



Quantifying the Financial Burden of Glycemic Control: A Retrospective

Single-Center Analysis of Healthcare Costs in South Korean Diabetes Patients.

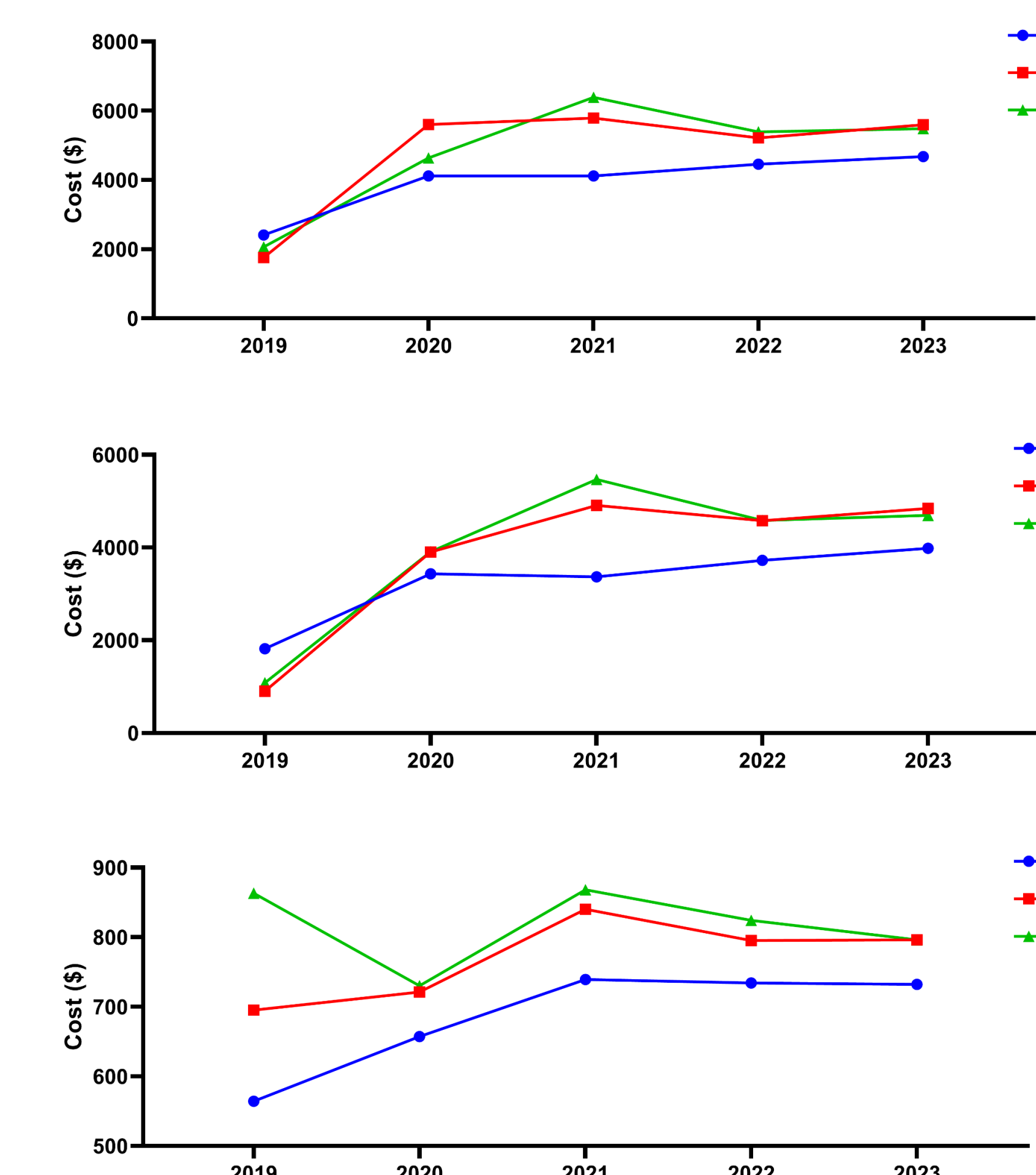
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A 1% rise in HbA1c increased costs by \$236.11, per A1c unit.



