

Diabetic control trends among type 2 diabetes mellitus in Kelantan state from 2012-2021

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ABSTRACT

Introduction: Around 422 million people worldwide have diabetes mellitus (DM), the majority of whom reside in low- and middle-income nations. Malaysia is the 8th Country with the highest diabetic prevalence in Western Pacific Region. According to the National Morbidity Health Survey, The Prevalence of diabetes in Kelantan increased from 11.3% 2015 to 19.5% in 2019. A lack of glycaemic control results in uncontrolled diabetes, which causes numerous difficulties in people with diabetes mellitus. These problems, in turn, have the potential to significantly lower patient quality of life, shorten life expectancy, and raise the expense of treating the condition. The objective of the study is to monitor trends of QA diabetes control, percentage of reaching glycaemic control, and mean HbA1C among adult (≥ 18 years) Type 2 Diabetes Mellitus (T2DM) patients in Kelantan from 2012-2021. **Materials and Methods:** A retrospective data review of adult type 2 DM Clinical Audit (DMCA) from 2012-2021 was analysed descriptively in January - March 2023 using Microsoft Excel 2022. The sample of DMCA was randomly selected from adult (≥ 18 years) T2DM patients who registered in the National Diabetes Registry Database. The operational definition for QA diabetes control is the number of T2DM with HbA1c <6.5 over the total number of T2DM patients sampled whereas the denominator for percentage of reaching glycaemic control was over the total number of T2DM with HbA1C test done. Percentage and mean were displayed for the trends. **Results:** All Districts QA diabetes trends in Kelantan showed an increment from 2012-2021. The range increments in all districts were 3.68%-14.29% in 2012 to 21.71%-36.08% in 2021. The district with the highest QA Diabetes in Kelantan in 2021 was Pasir Puteh 36.08%, followed by Pasir Mas 32.87%, Jeli 32.45%, and Kota Bharu 32.44%. 8 districts achieved QA diabetes above 30% in 2021. Pasir Mas and Tumpat achieved QA diabetes HbA1c <6.5 since 2017 and Kota Bharu achieved 30% in 2019. The Percentage of patients with T2DM reaching HbA1c $<6.5\%$ increased from 18.68% in 2012 to 35.06% in 2021. Furthermore, HbA1c $<7\%$ increased from 25.28% in 2012 to 40.85% in 2021. The Mean HbA1c $<6.5\%$ decreased from 2012 8.8 CI (8.8-8.9) to 2021 8.1 CI (8.0-8.1). **Conclusion:** Diabetic control among Adult T2DM in Kelantan showed improvement in 10 years duration in all districts. However, the performance still needs improvement since glycaemic control is an important indicator to prevent complications.