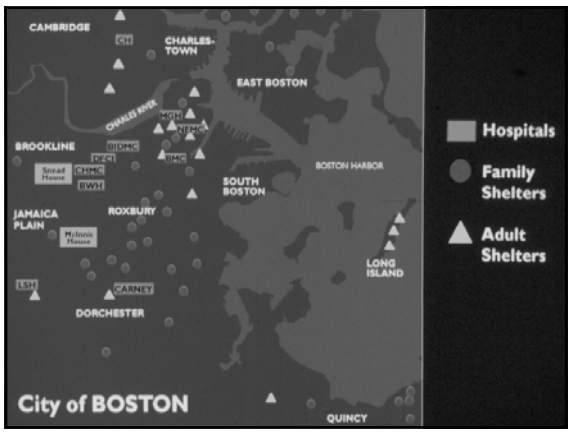


Homeless Census 2006

- **2004 Boston** **596,638**
- **2006 Homeless** **6,636**
  - **1% of population of Boston**
- **2006 Adult Homeless** **4,000**
- **2006 Street** **306**
  - **7.7% of adult homeless population**

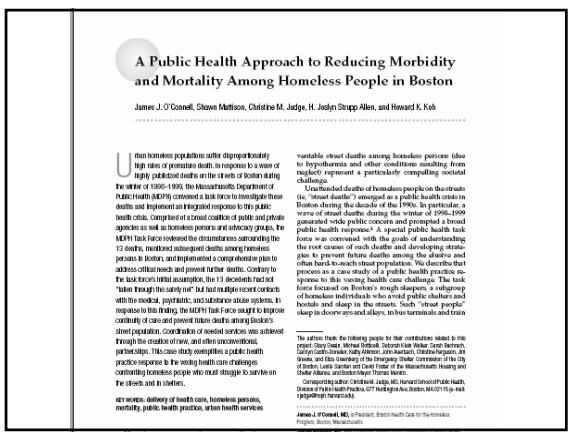
City of Boston Annual Census, 12/13/2004

- **3,944 single homeless individuals identified on a one night census**
- **888 (22%) in medical/mental health facilities**
  - **14 emergency departments**
  - **286 medical hospitals**
  - **84 medical respite beds (McInnis House)**
  - **225 detox**
  - **279 mental health hospitals/inpatient programs**

The Limits of Charity

Health care as "justice not charity"
No volunteers
No students (interns, residents)
No research
No mental health services

Hale & Dorr (1984)



A Public Health Approach to Reducing Morbidity and Mortality Among Homeless People in Boston

James J. O'Connell, Shawn Mattison, Christine M. Judge, H. Joslyn Strupp Allen, and Howard K. Koh

Urban homeless populations suffer disproportionately high rates of premature death. In response to a wave of highly publicized deaths on the streets of Boston during the winter of 1998–1999, the Massachusetts Department of Public Health (MDPH) convened a task force to investigate these deaths and implement an integrated response to this public health crisis. Comprised of a broad coalition of public and private agencies as well as homeless persons and advocacy groups, the MDPH Task Force reviewed the circumstances surrounding the 13 deaths, monitored subsequent deaths among homeless persons in Boston, and implemented a comprehensive plan to address critical needs and prevent further deaths. Contrary to the task force's initial assumption, the 13 decedents had not "fallen through the safety net" but had multiple recent contacts with the medical, psychiatric, and substance abuse systems. In response to this finding, the MDPH Task Force sought to improve continuity of care and prevent future deaths among Boston's street population. Coordination of needed services was achieved through the creation of new, and often unconventional, partnerships. This case study exemplifies a public health practice response to the vexing health care challenges confronting homeless people who must struggle to survive on the streets and in shelters.

key words: delivery of health care, homeless persons, mortality, public health practice, urban health services

...vantable street deaths among homeless persons (due to hypothermia and other conditions resulting from neglect) represent a particularly compelling societal challenge.

