

HEALTH INEQUALITIES IN NAFLD  
DISTRIBUTION AND OUTCOMES: A  
NATIONWIDE ANALYSIS OVER A DECADE

Authors::

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BACKGROUND:

- Non-Alcoholic Liver Disease (NAFLD) is becoming progressively more prevalent as obesity and DM rise
- The massive burden of disease owing to NAFLD has necessitated an effort to understand better the epidemiological, history, and progression of the disease
- We aim to review and analyze these health disparities and trends over the last decade.

METHODS

- We conducted a retrospective review on NIS years 2008-2018
- International classification of disease (ICD) codes identified variables, including NAFLD
- Chi-square test, logistic, and multivariate analysis was performed to analyze comparisons and find odds ratios.

RESULTS

- A total of 2,473,982 NAFLD patients are included in this analysis, out of which 234,533 survived, and 2,239,449 had died over the ten years
- Females had a higher percentage of NAFLD that both survived (56% vs. 44% p<0.05) and died (54% vs. 46% p<0.05) compared to males. Females also had decreased odds of mortality compared to males [0.94 (0.89-0.96) p<0.05].
- Trends over ten years showed that both Whites and females had a decreasing mortality rate over the decade as seen in Figure 1 and 2 respectively.

Whites and females have higher rates of prevalence and mortality, while females and Hispanics were both found to have lower odds of mortality. Concomitant comorbidities play a significant role in mortality in this patient population, as does teaching versus non-teaching hospital admission. These findings can help us better educate our scientists, physicians, and leaders to improve care in this population.

Table 1. Patient Characteristics			
Characteristic	NAFLD Who Survived	NAFLD Who Died	P Value
Patient Age, mean (SD)	N=234,533 55	N=2,239,449 63	p<0.05
Sex			p<0.05
Female	131,151 (56%)	1,221,843 (54%)	
Male	103,382 (44%)	1,017,606 (46%)	
Race N(%)			p<0.05
White	163,680 (70%)	1,637,709 (73%)	
Black	22,093 (9%)	196,624 (9%)	
Hispanic	34,640 (15%)	262,463 (12%)	
Asian or Pacific Islander	5,066 (2%)	52,627 (2%)	
Native American	1,994 (0.9%)	23,066 (1%)	
Other	7,059 (3%)	66,736 (3%)	
Insurance, N(%)			p<0.05
Medicare	89,920 (38%)	1,272,455 (57%)	
Medicaid	40,785 (17%)	322,149 (14%)	
Private	87,903 (37%)	568,820 (25%)	
Uninsured	15,924 (7%)	89,801 (4%)	
Household Median Income, N(%)			p<0.05
1-38,999	66,490 (28%)	680,569 (30%)	
39,000-47,999	61,823 (26%)	591,662 (26%)	
48,000-62,900	58,164 (25%)	565,102 (25%)	
>63,000	48,056 (21%)	405,116 (18%)	
Bed Size, N(%)			p<0.05
Small	37,854 (16%)	279,931 (13%)	
Medium	63,699 (27%)	566,805 (25%)	
Large	132,980 (57%)	1,392,713 (62%)	
Hospital Region			p<0.05
Northeast	38,510 (16%)	306,357 (14%)	
Midwest	50,893 (22%)	526,047 (22%)	
South	93,368 (40%)	915,263 (41%)	
West	51,785 (22%)	491,783 (22%)	
Hospital Location			p<0.05
Rural	18,551 (8%)	2,239,449 (6%)	
Urban	215,981 (92%)	2,098,588 (94%)	
Hospital Teaching Status			p<0.05
Teaching	91,679 (39%)	706,546 (32%)	
Non-Teaching	142,854 (61%)	2,239,448 (68%)	
Charlson Comorbidity Index, mean (SD)			p<0.05
0	56,476 (24%)	246,339 (11%)	
1	60,252 (26%)	188,562 (8%)	
2	40,433 (17%)	232,903 (11%)	
3	77,349 (33%)	1,565,599 (70%)	
LOS, days (SD)	4	5	p<0.05
Total Hospital Charges (SD)	62,247.00	\$49,490.00	p<0.05

