

Case definition

Report any patient less than 18 years of age (up to the 18th birthday), with or without a prior diagnosis of diabetes, presenting to hospital with hyperglycemic hyperosmolar state (HHS), defined as:

- Serum glucose concentration of >33 mmol/L
- Serum osmolality of >320 mOsm/kg
- Absence of significant acidosis:
 - Serum bicarbonate concentration of >15 mEq/L
 - Arterial/capillary pH of >7.30 or venous pH of >7.25

*This case definition aligns with the current Diabetes Canada diagnostic criteria¹⁰ for HHS with one important amendment: ketosis is **NOT** an exclusion factor. The rationale for including ketosis is that the original HHS definition was based on adult presentation, and it is well demonstrated that more than 40% of children and adolescents with type 2 diabetes present with ketones (even if not acidotic).*