

Updated information on US soldiers killed in Iraq as of August 8, 2005 is contained in the working tables and figures presented below. Preparation of the working tables and figures was funded by the *Austin American-Statesman* and is made freely available (hopefully with attribution) to journalists and others on request.

I. Background Notes

Data sources. The casualty figures are derived from data posted on the US Department of Defense website at <http://web1.whs.osd.mil/mmids/casualty/castop.htm>. The population data comes from Census 2000. In recent DOD postings, race/ethnic status and home county of soldiers killed have been included. The current patterns depicted below may vary slightly from our earlier updates in which neither race/ethnic status nor home county were available (we imputed home county from home town and state information in previous updates).

Research focus. The burden of sacrifice seems concentrated in a smallish segment of the nation, perhaps explaining why some authors feel the pain is not widely felt to date. Of the 1,827 soldiers killed in Iraq as of August 8, 2005, 1,797 came from 853 US counties (that is, only 27 percent of the 3,141 counties in the United States had soldiers killed in Iraq). The remainder came from:

American Samoa (5),
Federated States of Micronesia (2),
Guam (1),
Northern Mariana Islands (1),
Puerto Rico (15),
Virgin Islands (2), and
not ascertained as yet (4).

These notes and working tables and figures consider differences in death rates by community size and by race/ethnic status for the 1,797 soldiers from US counties. The totals reported in the tables below may be less than the 1,797 US county total due to missing data on some items.

In addition to the data considered in this paper, the DOD also publishes codes for the occupational categories, branch of service, and rank of soldiers killed in Iraq. We have received requests for an analysis of that information by race/ethnic status along with an analysis of the social/economic demographic differences among counties, but no one has provided the resources to undertake such studies to date.

Working hypothesis. Our early research, including interviews with families of soldiers killed, led us to hypothesize that small places some distance from metropolitan areas may be linked to a propensity to enlist in the military, largely due to more limited opportunities for employment and tertiary education available in such areas. In many cases, families and friends of soldiers killed suggested that, for children in their

communities, the military presented a viable option for getting both employment and more education.

Geographic identifiers. Throughout the analysis, we used home town and home state information as listed by the DOD for each soldier in order to determine home county. We have no way to determine how standardized the DOD classification of home town may be. The home town may be based on place of birth in some cases, where individuals graduated from high school in others, or where their parents or spouses or other family members currently live, etc. In a few cases, a military address seems to have been used.

As many small towns are located in or near metropolitan areas, we decided to use counties as the basis for comparison rather than cities or towns as the primary geographic identifier. Our expectation was that employment and educational opportunities would be greater in large counties (i.e., in terms of population) than in small counties and greater in small counties located in metro areas compared to small counties outside metro areas.

Comparison population. We consistently used the age 18 to 54 civilian population as a basis for determining estimated death rates since early casualties figures were in that age range. (Two of the more recent casualties were older than 54.) We recently compared results using 18 to 34, 18 to 44, and 18 to 59 age groups as comparison populations with no discernable difference in the pattern of results.

County population size categories. We grouped counties into seven population size categories. The grouping was guided somewhat by the requests for information we received from time to time.

County population size	Number of counties	Counties with soldiers		Total population in 2000	Average population size
		killed in Iraq number	percent		
1 million+	34	33	97%	70,245,850	2,066,054
500,000 to 1 million	78	73	94%	55,342,839	709,524
250,000 to 500,000	119	95	80%	41,640,329	349,919
100,000 to 250,000	293	190	65%	44,703,807	152,573
50,000 to 100,000	390	155	40%	27,643,153	70,880
25,000 to 50,000	645	149	23%	23,181,194	35,940
< 25,000	1,582	157	10%	18,669,331	11,801
Total	3,141	852	27%	281,426,503	89,598

Metropolitan Statistical Area (MSA) status. We distinguished between metro and non metro counties using the US Office of Management and Budget definition of a metropolitan statistical areas (MSA) as a county with a city of at least 50,000 residents and a total metropolitan area of at least 100,000 residents. An MSA includes bordering counties that are economically integrated with the central city and/or are considered to be within specified commuting distance of the central city. Larger metropolitan areas with one million or more residents are defined in terms of Primary MSAs (PMSAs) grouped

into Consolidated Metropolitan Statistical Areas (CMSAs). A county-based alternative is designated for New England states: New England County Metropolitan Areas (NECMAs). The US Office of Management and Budget and the US Census Bureau provide lists for all 3,141 US counties identified by MSA type: 882 counties are in metro areas according to the Office of Budget and Management definitions, and 2,259 counties are in non metro areas according to their definitions.

As of August 8, 2005, 52 percent (n = 462) of the metropolitan counties had soldiers killed in Iraq. Sixteen percent (n= 369) of the non metro counties had soldiers killed in Iraq.

Of counties less than 100,000 population, 16 percent (n=366) of the 2,259 small counties in non metro areas had 455 soldiers killed in Iraq, and 31 percent (n=111) of the 358 small non metro counties had 121 soldiers killed in Iraq.