Unidentified deaths of homeless people on the streets (ie, "street deaths") emerged as a public health crisis in Boston during the decade of the 1990s. In particular, a wave of street deaths during the winter of 1998–1999 generated wide public concern and prompted a broad public health response.[1] A special public health task force was convened with the goals of understanding the root causes of such deaths and developing strategies to prevent future deaths among the elusive and often hard-to-reach street population. We describe that process as a case study of a public health practice response to this vexing health care challenge. The task force focused on Boston's rough sleepers, a subgroup of homeless individuals who avoid public shelters and hostels and sleep in the streets. Such "street people" sleep in doorways and alleys, in bus terminals and train

The authors thank the following people for their contributions related to this project: Stacy Beale, Michael Bottinelli, Deborah Kate Walker, Sarah Bachrach, Carolyn Cianfa-Kinsler, Kathy Atkinson, John Auerbach, Christine Ferguson, Jim Greene, and Ellis Greenberg of the Emergency Shelter Commission of the City of Boston; Leslie Sanders and David Foster of the Massachusetts Housing and Shelter Alliance; and Boston Mayor Thomas Menino.

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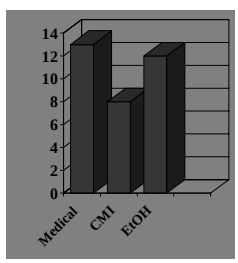
Co-Morbid Conditions

- **Multiple Major Medical Illnesses**
- **Chronic Mental Illness**
- **Alcohol Abuse**



Last Known Contact with Hospital

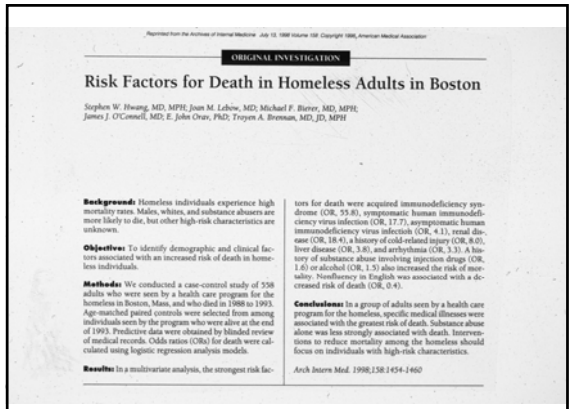
Name	DOD	Hospital	Visit Date	#Days to Death
ES	7/4/98	MGH EW	6/28/98	6
BM	7/26/98	MGH EW	7/18/98	8
KF	7/26/98	BMC EW	7/24/98	2
JB	10/12/98	MGH EW	10/3/98	9
CF	10/21/98	MGH EW	10/14/98	7
RL	11/30/98	MGH EW	11/21/98	9
RG	12/12/98	MGH IN	11/30/98	12
JB	12/23/98	BMC EW	12/16/98	7
JH	1/6/99	BMC EW	12/12/98	24
WM	1/29/99	MGH EW	1/19/99	3
JB	1/29/99	MGH EW	1/6/99	23

Last Known Detox

Name	DOD	Detox Unit	D/C Date	#Days to Death
ES	7/4/98	River Street	6/30/98	4
BM	7/26/98	Andrew House	7/6/98	20
KF	7/26/98	Andrew House	7/18/98	8
JB	10/12/98	Andrew House	10/9/98	3
RL	11/30/98	River Street	11/21/98	9
RG	12/12/98	Andrew House	11/9/98	33
JH	1/6/99	Dimock	12/14/98	22
WM	1/22/99	Andrew House	12/12/98	40

Methods

- **In 2000, Street Team identified cohort of 119 "high-risk" street folks**
- **Data over 5 years:**
  - **BHCHP's EMR**
  - **Respite Program records**
  - **BMC and MGH charts**
  - **Palm Pilot database of street visits**
  - **Weekly team meetings**



ORIGINAL INVESTIGATION

Risk Factors for Death in Homeless Adults in Boston

Stephen W. Hwang, MD, MPH; Joan M. Lebow, MD; Michael F. Bierer, MD, MPH; James J. O'Connell, MD; E. John Orav, PhD; Troyen A. Brennan, MD, JD, MPH

Background: Homeless individuals experience high mortality rates. Males, whites, and substance abusers are more likely to die, but other high-risk characteristics are unknown.

