

Associations with Positive Suicide Screenings in Outpatient Pediatric Surgical Clinics

Alyssa Barre¹, De-An Zhang², Victoria Holm, Henry J Iwinski³, Selina Poon

¹University of Kentucky, ²Shriners For Children Medical Center, ³Shriners Hosp for Children

INTRODUCTION: Suicide is the second leading cause of death in the United States for adolescents ages 10-24. Children in surgical clinics frequently have diagnoses and have had experiences that may predispose them to mental health challenges. This study examined potential associations between demographic variables and diagnoses with suicide screens in outpatient surgery clinics to better identify at-risk patients.

METHODS:

A database was compiled consisting of all suicide screenings administered across a nationwide pediatric surgical healthcare system from March 2019 through May 2023. Demographic variables and diagnoses were collected and associations with positive screenings were assessed. Multilevel logistic regression models were used to determine the odds ratio and 95% confidence interval (CI) for the relationship between each diagnosis as well as demographic characteristics and positive suicide screening, after controlling for repeated screenings within individuals.

RESULTS:

79,384 suicide screenings were collected for 50,796 patients. 5.6% (n=4,476) of these screenings were positive for suicidal thoughts, with 2.8% (n=125) of these being positive for acute suicidality. There was no difference in rates of positive suicide screenings based on ethnicity. Asian patients were less likely to screen positive than white patients (odds ratio [OR] 0.65, 95% confidence interval [CI] 0.56-0.76). Females had a higher likelihood of screening positive than males (OR 1.92, CI 1.8-2.05). Patients with Medicaid or who were uninsured were also more likely to screen positive compared to those with commercial insurance (OR 1.47, CI 1.38-1.57 and OR 1.17, CI 1.002-1.36, respectively). For each 0.1-unit increase in affluence based on the National Neighborhood Data Archive (NaNDA), there was decreased likelihood of positive screens (OR 0.93, CI 0.91-0.96). When compared to 2023, there were more positive screens in the years 2020 and 2021. The diagnosis most largely associated with increased risk was mental, behavioral, and neurodevelopmental disorders (OR 3.41, CI 2.92-3.97). Other diagnoses associated with positive suicide screening included scoliosis (OR 1.1, CI 1.02-1.17), burns (OR 1.43, CI 1.21-1.69), and pain (OR 1.88, CI 1.71-2.05). When analyzing scoliosis subtypes, juvenile idiopathic scoliosis was less likely to screen positive than kids with other subtypes of scoliosis (OR 0.71, CI 0.56-0.89). All p<0.05.

DISCUSSION AND CONCLUSION:

Female and patients with Medicaid or who were uninsured have increased risk of screening positive for suicidal ideations. Variables associated with a decreased risk included increase NaNDA affluence and Asian ethnicity. There were also higher rates in 2020 and 2021, suggestive of an influence of COVID-19. Patients with diagnosis of mental, behavioral, and neurodevelopmental disorders were most at risk for screening positive for suicidal thoughts. It is important for surgical providers to understand how demographic factors and diagnoses influence mental health and suicidality and may aid providing appropriate resources for these at-risk patients.