County population size	Number of counties	Counties with soldiers killed in Iraq		Population in 2000	Average population size
		number	percent		
in non metro areas					
50,000 to 100,000	213	88	41%	14,577,605	68,439
25,000 to 50,000	528	128	24%	18,749,421	35,510
< 25,000	1,518	150	10%	17,540,850	11,555
Total	2,259	366	16%	50,867,876	22,518
in metro areas					
50,000 to 100,000	177	67	38%	13,065,548	73,817
25,000 to 50,000	117	28	24%	4,431,773	37,878
< 25,000	64	16	25%	1,128,481	17,633
Total	358	111	31%	18,625,802	52,027

II. Findings Regarding the Community Size Debate

A. The estimated death rates of soldiers from smaller counties are higher than those of soldiers from large counties.

The estimated death rates of soldiers by county provide one way to compare the effects of the war in Iraq on different counties. From these comparisons, there is little doubt that the estimated death rates of soldiers from smaller counties are higher than those of soldiers from large counties (Table 1 and Figure 1).

Counties with over one million population have 26 percent of the US population aged 18-54, the presumed population “at risk,” and a total of 350 US soldiers killed in Iraq (20 percent of the total number of soldiers killed). The three smallest county size categories (under 100,000 population) have 24 percent of the population aged 18-54, but have 576 deaths (32 percent of the total number of soldiers killed).

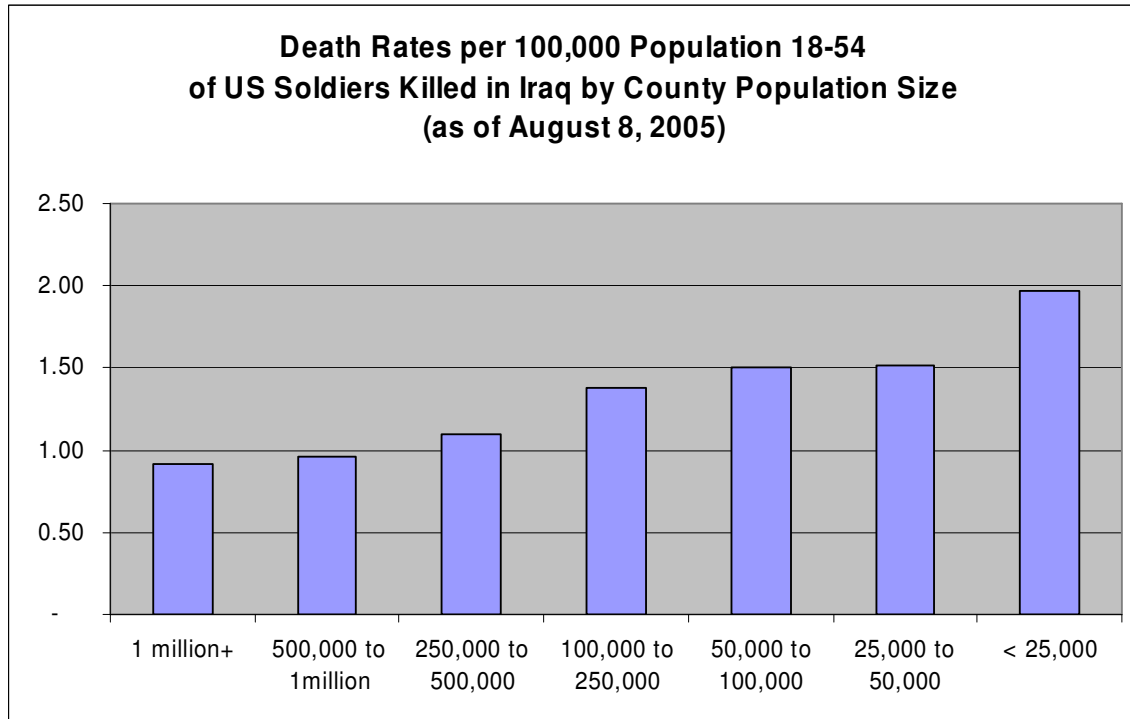
Thus, both the top population size category and the bottom three categories contained about one-quarter of the population at risk, but the bottom group not only had a relatively higher death rate, it had more deaths in absolute number (576 versus 350).

The death rate for the smallest population size category (<25,000) was 1.97 per 100,000 population, which was twice the size of the death rate (.92) for the largest population category (counties with populations of 1 million+). (See Figure 1.)

Table 1. Death Rates for All US Soldiers Killed in Iraq by County Population Size.

County population size	US soldiers killed in Iraq		Age 18-54 population in 2000		death rate per 100,000
	number	percent	number	percent	
1 million+	350	20%	38,241,295	26%	0.92
500,000 to 1million	291	16%	30,147,988	20%	0.97
250,000 to 500,000	245	14%	22,251,072	15%	1.10
100,000 to 250,000	328	18%	23,851,500	16%	1.38
50,000 to 100,000	218	12%	14,464,965	10%	1.51
25,000 to 50,000	178	10%	11,784,171	8%	1.51
< 25,000	180	10%	9,120,666	6%	1.97
Total	1,790	100%	149,861,657	100%	1.19

