

Quickshot Presentation 3

Beware of Big Data - A Lesson from Data Collection of Unsheltered Populations

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Introduction: Large database studies are commonly used to measure outcomes and quality among trauma patients. The introduction of CDC-mandated screening for social determinants of health in January 2024 and the availability of ICD-10 Z codes for those with unsheltered status created an opportunity to measure outcomes among this unique population.

Aim: Our primary aim was to determine the accuracy of current data sets using ICD-10 codes related to housing insecurity. The secondary aim was to determine utilization of nursing-completed screening admission database forms that include housing insecurity questions and concordance among these answers with ICD-10 coding and chart review.

Methods: ICD-10 codes Z5900, Z5901, Z5902, Z5910, Z59812, Z59819 that encompass housing insecurity and homelessness were used for data request for all trauma discharges from January 2024 through July 2024 at the only level one trauma center in New Mexico. Medical records were reviewed to determine the type of homelessness expressed and to review the admission database form for

concordance. All trauma patients were then screened during admission by trauma team providers to determine additional patients who may not have been identified by the ICD-10 codes or admission database. Descriptive statistics were then completed for accuracy and concordance among chart review, ICD-10 codes, and nursing admission screening forms.

Results: 226 patients greater than age 18 were identified from initial ICD-10 codes. 48 patients were identified incorrectly on coding (21%). 102 of the 226 patients (45%) had answered yes to the questions regarding housing insecurity on the adult admission form. Of the patients who were truly without a house, the yes response rate was 49% (n=88), the no response rate was 18% (n=32), and the not completed rate was 33% (n=58). After reviewing all trauma admissions, an additional 56 houseless patients were identified that were not included in initial ICD-10 coding.

Conclusions: Use of nursing screening admission forms and ICD-10 codes are not adequate to fully capture the housing status of populations in trauma. This is of vital importance in patients who face significant inequity in our society and barriers to healthcare related to housing status. Accurate and stringent data collection will allow for improved health outcomes, quality improvement projects, and public health interventions.