

immigration, births to unwed mothers) on various percentiles of the conditional ACSAR distribution and ordinary regression was used to determine average effects.

Population Studied: Patient discharge data for residents under age 65 in 810 zip-code areas in New York State from 1990-98 combined with Census and birth record data for 1990.

Principal Findings: Although average ACSAR's have fallen over time, the skewness in their distribution, particularly in low-income neighborhoods, has not changed. The classification of neighborhoods into ACSAR quintiles remained quite stable over the nine year study period. The relationship between income and average ACSAR's is negative and is driven largely by a thicker right tail in the ACSAR distribution for low-income neighborhoods. Holding other factors constant, the African-American share of local population is positively associated with ACSAR's, an effect that appears only above the median of the ACSAR distribution and when the population share of African-Americans is above the 67th percentile. The Hispanic share of local population is a stronger predictor of high ACSAR's and has greater impact at higher ACSAR percentiles. The concentration of Asians has a negative impact on ACSAR's, which is consistent across all ACSAR percentiles. A high concentration of immigrants is associated with higher ACSAR's, particularly near the middle of the ACSAR distribution. Finally, the percentage of births to unwed mothers is a very strong predictor of high ACSAR's with increasing influence at higher percentiles of the ACSAR distribution.

Conclusions: Several measures of socioeconomic disadvantage appear to change the entire shape of the distribution of avoidable hospitalizations rather than simply shift that distribution to the right. Recent declines in avoidable hospitalization rates appear to be driven more by system-wide changes in admitting practices rather than improvements in the delivery of ambulatory care to disadvantaged neighborhoods. The stability of avoidable hospitalization quantiles over time points to a chronic deficiency of timely ambulatory care in the most underserved neighborhoods. However, the predictive strength of the family structure variable (i.e., births to unwed mothers) suggests that part of the deficiency is driven by factors that are not readily changeable by access to medical care alone.

Implications for Policy, Delivery or Practice: Disparities among average members of comparative socioeconomic strata may be different from disparities faced by those with more extreme levels of deprivation. A greater focus on percentiles rather than averages can help target resources more effectively. Moreover, much of the data for this task can be obtained from existing administrative and population databases.

Primary Funding Source: Foundations

● Social Inequalities in Occupational Health Care

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Research Objective: This study is aimed at determining whether there are disparities in the incidence of occupational injuries and illnesses and in medical care for those disorders, based on workers' race, ethnicity, and socioeconomic status (SES). Few previous studies have investigated social inequalities in occupational health. Based on existing fragmentary evidence, we hypothesize that Blacks, Hispanics, and workers with low SES have a disproportionately high incidence of occupational injuries and illnesses, receive inferior medical care, suffer more severe disability, return to work more slowly, and are less likely to receive compensation benefits than are whites and those with high SES.

Study Design: Retrospective cross-sectional analysis of two existing national population-based surveys: the National Ambulatory Medical

Care Survey (NAMCS) and National Longitudinal Survey of Youth (NLSY). Pilot studies by us have demonstrated the usefulness of these databases in providing new information about occupational health care. This study will result in descriptive analyses of work-related cases from each database, including stratified sub-analyses comparing patient experiences among racial, ethnic, and socioeconomic patient groups, and selected multivariate analyses to assess the interactive effect of patient sociodemographic characteristics with employment experiences, medical services, and vocational outcomes.

Population Studied: The NAMCS covers physician-reported data for a nationally representative sample of 46,875 ambulatory medical care visits made in 1997-1998. 1,179 of those visits (2.5%) were for diagnosis and treatment of work-related conditions. Our analysis of the NLSY covers the experiences of 7,508 persons aged 33-41 who were interviewed in 1998, of which 563 (7.5%) self-reported experiencing an occupational injury or illnesses in the 2-year period preceding the interview.

Principal Findings: Both analyses suggest that there are significant disparities among the social groups studied. In the NAMCS, Hispanics with work-related conditions required insurer authorization for care 57% more often than non-Hispanics, and Blacks 14% more often than whites. On average, Blacks saw a physician during their visit 6% less often than whites, and Hispanics 5% less often than non-Hispanics. Blacks had blood pressure measured at the visit 32% less often than whites, and Hispanics 11% less often than non-Hispanics. The NLSY analysis indicated that following a work-related condition, Blacks were 16% more likely to miss work, had 28% more missed work days, and were 18% more likely to lose wages than non-Blacks. Similar patterns were observed among Hispanics compared to non-Hispanics, and low-SES (as indicated by educational attainment and family income) compared to high-SES workers.

