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Letter to the Editor

Outcomes in Pulmonary Hypertension in Relation to Insurance Status: National Hospital Discharge Survey, 2000-2010

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Dear Editor,

Pulmonary hypertension (PH), which is listed on hospital records as either primary PH or PH secondary to another underlying condition or disease, is a rare disease associated with mortality and considerable healthcare costs [1, 2]. Increased vascular pressure within the lungs and the heart leads to right-sided heart failure. Expensive treatment options make this condition difficult to manage [2]. Additionally, in fields of medicine and public health, insurance status has been demonstrated to be directly correlated with disparities in utilization of medical care, treatment of a disease, and the outcome of treatment [3]. Many unemployed individuals in Turkey and the United States do not have comprehensive health coverage [4-6]. This study examined whether insurance status had an effect on PH-related mortality.

Data were taken from the 2000–2010 National Hospital Discharge Survey, which is a population-based survey conducted by the National Center for Health Statistics in the United States. This survey includes information on discharges from a sample of nonfederal short-stay hospitals. All individuals from this nationally representative study were 20 years of age and older and had PH. Patients who either had been uninsured or had Medicaid (a government program providing medical coverage for the poor) were compared to patients covered under a variety of commercial insurers and Medicare (insurance coverage for those 65 years of age or older) alone. A PH-related hospitalization was defined as any patient with an ICD-9-CM (416.0 and 416.8) diagnosis of PH during admission. Death during hospitalization was regarded as a negative discharge outcome [7]. Comparisons were analyzed using the Chi-square test and the complex sample multiple logistic regression procedure to determine the relationship of health coverage and discharge status. All missing variables were excluded.

Data were available for 20,504 PH-related hospitalizations (63% females, 37% males) representing 240,401 individuals with a mean age of 69.6 (standard error: 0.20). In this subgroup, the prevalence of PH-related deaths was 3.8% in Whites, 2.2% in Blacks, and 0.3% in American Indians/Alaskan Natives. Among the PH hospitalizations, proprietary hospitals had significantly lower levels of PH-related deaths than government and nonprofit hospitals, as seen in Figure 1. The overall unadjusted odds ratio (OR) for death among those with Medicaid coverage compared to other types of health coverage was 2.31 (95% confidence interval [CI], 1.36–3.91; $p<0.05$). The adjusted OR was 1.31 (CI: 0.77–2.25; $p>0.05$), after controlling for demographic risk factors (race, gender, age, days of care, and marital status).

Among those with PH, individuals who were uninsured or had only Medicaid coverage had a 131% higher chance of mortality than those who had private coverage or other insurance. Consequently, more effort needs to be placed on addressing insurance-related disparities associated with PH to avoid negative discharge outcomes, although Turkey has had Universal Health Care (UHC) since 2012 with growing privatization. Healthcare professionals need to ensure that individuals with Medicaid are also diagnosed and treated on time so that this can delay the associated complications, and these individuals can suffer less morbidity and mortality [7]. As reflected by this study and previous studies, government-funded insurance or UHC provision is challenging in many countries because, paradoxically, the poor are often the last to benefit. More longitudinal studies need to be done to understand the precise connection between insurance status and PH.

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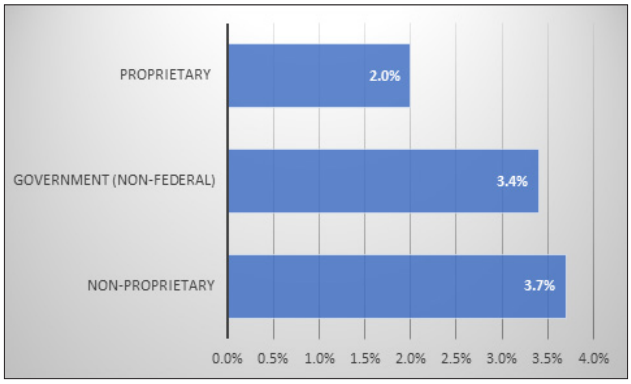

Figure 1. Prevalence of PH-related mortality rate stratified by hospital ownership. ($p<0.05$)

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REFERENCES

1. Bauer SR, Tonelli AR. Beyond the evidence: treating pulmonary hypertension in the intensive care unit. Crit Care 2014;18:524. [CrossRef]
2. Tagliabue P, Fedeli T. Treatment of pulmonary hypertension. Ital J Pediatr 2014;40. [CrossRef]
3. Rahman S, Mirza A-S, Wathington D, et al. Chronic disease and socioeconomic factors among uninsured patients: a retrospective study. Chronic Illn 2021;17:53-66. [CrossRef]
4. Viramontes O, Hochman M, Serota ML, Delgado E, Moreno G. New enrollment under the affordable care act: leading the way for community health centers in Southern California. BMC Health Serv Res 2018;18:729. [CrossRef]
5. Ergin I, Kunst AE. Regional inequalities in self-rated health and disability in younger and older generations in Turkey: the contribution of wealth and education. BMC Public Health. 2015;15:987. [CrossRef]
6. Dozier KC, Miranda MA, Kwan RO, Cureton EL, Sadjadi J, Victorino GP. Insurance coverage is an independent predictor of mortality after gunshot trauma. J Am Coll Surg 2009;209:S44. [CrossRef]
7. Krishnamoorthy P, Gopalakrishnan A, Ram P, et al. Clinical burden and cost analysis of pulmonary hypertension in patients with chronic kidney disease: a cross sectional study from the National Inpatient Sample. J Am Coll Surg 2017;69:1907. [CrossRef]