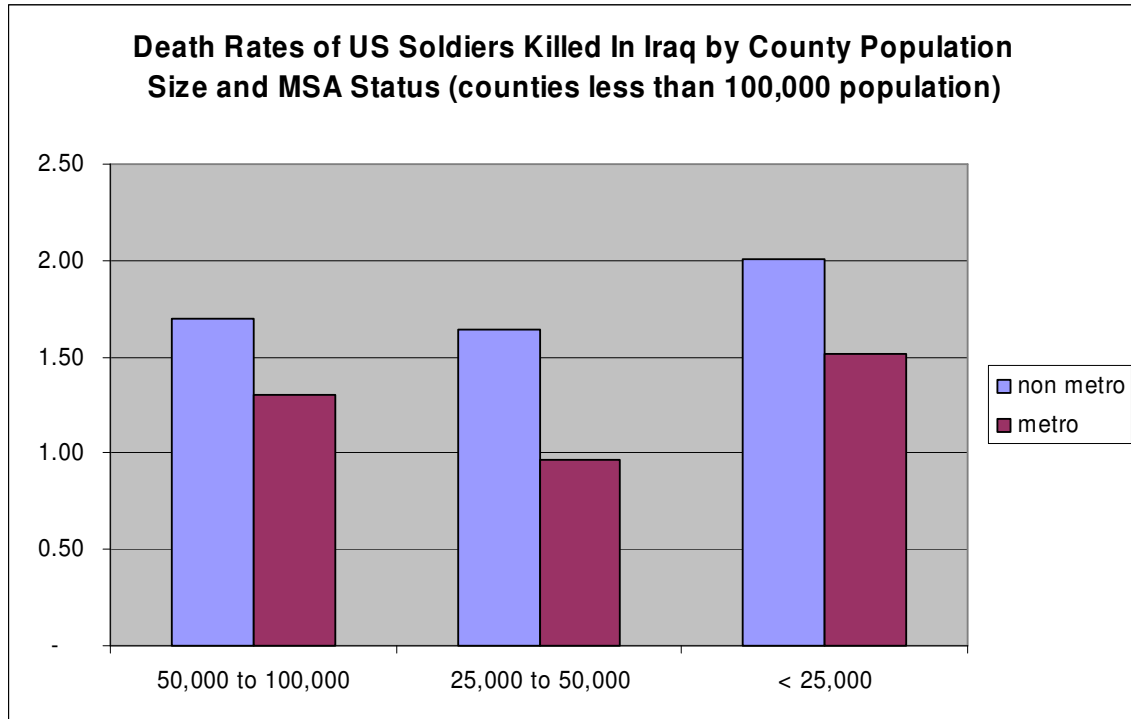
Figure 1. Death Rates by County Population Size.



B. The estimated death rates of soldiers from non metro counties are higher than those of soldiers from comparable sized metro counties.

The difference in death rates for small metro and non metro counties (<100,000 population) is also consistent with expectations (Figure 2). The non metro counties have higher death rates than the comparably small metro counties in all cases.

Figure 2. Death Rates for Small Counties by MSA Status.



III. Findings Regarding the Race/Ethnic Status of Soldiers Killed in Iraq

The DOD now classifies each soldier killed in Iraq by race/ethnic status (Table 2). The race classification in the DOD database seems to shift over time. That bothers me a bit.

Table 2. Race/Ethnic Status of US Soldiers Killed in Iraq.

	Frequency	Percent	Age 18-54 pop in 2000	Death rate per 100,000
AMERICAN INDIAN/ALASKA NATIVE	15	0.9		
ASIAN	16	0.9		
BLACK OR AFRICAN AMERICAN	183	10.7	18,214,484	1.00
HISPANIC	181	10.6	19,519,528	0.93
MULT	35	2.1		
NATIVE HAWAIIAN, OTH PACIFIC IS'L	11	0.6		
WHITE	1265	74.2	102,253,146	1.24
Total	1706	100.0		

A. The distribution of death rates for the White, non Hispanic population is consistent with expectations with respect to both size of county and metro status.

The death rates for White, non Hispanics tend to be higher in the smaller counties (Figure 3a), and especially in non metro counties (Figure 3b).

Figure 3a. White Non Hispanic Death Rates by County Population Size.

