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Evaluating the Impact of a Collaborative Care Model in Diabetes Management in a Primary Healthcare Setting in Qatar Using Real-World Data

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Background

- Diabetes is a chronic, debilitating illness of an escalating prevalence worldwide[1].
- The current prevalence of diabetes in Qatar is 15.5%, which is projected to increase to 29.7% by 2035[2].
- Diabetes management is still challenging despite healthcare advancement, warranting the need for a comprehensive Collaborative Care Model (CCM)[3].
- CCM assures the integration of knowledge, skills, values, and attitudes that aid team working within and among professions, and with patients and their families to improve health outcomes[4].
- Therefore, we aim to evaluate the impact of CCM on diabetes-related outcomes at a primary healthcare setting in Qatar.

Objectives

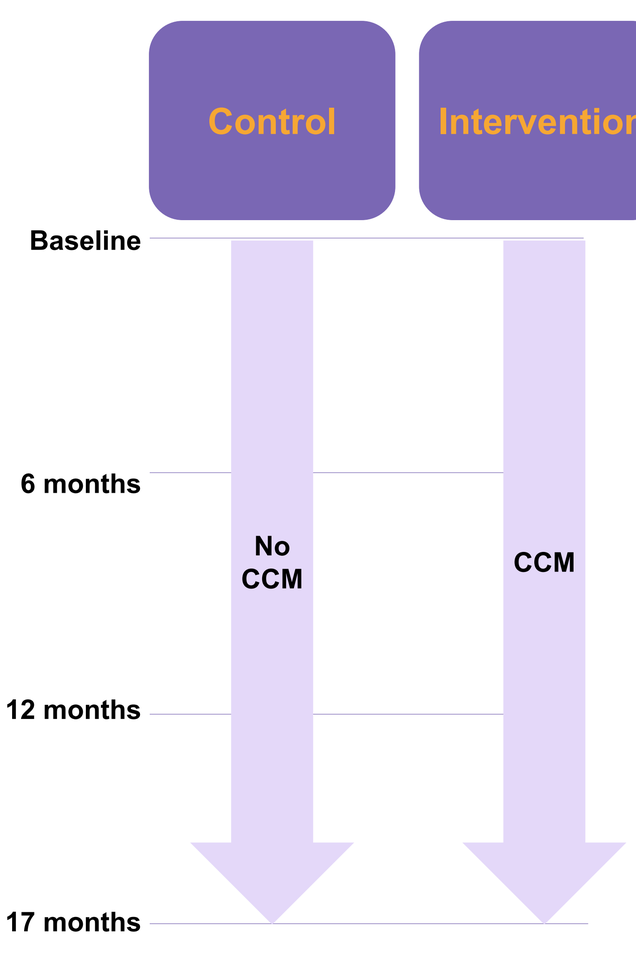
I. To characterize the clinical profile including diabetes-related comorbidities and complications of patients with DM attending an ambulatory diabetes care clinic at a primary healthcare center.

II. To evaluate the impact of CCM on glycemic control [glycated hemoglobin A_{1c} (HbA_{1c}), fasting plasma glucose (FBG), and random blood glucose (RBG)] among these patients.

III. To evaluate the impact of the CCM on other disease-related outcomes comprising lipid profile, BP, and body mass index (BMI).

Methods

- Study design: Retrospective observational study.
- Outcome measures: HbA_{1c}, FBG, BMI, blood pressure (BP), and lipid profile.
- Statistical analysis: Descriptive and inferential statistics.



