

LETTER TO EDITOR

Intentional self-harm associated mortality among U.S. White physicians, nurses, lawyers & judges**Deepak Gupta¹, Sarwan Kumar², Shushovan Chakraborty³**¹Clinical Assistant Professor, Anesthesiology, Wayne State University, Detroit, Michigan, United States; ²Assistant Professor, Internal Medicine, Wayne State University, Detroit, Michigan, United States; ³Clinical Associate Professor, Anesthesiology, Wayne State University, Detroit, Michigan, United States**Corresponding Author**Dr Deepak Gupta, Clinical Assistant Professor, Anesthesiology, Wayne State University/Detroit Medical Center, Box No 162, 3990 John R, Detroit, MI 48201, United States
E Mail ID: dgupta@med.wayne.edu**Citation**Gupta D, Kumar S, Chakraborty S. Intentional self-harm associated mortality among U.S. White physicians, nurses, lawyers & judges. Indian J Comm Health. 2020;32(4):757-759. <https://doi.org/10.47203/IJCH.2020.v32i04.029>**Source of Funding:** Nil **Conflict of Interest:** None declared**Article Cycle****Received:** 24/08/2020; **Revision:** 30/10/2020; **Accepted:** 17/11/2020; **Published:** 31/12/2020This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).**Abstract**

The mortality associated factors can be quantified in terms of proportionate mortality ratios (PMR) per National Occupational Mortality Surveillance (NOMS) data. Therefore, we explored NOMS data for the United States (U.S.) occupational workers' mortality during 1999, 2003-2004, 2007-2014 to compare physicians' mortality associated factors to the mortality associated factors among nurses vs. the mortality associated factors among lawyers & judges. Due to lack of adequate sample sizes of decedents being concurrently present among physicians, nurses, and lawyers & judges of Black race, we were able to tabulate 25 causes of death with significant PMRs among physicians, nurses, and lawyers & judges only of White race. Therein, intentional self harm associated mortality was found to be common among U.S. White physicians, nurses, lawyers & judges.

Keywords

Physicians; Nursing; Lawyers; Suicide

Introduction

To understand our mortality while and after practicing medicine (1), we had tabularized openly accessible National Occupational Mortality Surveillance (NOMS) data about physician mortality in United States (U.S). Now, we have revisited NOMS data for U.S. occupational workers' mortality during 1999, 2003-2004, 2007-2014 to compare our mortality associated factors to the mortality associated factors among nurses vs. the mortality associated factors among lawyers & judges (2). Non-Black-non-White ethnicity/race mortality data among occupational workers is not openly accessible at NOMS website most likely due to the paucity of their numbers in general population. However, it can be safely assumed that Black/White ethnicity/race mortality data can be easily extrapolated to other ethnicities/races. The primary difference during such extrapolation may be the time lag before any occupational job becomes as common among other ethnicity/race workers as among Black/White ethnicity/race workers.

The mortality associated factors can be quantified in terms of proportionate mortality ratios (PMR) per NOMS data (3,4). For example, PMR for intentional self-harm as the cause of death among 65-90 year-old White female physicians is 677 which is equal to $100 * (65-90 \text{ year-old White female physicians who died of intentional self-harm} \div \text{all 65-90 year-old White female physicians}) \div (\text{all 65-90 year-old White females who died of intentional self harm} \div \text{all 65-90 year-old White females})$. It means 65-90 year-old White female physicians were 6.77 times as likely to die due to intentional self harm as 65-90 year-old White female workers in general.

Essentially, PMR is neutral at 100 with (a) values below 100 meaning that the cause of death is less likely among the specific worker groups' population as compared to all workers' population and (b) values above 100 meaning that the cause of death is more likely among the specific worker groups' population as compared to all workers' population. Moreover, the more faraway from central-neutral 100 the value of PMR is the stronger the association of that cause of death is for that specific worker group. However, the p-value for PMR reaches

statistical significance (confidence interval do not include 100 and $p < 0.05$) as well as confidence interval for PMR becomes tighter only if the sample size of decedents is large enough for that cause of death among that specific worker group.

Based on this premise, we charted only those causes of death where PMRs were significant ($p < 0.05$) in all three worker groups (physicians, nurses, and lawyers & judges). Consequently, due to lack of adequate sample sizes of decedents being concurrently present among physicians, nurses, and lawyers & judges of Black race, we were able to tabulate 25 causes of death with significant PMRs among physicians, nurses, and lawyers & judges only of White race (Table 1). Subsequently, to demonstrate how faraway from central-neutral 100 their PMR values were, we graphed these 25 causes of death to depict how far right (and thus much more likely) or how far left (and thus much less likely) White physicians, nurses, and lawyers & judges had died due to them during 1999, 2003-2004, 2007-2014 in the U.S. (Figure 1).