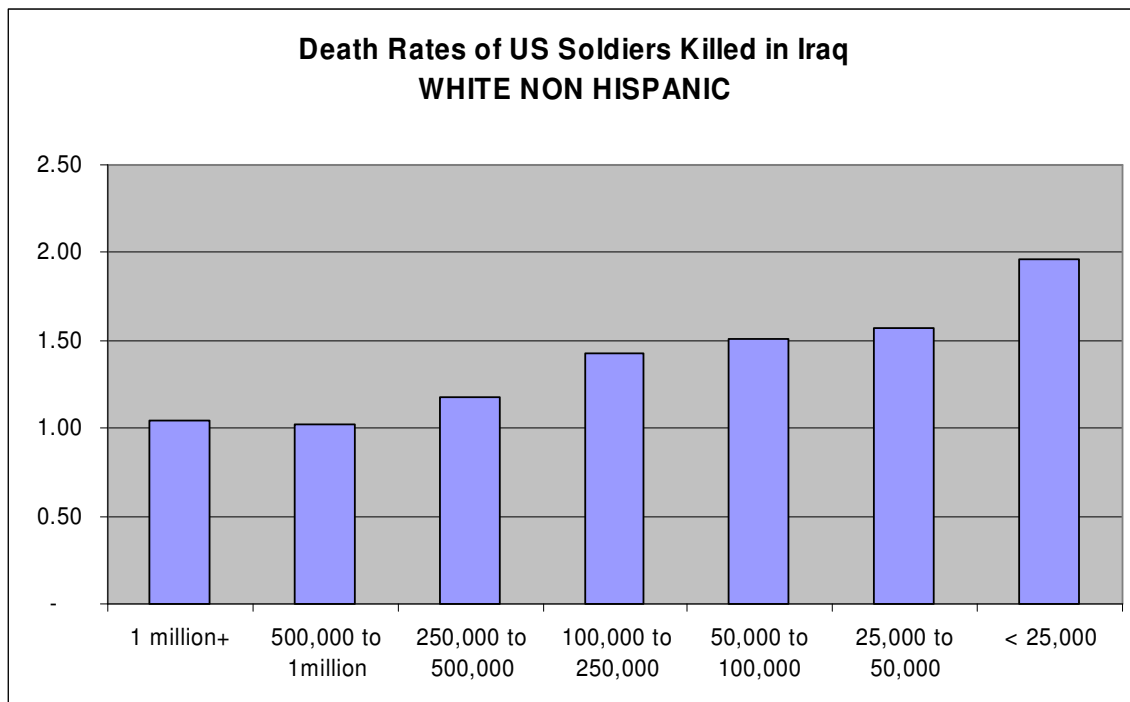
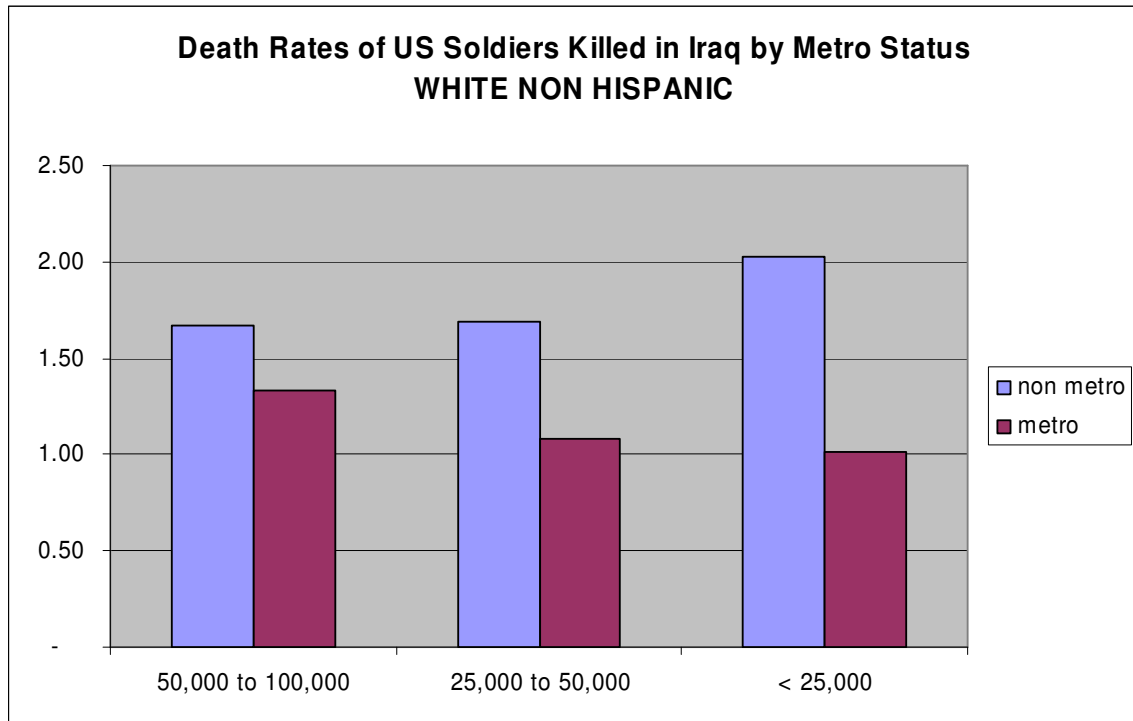


Figure 3b. White Non Hispanic Death Rates for Small Counties by MSA Status.



B. The distribution of death rates for the Black, non Hispanic population is consistent with expectations with respect to both size of county and metro status. The death rates tend to be higher for the smaller counties (Figure 3a), and especially for non metro counties over 25,000 population (Figure 3b).

Figure 4a. Black Non Hispanic Death Rates by County Population Size.

