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Diabetes Education with a Teaching Kitchen Intervention Can Improve Hemoglobin A1c for Type 2 Diabetics Compared to Traditional Diabetes Education

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BACKGROUND

- The Providence Milwaukie Community Teaching Kitchen offers health-focused, budget friendly cooking classes for patients.
- In 2019, we piloted diabetes education classes(3 classes) with an added hands-on culinary session(1 session).
- Classes are provided by our chef leader and nutrition lessons by our registered dietitian. Patients and community members learn essential preparation and cooking skills as well as evidenced-based nutrition information.

PRIMARY OBJECTIVE

- This study compares the change in hemoglobin A1c for patients who participated in the pilot with those in the standard curriculum and those referred to diabetes education but did not enroll.

METHODS

- This retrospective analysis compared change in hemoglobin A1c for all patients referred to diabetes education in the Providence Northern Oregon region in 2019.
- Patients referred to diabetes education but not enrolled were considered a control group.
- To balance patient characteristics (e.g. age, gender, and pre-A1c score), two-to-one propensity score matching method was used to identify two matched controls for each enrollee.
- Change in hemoglobin A1c from baseline to 3-6 months were compared among matched comparison groups.

RESULTS

13,582 patients were identified including:

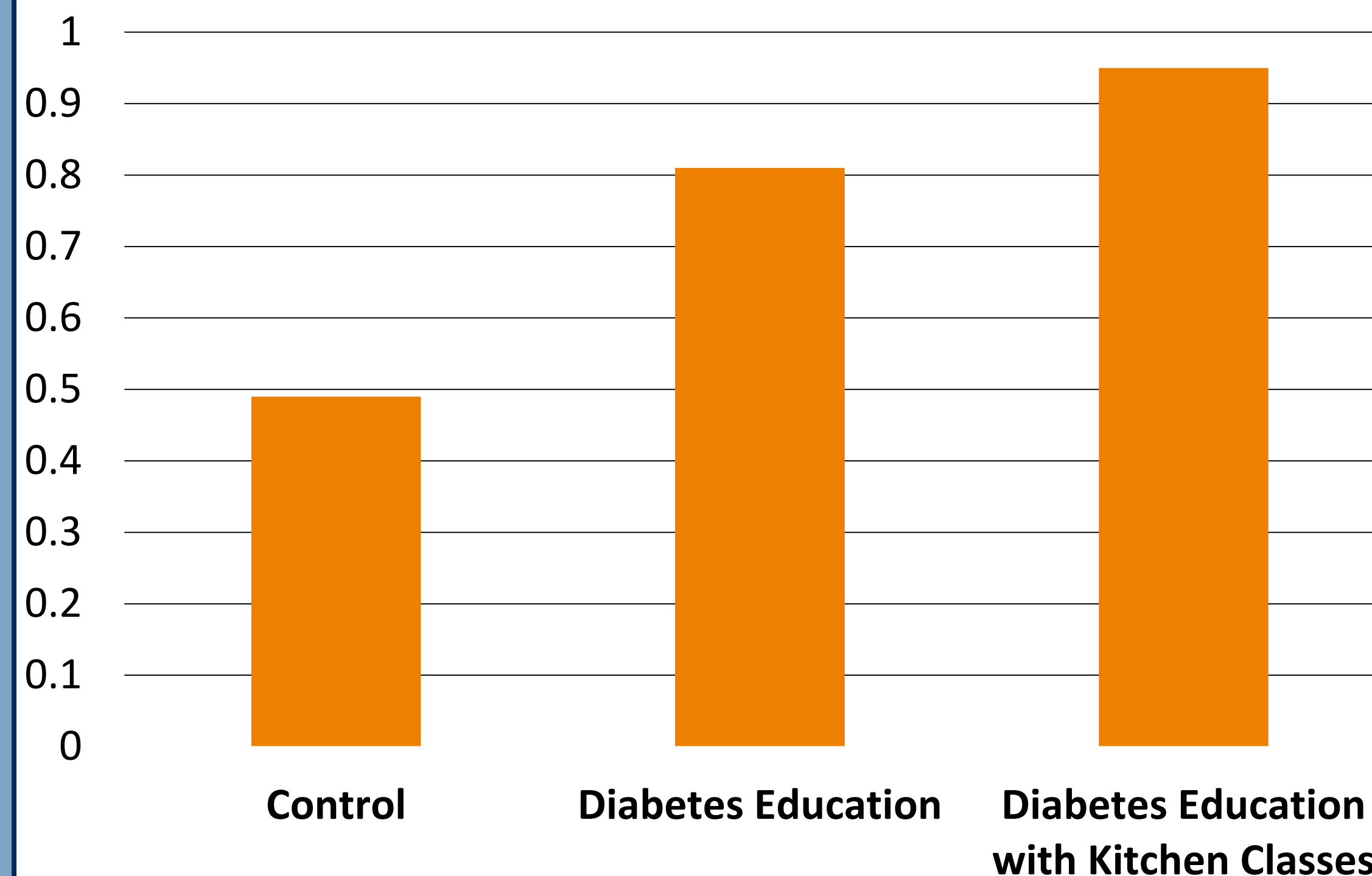
- 19 patients enrolled in diabetes education plus kitchen class
- 640 patients in traditional diabetes education
- 12,923 patients referred but did not enroll.
 - From the non-enrollees, 1,318 matched patients were selected as the control group.

Pre-intervention A1C was 8.14, 8.17, 8.72 for the control group, diabetes education group, and diabetes education group with kitchen classes, respectively with a reduction of hemoglobin A1C of -0.49, -0.81, and -0.95 respectively.

Compared to the control group, both diabetes education groups had a greater reduction in hemoglobin A1c (difference of 0.32, 95% Confidence Interval [CI]=0.17, 0.48 for the diabetes education group; difference of 0.46, 95% CI=-0.28, 1.19) for the diabetes plus kitchen class group).

Even though the diabetes education plus kitchen intervention had the largest reduction in hemoglobin A1c, the sample was small with large variation in reduction (-1.68 to -0.22).

Reduction in Hemoglobin A1C (%)



Disclosure Statement

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KEY POINTS

- Integrating a teaching kitchen component into the traditional diabetes education curriculum is a promising approach that can further improve initial biometric outcomes.
- Future studies are warranted to demonstrate clinical effectiveness of this enhanced intervention.
- Limitations
 - Low sample size (19)
 - Potential selection bias

CONCLUSIONS

- The greatest reduction on A1C from a single intervention tested is seen with diabetic education (0.81%).
- The addition of teaching kitchen with diabetic education conferred a modest additional (0.14%) reduction of A1C



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