Objective
To describe the glycaemic control and change in body mass index (BMI) in children and adolescents with type 1 diabetes (T1DM) after changing to multiple dose insulin regime (MDI) from fixed dose insulin regime (FD).

Methods:
• A retrospective observational study
• Subjects: children and adolescents with T1DM who were changed to MDI from FD at the Lady Ridgeway Hospital (LRH) from January 2013 to June 2018
• Ethical approval from LRH was obtained
• Informed written consent was taken from parents to obtain data from clinic records and growth parameters of the children
• Mean haemoglobin A1c (HbA1c) at the initiation of MDI, 6 months and 1 year after and in January 2019 were recorded
• BMI, BMI percentile for age and BMI standard deviation scores (BMI SDS) were calculated at the initiation of change in insulin regime and in January 2019
• Change in adiposity was measured by BMI SDS

Results:
• Mean age at initiation of MDI was 10.5 years (range 3.5 to 14.3)
• The follow up period following change in insulin regime ranged from 6 months to 56 months (4.75 years)
• The average time lag between the diagnosis of T1DM and initiation of MDI was 2.75 years
• Mean HbA1C at initiation (9.6%) had decreased to 8.4% (p<0.01) 6 months after, to 8.3% (p<0.001) 1 year and to 8.7% in January 2019
• The difference in BMI SDSs at initiation and in January 2019 was not statistically significant (p=0.076).

Conclusions: A significant improvement in glycaemic control was seen 6 months after converting to multiple daily insulin regime, and the improvement was sustained even after a mean duration of 3.5 years. Significant change in adiposity following initiation of MDI was not observed in our population of children and adolescents.