



# Case Study: Uncontrolled Type 1 Diabetes

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## Mr. PWD Himself

- 53yo Caucasian, non-Hispanic Male
- Ht 70", Wt 179#, BMI 25.3 kg/m<sup>2</sup>
- Divorced, high school education
- Retired

PMH: Type 1 diabetes, dx age 12; kidney & pancreas txp 1999, failed; 2<sup>nd</sup> kidney & pancreas txp 2007; CAD s/p stents 1998; HTN; dyslipidemia; ESRD; proliferative diabetic retinopathy; peripheral neuropathy; distant hx of EtOH & cocaine abuse; sleep apnea, obstructive

Medications: glargine & lispro insulin, gabapentin, tacrolimus & prednisone (steroids to decrease transplant rejection), Lipitor, bupropion, calcitriol, plavix, flucanazole, lisinopril, loperamide, magnesium oxide + others, 25 total

## Diagnosis

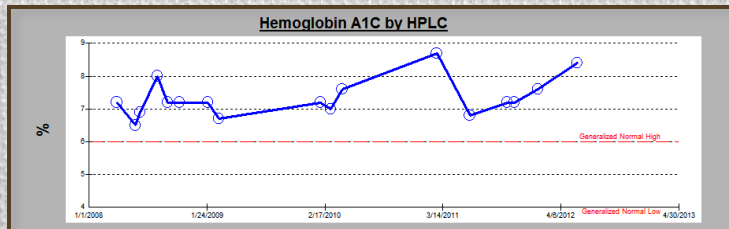
Altered nutrition-related labs r/t uncontrolled type 1 diabetes with wide glycemic variability, aeb most recent HbA1c 8.4%, pt report, multiple kidney/pancreas txp.

## Assessment

- Chief Complaint: Type 1 diabetes, uncontrolled with wide glycemic variability due to mismatch of insulin to food
- Goal of Care: Glycemic control, prolonged health of transplanted kidney
- Glycemic variability still significant – still taking mealtime insulin after meals. Long-standing fear of hypoglycemia continues.
- Mr. PWD seems to have difficulty performing the fairly complicated mathematical equations (health numeracy issues) needed for effectively determine prandial bolusing using the carb counting meal planning approach in conjunction with mealtime dosing algorithms

### HbA1c Hx:

- 8.4% 5/29/12
- 7.6% 1/20/12
- 6.8% 6/10/11
- 8.7% 2/21/11
- 7.6% 4/15/10
- 6.7% 3/3/09



## Diet History

- Eats 2 meals per day, but now making a conscious effort to eat a bowl of cereal for breakfast. Next meal is in the evening, but drinks up to 128 ounces of KoolAid throughout the day as he is fearful of hypoglycemia.
- In addition, tries to reduce the risk of hypoglycemia by taking prandial insulin after meals.

## Interventions

- Reviewed insulin action - peak, onset and duration
- Discussed use of an insulin to carb factor of 1 unit covers 15 grams of carb
- Came up with a list of his favorite foods in the portions that he consumes and helped him to determine the carb content.
- Converted list of favorite foods to a dose of prandial insulin. Ex.:
  - 1 cup of rice = 3 units of lispro
  - 2 cups cheerios with 1 cup milk equals = 4 units of lispro
- Education materials given: Calorie King booklet, insulin action information, sample meal plan with suggested doses of lispro using his insulin:carb ratio of 1:15

## Monitoring & Evaluation

Pt's stated goals for the next month:

He will try to take lispro at the beginning of the meal.

Try to use the food+mealtime dosing handout to refer to for determination of mealtime dose.

Continued monitoring:

F/u appt. with the ARNP and PharmD 1 week at the DCC for 3 day MedTronic iPro study to look for patterns in glycemic variability and adequacy of basal/bolus insulin.

Would benefit from another session with the diabetes nutrition educator within the next 2-3 months.