Annual costs steadily increased from 2019 to 2023; in 2023, MG (\$5,594) and HG (\$5,485) groups had higher total costs than NG (\$4,677).

Background: The impact of glycemic control on healthcare costs is a critical research area. This study aimed to evaluate the relationship between hemoglobin A1c (HbA1c) levels and healthcare costs, including out-of-pocket (OOP) expenses and insurance expenditures (IEs), over a five-year period (2019–2023).

Methods: This retrospective cohort study was conducted using data from Uijeongbu St. Mary's Hospital for patients who underwent HbA1c testing between January 1, 2019, and December 31, 2023.

NG: normoglycemic, A1c < 6.5%

MG: moderately hyperglycemic, A1c 6.5-8%

HG: highly hyperglycemic, A1c > 8%

Results: Of 86,417 patients, 61,961 were NG, 15,065 MG, and 9,391

HG. The HG group had the highest 75th percentile costs at \$8,554, compared to \$7,169 for the NG group and \$8,068 for the MG group..

Worsening glycemic control correlated with higher healthcare costs.

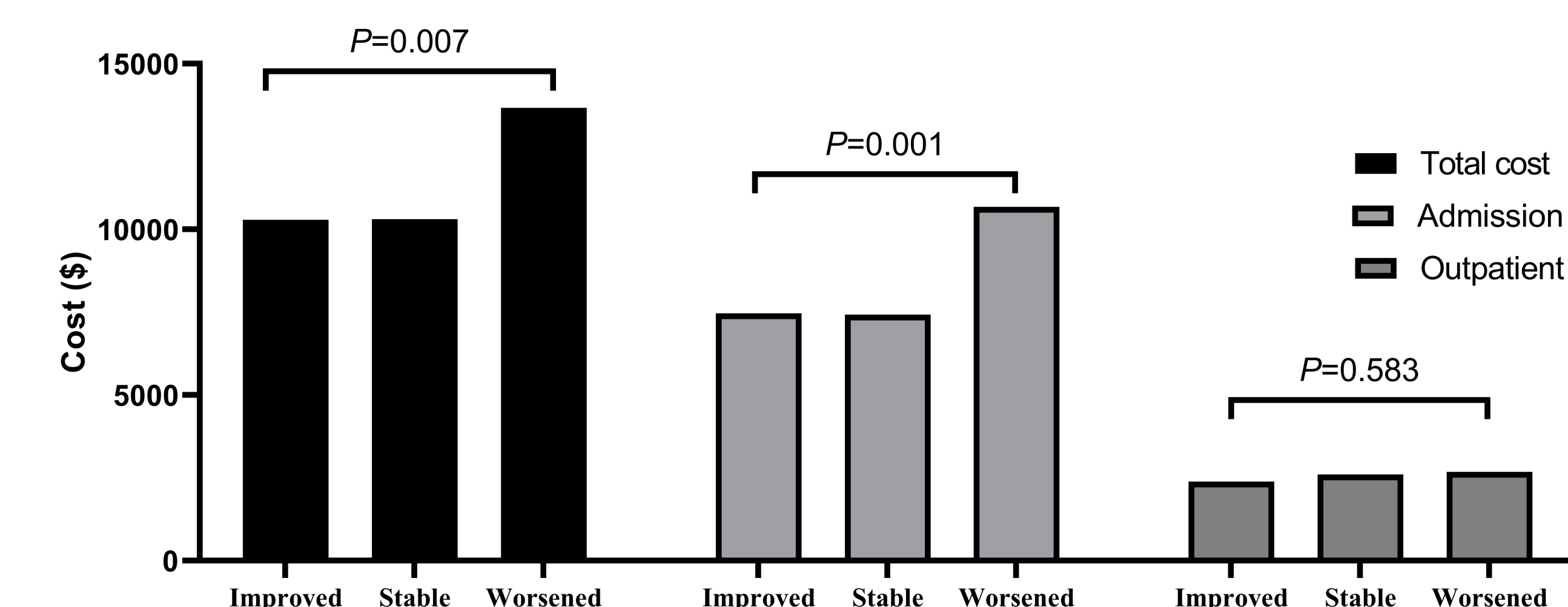
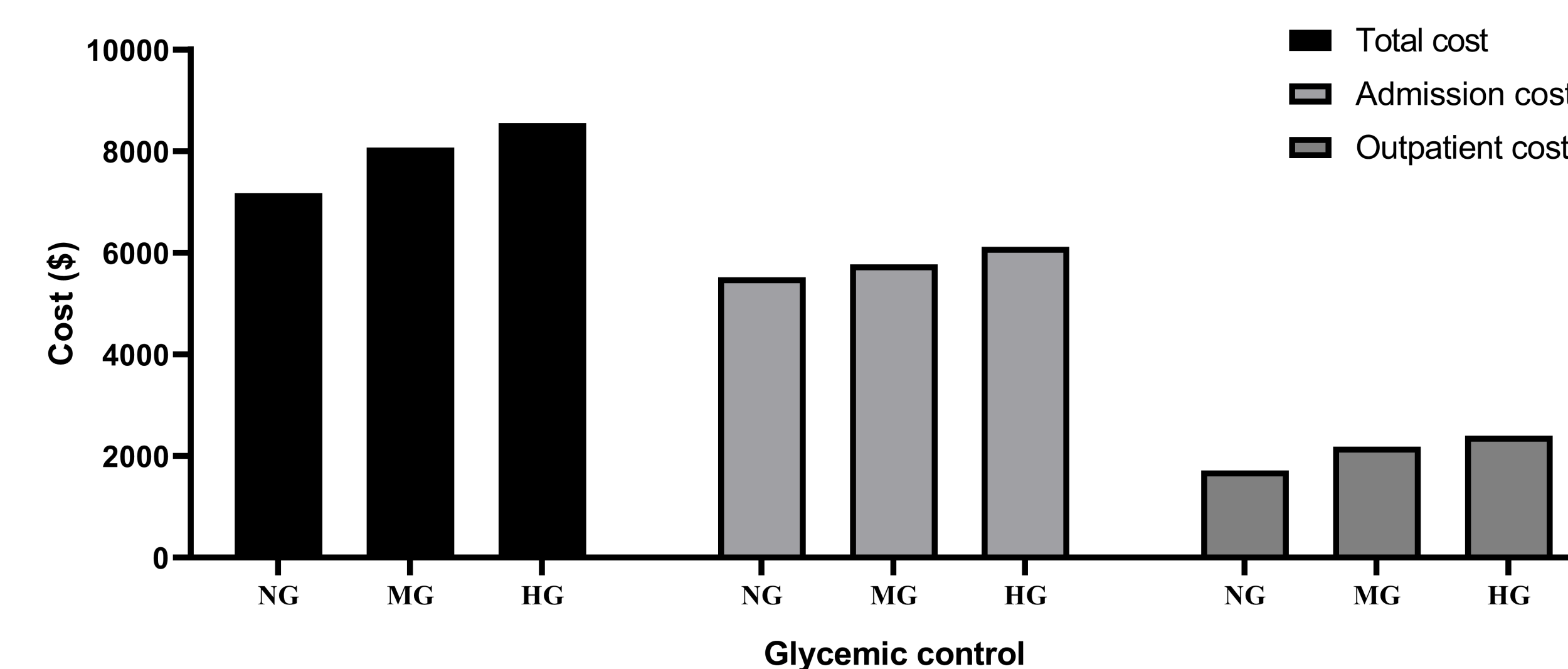
Patients with diabetes, chronic kidney disease, or serious disease exemption status, especially those poorly controlled, incurred higher costs. Patients under medical aid had higher IEs and OOP expenses.

Conclusion: Elevated HbA1c levels accrue higher healthcare costs.

