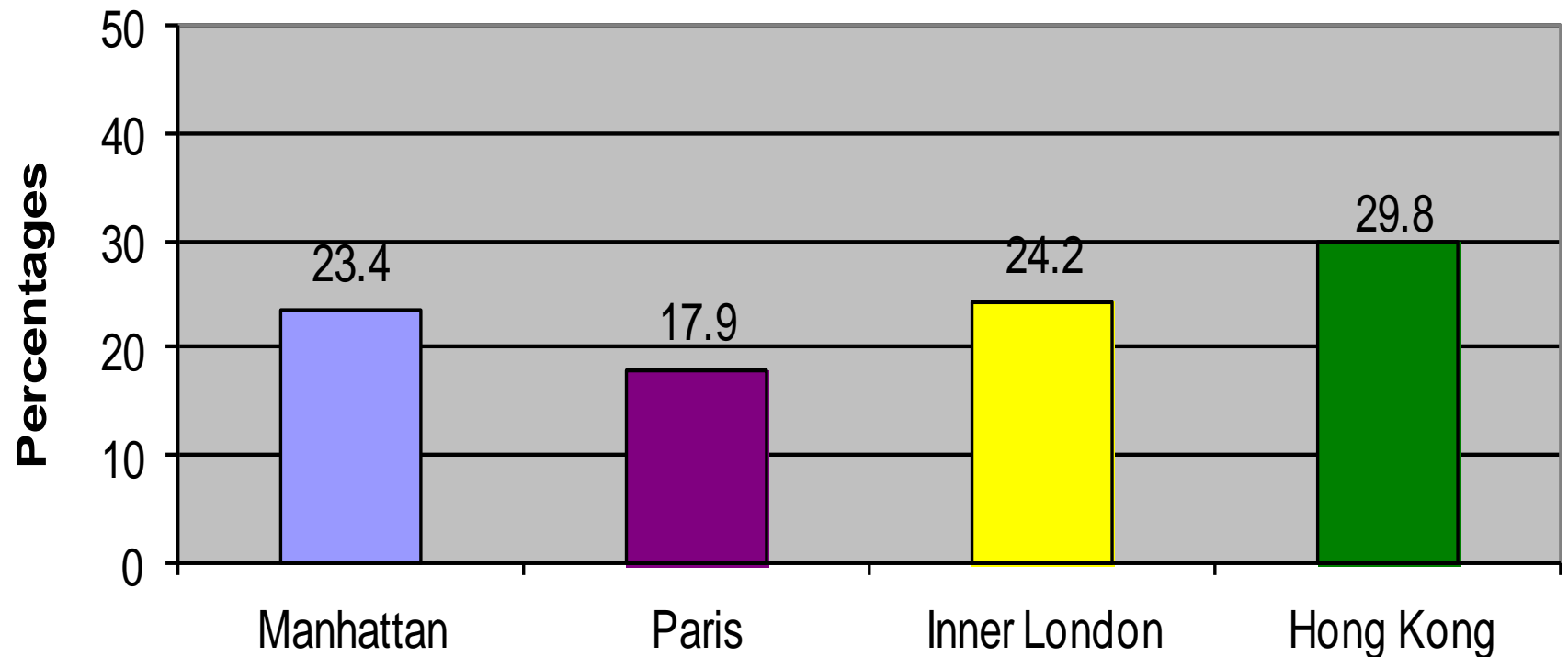
Avoidable Mortality Rates in Four World Cities



Average rates over 4 year period -- 1999-2003 Excludes deaths from IHD

Source: Chau, Woo, Chan, Weisz and Gusmano. Avoidable mortality pattern in a Chinese population --Hong Kong, China. European J. of Public Health 1-6, 2010.

Avoidable Mortality as a Percent of Total Mortality in Four World Cities



Source: Chau, Woo, Chan, Weisz and Gusmano. Avoidable mortality pattern in a Chinese population --Hong Kong, China. European J. of Public Health 1-6, 2010.