Objective: To identify demographic and clinical factors associated with an increased risk of death in homeless individuals.

Methods: We conducted a case-control study of 558 adults who were seen by a health care program for the homeless in Boston, Mass, and who died in 1988 to 1993. Age-matched paired controls were selected from among individuals seen by the program who were alive at the end of 1993. Predictive data were obtained by blinded review of medical records. Odds ratios (ORs) for death were calculated using logistic regression analysis models.

Results: In a multivariate analysis, the strongest risk factors for death were acquired immunodeficiency syndrome (OR, 55.8), symptomatic human immunodeficiency virus infection (OR, 17.7), asymptomatic human immunodeficiency virus infection (OR, 4.1), renal disease (OR, 18.4), a history of cold-related injury (OR, 8.0), liver disease (OR, 3.8), and arrhythmia (OR, 3.3). A history of substance abuse involving injection drugs (OR, 1.6) or alcohol (OR, 1.5) also increased the risk of mortality. Nonfluency in English was associated with a decreased risk of death (OR, 0.4).

Conclusions: In a group of adults seen by a health care program for the homeless, specific medical illnesses were associated with the greatest risk of death. Substance abuse alone was less strongly associated with death. Interventions to reduce mortality among the homeless should focus on individuals with high-risk characteristics.

Arch Intern Med. 1998;158:1454-1460

Criteria for High-Risk Cohort:

On streets for at least 6 months, and ≥ 1 of following:

- **"Tri-morbidity": co-occurring medical, psych, and SA problems**
- **Multiple ED visits or hospitalizations in year**
- **≥3 ED visits in 3 months**
- **Age ≥ 60 years**
- **HIV/AIDS**
- **Cirrhosis or ESRD**
- **H/O frostbite, immersion foot, or hypothermia**

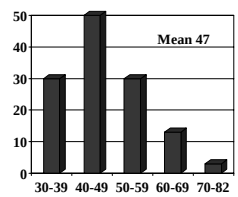
Demographics of HR Cohort

Male: Female 3:1

Ethnicity/Race

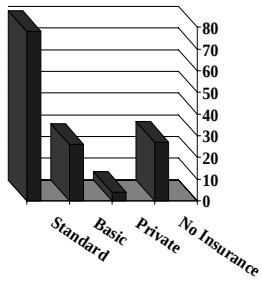
White	96 (76%)
African-Am	15 (12%)
Native Am	9 (7%)
Latino	6 (5%)

Age



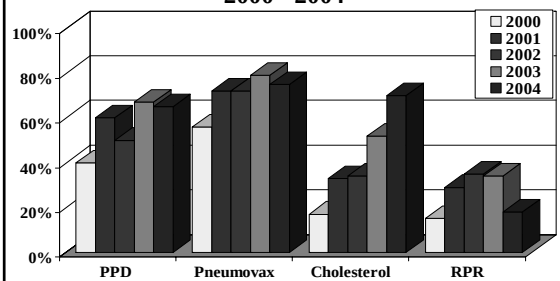
Health Insurance of Street Cohort

- **80% (108) with health insurance**
  - **58% (78) with MassHealth "Standard" (SSI or SSDI)**
  - **19% (26) with MassHealth "Basic" (expansion by waiver)**
  - **3% (4) with private insurance**
- **20% (27) with no insurance**



What has happened to our street cohort?