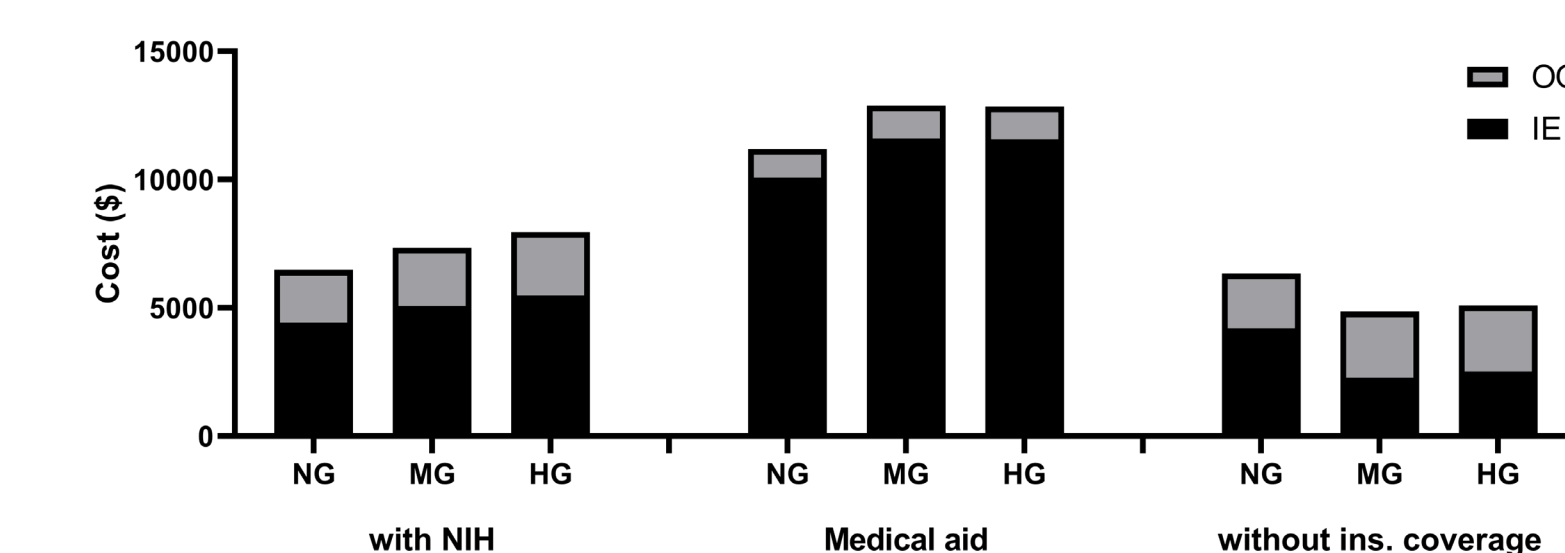
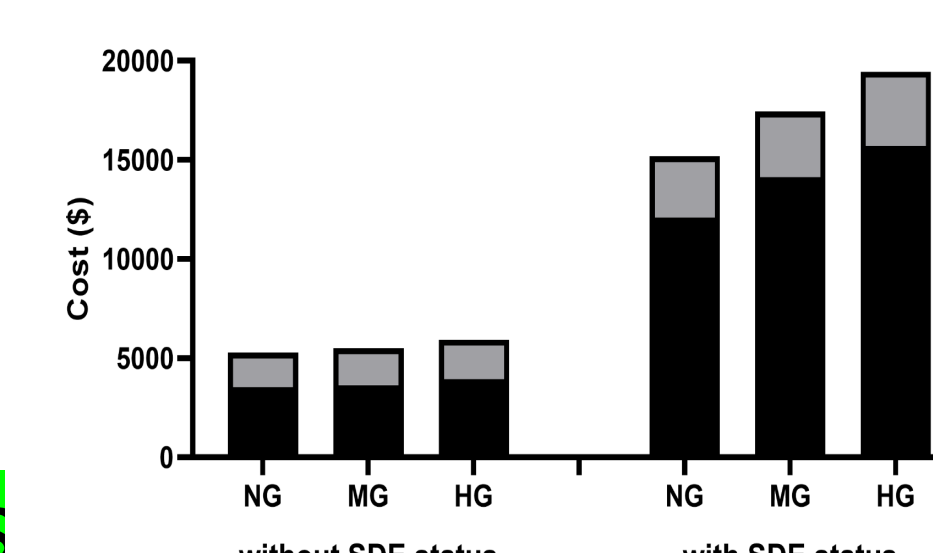
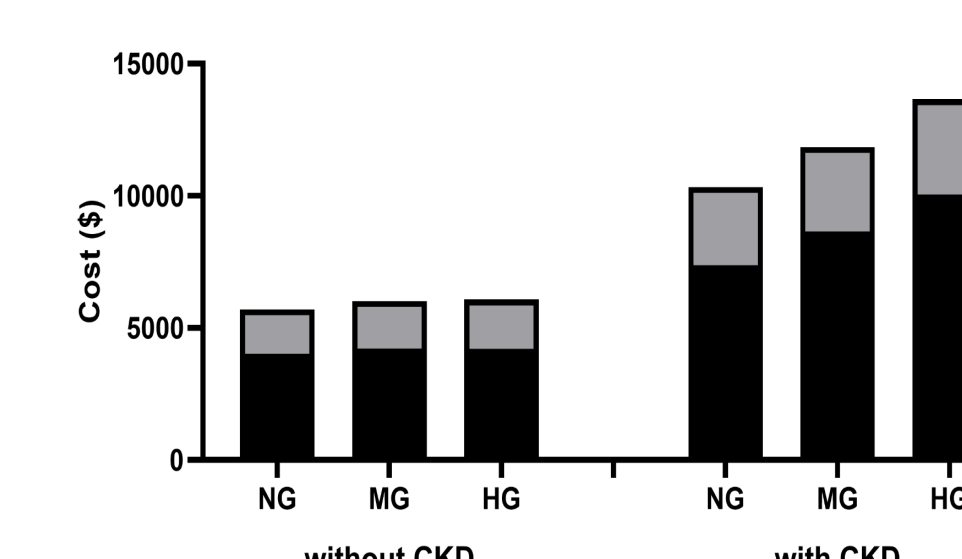
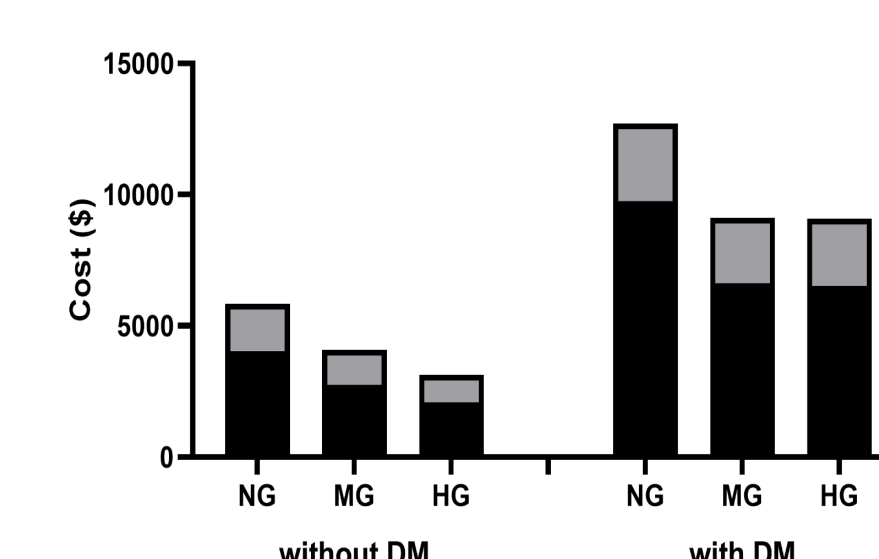
Effective management of glycemic levels is essential to reduce financial burdens

Results

The HG group had the highest costs, with total (\$8,554), inpatient (\$6,119), and outpatient (\$2,399) expenditures increasing with worsening glycemic control:



Patients with worsened glycemic control incurred the highest total (\$13,668) and inpatient (\$10,681) costs; outpatient costs did not significantly differ (P=0.583).



- Patients with DM, CKD, or SDE status showed substantial cost increases;
- SDE patients had the highest total costs (NG: \$15,614; MG: \$17,673; HG: \$19,486).
- Medical Aid recipients had the highest total costs (MG: \$13,289; HG: \$13,085) with low OOP burden; uninsured patients had lower total costs but higher OOP ratios.