Conclusions: Preliminary data from two national health care surveys indicates disparities in occupational health and health care for work-related conditions based on patients' race, ethnicity, and SES. These studies have demonstrated the usefulness of national survey databases as a novel source for collecting information about the health and vocational experiences of injured workers.

Implications for Policy, Delivery or Practice: This study helps demonstrate the barriers that Black, Hispanic, and low-SES workers face in accessing occupational health care, and their susceptibility to more severe vocational impacts following a work-related injury. These findings will help alert policymakers and public health advocates to the need to devise specific strategies for protecting the health and earning capacity of minority and low-wage workers.

Primary Funding Source: CDC, National Institute for Occupational Safety and Health

● The Safety Net for the Uninsured – Does it Improve Access and Reduce Racial/Ethnic Disparities?

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Presented by: Mark Doescher, M.D., M.S.P.H., Assistant Professor, Family Medicine, University of Washington, Box 354696, Seattle, WA 98195-4696; Tel: (206) 616-9207; Fax: (206) 685-0610; E-mail: mdoesche@u.washington.edu

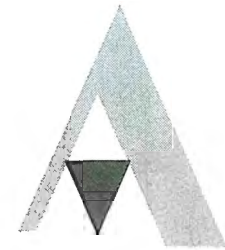
Research Objective: To examine the effect of community-level safety-net factors on access to care and racial/ethnic disparities in access among uninsured adults.

Study Design: A cross-sectional study of participants in the 1996-97 Community Tracking Study (CTS) household survey, a representative sample of the United States population residing in 60 communities, 12 of which were case study sites with larger sample sizes. Dependent measures included respondents' reports of having a regular site of care and an annual physician visit. Race/ethnicity, was classified in the CTS as primarily Spanish-speaking Hispanic,

Social Inequalities in Occupational Health and Health Care



**Initial Findings from the National Ambulatory Medical Care
Survey, 1997-1998
and the National Longitudinal Surveys of Youth, 1998**



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**Presentation at the Annual Conference of the
Academy of Health Services Research
Washington, D.C.
June 23, 2002**

BACKGROUND

- **There is mounting evidence for socially-based disparities in the incidence of work-related injuries and illnesses, medical care for those conditions, and injured workers' vocational and health outcomes.**
- **Special reasons for disparities in occupational health:**
 - **Distinct employment patterns among minority groups**
 - **Differing exposure to job hazards**
 - **Backdrop of management - labor relationships**
 - **Contentious nature of workers' compensation**
 - **Possible discrimination in employment or safety**

Disparities in Access to Occupational Medical Care

- **Growing evidence that blacks, Hispanics, immigrants, and low-income workers receive inferior medical care for treatment of work-related conditions.**
- **Employer-purchased workers' compensation insurance is designed to be mandatory and comprehensive, providing 100% payment for job-related injuries and illnesses, with no cost-sharing or co-payments required by injured workers.**
- **In theory, minority workers seeking treatment for job-related conditions should not face the same substantial barriers to care as do those lacking regular health insurance.**
- **However, evidence suggests that barriers do exist, stemming from insurance company denials, disincentives to claims reporting, bias in medical diagnosis of work-relatedness, and other factors.**

STUDY OBJECTIVES

- The present descriptive study is aimed at determining whether there are disparities based on workers' race, ethnicity, and socioeconomic status (SES) in:

- incidence of occupational injuries and illnesses,
- medical care for those disorders,
- related health and vocational outcomes.

