

Background:

- ❖ Insulin pump service has revolutionised management of T1D in children
- ❖ NICE recommend the use of insulin pump for children with
 - 1) poor metabolic control,
 - 2) disabling hypoglycaemia
 - 3) challenges with MDI insulin use
- ❖ National Paediatric Diabetes Audit (NPDA) reports helps to measure our clinical performances against wider national data (IOM is not part of NPDA cohort)

Aims:

- ❖ To compare the prevalence of insulin pump users, performance outcomes such as HbA1c and compare it against published NPDA report
- ❖ Also to identify factors that helps to promote wider use of insulin pump use in T1D

Methodology:

- ❖ A retrospective observational study was carried out on all diabetic children managed by our Paediatric unit between April 2015- March 2017
- ❖ Key outcomes like age, HbA1c, and prevalence of pump users were compared to NPDA data

Results:

Our unit results were compared with corresponding NPDA yearly outcomes (England and Wales combined) and details provided in **Table-1**

Insulin pumps used

- ❖ 2015-16
 - 43/48 (27-Animas, 15-Omnipod and 1-Medtronic who moved from UK)
- ❖ 2016-17
 - 39/45 (17-Animas, 21-Omnipod, 1-Medtronic)

Table 1	2015-2016		2016-2017	
Outcomes	NPDA	IOM	NPDA	IOM
Total (M)	27089 (14191)	48 (25)	27420 (14457)	45 (22)
Age range	0-19	6.2-19	0-19	2.5-17
Pump users in %	28	90 (43/48)	32.2	87 (39/45)
Mean HbA1c (mmol/ml)	68.3	63.3	66.9	63.8
<58 mmol/ml in %	26.6	31.2	28.9	39.5
>80 mmol/ml in %	17.9	6.2	16.4	7.2

Conclusions:

- ❖ Within our unit we were able to demonstrate better glycaemic control using intensive insulin pump therapy
- ❖ Provision of only 2 different insulin pumps helped in better utilisation of expertise and providing crucial choice for the end users (tube vs. patch pump)
- ❖ Liberal funding by health care provider is crucial for pump services

References:

- Continuous subcutaneous insulin infusion for the treatment of diabetes mellitus Technology appraisal guidance [TA151]
- National Paediatric Diabetes Audit Report 2015-2016 Part 1: Care Processes and Outcomes
- National Paediatric Diabetes Audit Report 2016-17: Care processes and outcomes