Population Health Proposal Part 3

EVALUATION PLAN AND COST-BENEFIT ANALYSIS

YOUNG ADULTS (18–25) WITH SERIOUS MENTAL ILLNESS, SEDGWICK COUNTY, KANSAS

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Problem Identified From Population Data

- Population: young adults ages 18–25 with serious mental illness in Sedgwick County, Kansas (Sedgwick County Health Department, 2022).
- Problem: high depression burden and elevated suicide risk within this group (SAMHSA, 2023).
- Kansas suicide mortality increased faster than national trends across 2001–2021 (Garnett & Curtin, 2023).
- Local systems impact rising crisis and emergency utilization for depression, suicidal ideation, and self-harm among young adults (Sedgwick County Health Department, 2022).

Selected Intervention Overview

- Selected intervention: Community gatekeeper training initiative (QPR + Mental Health First Aid).
- Core components
  - Train trusted community members (education, workplaces, faith, peers, social service staff) to recognize warning signs and respond.
  - Standardized response steps: question, persuade, refer (QPR) plus supportive action planning and crisis response skills (MHFA).
  - Closed-loop referral pathways to 988, local crisis stabilization, and community mental health services.
- Rationale: gatekeeper programs increase knowledge and self-efficacy for identification and referral (Liu et al., 2025; Kingi-Uluave et al., 2025).

How Outcomes Will Be Evaluated

- Evaluation approach: mixed-methods process and outcome evaluation using a logic model (inputs → activities → outputs → outcomes).
- Design
  - Baseline measurement, then quarterly monitoring for 12–24 months.
  - Interrupted time series of suicide-related ED visits and crisis encounters, with pre/post trend comparison.
  - Equity stratification by age, sex, race/ethnicity, and ZIP code when available.
- Use results for continuous quality improvement (booster trainings, targeted outreach, referral pathway fixes).

Evaluation Measures to Determine Effectiveness

- Process measures (implementation and reach)
  - Number trained, completion rate, and workforce/sector distribution (training roster).
  - Training fidelity (standard curriculum delivered, booster completion at 6–12 months).
  - Referral actions: number of warm handoffs to 988 or crisis services reported by gatekeepers.
- Direct measures (knowledge and skill gains)
  - Pre/post changes in suicide prevention knowledge, stigma, and self-efficacy (validated brief scales).
  - Skill demonstration via scenario-based assessment or observed role-play (sampled).
- Outcome measures (population and system indicators)
  - Suicide-related ED visits, hospitalizations, and self-harm encounters among ages 18–25 (local hospitals, KDHE morbidity data).
  - Suicide deaths (KDHE vital statistics and CDC mortality reporting) for ages 18–25.
  - Linkage-to-care within 7 days after a crisis encounter and reduced repeat ED visits within 30 days.
- Interpretation: sustained downward trends post-implementation, relative to baseline, support positive intervention impact.

Cost-Benefit: Human Resources

- Human resources (costs)
  - Program coordinator (0.5–1.0 FTE) for scheduling, partnerships, and QA.
  - Certified trainers for QPR and MHFA, plus peer co-facilitators and community champions.
  - Data/evaluation support: analyst (0.2–0.5 FTE) for dashboards, trend analysis, and reporting.
- Human resources (benefits)
  - Increased community capacity to recognize risk and initiate timely referral.
  - Reduced burden on crisis responders through earlier detection and more appropriate routing.
  - Stronger cross-sector collaboration (health systems, schools, social services, law enforcement).

Cost-Benefit: Capital Resources

- Capital resources (costs)
  - Training venues or webinar platform licensing and IT support.
  - Secure data infrastructure for tracking participation and outcomes (HIPAA-aligned where needed).
  - Equipment: laptops/tablets, projector, and secure storage for training records.
- Capital resources (benefits)
  - Scalable delivery across multiple sectors and ZIP codes.
  - Reliable data capture enables rapid feedback loops and targeted improvements.
  - Supports sustainability beyond the initial implementation period.

Cost-Benefit: Material Resources

- Material resources (costs)
  - Course fees, manuals, and participant materials for QPR and MHFA.
  - Marketing and outreach (flyers, social media ads, community events) to recruit gatekeepers.
  - Incentives (optional) to improve participation, especially in high-need areas.
- Material resources (benefits)
  - Higher participation and retention, improving reach and dosage.
  - Consistent messaging that normalizes help-seeking and reduces stigma.
  - Clear referral tools (wallet cards, QR codes) increase the likelihood of timely action.

Summary

- Evaluation will combine process, direct, and outcome indicators to show whether the intervention was delivered as planned and improved population trends.
- Short-term success indicators: training reach, improved knowledge/self-efficacy, and increased crisis referrals.
- Medium-term indicators: improved linkage to care and reduced repeat ED utilization for suicide-related crises.
- Long-term indicators: reduced suicide attempts and deaths among ages 18–25 in Sedgwick County.
- Cost-benefit expectation: relatively modest training and coordination costs compared with high medical and societal costs of suicide and self-harm (Peterson et al., 2024; CDC, 2025).

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