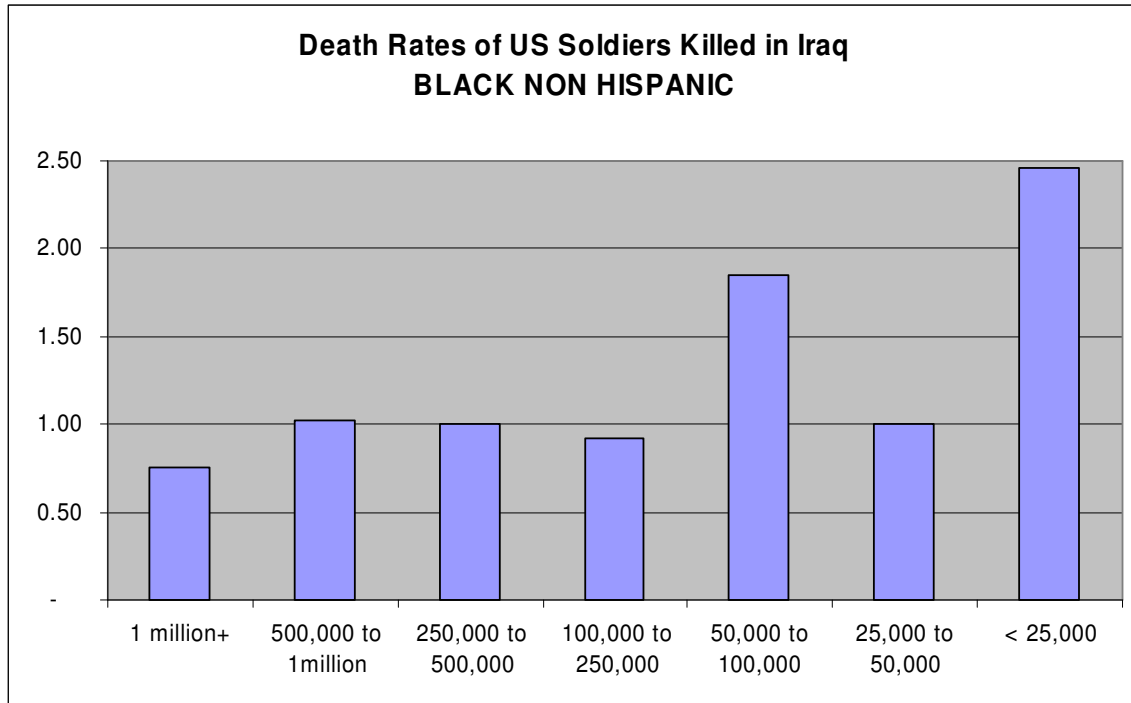
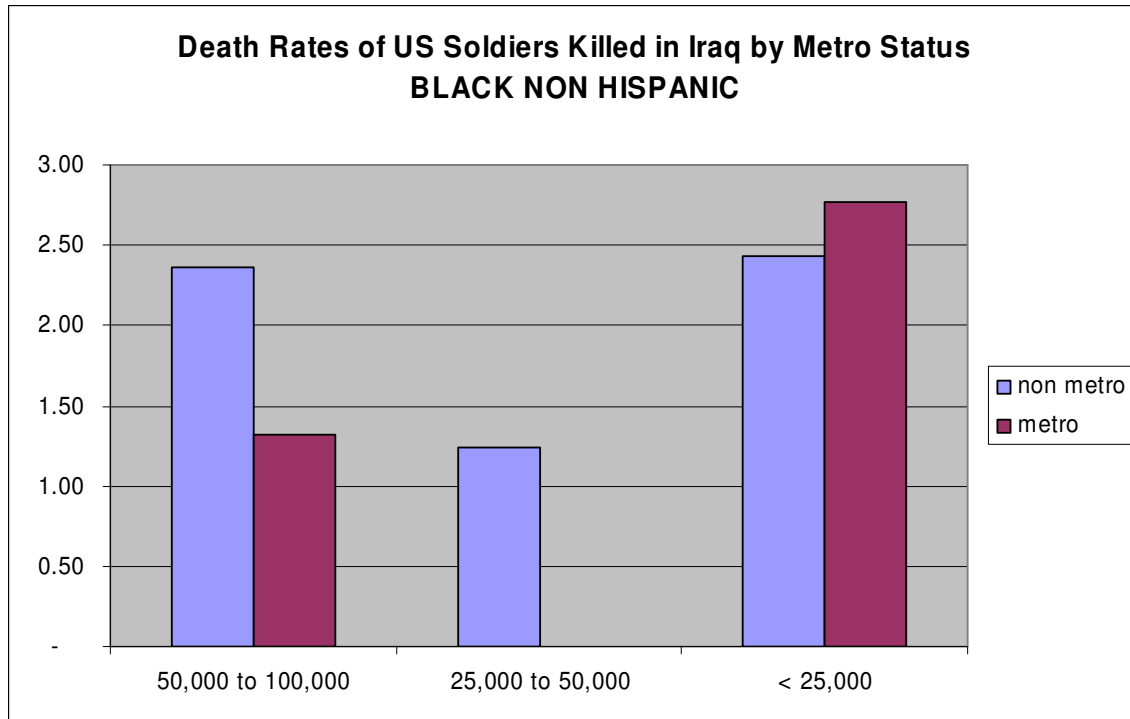


Figure 4b. Black Non Hispanic Death Rates for Small Counties by MSA Status.



C. The death rates for Black soldiers killed in Iraq tend to be higher than for Whites in smaller counties (see Table 3) and especially in the small non metro counties (see Table 4).

The fact that Whites from smaller areas are over-represented among the US military personnel killed in Iraq has received much attention. As far as I can determine, the even greater over-representation of Blacks from similar communities has received little if any comment.

Table 3. Death Rates of US Soldiers Killed in Iraq by Race and County Population Size.

County population size	Death rate per 100,000 aged 18-54	
	White	Black
1 million+	1.05	0.76
500,000 to 1 million	1.03	1.02
250,000 to 500,000	1.17	1.01
100,000 to 250,000	1.43	0.92
50,000 to 100,000	1.51	1.85
25,000 to 50,000	1.57	1.00
< 25,000	1.96	2.46

Table 4. Death Rates of US Soldiers Killed in Iraq by Race and Metro Status.