- Hypothesis:

We hypothesize that compared to whites and those with high SES, blacks, Hispanics, and workers with low SES have:

- a higher incidence of occupational injuries and illnesses,
- receive inferior medical care,
- suffer more severe disability
- return to work more slowly,
- are less likely to receive compensation benefits

NAMCS AND NLSY STUDY POPULATIONS

The present study is based on:

- **National Ambulatory Medical Care Survey (NAMCS)**
 - **Physician-reported data for a nationally representative sample of 48,054 ambulatory medical care visits made in 1997-1998**
 - **1,179 of those visits (2.5%) were for diagnosis and treatment of work-related conditions**
- **National Longitudinal Surveys of Youth (NLSY)**
 - **7,271 employed respondents aged 33-41 in 1998, of which 543 (7.5%) self-reported experiencing an occupational injury or illness in the 2-year period preceding the interview**

METHODS

- **Identified work-related injury and illness claims and incidents**
 - **NAMCS: Physician reported work-related claims were identified**
 - **NLSY: Self-reported injuries and illnesses identified**
- **Bivariate analyses were conducted on weighted data stratified by patients' race, ethnicity, and SES indicators including educational level and median family income.**
- **Odds ratios and 95% confidence intervals were calculated, controlling for the influence of selected covariates through multivariate regression techniques.**

National Ambulatory Medical Care Survey 1997-1998 (n=48,054)

- **2.5% of all office visits are for work-related conditions**
- **Workers' compensation is the expected payer for 82% of these visits**
- **Patients seen for "work-related" office visits are:**
 - **62.3% are male**
 - **11.9% are black**
 - **18.7% are Hispanic**
- **25.6% of visits are with the patient's regular primary care provider**
- **36.3% of visits require insurer authorization for care**
- **Average time spent with the physician is 18.1 minutes**

Findings from NAMCS, 1997-1998

Visits for Work-Related Conditions (n=1,179)

Odds Ratios and 95% confidence intervals, after controlling for age, gender and location (urban/rural) of office.

Characteristic of Care	Hispanics/non-Hispanics
Authorization required for care	1.93 (1.36-2.75)
MD seen during the visit	0.49 (0.25-0.95)
At least one Rx drug prescribed	0.62 (0.44-0.88)
X-ray taken	2.70 (1.84-3.91)
RN or LPN seen during visit	0.43 (0.24-0.76)
Visit with general/family MD	0.39 (0.22-0.68)
Visit in clinic/urgent care setting	2.19 (1.36-3.54)

Findings from NAMCS, 1997-1998

Visits for Work-Related Conditions (n=1,179)

Odds Ratios and 95% confidence intervals, after controlling for age, gender and location (urban/rural) of office.

Characteristic of Care	Blacks/Whites
Blood pressure taken	0.61 (0.40-0.93)
MD seen during the visit	0.36 (0.19-0.70)
RN or LPN seen during visit	0.56 (0.32-0.96)
Visit with general/family MD	1.51 (0.99-2.31)
Visit with orthopedist	0.65 (1.08-2.59)
Visit included phys. therapy	1.56 (1.05-2.31)
Mental health counseling	5.10 (3.76-5.74)

