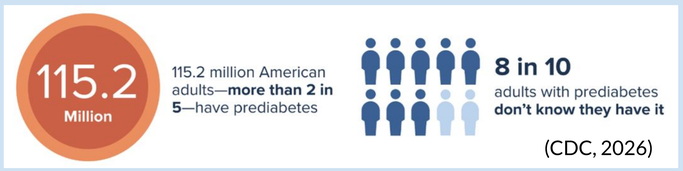
Bridging the Gap in Prediabetes Care: Improving Outcomes Among Socioeconomically Disadvantaged Adults

Reality → Theoretical

Background

- **Prediabetes affects low-income adults more** (CDC, 2026)
  - 13% have prediabetes at federal poverty line
  - 5.5% have prediabetes at 500% above federal poverty line
  - 43.5% of adults have prediabetes → 115.2 million adults
    - Only 21.4% report guidance from care team
  - Brief visits, large provider-patient panels, and lack of standardized workflows → limit opportunities for



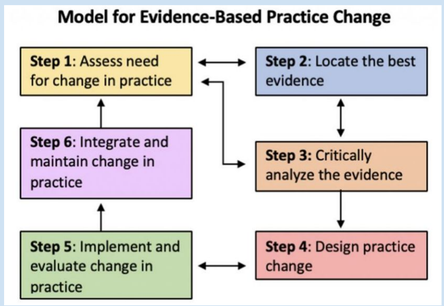
(CDC, 2026)

Importance of Issue

- **Prediabetes is a window of opportunity**
  - Gaps in patient motivation and lifestyle persist despite routine screening
  - Intervention → decreases chronic complications
    - Limits the strain on resource-limited areas (Amelia et al., 2023)
  - No intervention → disparities widen among low-income and minority populations (Li et al., 2025)
    - Underserved areas become burdened

Framework

- **The Model for Evidence-Based Practice Change**
  - Improves care by integrating, clinical expertise, and patient preference (Melnyk & Fineout-Overholt, 2019)
  - *Steps:*
    - Identify a problem
    - Analyze evidence
    - Implement change
    - Evaluate outcomes
    - Sustain effective improvements
  - *Guides this project:*
    - Identify gaps in prediabetes care
    - Implement multi-level evidence-based interventions
    - Evaluate impact
    - Sustain if change is effective



(Melnyk & Fineout-Overholt, 2019)

Key Concepts & Outcomes

- **Goal: Cost-effective prevention of prediabetes progression**
  - Decreased risk of long-term complications (Li et al., 2025)
  - Increaesed quality of life
  - Participants will receive 1-on-1 motivational interviewing-based prediabetes counseling with a registered nurse
    - Strengthen the patient's self-efficacy and engagement
    - Outcome: Increased self-management skills resulting in a reduction in A1C of at least 0.5% within 1 year

(OpenAI, 2026)

Interventions & Solutions

- **Individual intervention:** (Cengiz & Korkmaz, 2023)
  - 1-on-1 motivational interviewing-based prediabetes counseling
    - Enhances self-efficacy and patient engagement→ Preventative self-management
- **Community intervention:** (Nikitara et al., 2020)
  - Community-based group diabetes prevention education classes
    - One class per month for 1 year
    - Led by a knowledgeable registered nurse
      - Cost efficient resource
- **Policy Intervention:** (O'Brien et al., 2022)
  - Implement a clinical decision support tool
    - Addresses the knowledge gap and time barrier
    - Flags abnormal labs, prompts lifestyle counseling, and suggests referrals

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Key Players

- **Low-income prediabetic populations require interdisciplinary care:**
  - Patient and family engagement → Foundational
  - *Primary Care Providers:*
    - Screening, diagnostics, and education
  - *Registered Nurse:*
    - Motivational interviewing-based counseling sessions, and group lifestyle education classes
  - *Case management:*
    - Resource assistance →Food, insurance, and transportation

Evaluation

- **Process evaluation:**
  - Self-efficacy → Diabetes Management Self-Efficacy Scale (DMSES)(Cengiz & Korkmaz, 2023)
  - Patient engagement → Patient Health Engagement Scale (PHE-s) (Graffingna & Barella, 2018)
  - Attendance → Group education (Nikitara et al., 2020)
  - Provider interviews→ Clinical decision tool ease of use (O'Brien et al., 2022)
- **Impact evaluation:**
  - A1C → At baseline and every 3-6 months
  - Weekly food/exercise logs → Sustained healthy behaviors
  - Utilization data → Clinical decision support tool

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