County population size	Death rate per 100,000 aged 18-54			
	White		Black	
	non metro	metro	non metro	metro
1 million+	0.76	1.05	0.76	1.05
500,000 to 1 million	1.02	1.03	1.02	1.03
250,000 to 500,000	1.01	1.17	1.01	1.17
100,000 to 250,000	0.92	1.43	0.92	1.43
50,000 to 100,000	1.85	1.51	1.85	1.51
25,000 to 50,000	1.00	1.57	1.00	1.57
< 25,000	2.46	1.96	2.46	1.96

	counties	counties	counties	counties
50,000 to 100,000	1.67	1.33	2.36	1.32
25,000 to 50,000	1.69	1.08	1.24	-
< 25,000	2.03	1.02	2.44	2.77

4. The distribution of death rates for the Hispanic population is less consistent with expectations with respect to both size of county and metro status.

Figure 5a. Hispanic Death Rates by County Population Size.

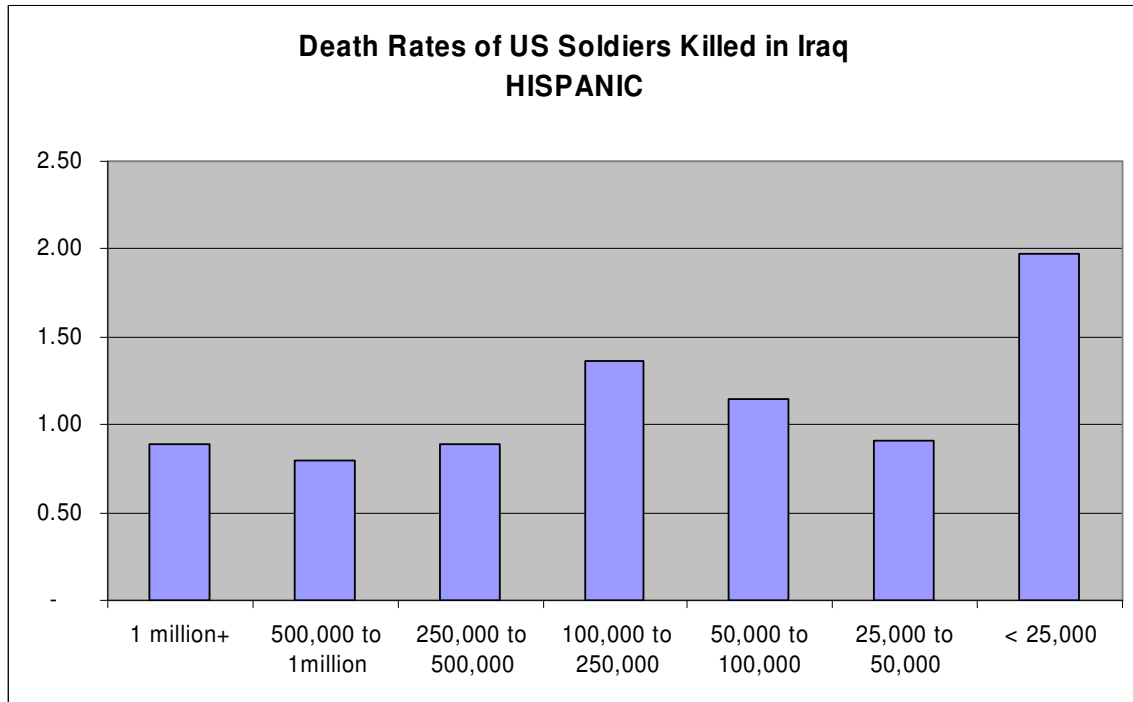
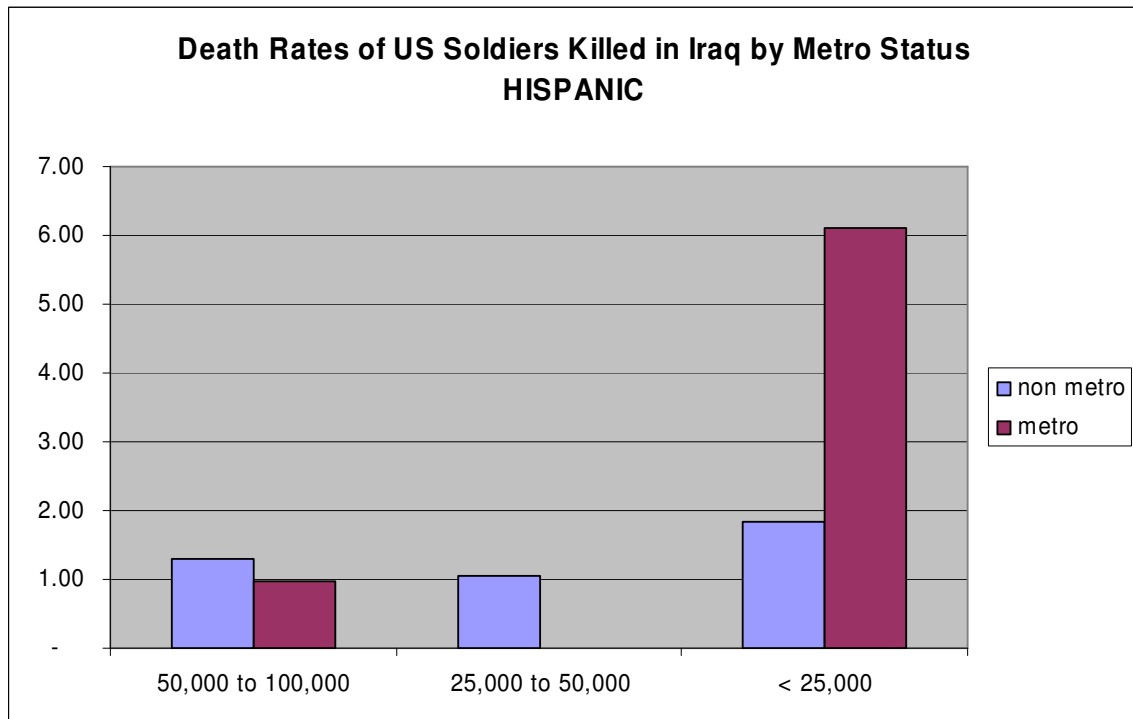


