



# Evaluation of Hemoglobin A1c (HbA1c) Monitoring of Diabetic Patients in Different Areas and Hospital Levels in Taiwan by NHIRD

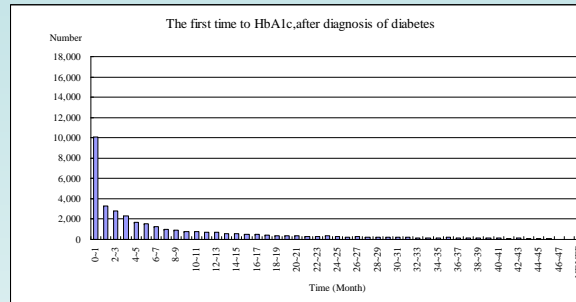
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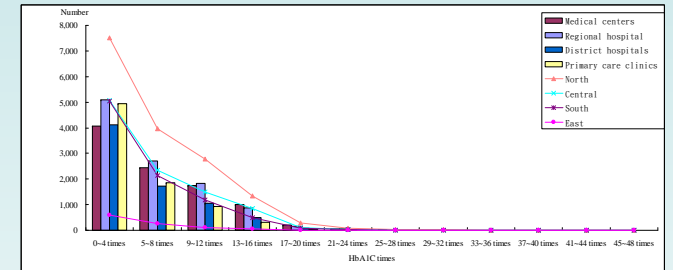
## Purpose

The diabetic population in Taiwan is estimated to be over 1,000,000. Diabetes is the fourth leading cause of death in Taiwan. Improvement in the quality of diabetes care is critical, both for patients' life quality and health care costs. However, blood glucose and hemoglobin can combined to form glycosylated hemoglobins (HbA1c) *in vivo*. Monitoring of HbA1c may reflect the glycemic control in recent 2-3 months. Many studies have shown that when HbA1c reducing 1%, the risk of developing retinal, kidney and nerve disease will be reduced by 40%. This study aimed to understand diabetic care in Taiwan's medical institutions, frequency of follow-up of HbA1c in diabetic patients was affected by patients-care in different levels of hospitals and in different areas distributed in Taiwan. The results may be applied in public health policy of prevention for diabetes complications in Taiwan.



The 16.85% diabetic patients were followed up of HbA1c at average interval of time in 3 months. Following up of HbA1c at average interval of time in 4-6 month, more than 1 year were 40.96% and 18.33%, respectively.

There were 97,824 times (47.95%) in northern Taiwan, the least was 2.36% in eastern Taiwan. The highest performance of HbA1c was the regional hospital (64,160 times), followed by medical centers of 60,834 times (29.82%). It had statistically significant difference ( $P < 0.05$ ).

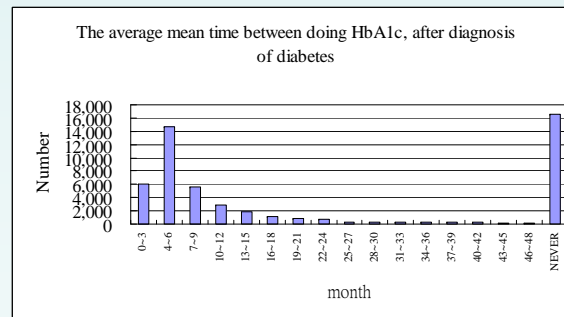


## Methods

In this study, we used the "Longitudinal Health Insurance Database 2005 released by the Taiwan National Health Research Institute (NHRI) in 2006. The data were analyzed by SAS 9.0.

## Results

Our results showed total of 52,470 persons (5.247 %) was diagnosed as diabetes. There were 10,080 persons (19.21%) who were tested first HbA1c within 1 month, but there were up to 16,607 patients (31.65%) had never been tested for HbA1c.



## Conclusions

Therefore, the results can be applied as reference when designed public health and prevention policy for diabetes care and set the pay system of National Health Insurance bureau.

## References

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3. Krishnamurti U, Steffes MW. Glycohemoglobin: a primary predictor of the development or reversal of complications of diabetes mellitus. *Clin Chem.* 2001;47(7):1157-65.