

# A prototype for training teams: Type 1 diabetes clinic and multidisciplinary meeting simulation

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## A Need for Change

Simulation-based education provides a safe environment for **experiential learning** of technical and non-technical skills and also supports ongoing self-regulated learning.

The **clinic and multidisciplinary meeting (MDM)** simulation aimed to improve trainees' data interpretation, presentation skills and knowledge of relevant technology whilst considering key psychosocial factors in management of patients with Type 1 Diabetes (T1D).

## Evaluation and Feedback

13 trainees attended and 10 answered pre and post session questionnaire. The trainee day was rated using a Likert scale (poor (1) to excellent (5)) with a **mean score of 4.7±0.64**.

**Qualitative feedback:** Trainees enjoyed the 'interactive sessions' with 'problem solving aspects' and an 'abundance of educators'.

## The Innovation and Implementation

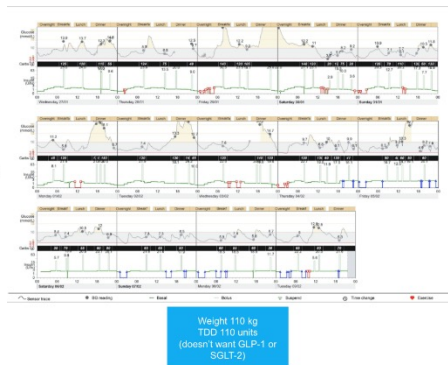
Trainees were divided into **groups of 3-4** and each group was allocated a different case. The information provided included the patient's **background, concerns, and diabetes technology data**. Each group discussed their thoughts and then presented their case to a **multidisciplinary team (MDT)** (diabetologist, diabetes specialist nurse, diabetes specialist dietitian, psychiatrist) structured in a similar format to the type 1 diabetes MDM at an inner city teaching hospital. A group discussion of each case followed with **key learning points** highlighted.

Skill	Difference in pre and post session scores (Likert scale 1= strongly disagree to 5 = strongly agree)
Performing an outpatient assessment of a complex patient with type 1 diabetes	3.64±0.88 to 4.38±0.7
Analysing data from diabetes technology and using this to inform the consultation	3.45±0.99 to 4.13±0.78
Initiating appropriate diabetes technology according to relevant guidelines	3.27±0.86 to 4.13±0.78
Considering the psychosocial factors in diabetes consultations	3.64±0.88 to 4.25±0.83

## CASE 1

28-year-old female

- T1D for 10 years
- On CSII with MiniMed™640G for past 3 years
- Still having some hypos and then post-meal highs
- Frustrated with current glucose levels
- Struggling with highs and lows of glucose levels
- DDS 5
- Recent download



## Current pump settings

Basal 1		Bolus Wizard		Easy Bolus			
24-hour Total	34.600 U	Units	g, mmol/L	Easy Bolus	Off		
Time	Units	Active Insulin (h:mm)	2:00	Bolus Increment	0.1 U		
00:00	0.550	Maximum Bolus	40.0 U	Bolus Speed	Quick		
02:00	1.00			Dual/Square	Off/On		
04:00	1.50	<b>Carbohydrate Ratio (g/U)</b>					
06:00	2.45	Time	Ratio	<b>Insulin Sensitivity (mmol/L per U)</b>	<b>Blood Glucose Target (mmol/L)</b>		
08:00	2.50	Time	Ratio	Time	Low	High	
10:00	2.20	0:00	6.5	0:00	3.5	7	7
12:00	1.45	6:00	6.5	6:00	3		
14:00	1.60	12:00	5.5	22:00	3.5		
16:00	2.00	18:00	7.5				
18:00	1.55	22:00	6.5				
20:00	1.80						
22:00	1.85						
24:00	1.30						
00:00	1.25						
02:00	1.20						
04:00	1.20						
06:00	1.10						
08:00	0.825						
10:00	0.675						

## Conclusions

Simulating a clinic and MDM encourages **collaborative learning** and promotes **problem-solving skills**. The variety of members from the MDT provides different perspectives to the management of patients and offer a unique learning opportunities in providing **holistic care**.

Example case information including patient background, concerns and data from diabetes technology