Figure 5b Hispanic Death Rates for Small Counties by MSA Status.



The fact that the distribution of death rates for the Hispanic population is less consistent with expectations is partly due to so few deaths of Hispanic soldiers from small counties. The death rates tend to be highest for the smallest counties under 25,000 population (Figure 5a). The death rates for non metro counties (Figure 5b) are higher than for the comparable sized metro counties.

Table 5. US Soldiers Killed in Iraq by Race/Ethnic Status and County Population Size.

County population size	White		Black		Hispanic	
	soldiers killed	percent	soldiers killed	percent	soldiers killed	percent
1 million+	197	15%	42	22%	87	47%
500,000 to 1 million	196	15%	46	24%	32	17%
250,000 to 500,000	193	14%	26	14%	19	10%
100,000 to 250,000	268	20%	21	11%	24	13%
50,000 to 100,000	181	14%	23	12%	8	4%
25,000 to 50,000	152	11%	11	6%	6	3%
< 25,000	145	11%	23	12%	10	5%
Total	1,332	100%	192	100%	186	100%

Sixty-four percent of the White soldiers killed came from counties greater than 100,000 population (Table 5), but the percentages were demonstrably higher for Blacks and Hispanics: 70 percent of Blacks and 87 percent of Hispanics came from the larger counties. What urban Blacks and Hispanics have in common with the less urban population with respect to the propensity to serve in the military, beyond patriotism, is a question worth pondering. (The patriotism commentary to date seems to be largely confined to rural Whites.)

Appendix A. Other Demographic Characteristics of Soldiers Killed in Iraq.

Age of US soldiers killed in Iraq (ages 18-54)			Age 18-54		Death rate per 100,000
	Frequency	Percent	Cumulative Percent	pop in 2000	
18	18	1.00%	1.00%	2,826,275	0.64
19	110	6.13%	7.13%	2,869,996	3.83
20	199	11.09%	18.2%	2,800,597	7.11
21	214	11.92%	30.1%	2,650,482	8.07
22	188	10.47%	40.6%	2,594,750	7.25
23	118	6.57%	47.2%	2,524,972	4.67
24	124	6.91%	54.1%	2,494,090	4.97
25	99	5.52%	59.6%	2,576,761	3.84
26	98	5.46%	65.1%	2,489,665	3.94
27	76	4.23%	69.3%	2,612,111	2.91
28	57	3.18%	72.5%	2,799,999	2.04
29	56	3.12%	75.6%	3,023,237	1.85
30	53	2.95%	78.6%	3,070,112	1.73
31	51	2.84%	81.4%	2,889,203	1.77
32	34	1.89%	83.3%	2,877,583	1.18
33	34	1.89%	85.2%	2,933,940	1.16
34	29	1.62%	86.8%	3,047,948	0.95
35	23	1.28%	88.1%	3,327,909	0.69
36	39	2.17%	90.3%	3,360,928	1.16
37	25	1.39%	91.6%	3,385,909	0.74
38	23	1.28%	92.9%	3,454,065	0.67
39	21	1.17%	94.1%	3,502,682	0.60
40	17	0.95%	95.0%	3,578,078	0.48
41	14	0.78%	95.8%	3,429,371	0.41
42	13	0.72%	96.5%	3,507,377	0.37
43	16	0.89%	97.4%	3,410,020	0.47
44	9	0.50%	97.9%	3,341,149	0.27
45	10	0.56%	98.5%	3,376,128	0.30
46	8	0.45%	98.9%	3,211,505	0.25
47	5	0.28%	99.2%	3,172,441	0.16
48	2	0.11%	99.3%	3,086,131	0.06
49	2	0.11%	99.4%	2,964,421	0.07
50	3	0.17%	99.6%	3,009,682	0.10
51	4	0.22%	99.8%	2,902,262	0.14
52	1	0.06%	99.9%	3,021,712	0.03
53	1	0.06%	99.9%	3,004,717	0.03
54	1	0.06%	100.0%	2,275,502	0.04
Total	1795	100.00%		111,403,710	1.61

