

Initial results from introduction of insulin pump therapy at Children's Diabetes Center in Varna

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Background:

❖ The prevalence of childhood type 1 diabetes mellitus (T1DM) has increased significantly. Insulin pump treatment (IPT) is the best method for optimal control of T1DM so far.

Aim:

❖ to assess the changes of diabetes control for 18 months after the introduction of IPT.

Methods and patients:

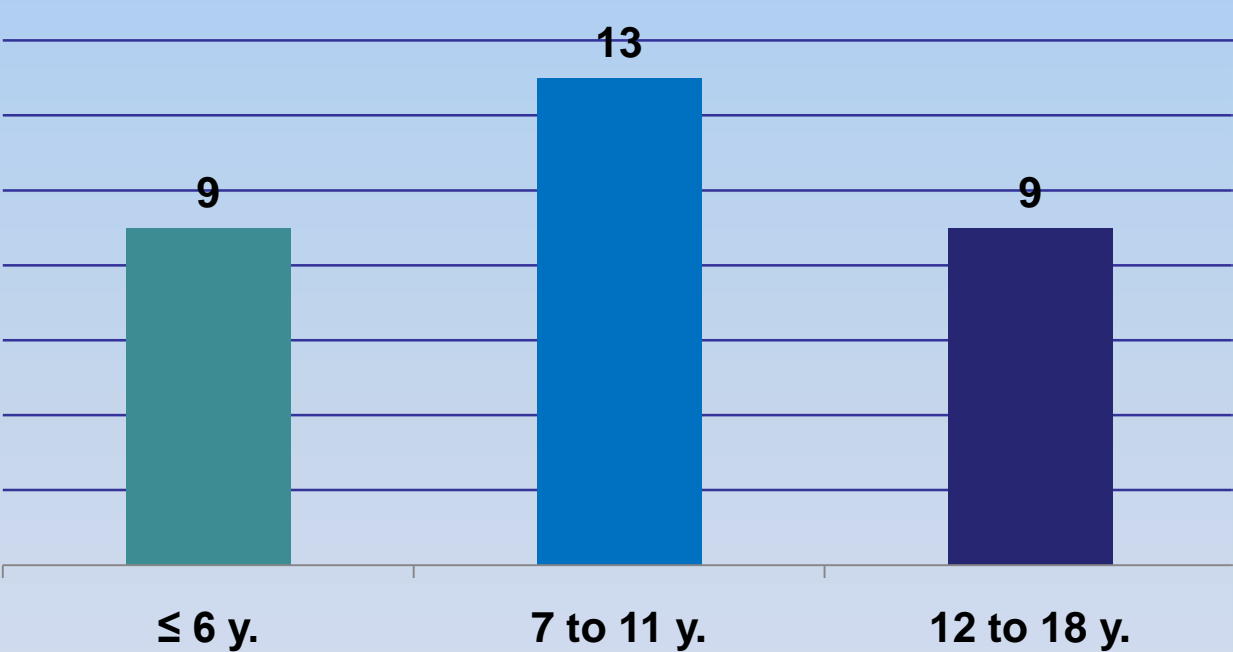
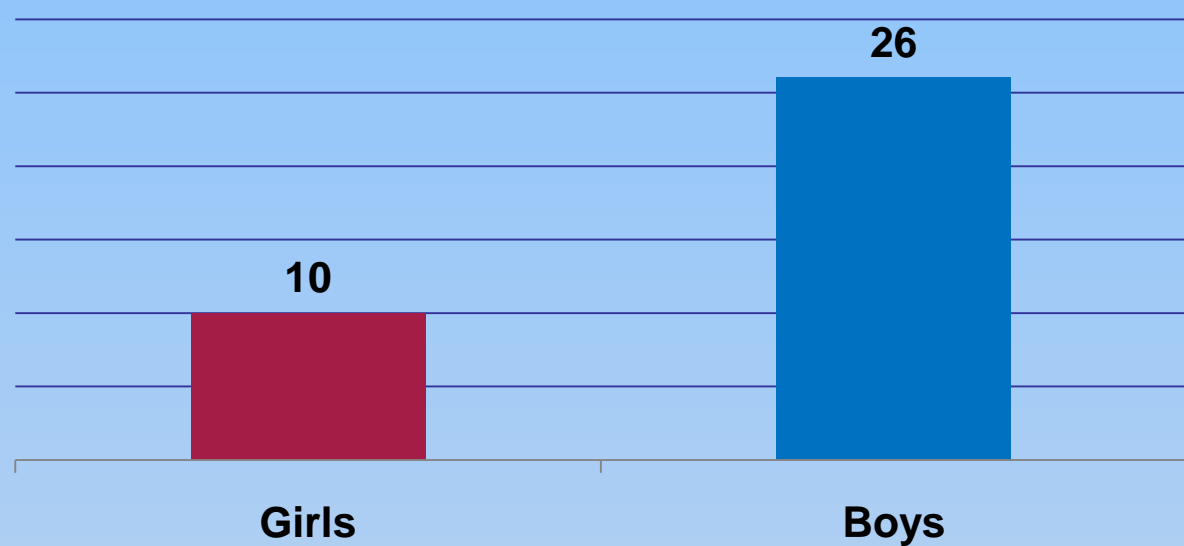
❖ Data is registered from the set-up of IPT until Sept 30th, 2015.