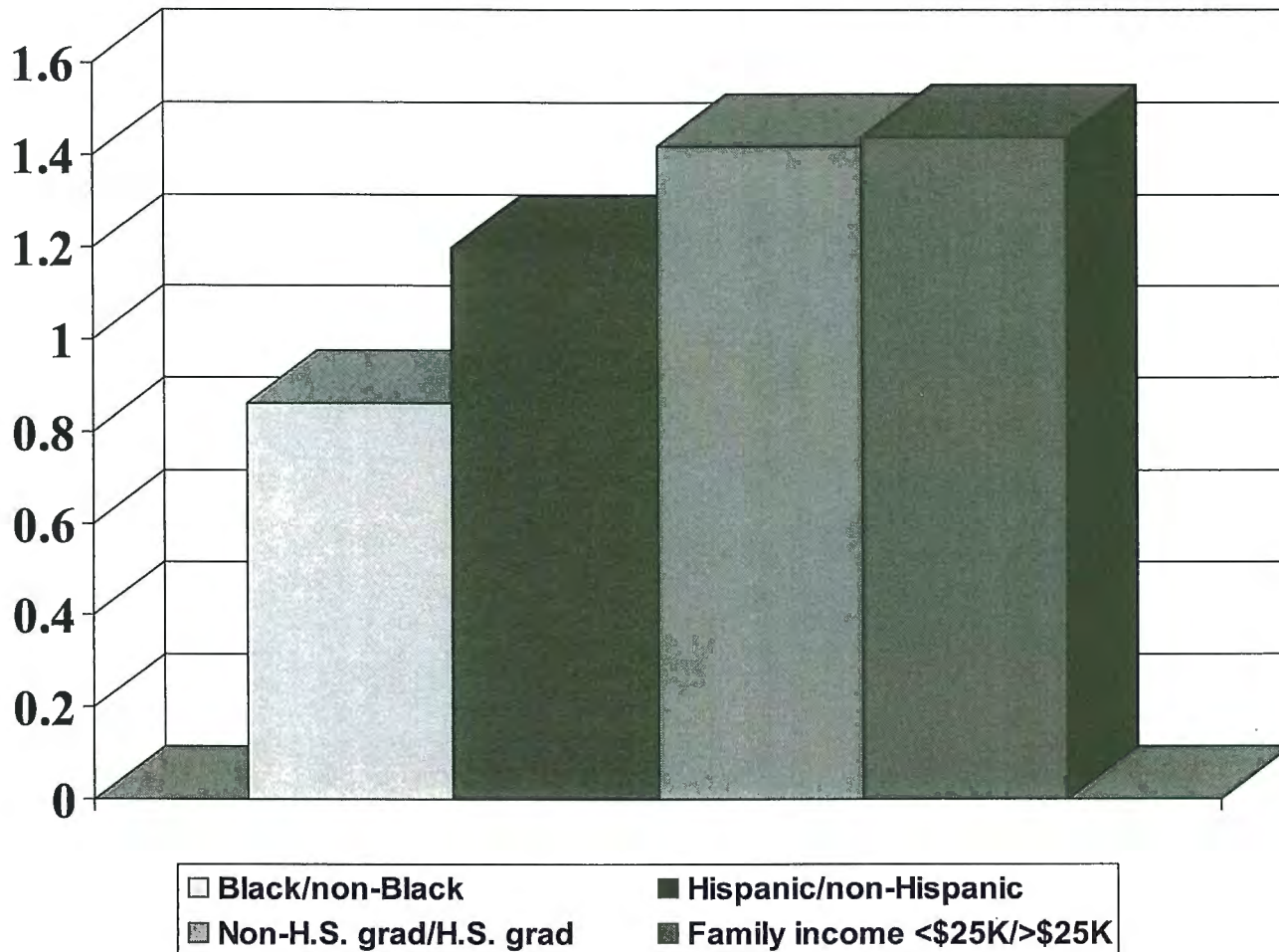
Findings from NAMCS, 1997-1998
Visits for Work-Related Musculoskeletal Conditions Only
(n=545)

Odds Ratios and 95% confidence intervals, after controlling for age, gender and location (urban/rural) of office.

Characteristic of Care	Hispanics/non-Hisp.	Blacks/Whites
Authorization required for care	2.75 (1.83-4.13)	Not significant
MD seen during the visit	0.43 (0.20-0.93)	0.27 (0.12-0.60)
Blood pressure taken	Not significant	0.57 (0.34-0.94)
X-ray taken	2.53 (1.67-3.8)	Not significant
RN or LPN seen during visit	0.48 (0.26-0.89)	Not significant
Visit with general/family MD	0.45 (0.25-0.81)	Not significant
Visit with orthopedist	Not significant	0.60 (0.38-0.94)
Visit in clinic/urgent care setting	2.48 (1.47-4.16)	Not significant
New patient this visit	1.79 (1.16-2.78)	Not significant

Findings from NLSY, 1998

Relative risk of reporting a work-related injury or illness among respondents to the 1998 NLSY (n=7,271), weighted data



