Background Cork University Hospital (CUH) is peripheral centre of paediatrics that provides a joint adult and paediatric emergency department service. Currently paediatric and emergency department staff use the 2009 BSPED Diabetic Keto-Acidosis (DKA) protocol. In light of upcoming new national DKA guidelines used by the Tertiary Paediatric centres, we aimed to see staff adherence to the current protocol in use.

Objectives To evaluate paediatric & ED staff adherence to this protocol through documentation of management. Our secondary objectives included analysis of patient demographics, severity of DKA, complications and length of stay.

Methods We retrospectively analysed all paediatric patients with T1DM presenting with DKA from January 2015 up to July 2017. Patients were identified from Diabetes Nurse Specialist database. Data was recorded and comparison was made between initial treatment from emergency staff and subsequent review by paediatrics.

Results The total number of patients on the DKA protocol during the time period was 53 and, following exclusion criteria, 37 (69%) charts were analysed. Notable exclusions were 6 patients (11%) commenced on protocol despite not meeting criteria for DKA diagnosis.

The average age at presentation was 8.18 years, male to female ratio 2:3 and 81% (n=43) of presentations were new onset T1DM. A majority (56%) of presentations were of moderate severity.

Within management from ED staff, 28% (n=10) had no protocol documentation.

Only 8% (n=3) had the correct protocol documented and commenced. 31% (n=11) were seen by paediatric team directly. Paediatric staff incorrectly calculated protocol management plans in 65% (n=24) of cases.

Despite 53% of presentations in severe acidosis meeting protocol requirement for ICU involvement they were not reviewed by the ICU team and ward managed.

Conclusion Health care providers working in CUH adherence to BSPED 2009 guidelines protocol is poor. It is essential to implement the use of current DKA protocol in use for all DKA at presentation. Recognition of the definition is the starting point.

We recommend thorough emergency & paediatric staff education and implementation of a mandatory proforma for DKA presentations.