

Hospital Admission for Diabetic Ketoacidosis (DKA) in Children and Adolescents with Type 1 Diabetes (T1D) in Thailand between the years 2015 and 2019

Incidence of DKA admission varies among different countries. However, data of DKA admission in Thai children and adolescents with T1D is still lacking

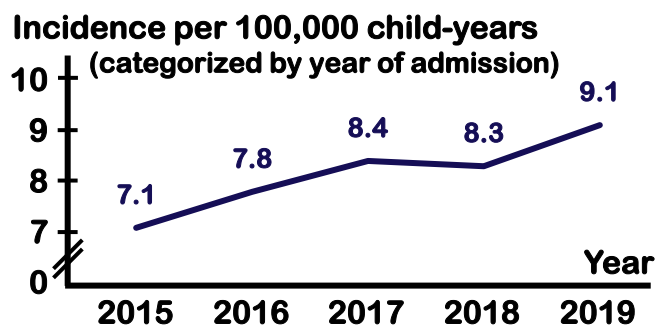
Objective: To analyze characteristics of children and adolescents with T1D who were hospitalized between the years 2015 and 2019

Data were extracted from databases of the Civil Servant Medical Benefit Scheme, the Social Health Insurance, and the Universal Coverage Scheme during 2015-2019 which comprised **8,708** admissions of **5,254** hospitalized Thai children and adolescents aged 0-18 years with T1D

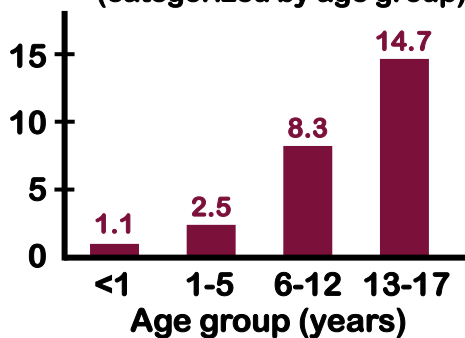
Results: **DKA** was the main indication for T1D admissions (**N = 3,846, 44%**)

Incidence of T1D admission

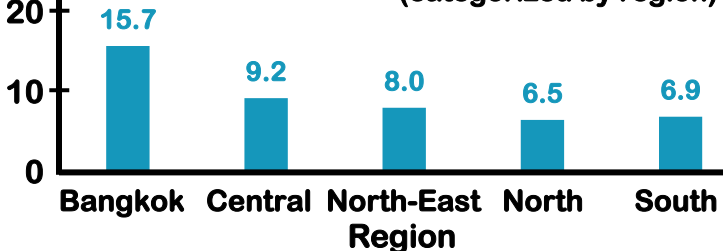
Average **8.1** per 100,000 child-years
 Girls **9.6**
 Boys **6.7**



Incidence per 100,000 child-years (categorized by age group)

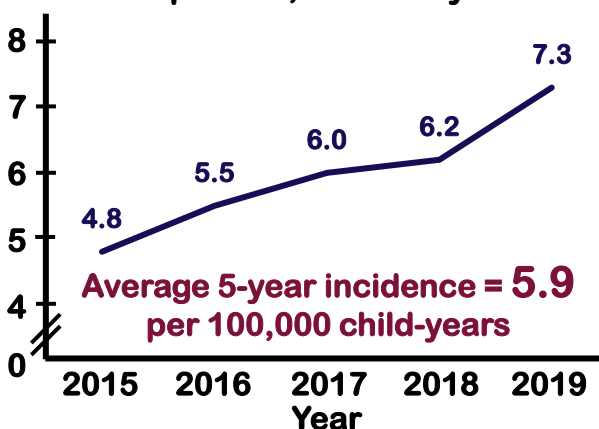


Incidence per 100,000 child-years (categorized by region)