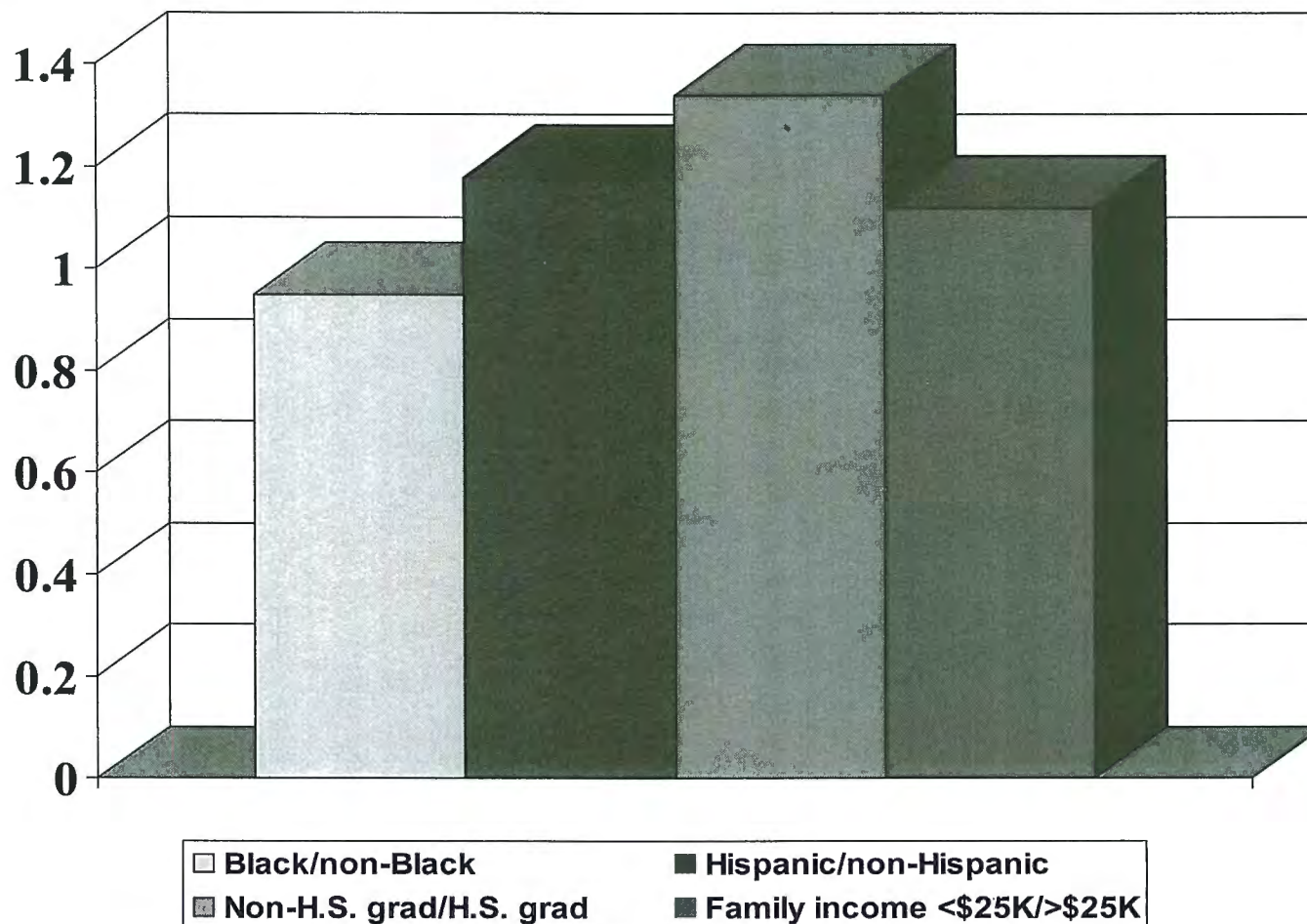
National Longitudinal Surveys of Youth, 1998 (n=7,271)

	Reported a work-related incident (n=543)	Employed, No work related incident (n=6,728)
Male	60.7%	52.6%
Black	11.6%	13.5%
Hispanic	18.7%	9.6%
Total Family Income	\$52,292	\$60,190
Years of Formal Education	12.7	13.5

*Nationally representative weights have been applied.

