Admissions for urinary tract infections are increasing for young adults with spina bifida in the United States, 2006 to 2016

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INTRODUCTION

• Due to improved medical care, the majority of children and adolescents with spina bifida (SB) are surviving into adulthood, resulting in a growing population of adults with SB in the United States.1

• These patients commonly seek emergency or inpatient care for potentially preventable causes including urinary tract infections (UTI), pressure ulcers, and urolithiasis.

• Transition of adolescents into adult urologic care is inconsistent and results in unmet health needs.2 Transitional urology is an emerging field aiming to bridge care of patients with congenital conditions into adult care

METHODS

Dataset:

• National Inpatient Sample (NIS) for the years 2006-2016
  • All-payer admissions claims-based database
  • Sampling of 20% of US non-military discharges
  • Allows national population estimates
  • Statistical protocols and weights per HCUP standards

• Population
  • Group 1: SB admissions ages 18-25, N= 51,000
  • Group 2: SB admissions ages 26-33, N= 57,358
  • Group 3: General population (non-SB) admissions ages 18-25
    • N= 27,088,856, for comparison of change in billing/coding
  • Primary diagnoses identified by ICD-9 codes
  • Additional variables: demographics, length of stay, hospital costs, hospital-specific information

• Statistical Analysis
  • Trends over time period estimated by multivariate logistic regression with year as the exposure of interest
  • Covariates: year, age, gender

RESULTS

• SB admissions represent 0.2% of all admissions for the 18-25 age group (51,000/27,088,856) and increased 29.3%.

• UTI was the most common primary diagnosis and it is increasing for SB admissions ages 18-25.

• Sepsis had largest increase and had longest mean length of stay (9.0 days SD13) and the highest total mean hospital costs ($70,402 SD110,810)

• “Preventable” diagnoses accounted for 37.8% of admissions and were increasing for both SB groups OR 1.034 (CI 1.028-1.040)

CONCLUSION

• There is a large and growing need of longitudinal care for SB young adults

• The large increase in sepsis (321% increase) was also see in comparison groups and this trend has been shown in other studies3. Potential causes include increased surveillance and detection of sepsis, a sicker population, or national changes in billing/coding for hospital admissions

• There is a growing need of longitudinal care for SB young adults

• Skin conditions, shunt complications and pneumonia decreased in the SB populations possibly indicating improved preventative care for these conditions

Aim: To examine national trends for hospitalization in young adults with spina bifida

Hypothesis: There been a decrease in proportion of inpatient admissions with urologic diagnoses due to the increasing nationwide focus on transitional and adult urologic care for this vulnerable population

LIMITATIONS

• NIS is a database of admissions, cannot follow patients over time or account for repeat admissions

• Relies on proper billing and coding and this may be prone to multiple biases

• Lack more detailed information about each admission

References


4. INTRODUCTION, Jennifer Hagedorn MD, 2006-2016

5. METHODS: Christopher Loftus MD, 2006-2016


7. CONCLUSION: MP29-03

8. LIMITATIONS: Donald K. Stoller, 2006-2016