



Module 1, Vignette 2, Strategies to Improve Glucose Control with MTI and CGM

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So, let's do a case to really apply some of the things you've learned in Module 1. Johnny's a 56-year-old male from Southeast Asia, and he's had Type 2 diabetes for about six years. Sadly, this was his birthday present at his 50th birthday annual physical. He reports that he doesn't really feel the effects of having diabetes, and it's really frustrating for him to feel like he's not been able to get good control because he checks in the morning, and his morning readings seem to be pretty good. And then based upon his work, he's really not been able to check later in the day. Yet every time he comes into the doctor's office, his glucose level is high, and he really is just not sure what's going on. He takes basal insulin, 48 units daily, and metformin twice a day. And what's urgent now is that he's coming in because he needs to be cleared for surgery so that he can get his shoulder fixed and get back to work.

You've got his past medical history listed here, as well as medications; and we really need to start thinking about what can we do to evaluate his glucose readings. I'll ask you just to take a second to look at these choices and decide what would be the best option for you. All of them are reasonable options.

We chose to use a continuous glucose monitor, and as you look at the CGM output, there are a number of things that you can see. First of all, I like to look at the bottom; and you see, in the green area, the time in range. He's got very little time in range. The mean is actually above it the entire time.

Then I go up to that bar graph in the upper right, and you can see that he doesn't have any lows or very lows. He's got about 10% time he's in the target range, and about 27% time he's high, and about 63% that he's very high. So clearly, he's got good coverage overnight, maybe too much coverage overnight, but he needs better coverage during the daytime because you can see each of those peaks, spikes go up with his meals.

So, as we think about treatment, we're going to have to decide do we want to make a change in his basal insulin, do we want to add another agent, or do we want to add mealtime insulin? And for this guy, because time is really an important factor, I would suggest that we consider doing a slight reduction in his basal insulin and giving him mealtime insulin at each of his meals and continuing the use of CGM so we can very quickly get under control to help Johnny get to his surgery.

This will be the end for Module 1, but we'll revisit Johnny again in Module 2.