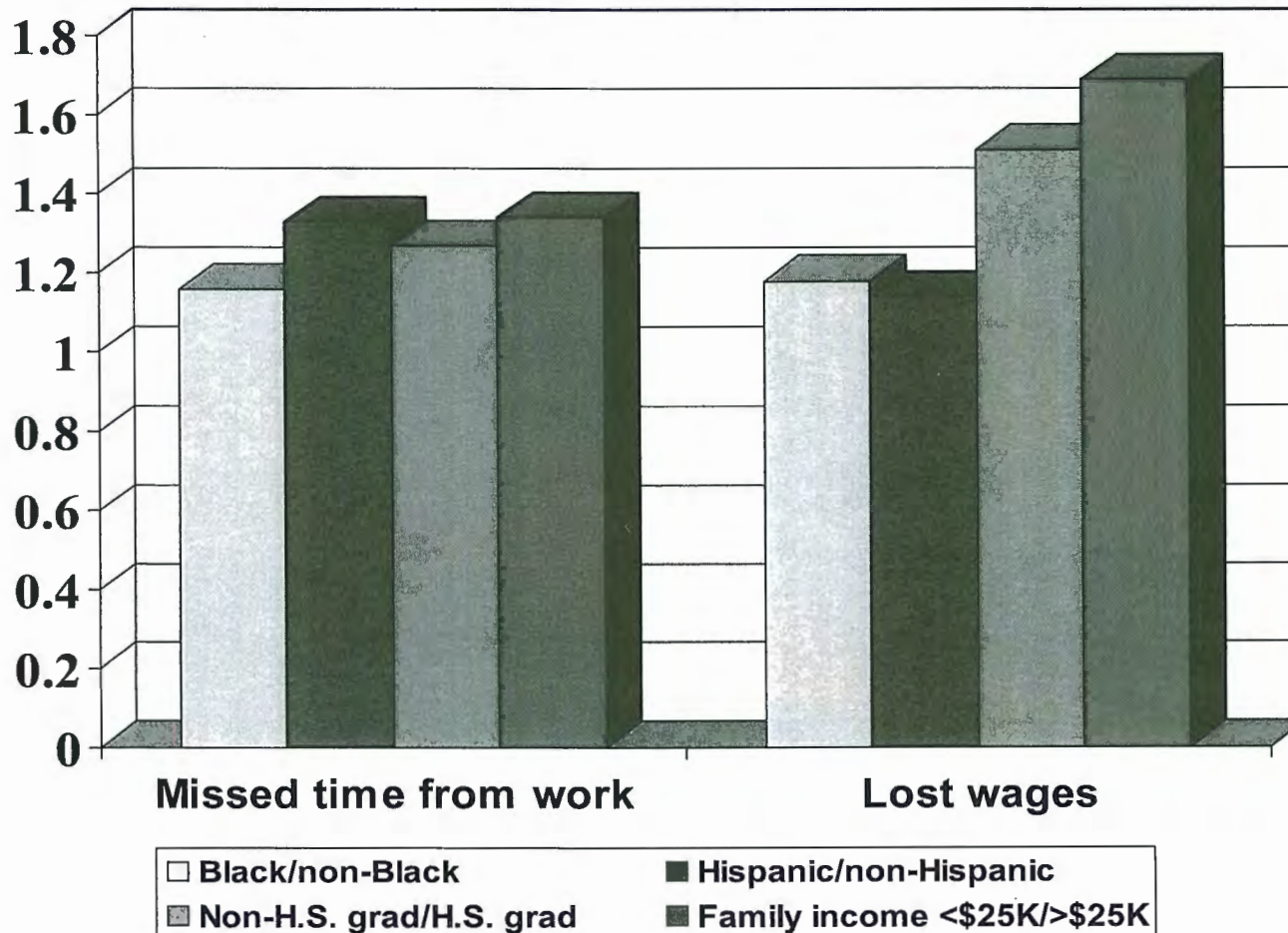
Findings from NLSY, 1998 (n=7,271)

Relative risk of working in a job requiring significant physical effort among respondents to the 1998 NLSY (n=7,271), weighted data