Gender of US soldiers killed in Iraq	Frequency	Percent	Age 18-59 pop in 2000	Death rate per 100,000
Female	38	2.11	55,983,379	0.07
Male	1759	97.89	55,420,331	3.17
Total	1797	100.00	111,403,710	1.61

Home state of US soldiers killed in Iraq	Frequency	Percent	age 18-59 pop in 2000	Death rate per 100,000
MS	33	1.84%	906,946	3.64
VT	11	0.61%	315,953	3.48
ND	9	0.50%	308,517	2.92
LA	43	2.39%	1,511,086	2.85
SD	9	0.50%	341,124	2.64
AR	28	1.56%	1,082,353	2.59
WY	6	0.33%	241,678	2.48
DC	3	0.17%	123,475	2.43
NE	19	1.06%	791,813	2.40
DE	7	0.39%	306,706	2.28
AZ	44	2.45%	1,973,915	2.23
OK	30	1.67%	1,356,782	2.21
OR	34	1.89%	1,574,196	2.16
ID	13	0.72%	609,428	2.13
TX	166	9.24%	7,902,310	2.10
SC	28	1.56%	1,437,697	1.95
VA	53	2.95%	2,811,502	1.89
CA	200	11.13%	10,765,217	1.86
AL	30	1.67%	1,645,065	1.82
IA	25	1.39%	1,403,289	1.78
NM	11	0.61%	619,177	1.78
WI	44	2.45%	2,527,961	1.74
GA	51	2.84%	2,946,206	1.73
HI	3	0.17%	178,130	1.68
OH	85	4.73%	5,059,258	1.68
WV	15	0.83%	896,397	1.67
MT	7	0.39%	423,615	1.65
PA	86	4.79%	5,359,134	1.60
TN	38	2.11%	2,438,143	1.56
IL	75	4.17%	4,839,147	1.55
NV	12	0.67%	800,468	1.50
RI	7	0.39%	473,032	1.48
KY	28	1.56%	1,950,615	1.44
IN	40	2.23%	2,814,555	1.42
ME	9	0.50%	646,432	1.39
WA	36	2.00%	2,624,953	1.37
KS	16	0.89%	1,196,466	1.34

NY	84	4.67%	6,737,665	1.25
CO	25	1.39%	2,023,634	1.24
MD	22	1.22%	1,801,038	1.22
MI	51	2.84%	4,211,924	1.21
FL	73	4.06%	6,048,895	1.21
CT	17	0.95%	1,439,912	1.18
AK	3	0.17%	257,615	1.16
NJ	36	2.00%	3,151,359	1.14
MO	28	1.56%	2,456,728	1.14
NC	35	1.95%	3,145,063	1.11
NH	7	0.39%	640,275	1.09
MA	29	1.61%	2,878,981	1.01
MN	23	1.28%	2,357,433	0.98
UT	10	0.56%	1,050,447	0.95
Total	1797	100.00%	111,403,710	1.61

US soldiers killed in Iraq by race/ethnic status and state

STATE	Total killed	%White	%Black	%Hispanic	%Other
AK	3	67%	33%	0%	0%
AL	29	69%	31%	0%	3%
AR	28	82%	18%	0%	0%
AZ	40	80%	5%	8%	18%
CA	194	54%	6%	34%	10%
CO	24	92%	4%	4%	4%
CT	17	71%	6%	18%	6%
DC	3	67%	33%	0%	0%
DE	7	86%	14%	0%	0%
FL	73	67%	19%	12%	1%
GA	51	59%	33%	8%	0%
HI	3	0%	0%	0%	100%
IA	25	100%	0%	0%	0%
ID	13	100%	0%	0%	0%
IL	74	88%	8%	4%	1%
IN	40	100%	0%	0%	0%
KS	16	88%	0%	13%	0%
KY	28	82%	14%	0%	4%
LA	43	72%	26%	2%	0%
MA	29	83%	10%	7%	0%
MD	21	62%	29%	0%	14%
ME	9	100%	0%	0%	0%
MI	51	90%	4%	4%	2%
MN	22	91%	5%	5%	5%
MO	28	89%	7%	4%	0%
MS	33	70%	30%	0%	0%
MT	6	100%	0%	0%	17%

NC	35	71%	26%	0%	3%
ND	8	100%	0%	0%	13%
NE	17	88%	6%	6%	12%
NH	7	100%	0%	0%	0%
NJ	35	69%	23%	6%	6%
NM	9	56%	0%	44%	22%
NV	12	75%	0%	17%	8%
NY	82	54%	22%	18%	9%
OH	84	88%	7%	2%	4%
OK	28	89%	7%	4%	7%
OR	34	85%	0%	6%	9%
PA	86	91%	6%	3%	0%
RI	7	100%	0%	0%	0%
SC	28	50%	50%	0%	0%
SD	9	100%	0%	0%	0%
TN	37	84%	11%	5%	3%
TX	166	63%	5%	31%	2%
UT	9	89%	0%	11%	11%
VA	52	75%	15%	2%	10%
VT	10	100%	0%	0%	10%
WA	35	80%	9%	9%	6%
WI	44	98%	2%	0%	0%
WV	15	93%	7%	0%	0%
WY	6	100%	0%	0%	0%