

Significance of the Problem

Approximately 30.3 million Americans had diabetes in 2015 with 1.5 million being diagnosed annually (ADA, 2019).

More than 84 million Americans have pre-diabetes (ADA, 2019).

Diabetic education has been shown to reduce HgA1C by an average of 1-2% (Chrvala et al., 2016)

Decreasing HgA1C can significantly reduce morbidity and mortality associated with diabetes.

The total annual cost of diabetic care in the US is estimated to be 327 billion (ADA, 2017).

Healthy People 2020 published a goal that the percentage of diabetic patients in American who receive formal diabetic education should be significantly increased (ODPHP, 2019).

In 2012, 46.9% of adult diabetic patients reported having received formal diabetic education (ODPH, 2019).

A goal of 58.4% was set by the ODPHP.

PICOT Question

For providers managing diabetic patients at a primary care clinic, what is the impact of a written policy, point of care reminders, and individualized feedback at increasing provider referral rates of diabetic patients to community hospital diabetic education, compared with no intervention?

Evidence Appraisal

Level	Number Included	Quality	Evidence Reviewed
I	4	A	Systematic Reviews/RCTs
III	3	A	Controlled Trials
V	1	B	Cohort Studies
VII	1	B	Summary of Evidence

Synthesis of Evidence

Based on the review of literature, the following interventions are recommended to increase provider referral rates:

1. A written protocol
2. Point of care reminders
3. Audit with feedback

Review of Literature

Database	Keywords	Results	Reviewed	Accepted
Cochrane	Remind* AND "point of care" OR feedback OR "computer generated"	14	3	3
JBI	Remind* AND "point of care" OR feedback OR "computer generated"	155	5	3
CINAHL	remind* OR "point of care" or feedback AND protocol or "written policy" or guideline* or behavior or "quality of care" AND provider* or practitioner* AND diabet*	94	12	2
MEDLINE	remind* OR "point of care" or feedback AND protocol or "written policy" or guideline* or behavior or "quality of care" AND provider* or practitioner* AND diabet*	178	10	2 duplicates
PubMed	remind* OR "point of care" or feedback AND protocol or "written policy" or guideline* or behavior or "quality of care" AND provider* or practitioner* AND diabet*	197	6	1 duplicate
Citation Chase			2	1
Hand Search			2	0

Inclusion Criteria: published after 2009, English language, peer reviewed
Exclusion Criteria: Focused on patient compliance, inverse of inclusion

Decision to Change Practice

The clinic does not currently have a protocol regarding formal diabetic education.

Based on the current evidence, the primary care clinic management determined (secondary to the DNP student's advice) that formal interventions be completed to increase provider referral rates.

Evaluation

Week 1-2 referral percentage: 10.77%
Week 3-6 referral percentage: 18.65%
Week 7-12 referral percentage: 16.48%
Total 12-week referral percentage 2018: 12.7%
Total 12-week referral percentage 2019: 15.40%

Conclusion and Recommendation

Primary Outcome: Did the referral rates increase with intervention use?

Wilcoxon – Signed Rank Test: ($P > 0.05$)

Total increase: 2.7% compared to 2018

Secondary Outcome: Which intervention phase was most effective?

Repeat measure ANOVA: ($P > 0.05$)

Combination of protocol, point of care reminder, and audit and feedback was most effective with a referral rate of 16.48%.

Recommendation: Additional EBP projected with added interventions for > 6 months.

A total increase of 39.9% is needed at the PCC to increase their referral rate to meet the ODPHP recommendations.

Implementation

Project Setting:

Primary care clinic located in Northern Minnesota
MDs (n – 9) and FNP's (n – 2)

Average years of provider employment at facility: (insert calculation)

Male providers (n - 4) and female providers (n – 7)

The clinic managed 1,433 DM patients since 2017

Diabetic education provided at local community hospital

The primary care clinic where this project was implemented had a pre-intervention referral rate of 17.79% since 2017.

Goal: Increase provider referral rate to 58.4%

Design: Pre-intervention, post-intervention

Pre-intervention data (2018):

Gathered over 12 weeks

Studied population (9 MDs, 2 FNP's)

Post-intervention data (2019)

Gathered over same 12 weeks as 2018

Same studied population (9 MDs, 2 FNP's)

Implementation Plan:

Weeks 1 – 2: protocol only

Weeks 3-6: protocol with verbal point of care reminders

Weeks 7-12: protocol, point of care reminders, audit with feedback