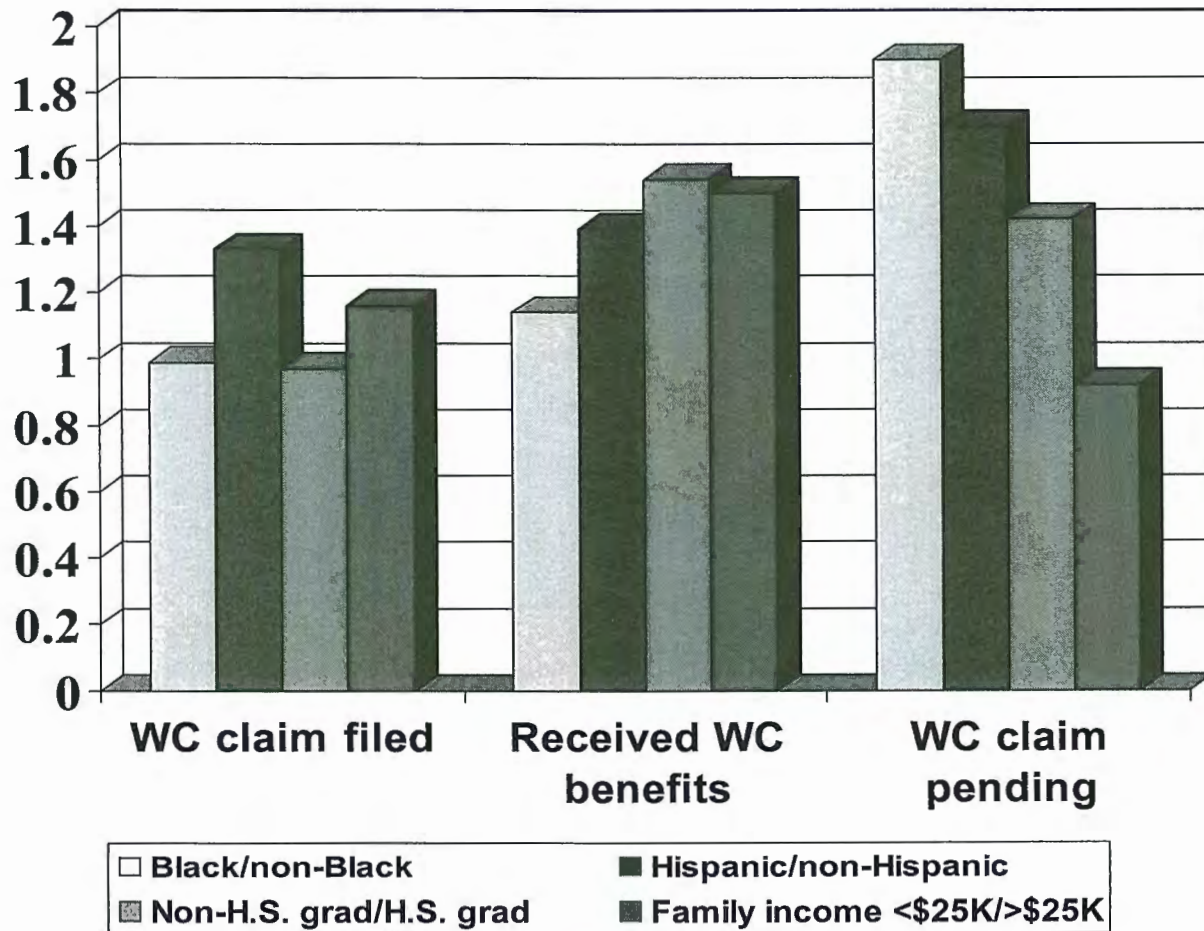
Findings from NLSY, 1998 (n=7,271)

Relative risk of selected vocational consequences of job-related injury or illness, among respondents to the 1998 NLSY (n=7,271), weighted data



