Online Data Supplement to:

Variation in Utilization of Intensive Care for Pediatric Diabetic Ketotacidosis

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1) Methods

1.a. Data sources and study population

The state of Texas masks gender and zip code data of hospitalizations with a diagnosis of infection with the human immunodeficiency virus (HIV), or with alcohol- or substance-related disorders. In addition, the state provides only broad age group data (0-17 years, 18-44 years, etc.) for hospitalizations with a diagnosis of infection with the human immunodeficiency virus (HIV), or with alcohol- or substance-related disorders, to protect patient privacy. Finally, zip code data are masked in specific categories of hospitalizations with small number from a given zip code of residence or small number discharges from a specific hospital.

1.b. Study variables

Supplementary Table 1. International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes used to identify selected comorbidities and complications of DKA hospitalizations. (Where only 3 or 4-digit codes are listed, all associated subcodes are included)

Variable	ICD-9-CM codes
Obesity	278.00, 278.01, 278.03, 649.1, 649.10-649.14, V85.30-V85.45
Tobacco abuse	305.1X, V15.82
Type of diabetes with DKA	
Type 1	250.11, 250.13
Type 2 or unspecified	250.250.10, 250.12
Diabetes with hyperosmolarity	250.20-250.23
Diabetic coma	250.30-250.33

1.c. Data analysis

Because some hospitals did not contribute data for the whole study period (that is, some new hospitals started operation, while others closed, during study period), we standardized the hospital-specific volume of hospitalizations with diabetic ketoacidosis by deriving an annualized number of hospitalizations. The annualized number of hospitalizations was calculated by dividing the total number of hospitalizations for each hospital by the number years the hospital has been contributing data on hospitalizations with diabetic ketoacidosis. We used this approach to limit the number of excluded hospitals and to maximize the generalizability of study data. We assessed the validity of this approach for modeling predictors of admission to ICU by comparing model findings for each covariate between a model that included only hospitals with 10 years of data (n =197) and that with added data from hospitals with less than 10 years of data (n = 15). There has been no change in the direction of the association of each modeled covariate with ICU admission, and no change in the level of statistical significance for each (that is, no statistically significant covariate became non-significant or vice versa).