to the pediatric intensive care unit (PICU) at Women and Children's Hospital in Charleston, WV, from January 2007 to December 2010 in comparison with our general Type 1 diabetes population. The data collection tool included multiple sociodemographic factors, HbA1c, and markers of the degree of DKA.

Results: We reviewed a total of 167 patients with an admitting diagnosis of DKA; 63 charts were excluded because they did not meet either DKA criteria and age criteria, had new-onset diabetes, or lived outside of West Virginia; 57% were female, 43% male. Average age was 13.6 years (SD = 2.81 years); 56% were covered by Medicaid or CHIPS insurance and 44% by commercial payers; 11.5% were African American and 88.5% were Caucasian. The average HbA1c was 10.85% (SD = 2.364). Average length of stay in the PICU was 17.8 hours (SD = 11.13). We identified peak DKA admissions during April to October, with the lowest admissions being December through March.

Conclusions: Salient findings include higher HbA1c and higher rates in African American patients and in those covered by Medicaid/CHIPS.

Clinical Implications: This study identifies sociodemographic factors associated with children admitted for DKA in West Virginia. Patients indentified to be at higher risk for DKA include those with elevated HbA1c, of African American race, and covered by Medicaid/CHIPS. Nurses can utilize these findings to develop strategies to educate these high-risk groups on the prevention of DKA.

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Dance for Health: Implementation of a Dance Program to Improve Physical Activity of Children

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Background: Sedentary lifestyle, decreased physical activity, and poor diet contribute to the increasing problem of childhood obesity and risk for Type 2 diabetes. Children living in urban areas often have limited access to physical activity.

Aims: The purpose of this study was compare the effect of dance, with unstructured playtime, on the physical activity level of an underserved, urban population of children. Activity, via pedometer readings (PR), effect on heart rate (HR), and body mass index (BMI), were assessed.

Methods: In this longitudinal study, height and weight were measured and BMI was calculated during the first week of the 4-week program. Every week, heart rates were measured, as well as the PR. Preactivity heart rates were obtained, and a hip-hop dance class was taught for 30 minutes, once a week, by a dance team. Resting HR and PR were measured after the dancing. During the nondancing days, PR were taken to gauge physical activity during usual activity.

Results: Thirty-eight children (16 were female, and 22 were male; 4.7–12.9 years) participated in the study. Average BMI was 18.3 (±5.5); 20% were above the 85th percentile for age and gender. Overall, the average PR measurement for dancing days was 1,760 (±945) versus 851 (±619) on nondancing days. The number of steps in dancing days was approximately double those in the nondancing weeks ($p < .001$). The number of steps significantly increased in the later weeks in comparison with the first week ($p < .001$). Children 8–10 years had more steps than younger and older age groups. Age had a quadratic association with PR ($p < .001$). Males had 37.2% more steps than females ($p = .026$), and BMI was found to not be associated. Resting HR was significantly higher than baseline ($p < .001$).

Conclusions/Clinical Implications: Children in this population were not physically fit as evidenced by their elevated resting heart rates after exercise. Implementing dancing increased steps and activity of the children. Dance is a culturally relevant, enjoyable, free, and easily accessible method of activity. It is crucial for nurses in pediatric endocrinology to address the obesity epidemic with culturally appropriate interventions and to partner with the community to tackle this public health crisis.

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Improving the Efficiency and Safety of Managing Children With Diabetic Ketoacidosis

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Background: Typically, managing diabetic ketoacidosis (DKA) in children is labor intensive and includes collection and monitoring of hourly subcutaneous blood glucose, vital signs, neurological assessment, and other laboratory values every 2 to 4 hours by nurses. Intravenous (IV) hydration is imperative and requires frequent fluid changes based on laboratory results. Managing IV fluids is problematic because of delays in physician return calls, pharmacy response to physician orders, and delivery of IV fluids to patient areas.

Aims: The purpose of this pilot study was to investigate whether a streamlined process using a three-bag system for treating children with DKA would improve efficiency for nurses, length of hospitalization, cost, and blood glucose levels.

Methods: Pediatric hospitalists developed an order set to treat children with DKA using a three-bag system: Bag 1—3/4 normal saline (NSS) with 20 mEq/L potassium chloride (KCL) and 20 mEq/L K-Phosphate. Bag 2—dextrose (D) 10% 3/4 NSS with 20 mEq KCL/L and 20 mEq/L K-Phosphate. If the serum potassium is greater than 6.0 mmol/L, IV bags without potassium supplements would be used until serum potassium is less than 5.5 mmol/L. Bag 3—1 U regular insulin/1 mL NSS (usually 250 mL IV bag). Pharmacy delivers the bags prepared to the physician's specifications to the unit, and nurses manage administration based on the order set with minimal need to contact the physician. A comparative nonexperimental design was used to evaluate the outcomes of children hospitalized with DKA before and after initiation of the three-bag system. Thirty medical records were reviewed with 16 patients not using the three-bag system (control group) and 14 patients using the three-bag system (study group).

Results: Independent samples *t* test and chi-square were used to determine significance. There was no difference between the groups for change in glucose. Length of stay, number of IV bags, and cost were reduced in the study group; however, this change was not significant. Verbal orders significantly decreased from the control group (68%) to the study group (14%; $p < .008$).

Conclusions: By using the three-bag system, there is no indication for reduction in number of IV bags, cost, and length of stay; however, the sample size was too small to demonstrate significance. The reduction in verbal orders may create efficiency by saving nursing time and decreasing medication errors.