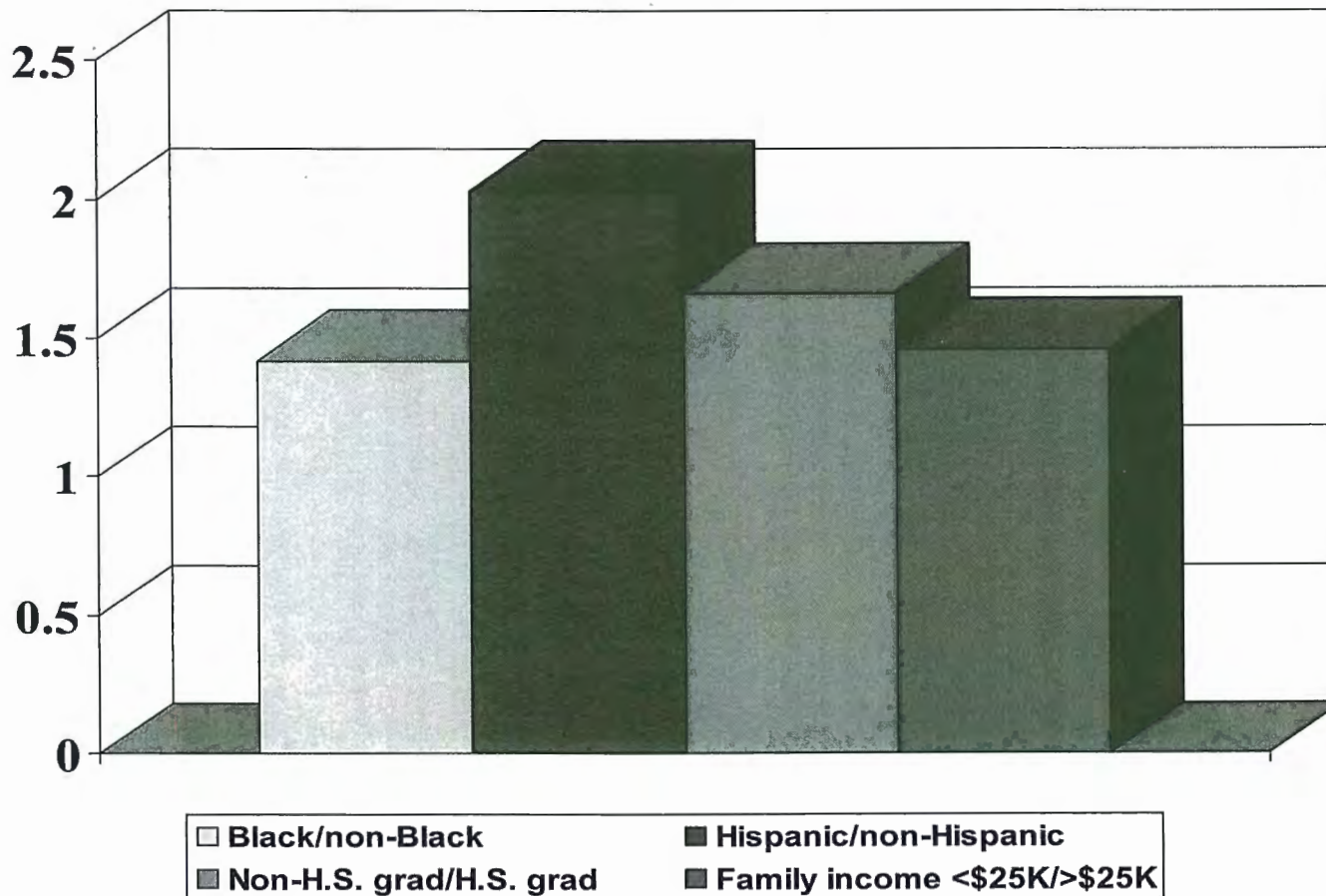
Findings from NLSY, 1998 (n=7,271)

Relative risk of filing for and receiving WC benefits, among those reporting a work-related injury or illness in the 1998 NLSY (n=7,271), weighted data



Findings from NLSY, 1998 (n=7,271)

Relative risk that health prevents respondent from working now (at time of survey), among those who experienced a work-related injury or illness in the 1998 NLSY (n=7,271), weighted data



CONCLUSIONS

- **Preliminary results of analyses from the 1998 NLSY and 1997-1998 NAMCS provide evidence suggesting that there are socially-based disparities in occupational health events and the vocational impact of work-related injuries and illnesses.**
- **The evidence suggests that variations in the incidence of work-related injury may be linked to greater job exposure among vulnerable groups.**
- **Injured blacks and Hispanics appear to receive inferior medical care, with regards to seeing a physician, having blood pressure taken, requiring authorization for care, and other indicators.**
- **The data suggest that low-income workers, low-education workers, blacks, and Hispanics are susceptible to greater vocational impacts and job disruption as a result of suffering a job-related injury or illness.**

BACKGROUND

- **There is mounting evidence for socially-based disparities in the incidence of work-related injuries and illnesses, medical care for those conditions, and injured workers' vocational and health outcomes.**
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