A Qualitative Analysis of Barriers to Medication Adherence in Uncontrolled Diabetes
Focus on Insulin and Suggestions for Practice Improvements

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There are many barriers that contribute to patients’ nonadherence to insulin. Urgent interventions and policies are warranted to reduce diabetes complications and increase patients’ and caregivers’ awareness of the benefits of using insulin.

**Conclusion**

“...I am here in the gulf area for the last 30 years. I have seen each security man in the airport... So yourself you don’t take it [insulin].. because they will remove it and throw it away ..so you don’t take the insulin on that day... traveling you take 5 to 6 hours to reach home ... then what happens is .. you are traveling from seven to twelve you are suppose to take your dose at 8, you don’t take it.” – P11

Qatar’s country with a reported population of less than three million people, has a diabetes prevalence of 14% in 2017

A conceptual framework model was developed through systematic literature review, identifying all barriers to medication adherence in diabetes

A mixed method triangulation study design was used in primary healthcare centers (PHCC) in Qatar

Adult patients with uncontrolled diabetes and attending the PHCC for the past year completed an adherence questionnaire (ARMS-D) followed by semi-structured interviews

Healthcare providers involved in managing patients with diabetes within the PHCC were approached for semi-structured interviews

Thematic analysis was utilized and subgroup analysis was conducted to determine the barriers related to insulin adherence in patients with uncontrolled diabetes

**Methodology**

1. **Dose adjustments**
   - Insulin is a very dangerous medication... If you don’t feel that he is well educated and that he will listen and understand, you can’t give him insulin now... you have to give him the training now... (I feel that the patient isn’t focusing a lot or would possibly have a problem and get hypoglycemia, I might not give the insulin at all and give him oral... If he is a very aware [uncontrolled], I may refer him to the patient coordinator... I would refer him to the hospital” – HCP 16

2. **Fear of side effects**
   - “...Patients are more denying to take the injection itself, so the refusal is not because of fear of being seen but the refusal of receiving the injection in the first place, but if the insulin was a table they would not have a problem. The problem itself is from the needle itself.” – HCP10

3. **Fear of self-injection**
   - “...I remember I had one patient type 1 diabetes and she got married and pregnant and she did not tell her husband she is diabetic and I didn’t know this information... So we started talking about diet and she would say it’s gestational diabetes, because her husband was with her. So we started to deal with her that this [diabetes] is temporary, it came during your pregnancy and we will give you insulin for it. We did this and moved on; is something that could possibly lead to a divorce because she did not tell her husband about it before” – HCP11

4. **Fear of pain**
   - “...I remember I had one patient type 1 diabetes and she got married and pregnant and she did not tell her husband she is diabetic and I didn’t know this information... So we started talking about diet and she would say it’s gestational diabetes, because her husband was with her. So we started to deal with her that this [diabetes] is temporary, it came during your pregnancy and we will give you insulin for it. We did this and moved on; is something that could possibly lead to a divorce because she did not tell her husband about it before.” – HCP11

**Results and Discussion**

**Suggestions for Practice Improvements**

- Educating the patient through an online portal created for diabetes
- Documentations which take the patient’s working conditions and religious rituals into account
- Creating a platform for educating the public to eliminate and correct myths about insulin use
- Creating country-specific guidelines which take into consideration patients’ refusal of insulin, cultural issues, and action plan

There are many barriers that contribute to patients’ nonadherence to insulin. Urgent interventions and policies are warranted to reduce diabetes complications and increase patients’ and caregivers’ awareness of the benefits of using insulin.