❖ Collected information:

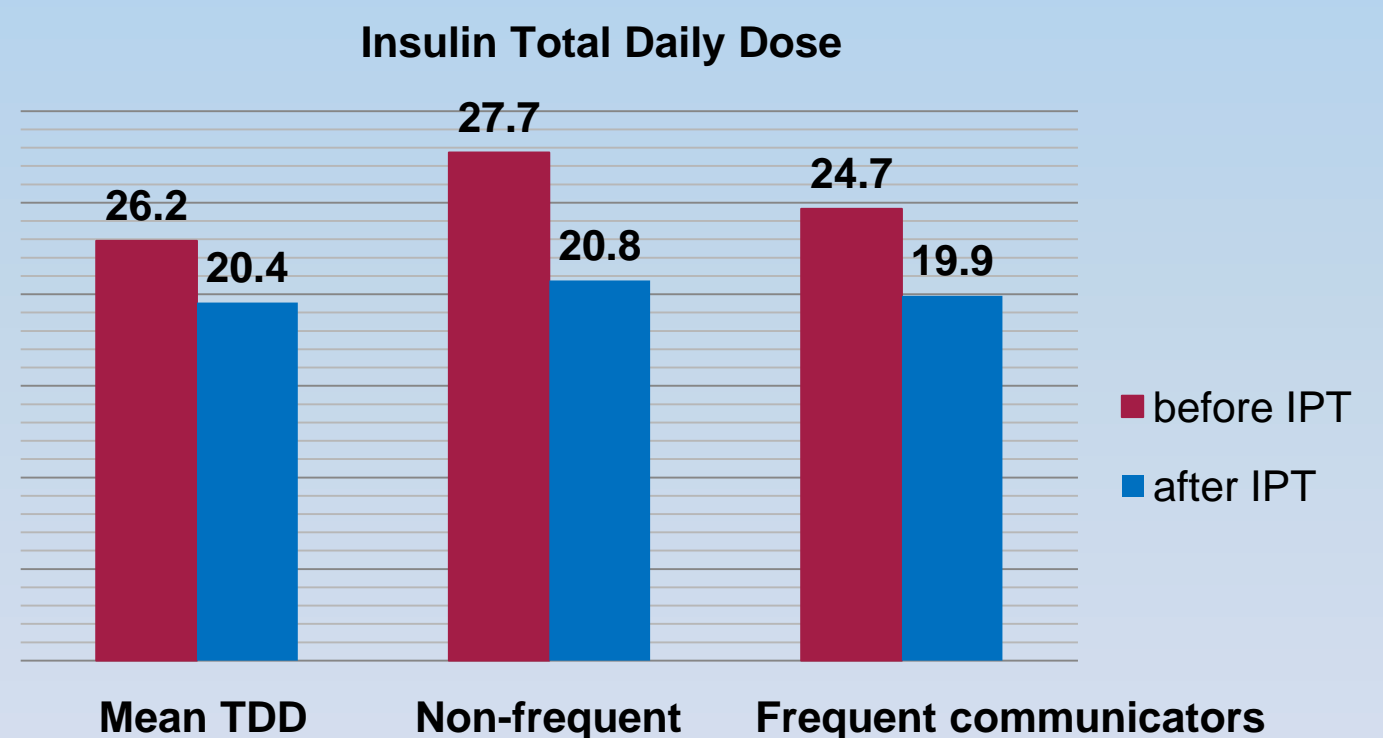
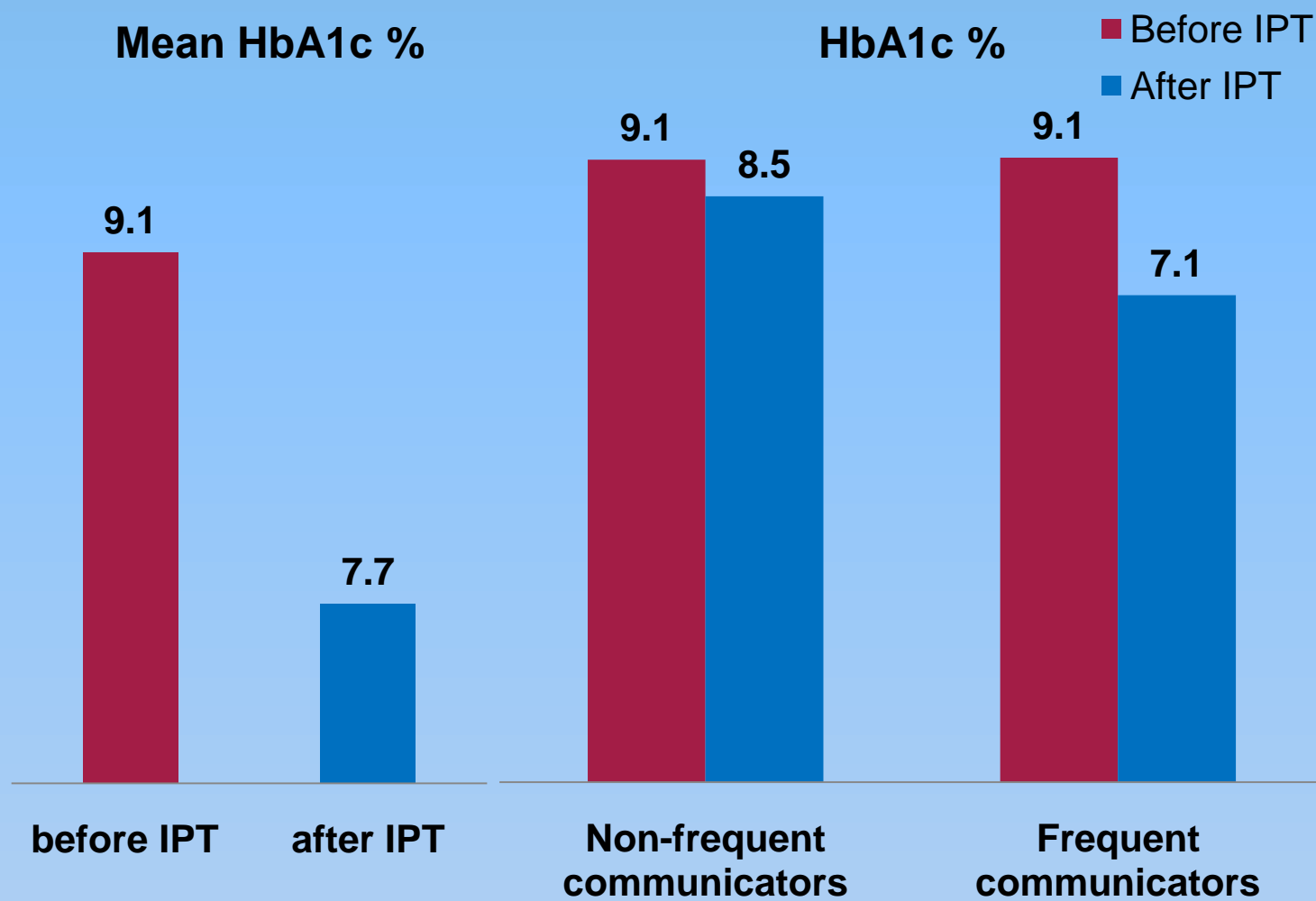
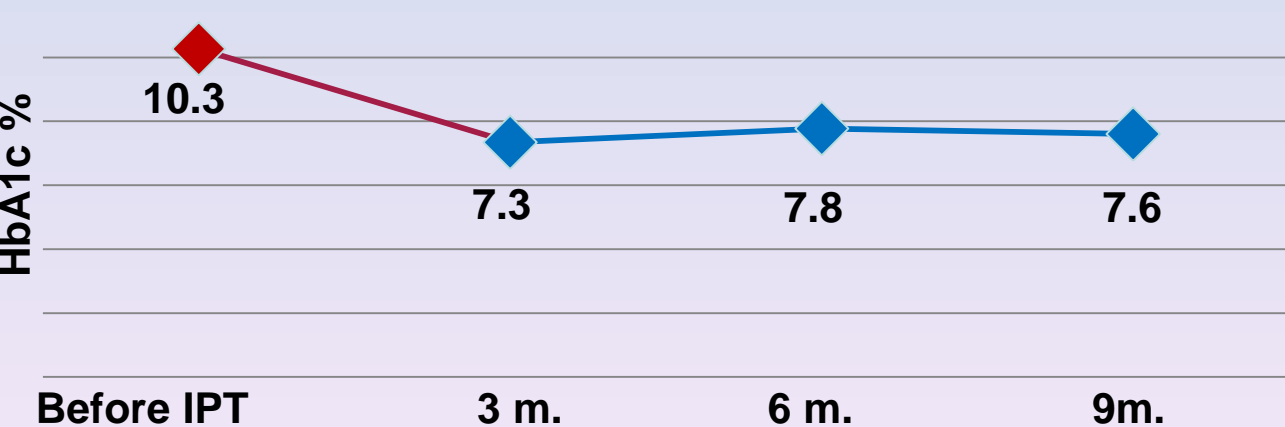
- ✓ demographic data;
- ✓ anthropometric data;
- ✓ duration of diabetes;
- ✓ HbA1c% measured quaterly ;
- ✓ episodes of acute complications (requiring hospitalization);
- ✓ insulin dose (UI/kg/d);
- ✓ frequency of contacts with the Center (<1x/month).

Results:

- ❖ 36 children with T1DM (26 boys)
- ❖ Mean age $9.0 \pm 4.45y$.
- ❖ Mean diabetes duration $3.58 \pm 2.6y$
- ❖ Duration of IPT 18.63 ± 15.16 months
- ❖ Mean HbA1c before IPT $9.07 \pm 2.10\%$, after IPT $7.70 \pm 1.78\%$
- ❖ Mean HbA1c in children <6 years of age decreased from 10.27% to 7.70%
- ❖ Mean HbA1c non-frequent communicators vs. frequent communicators: 8.52 vs. 7.08%
- ❖ Reduction in insulin total daily dose
- ❖ No episodes of severe hypoglycemia
- ❖ 1 episode of mild DKA in a teenager



Mean HbA1c% in age group ≤ 6 years



Conclusion: Switching to IPT improved diabetes control and lowered the frequency of acute complications, mostly in pre-school children.

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