Title Slide: Challenges & Research Opportunities for Multilevel Research

Commentary by Thomas M. Vogt

National Cancer Institute
U.S. Department of Health and Human Services
National Institutes of Health

Slide 2: Important Issues for Multilevel Research

- **Logical approaches are not always effective**
  e.g., health risks are poor long term motivators of behavior change (emphasizing smoking or obesity risk does not lead to long term behavior change
- **Effective approaches to behavior change are complex and difficult**
  e.g. changing culture is effective but very difficult.
  Will multi-component interventions be more successful in making sustained behavior changes because they are synergistic?

Slide 3: Important Issues (con.)

- Effective interventions must be "evidence-based, economically feasible, and consistent with community values…", and they must remain that way after implementation.
- Attenuation of effects - initial change is not beneficial unless it is sustained
- Firm and sustained commitment of participating organizations - e.g. 3W worksite study

Slide 4: Challenges to Multilevel Intervention Research

- Interventions must not neglect what is clearly effective because it is difficult to achieve.
- Example: HEDIS implementation
- Critical importance of:
  1. **Sustained commitment**
  2. **Appropriate Budget**

3. **Accountability**

Slide 5: New Opportunities for Multilevel Research

1. Explore extraordinary opportunities arising from the explosion of **longitudinal comprehensive electronic medical records (EMR)**
    - multiple measures over time
    - comprehensive co-morbidity & health care utlization information
    - linkages across practices and health systems
    - total populations numbered in millions
    - opportunities for feedback and intervention at organization, clinician, patient levels (e.g. Stevens HIT study)

Slide 6: New Opportunities for Multilevel Research

2. New **design & statistical approaches** - Hierarchical models, propensity or instrumental variables are good approaches, but new methods designed for EMR systems should be developed.
3. Need to **standardize coding practices** and methods for merging data across systems (e.g., CRN and VDW) to facilitate rapid, accurate, and inexpensive merging of health record data across healthcare systems