Avoidable Hospitalization: A Measure of Access to Primary Care

Avoidable Hospital Conditions

Examples:

- Bacterial Pneumonia
- Congestive Heart Failure
- Asthma
- Cellulitis

Marker Conditions

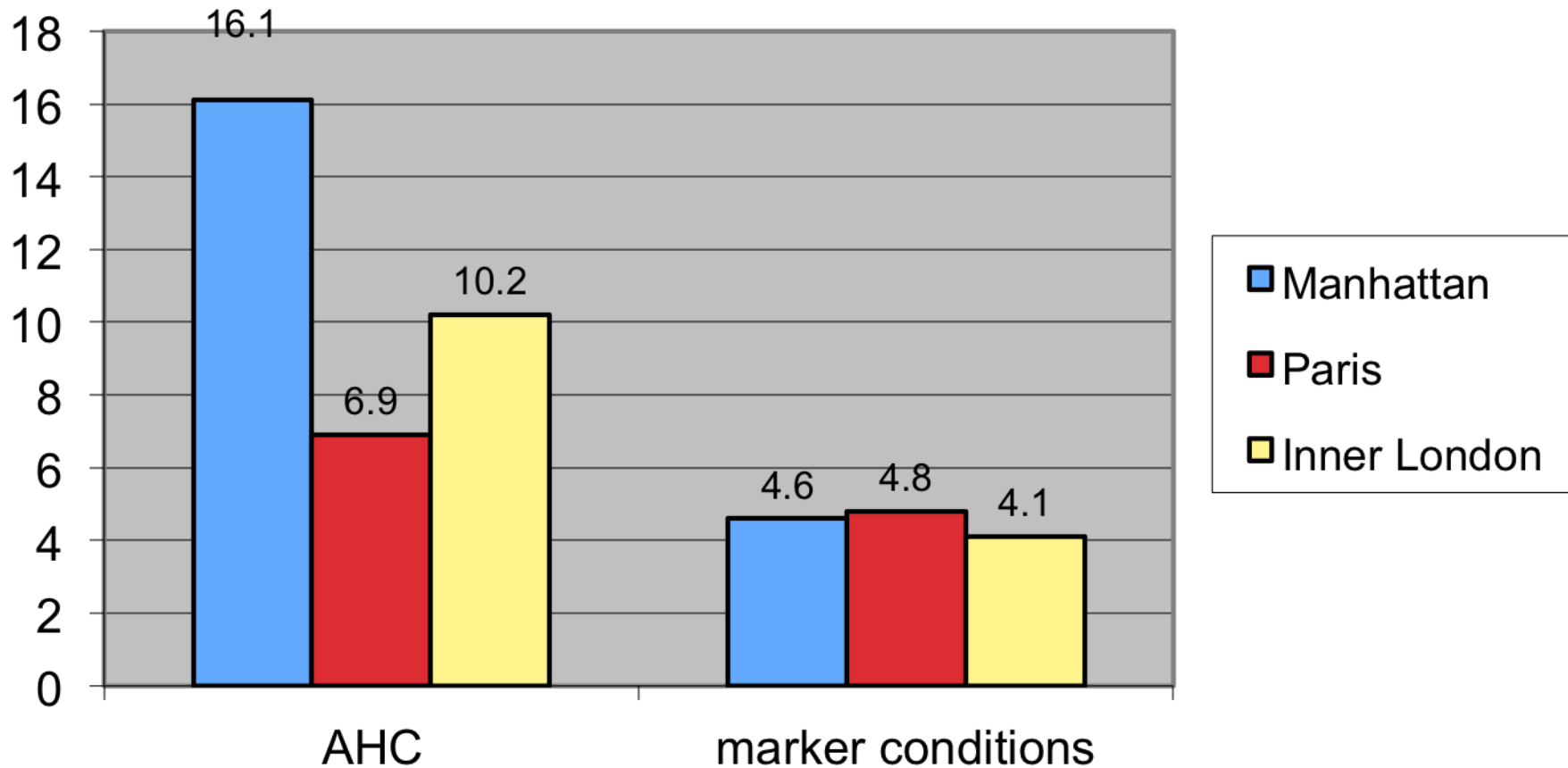
Examples:

