

## Average HbA1c level

The mean value of HbA1c for one year in patients with pediatric diabetes mellitus aged <20 years



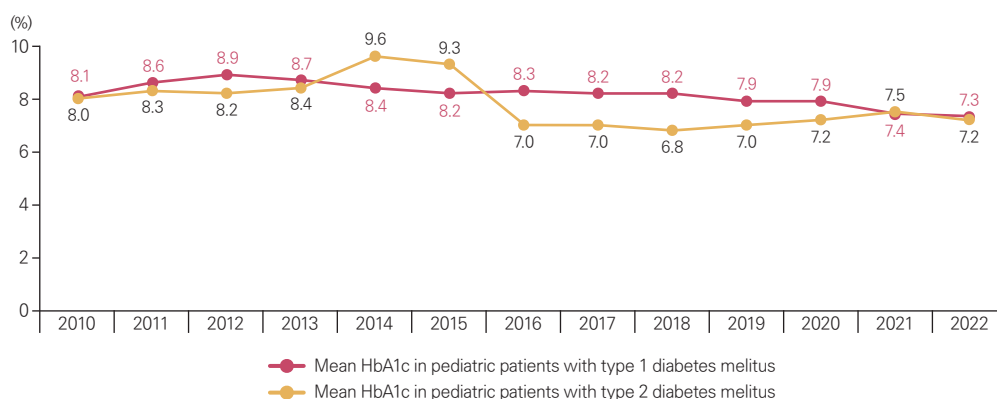
### Definitions

- ◆ **Diabetes mellitus:** A metabolic disease caused by abnormal insulin secretion or action.
- ◆ **Type 1 diabetes:** Previously known as insulin-dependent diabetes, the condition arises when insulin secretion is decreased mainly by the destruction of pancreatic islet cells through autoimmune mechanism.
- ◆ **Type 2 diabetes:** Previously known as non-insulin-dependent diabetes as blood glucose control could be achieved without insulin injection, the condition arises through resistance to insulin action and reduced insulin secretion.
- ◆ **HbA1c:** Glycated hemoglobin; an indicator of glycemic control in the recent past three months.
  - 5.7% – 6.4% indicates the prediabetes stage
  - ≥6.5% indicates the diagnostic criteria of diabetes, while the target HbA1c in patients with diabetes is <7%



### Result

January 1, 2010 – December 31, 2022



### Interpretation

- ◆ The values may be taken to indicate the course of blood glucose control in each of the type 1 and 2 diabetes patients.
- ◆ The target HbA1c in diabetes patients is <7%, and at SNUBH, the HbA1c in pediatric patients with diabetes mellitus are being managed to reach the target.
- ◆ For pediatric patients with type 1 diabetes mellitus, the average HbA1c levels have been improving, with values of 7.4% in 2021 and 7.3% in 2022. Similarly, for pediatric patients with type 2 diabetes mellitus, their HbA1c levels have been approaching the target, with readings of 7.5% in 2021 and 7.2% in 2022.



### Improvement

- ◆ To achieve HbA1c levels within the target range, there is a need for close communication among healthcare professionals responsible for pediatric diabetes care, as well as ongoing patient education.

Data source SNUBH EMR (Electronic Medical Record), CDW (Clinical Data Warehouse)

## Proportion of HbA1c < 7.0% Patients

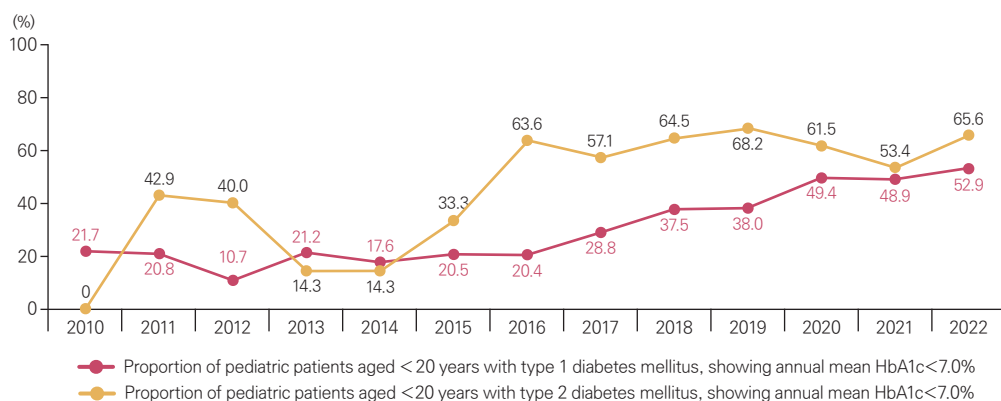
The proportion of patients with pediatric diabetes mellitus aged <20 years showing HbA1c <7.0%

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### Result

January 1, 2010 – December 31, 2022



### Interpretation

- ◆ The indicator shows the proportion of pediatric patients with diabetes who have achieved the target HbA1c <7.0%.
- ◆ For type 1 diabetes in children and adolescents, the proportion of patients achieving the target HbA1c<7.0% shows an increasing trend each year, indicating a continuous improvement in glycemic control.
- ◆ For type 2 diabetes in children and adolescents, the proportion of patients achieving the target HbA1c<7.0% is greater than 65%.

### Improvement

- ◆ Efforts are needed to expand support for consumable materials used in the management of pediatric diabetes patients, and in line with the remarkable advancement of related medical devices, continuous patient education and patient-centered healthcare provision should also be emphasized.

Data source SNUBH EMR (Electronic Medical Record), CDW (Clinical Data Warehouse)