

UNIVERSITI TEKNOLOGI MARA

**HOSPITALIZATION RESULTING FROM
ANTIDIABETIC RELATED
HYPOGLYCAEMIA**

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Dissertation submitted in partial fulfilment of the requirements for the
degree of

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I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This writing has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I hereby acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

AIM: To investigate prevalence and the risk factors of hospitalization resulting from antidiabetic related hypoglycemia in adult diabetic patients from 2010 to 2014 in Hospital Selayang. **METHODS:** This is a retrospective observational cohort study on 3770 adult hospitalized diabetic patients from the year 2010 to 2014 in Hospital Selayang. Medical records were reviewed for demographics, medical history, duration of diabetes, results of laboratory test and current diabetes therapy. Univariate analysis and multivariate logistic regression were used to determine risk factors of severe hypoglycemia. **RESULTS:** The overall prevalence for severe hypoglycaemia was 22%. Patient experiencing severe hypoglycaemia are more likely older, women, have lower HbA1c, have more concomitant medication and have renal impairment. More patients are also followed up at government clinics compared to government hospitals or non-government hospitals or clinic. Patients are mostly taking oral antidiabetic combinations of metformin and sulphonylureas (all $p < 0.05$). Multiple logistic regression showed that the risk of severe hypoglycaemia increased with older age, lower HbA1C and impaired renal function. (all $p < 0.05$). **CONCLUSION:** Patients at risk for severe hypoglycaemia should have individualized diabetic treatment associated with less risk of hypoglycaemia and less stringent glycaemic targets. Patients at risk as well as family members or caregivers should also be given to education on the management of severe hypoglycaemia

Keywords: severe hypoglycaemia, antidiabetic agents, oral hypoglycaemia, insulin therapy risk factors, Type 2 diabetes, Type 1 diabetes

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