Improving Medication Adherence by Addressing Low Health Literacy and Lack of Medication Knowledge: A Quality Improvement Project

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Background

Hypertension affects 48% of adults in the United States and is a major risk of cardiovascular disease and stroke (Centers for Disease Control and Prevention [CDC], 2023).

Approximately 50% of patients with chronic conditions adhere to prescribed medications (World Health Organization, 2021)

Consequences

- Increased hospitalizations
- Preventable complications
- Higher healthcare costs

Practice Gap

Current outpatient care lacks

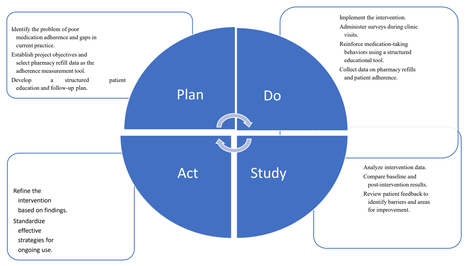
- Reinforced patient education
- Standardized adherence assessment tools

Purpose

To improve medication adherence among adults with hypertension and low health literacy through a structured nurse-led education.

Methods

Plan-Do-Study-Act (PDSA) model



Timeframe was 8 weeks

Intervention:

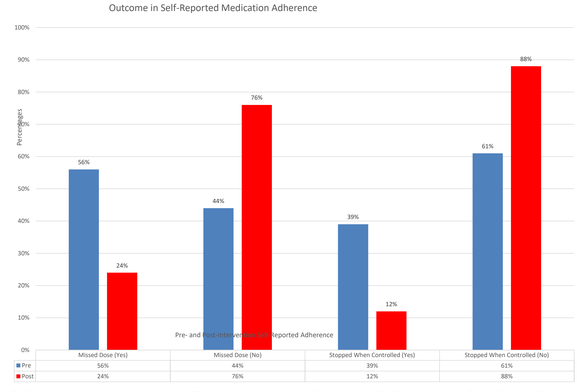
- Nurse-led education using the Centers for Disease Control and Prevention (CDC) tool
- Teach-back method
- Follow-up calls

Education

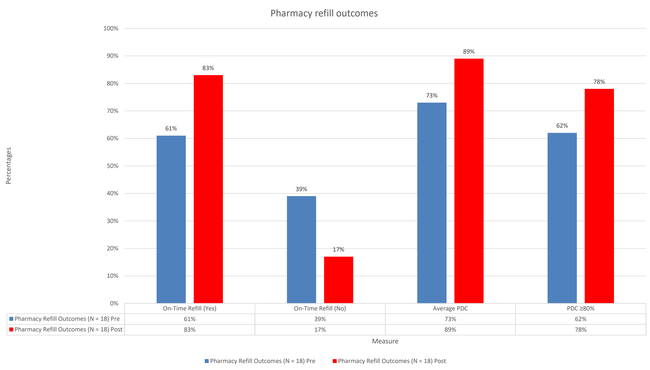
Setting and Sample

- Ambulatory Clinic
- n=18
- Adults with hypertension
- Baseline data on medication refill rates and survey responses were collected to serve as comparison points of subsequent evaluation of project outcomes

Results



Missed doses: Decrease from 56% to 24% Significant (p = .041)
Self discontinuation: Decrease from 39% to 12% Not significant (p = .25)



On-Time Refills: Increase from 61% to 83%, Not significant (p=.134)
Proportion of Days Covered (PDC): Increase from 73% to 89% Significant (p<.001)
Large effect (d=2.09)
Exceeded 80% adherence threshold

Qualitative results
Feedback

- Better understanding
- Reminder calls helped

“The reminder helped me stay on track”

Discussion

- Nurse-led education combined with reminder strategies improved medication adherence, especially patients with low health literacy
- Intervention addressed both knowledge gaps and behavioral barriers
- Significant reduction in missed doses suggests improved understanding and routine medication-taking
- Proportion of Days Covered (PDC) increase reflects clinically meaningful improvement in adherence and potential for better blood pressure control

Implications for Practice

- Combination of education, teach-back and follow-up reinforcement is more effective than education alone
- Use of objective measure (e.g. PDC) allows early identification of patient at risk for non adherence

Limitation

- Small sample size (n=18)
- Single-site setting. This limits generalizability
- Short intervention duration (8 weeks)

However, consistent improvements across support real world better patient outcomes.

Conclusion

Structured nurse-led education with follow-up support significantly improves medication adherence and offers a scalable model for chronic disease management

Contact Information

References