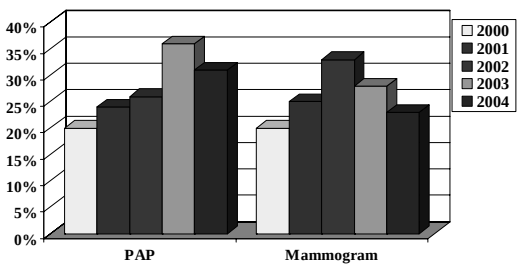
Outcome Measures
2000 - 2004



*PPD within year or history of positive; Pneumovax within 10 years; Chol within 5 years; RPR within 3 years

**percent based on # of patients on HR list each year (2000=127; 2001=136; 2002=144; 2003=131; 2004=125)

Women's Outcome Measures
2000 - 2004

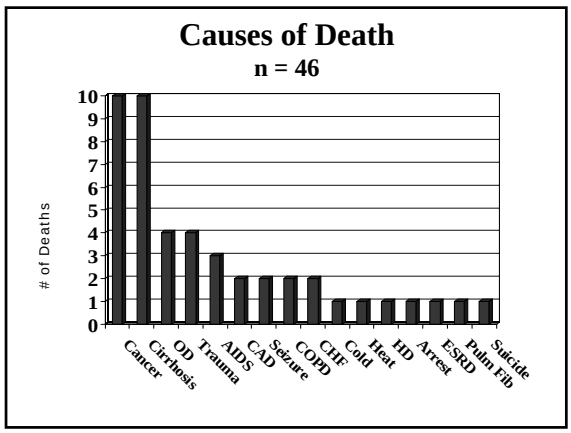


*PAP within year; Mammogram within 2 years for women over 40

**percent based on number of women on HR list each year (2000=31; 2001=33; 2002=37; 2003=28; 2004=26)

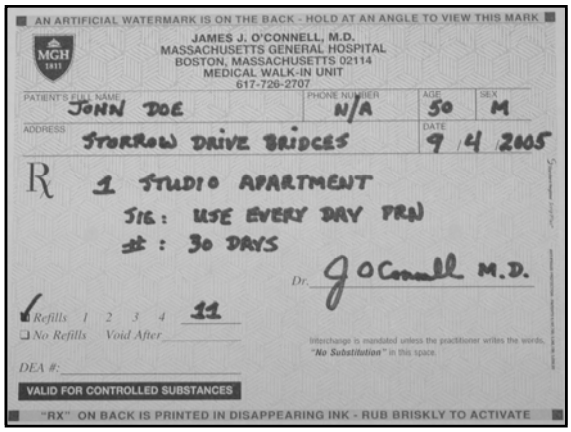
Eight Years Later: Whereabouts of Original Street Cohort 01/01/2008 (N = 119)

- **Deceased** 46 (39%)
- **Nursing Home** 9 (8%)
  - Nursing Home 8
  - Rest Home 1
- **Incarcerated** 2 (2%)
- **Shelter** 4 (3%)
  - Emergency 2
  - DMH 1
  - Treatment Program 1
- **Housed** 48 (40%)
  - Apartment 30
  - SRO 12
  - Family/Friends 6
- **Streets** 7 (6%)
  - Streets
  - Respite (BMH) 1
- **Unknown/LTFU** 3 (3%)



Utilization of Medical Services by the Cohort, 1999-2003 (N = 119)

- **Emergency Room Visits** **18,384**


AN ARTIFICIAL WATERMARK IS ON THE BACK - HOLD AT AN ANGLE TO VIEW THIS MARK

JAMES J. O'CONNELL, M.D.
MASSACHUSETTS GENERAL HOSPITAL
BOSTON, MASSACHUSETTS 02114
MEDICAL WALK-IN UNIT
617-726-2707

PATIENT'S FULL NAME: JOHN DOE | PHONE NUMBER: N/A | AGE: 50 | SEX: M
ADDRESS: STORROW DRIVE BRIDGES | DATE: 9/4/2005

℞ 1 STUDIO APARTMENT
SIG: USE EVERY DAY PRN
#: 30 DAYS

Dr. J O'Connell M.D.

✓ Refills 1 2 3 4 11
☐ No Refills Void After

Interchange is mandated unless the practitioner writes the words, "No Substitution" in this space.

DEA #:

VALID FOR CONTROLLED SUBSTANCES

"RX" ON BACK IS PRINTED IN DISAPPEARING INK - RUB BRISKLY TO ACTIVATE