Towards a 'Meta-Evaluation' of NIH-Funded Collaborative Research: Mechanisms and Desired Outcomes

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Motivation

- In past few years, STPI has worked with a wide range of NIH programs and initiatives
- ‘Collaboration’ is a recurring theme in many solicitations and an outcome that we are increasingly being asked to incorporate into evaluation
- Plenty of collaboration indicators and tools available (e.g. co-citation analysis, SNA), but not always clear what evaluation questions we should be asking about collaboration for a given program
- Aimed to create a loose conceptual framework to facilitate evaluation of research collaboration across NIH

What is Research Collaboration?

- Research-related activities involving more than one individual or institution
- Roles and actors can vary, interactions may be formal or informal
- Almost all research is collaborative at some level (e.g. within a lab)
- Collaborations of interest usually involve adding diversity– especially of discipline, approach, institution, nationality, access to resources, or level of experience

Types of Collaborative Research Programs at NIH

1. Direct support for collaborative research on a specific project (e.g. FIRCA)
2. Support for bi-lateral collaboration between institutions (e.g. ICOHRTA)
3. Support for Centers of Excellence, including funds for research, shared cores, and infrastructure within an institution
4. Support for networks or consortia (e.g. NIGMS Glue Grants)

Outcomes of Interest: Single Project Collaboration

- Research that is different or more productive
  - Two heads are better than one
  - Opportunity to pool resources, expertise
  - Assumption that diversity strengthens research
- Experience gain for collaborators
  - One collaborator may act as a mentor (especially junior-senior)
  - Collaborators may learn from each other (especially multidisciplinary)
- Expanded or strengthened social ties
  - Collaborators establish or strengthen ties to each other
  - May also expand to new social networks

Outcomes of Interest: Institutional Collaboration

- Research that is different or more productive
  - Pooled resources and/or specialization at an institutional level
  - Efficient for both parties to take advantage of local expertise, infrastructure, or other resources (e.g. access to patient populations)
- Enhanced institutional research capacity at one or both institutions
  - Depends largely on character of collaborative relationships and activities

Outcomes of Interest: Centers of Excellence

- Research that is different or more productive
  - Outcomes identified for individual collaborations are all relevant
  - Issue is to assess whether the sum of constituent collaborations is more than the parts
  - Expansion of research communities and enhanced community cohesion are relevant, as they theoretically increase opportunities for collaboration– especially informal collaboration

Outcomes of Interest: Networks and Consortia

- Progress towards answers to bigger and/or more important questions
  - Assumption is that some efforts are simply too big for a single institution to pursue on its own
- Building new fields faster/better or steering existing fields in new directions
  - Assumption that coordination and strategic planning enhance or accelerate field development
  - Also a community-building aspect– helps field to come together faster

Next Steps?

- One next step might be to create full generic logic models for collaboration-oriented programs at NIH to capture additional nuance as well as inputs, context, and potential barriers
- Systematic attempt to reconcile solicitations against generic logic models could reveal what NIH is trying (and what it is not trying) with respect to promoting research collaboration
- Ideally, would like to be able to say something about which approaches work, but existing data about program performance are probably insufficient to do this even at a crude level
- Ultimately, envision collaboration portfolio analysis as a subset of a larger effort to assess NIH portfolio as a whole