

## Perspective of NIH Review Committees

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## Review Criteria for PA-01-069

- Significance
- Approach
- Innovation
- Investigator
- Environment
- Recruitment of Women, Minorities, and Children
- Human Subjects
- Budget

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## Key Points

- Importance of the Issue and Efficacy of the Intervention Approach
- Key Elements of the Study Approach
- Collaboration, Expertise, and Feasibility
- External Validity and Translation

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## Importance of the Issue and Efficacy of the Intervention Approach

- The issue should be of high public health significance.
- Will the results of this study advance the state of scientific knowledge and influence clinical practice?
- The intervention approach to be tested must already have a solid empirical basis in efficacy studies.

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## Key Elements of the Study Approach

- Patients and Setting
- Sampling and randomization plans
- Clear description of the intervention and staff training methods
- Innovation
- Study design and control groups
- Statistical analyses
- Process and outcome measures

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## Patients and Setting

- Targeted to a patient population commonly seen in community settings: diverse and/or high-risk.
- “Real world” clinical setting in the community.
- Co-morbidities in study sample.
- Inclusion and exclusion criteria less stringent than in efficacy studies.

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## Sampling and Randomization

- The sampling and randomization plans must be systematic and well described.
- Will the study sample be representative of the community population?
- Diverse groups of participants are needed to enhance external validity.
- Are the recruitment methods clearly specified and will they be effective?
- What are the plans for retaining subjects for the duration of the study?

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## The Intervention

- The original intervention should have been well-described, theoretically-based, and innovative.
- Already proven to be efficacious.
- The fundamental intervention approach should have a firm basis in established research.
- Cultural appropriateness.

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## Innovation

- The application of the intervention to be tested for translation would be considered innovative.
- Test novel ways of implementing previously established intervention approaches in real-world settings with diverse or high-risk populations.
- Design and measurement plan.

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## Providing the Intervention

- Who will provide the intervention?
- Research staff (effectiveness study) or existing community agency staff (translation study)?
- Staff training methods should be clearly described, including both the initial and follow-up training.

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## Design Issues

- Translational research is not the same as clinical trials.
- What is the most appropriate control group or control procedures?
- Besides RCT, consider other appropriate control procedures such as time-series designs, multiple baseline designs, cross-over, quasi-experimental designs.
- Efficacy research typically has more experimental control.

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## Design Issues

- In effectiveness and translational research, the control group should have ecological validity: e.g., usual care or enhanced clinical care.
- Consideration of moderator variables.
- Plan for measurement of long-term outcomes.
- Consideration of potential problems.

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## Statistical Issues

- Statistical expertise on investigative team.
- The power analysis should be clearly described and based on real data.
- Will the effect of intervention be clinically meaningful?
- The primary analysis should be an intent-to-treat analysis.
- Specify primary outcomes, secondary outcomes, and mediators and moderators.

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## Statistical Issues

- Careful documentation needed for number of patients who did not complete the intervention, and reasons for not completing.
- How will missing data be handled?
- Sophisticated models for longitudinal data needed when clinics or teams are randomized (HLM, SEM, GEE, random regression models).
- Link data analysis plan to specific aims; be very specific in your plans.

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## Process Measures

- Process measures are essential.
- Implementation of the intervention—not necessarily the same as fidelity.
- Costs of providing the intervention (time spent by staff).
- Satisfaction of patients and staff.
- Hypothesized mediators of response to the intervention.
- Barriers to successful implementation should be documented in both the short and long term.

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## Outcome Measures

- Outcome measures must be reliable, valid, and have clinical utility—if the measurement plan is burdensome, it will increase attrition.
- Measures must be practical in order to be routinely employed in community settings.
- Multi-modal assessment using self-report and objective measures.
- Health behaviors, health status, psychosocial functioning and quality of life should be included as key outcomes in both the short and long-term.

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## Collaboration, Expertise, and Feasibility

- Investigators must have established relationships with the participating community-based clinics—letters of agreement needed (demonstrating commitment).
- Investigative team must have expertise with the intervention and study approach—track record of relevant publications and grants, interdisciplinary team, institutional environment likely to facilitate achievement of study aims.
- Pilot tests in the proposed community setting with the study population necessary to demonstrate the the study approach is feasible.

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## External Validity and Translation

- Potential for translation is significant issue for the reviewer—RE-AIM.
- To what patient populations and settings will the study findings be expected to generalize to?
- Transferability (application to diverse settings) depends upon well-specified description of the intervention approach (treatment manuals and staff training methods), and evidence that the intervention leads to maintenance of change over long follow-up period—not only for patients but also for the setting.

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## Bottom-Line

- Does the intervention strategy proposed have the ability to be translated into primary care, community, family or other patient care/support settings?
- Translation requires successful demonstration of the intervention's long-term effectiveness with a diverse patient population in a real-world clinical setting.

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## Other Reviewer Concerns

- Is the application well-written?
- Is it organized appropriately?
- Is it easily readable?
- Are there typos, spelling errors, missing references?
- Are revised applications responsive to the earlier reviews?

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## Summary of Reviewers' Issues

- Importance of the issue.
- Soundness of the approach—recruitment and retention of diverse study sample; type, delivery, and translatability of proposed intervention; measurement of process, outcome, and mediator variables; use of theory; appropriate design; convincing power analysis and statistical plan.
- Pilot studies to demonstrate feasibility.
- Collaborative arrangements with community-based clinics.
- Experience of the team.
- Ready for "prime time?"

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## Recommendations

- Reviewers need to be re-socialized— efficacy trials and internal validity vs. effectiveness/translation research and external validity.
- Some sort of training needed--readings and discussions--for members of study sections and special emphasis panels.

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## Helpful References

- Garfield, S., et al. (2003). Considerations for translational research in real-world settings. *Diabetes Care*, 26, 2670-2674.
- Glasgow, R., et al. (2003). Translating research to practice: Lessons learned, areas for improvement, and future directions. *Diabetes Care*, 26, 2451-2456.
- Glasgow, R., et al. (2003). Why don't we see more translation of health promotion research? *AJPH*, 93, 1261-1267.
- Venkat Narayan, K., et al. (2000). Translation research for chronic disease: The case for diabetes. *Diabetes Care*, 23, 1794-1798.
- [www.re-aim.org](http://www.re-aim.org)

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