Incidence of DKA admission

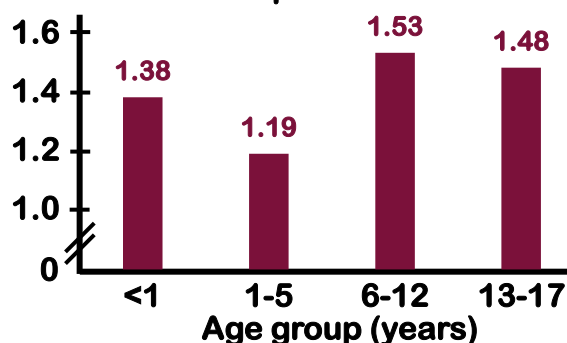
Incidence per 100,000 child-years



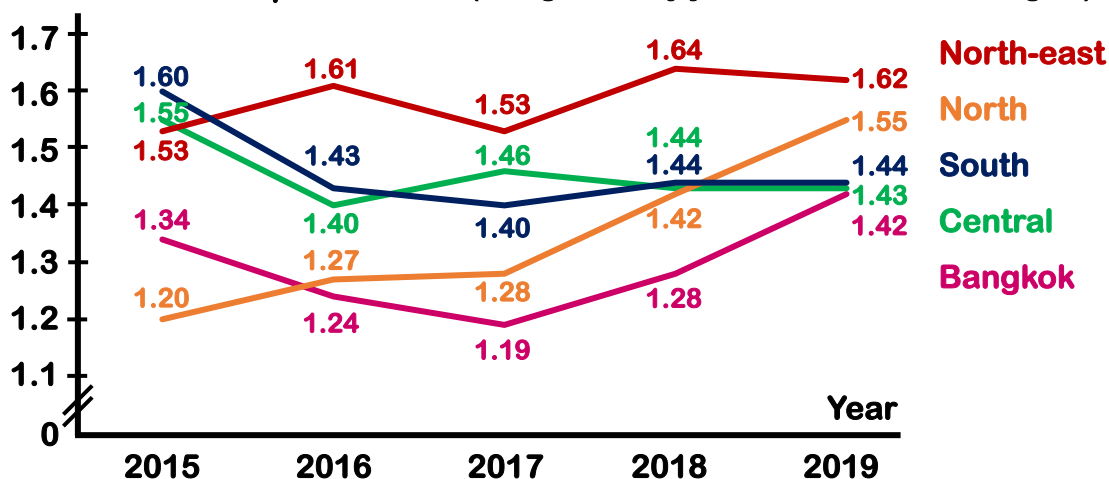
DKA admission / patient ratio

Girls **1.56**
 Boys **1.39**
 Girls : boys **1.12 : 1**

DKA admission / patient ratio



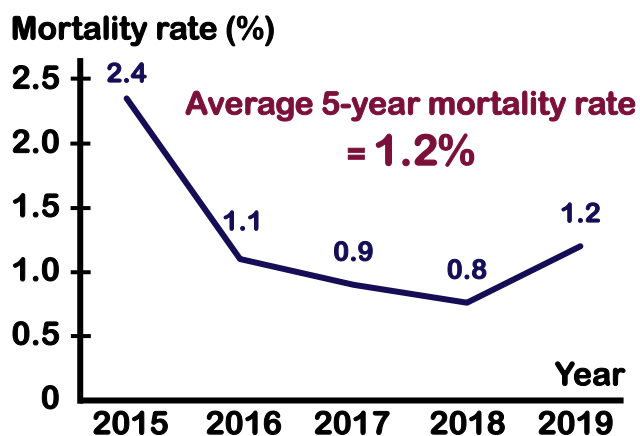
DKA admission / patient ratio (categorized by year of admission and region)



Comorbidities in T1D and DKA admissions

Rank	Conditions					
	T1D			DKA		
	ICD-10	Diagnosis	N (%)	ICD-10	Diagnosis	N (%)
1	J00-J22	Respiratory tract infections	832 (9.6)	J00-J22	Respiratory tract infections	376 (9.8)
2	A00-A09	Intestinal infections	406 (4.7)	A30-A49	Other bacterial diseases	205 (5.3)
3	N30-N39	Other diseases of urinary system	375 (4.3)	N30-N39	Other diseases of urinary system	201 (5.2)

Mortality rate of DKA



Implication

Improvement of T1D care to prevent DKA admission should be strengthened, particularly in patients who are more than 5 years old and reside in the north-east region

Conclusions

- DKA was the most common indication of T1D admissions observed during 2015-2019
- Increased trend for T1D and DKA admissions and decreased trend for mortality rate of DKA were observed from the year 2015-2019
- Adolescents aged 13-17 years and Bangkok region had the highest incidences for T1D admission while children aged 6-12 years and north-east region had the highest ratios of DKA admission / patient
- Respiratory tract infections were the most common comorbidities for T1D and DKA admissions