Results

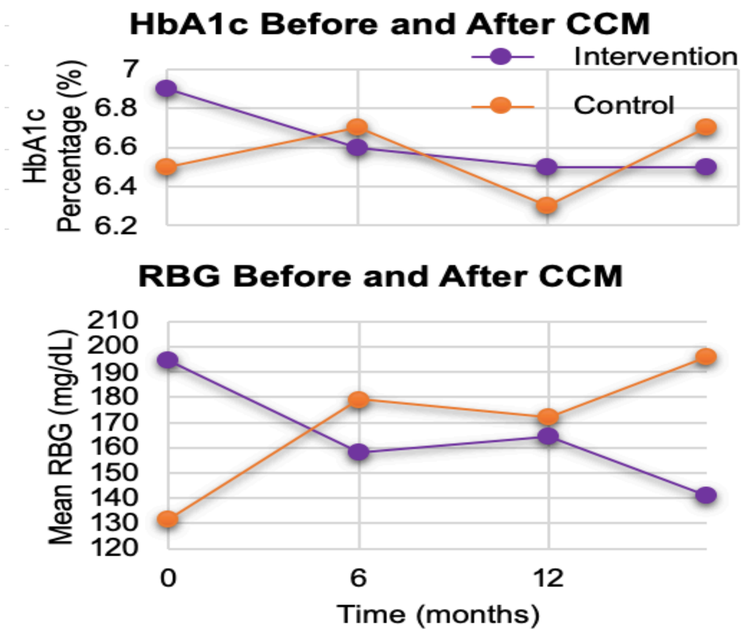


Figure 1. Glycemic control parameters

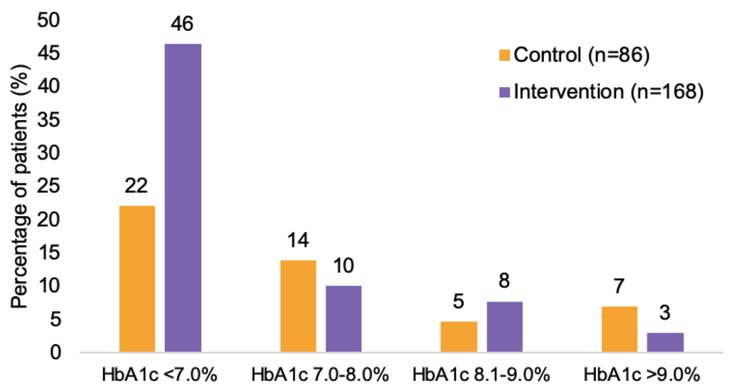


Figure 2. Final mean HbA1c distribution at 17 months

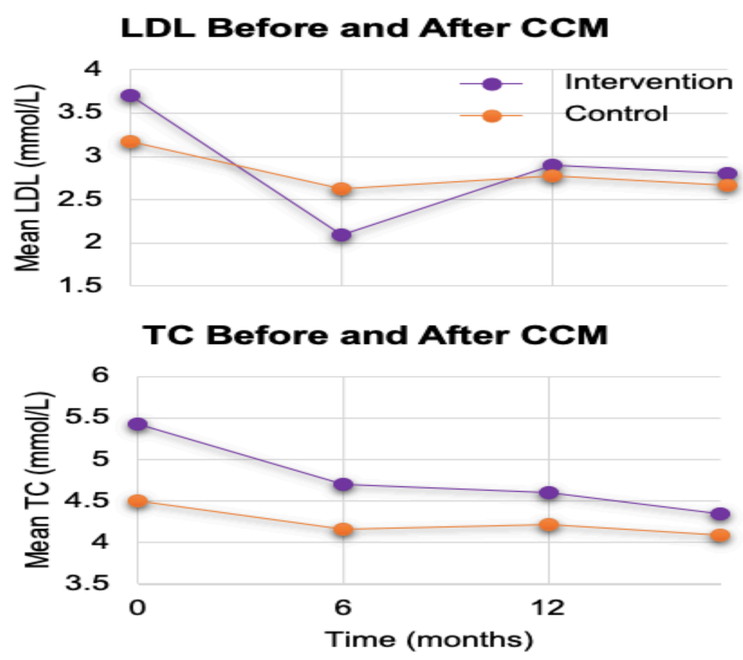


Figure 3. Lipid profile parameters

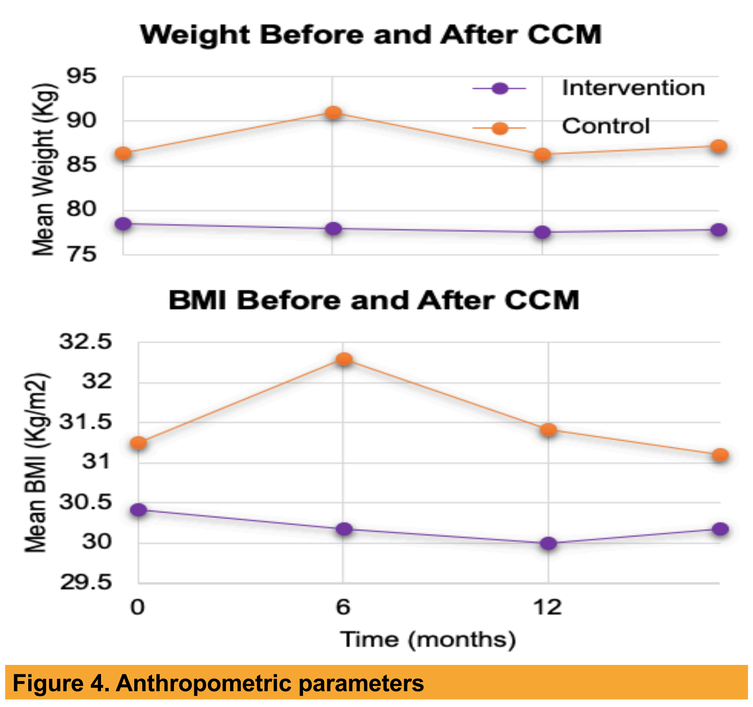


Figure 4. Anthropometric parameters

Results *(Cont'd)*

- There were no statistically significant differences at baseline or at 17 months in the medication regimens and types of medications
- The most commonly prescribed medication regimen was oral monotherapy.
- More patients in the intervention group received metformin than the control group at baseline and at 17-months

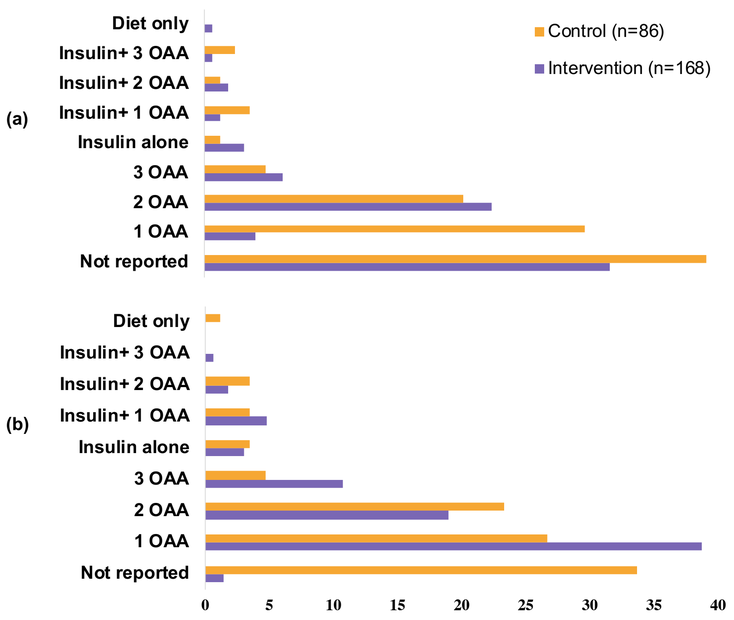


Figure 5. Medication regimens before and after CCM

Limitations

- There is a high heterogeneity among the primary studies as a result of the variations in original studies setting, number of patients, type of pharmacist's interventions, and outcomes measures
- Each systematic review stratified the primary studies differently (based on study setting, disease, outcome, or not stratified)

Conclusion

- CCM provision improved HbA_{1c}, RBG, LDL-C, TC, weight, and BMI significantly in patients with diabetes within 17 month in a primary healthcare setting.
- Future studies should determine the long-term impact of CCM in this setting.
- The findings highlight the positive impact of the integration of different healthcare professionals into the healthcare team in primary care settings on tangible health outcomes.

References

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