- Acute Myocardial Infarction
- Appendicitis
- GI obstruction
- Hip fracture

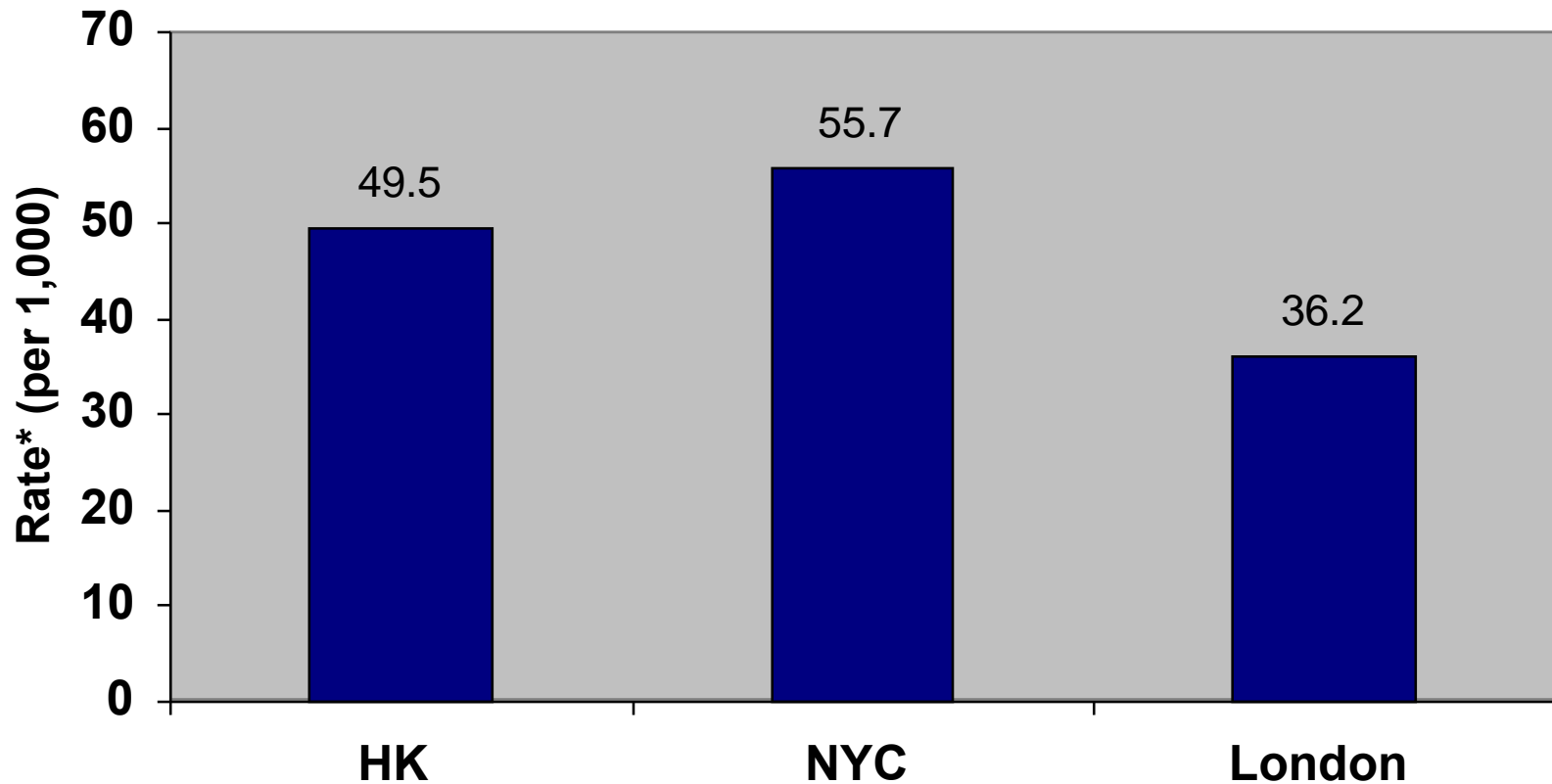
We use the list of ICD-9/ICD-10 Codes from the definition used by Dr. Joel Weissman and colleagues

Hospital Discharges for Avoidable Hospital Conditions and Marker Conditions: Manhattan, Paris and Inner London 1998-2001 average

Age Adjusted Rates/1000 population 18+



AHC Rate in Population Aged 65+, 2006-2008



* Age Adjusted to 2000 WHO Population

Key Points

- Hong Kong has better population health than other world cities but it's difficult to disentangle role of the health care system from city and population characteristics, and other social and environmental factors.
- We need more comparative research among cities and their neighborhoods, which examines alternative strategies to protect and promote population health and to deliver health care services.
- A noteworthy convergent trend in NYC, London and Paris: Increasing recognition that the neighborhood is a critical unit for interventions targeted to improving the health of populations at highest risk.