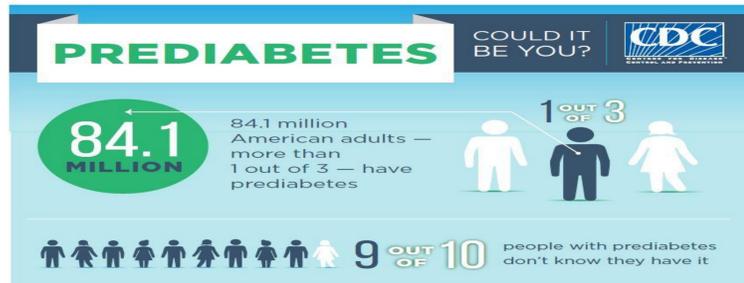


ARE WE APPROPRIATELY UTILIZING METFORMIN FOR PATIENTS WITH PREDIABETES AT THE NEIGHBORHOOD HEALTH CENTER (NHC)?

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BACKGROUND



- Prediabetes (HgbA1c: 5.7%-6.4%) is an important risk factor for future diabetes and cardiovascular disease. Early identification and intervention can reduce the rate of progression to diabetes.
- The Diabetes Prevention Program (DPP) ⁽²⁾ A landmark randomized, controlled clinical trial that was conducted nationwide to show that lifestyle changes and/or metformin can effectively delay diabetes.
- The American Diabetes Association (ADA) recommends an intensive diet and physical activity behavioral counseling program for all patients with prediabetes and suggests that metformin be considered in patients with certain risk factors.
 - BMI ≥ 35 kg/m², age <60 years, history of gestational diabetes, high risk patients (>6.2%), in low/medium risk (5.7-6.1%) if no weight loss or rising HgbA1c after 16-week of lifestyle modifications
- The most effective intervention has been proven to be intensive lifestyle modifications. However, the use of metformin did experience a 31% decrease (3-year period) and 18% decrease (10-year follow-up) in incidence of diabetes.

OBJECTIVE

To assess if education of metformin in prediabetes will improve utilization at the NHC in efforts to delay progression of diabetes.



DESIGN/METHODS

Phase I

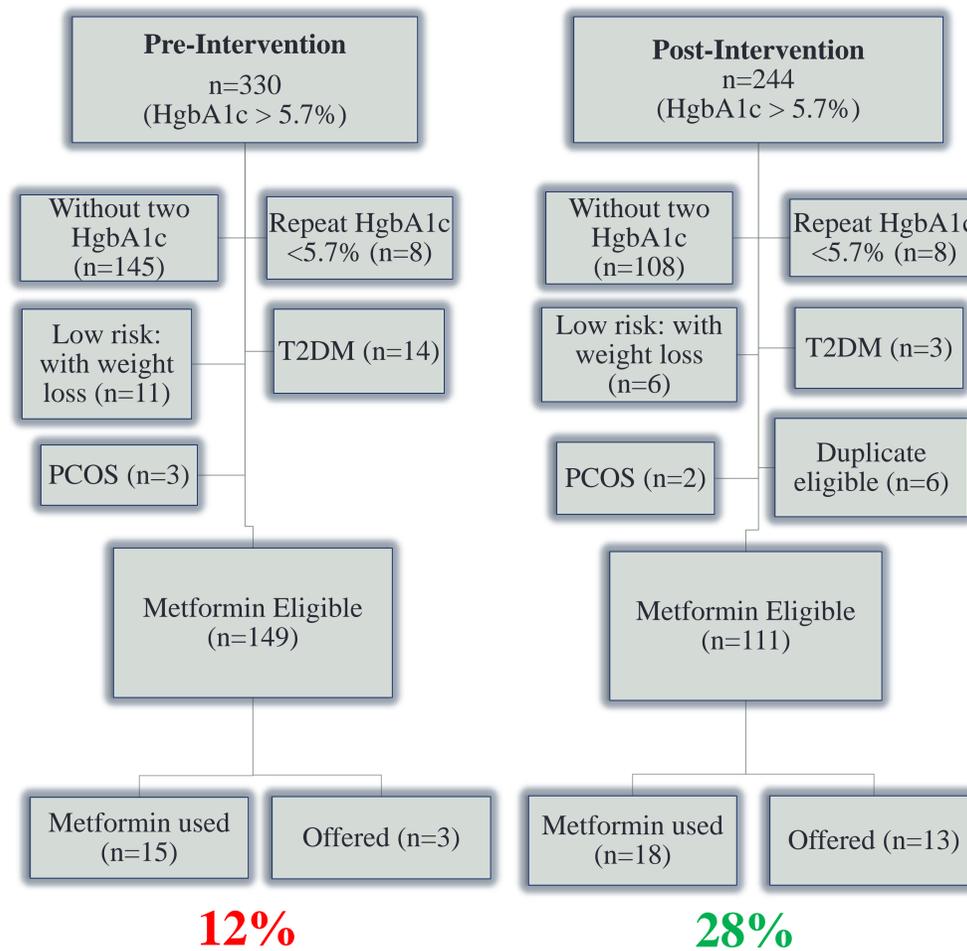
- An EMR query (n=330) included prediabetic patients seen during 09/28/2015 to 08/31/2017. Exclusion criteria included patients without two HgbA1c readings at least 6 months apart, patients that progressed to overt diabetes mellitus or another diagnosis warranting the use of metformin (e.g. polycystic ovary syndrome). With this subset of patients (n=149), consideration for metformin use was based on the certain risk factors.

Phase II - Intervention

- Education was provided to physicians via an oral PowerPoint presentation regarding general information about diagnosis of prediabetes and interventions that have been proven to delay incidence of diabetes.

Phase III

- An EMR query (n=244) was conducted once again with the same format during 10/01/2017 to 01/31/2018, n= 244. Patients were again excluded as above, in addition duplicate eligible patients were excluded (n=111).



RESULTS

	PRE INTERVENTION	POST INTERVENTION
Male	45	32
Female	105	74
High Risk	44	16
Worsening HgbA1c	53	26
Low Risk: No Weight Loss	126	74
BMI ≥ 35 kg/m ²	34	20
Age < 60 years	106	56
History of GDM	4	3
Metformin	15	18
Considered Metformin	3	13
Percentage of utilizing metformin on eligible patients	12%	28%

CONCLUSIONS

- There was a marked increase consideration of metformin use to eligible patients after education was provided to physicians. Further studies can be completed to investigate the effectiveness of metformin therapy in prediabetic patients to delay progression of diabetes.
- Possible limitations include: under documentation, limited guidelines regarding use of metformin for prediabetes, shared decision making, and utilizing IGT/IFG ICD10 codes.

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