To explain the graphical comparison by revisiting the example of intentional self harm as the cause of death, 65-90 year-old White female physicians, nurses, and lawyers & judges were respectively 6.77 times, 1.45 times, and 3.95 times as likely to die due to intentional self harm as 65-90 year-old White female workers in general indicating that intentional self harm as mortality associated factor becomes ascendingly significant for nurses, lawyers & judges, and physicians in that order among 65-90 year-old White female workers.

Even though NOMS data documents regarding 242 causes of death for all workers categorized by their age group (18-64 year-olds or 65-90 year-olds), sex (female or male) and race (Black or White), we found only 25 out of 968 causes of death where White physicians, nurses, and lawyers & judges had significant PMRs concurrently. The reason for this niche data (<3% representation due to only 25/968 causes of death) may be that the sample sizes of decedents among White physicians, nurses, and lawyers & judges were very dissimilar most likely due to potential rarity of 65-90 year-old White male nurses and corresponding potential rarity of 65-90 year-old White female physicians, and lawyers & judges (5,6,7), unless the

significant causes of death are actually very dissimilar per se among White physicians, nurses, and lawyers & judges. Summarily, our tabulation and illustration do not completely answer our inquisition into comparative mortality among physicians, nurses, lawyers & judges for all age-groups/sexes/races/ethnicities but like our earlier publication (1), puts forth the alarmingly common mortality associated with intentional self harm among White physicians, nurses, lawyers & judges in the U.S.

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Tables

TABLE 1 CAUSES OF DEATH CONCURRENTLY SIGNIFICANT AMONG U.S. WHITE PHYSICIANS, NURSES, AND LAWYERS & JUDGES (SOURCE DATA FROM NATIONAL OCCUPATIONAL MORTALITY SURVEILLANCE [2])

Among White Workers' Population In United States		Proportionate Mortality Ratio		
Demographics	Cause of Death	Physicians	Nurses	Lawyers & Judges
18-64 year-old females	Malignant Neoplasms	117	92	135
	Malignant Neoplasms Respiratory System	67	77	76
	Malignant Neoplasms Trachea, Bronchus and Lung	67	77	72
	Malignant Neoplasms Brain	181	120	178
	Malignant Neoplasms Brain and Nervous System	177	120	181
	Ischemic Heart Disease	69	93	50
	Diseases of the Respiratory System	63	89	36
	Chronic Obstructive Pulmonary Disease	33	79	22
	Intentional Self Harm	212	162	202

65-90 year-old females	Malignant Neoplasms	115	98	112
	Diseases of the Heart	88	97	87
	External Causes of Injury and Poisoning	205	118	144
	Intentional Self Harm	677	145	395
18-64 year-old males	Infectious and Parasitic Diseases	66	156	68
	Malignant Neoplasms	109	88	111
	Malignant Neoplasms Respiratory System	47	66	58
	Malignant Neoplasms Trachea, Bronchus and Lung	49	67	58
	Malignant Neoplasms of Other and Unspecified Sites	186	73	155
	Diseases of the Digestive System	53	85	80
	Diseases of Liver	52	83	76
	Cirrhosis & Other Chronic Liver Disease	42	79	77
	External Causes of Injury and Poisoning	142	114	119
	Intentional Self Harm	205	136	182
	65-90 year-old males	Diseases of the Nervous System and Sense Organs	160	120
Diseases of the Respiratory System		70	113	70

Figures

FIGURE 1 CAUSES OF DEATH CONCURRENTLY SIGNIFICANT AMONG U.S. WHITE PHYSICIANS, NURSES, AND LAWYERS & JUDGES GRAPHICALLY DEPICTED WITH CORRESPONDING PROPORTIONATE MORTALITY RATIOS (PMRS) IN ZONE A (18-64 YEAR-OLD FEMALES), ZONE B (65-90 YEAR-OLD FEMALES), ZONE C (18-64 YEAR OLD MALES), AND ZONE D (65-90 YEAR-OLD MALES): THE CENTRAL-NEUTRAL VERTICAL LINE REPRESENTS PMR=100 WITH PMR>100 SCALED AS HORIZONTAL BARS ON TO ITS RIGHT AND PMR<100 SCALED AS HORIZONTAL BARS ON TO ITS LEFT (SOURCE DATA FROM NATIONAL OCCUPATIONAL MORTALITY SURVEILLANCE [2])

