

Promoting insulin therapy with brief motivational interviewing among type 2 diabetic patients: A quasi-experimental study

T.T. Go^{1,2}, Mandy M. Ho², P.H. Chau², Alfred S.K. Kwong¹, Jenny H.L. Wang¹, Welchie W.K. Ko¹

¹Department of Family Medicine and Primary Health Care, Queen Mary Hospital,

²School of Nursing, LKS Faculty of Medicine, The University of Hong Kong

Introduction

Early initiation of insulin in type 2 diabetic (T2DM) patients with suboptimal glycaemic control can reduce the risk of diabetes-related complications. Finding effective approach to promote insulin acceptance and insulin initiation is an important research area in diabetic care.

Objective: To examine the effectiveness of individualised education intervention applying brief Motivation Interviewing (MI) in facilitating insulin acceptance and insulin initiation among T2DM patients with sub-optimal glycaemic control.

Methods

Design: Quasi-experimental study

Subjects: Chinese T2DM patients who had HbA1c $\geq 7.5\%$ and maximum dosage of oral anti-diabetic agents were recruited in an outpatient clinic from 10/2019 to 4/2020.

They should never use or be on insulin therapy.

Procedure: All participants were interviewed by a registered nurse using the Chinese Attitudes to Starting Insulin Questionnaire (Ch-ASIQ)¹, to understand their psychosocial and behavioural barriers towards insulin initiation. Groups were allocated by phases.

Control group: Usual care (result interpretation

of laboratory tests + advice for diet, exercise and lifestyle)

Intervention group: Usual Care + 15-minute individualized Brief MI to address the barriers of insulin initiation identified by the Ch-ASIQ¹

Outcomes: (i) “insulin acceptance” (i.e. patients’ agreement to be referred to the insulin clinic at the end of the session) & (ii) “insulin initiation” (i.e. patients’ attendance at insulin clinic for insulin initiation ≤ 6 months post-intervention)

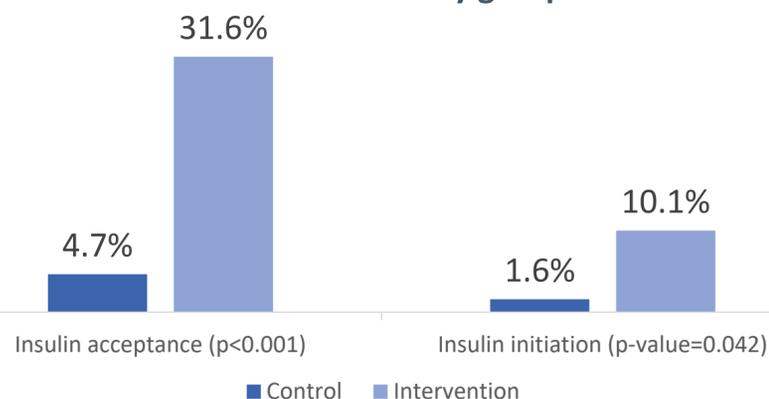
Analysis: Group difference in proportions of insulin acceptance and initiation were compared by exact chi-square test.

Results Subject Characteristics

Among 143 patients (control: 64; intervention: 79), 52.4% were female, mean age of 64.5 (SD=8.7) with 72% aged ≥ 60 , 46.9% were being employed, 52.4% had secondary or tertiary of education, 86.7% were overweight/obese, 56.6% had been diagnosed >10 yrs, and mean HbA1c of 8.3% (SD=1.0). All patient characteristics did not show significant differences between the intervention and control groups.

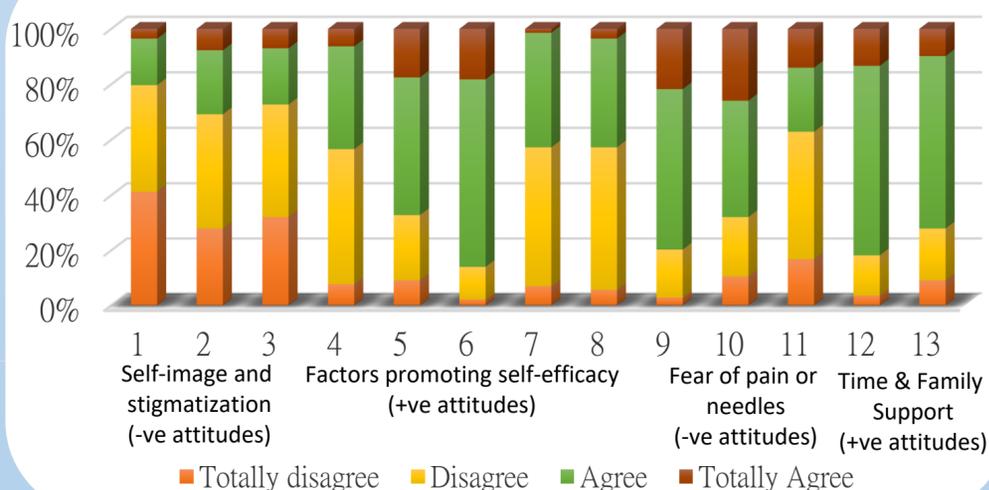
Insulin acceptance & insulin initiation

Figure 1. Percentage of insulin acceptance & insulin initiation by groups



Myths & barriers for insulin initiation

Figure 2. Items properties of the Ch-ASIQ



Significance

Participants in intervention group started insulin at a lower mean HbA1c of 8.66%, compared to the mean HbA1c of 9.0% for those referees of the pre-insulin class in the same district². The early start of insulin could reduce risk of mortality and diabetic complications³.

Conclusion

A structured brief MI tailored to address the barriers of insulin initiation identified by the Ch-ASIQ was effective to promote insulin acceptance and insulin initiation among T2DM patients with suboptimal glycaemic control.

References: ¹Fu SN, Chin WY, Wong CKH, Yeung VTF, Yiu MP, Tsui HY, et al. Development and validation of the Chinese Attitudes to Starting Insulin Questionnaire (Ch-ASIQ) for primary care patients with type 2 diabetes. PLoS One. 2013;8(11):e78933-e.

²Go TT, Ho MM, Chau PH, Kwong ASK, Wang JHL, Ko WK. Insulin initiation of the patients with Type 2 diabetes referred to pre-insulin class in a primary care setting: A retrospective study. 2019.

³American Diabetes Association. Standards of Medical Care in Diabetes-2021. Diabetes care. 2021;44:S1-S124.