Multilevel Interventions in Cancer Care Delivery: Follow-up to Abnormal Screening Tests
Frequently Asked Questions
January 2018

DEFINITIONS

Can you talk more about the definition of community setting compared to healthcare systems, perhaps by giving an example? You give the example of an FQHC as a community setting, I think of community as a city/regional context.

The FOA, PAR-17-149 defines healthcare institutions and community settings as follows:

***Healthcare institution*:** Collection of primary and specialty care providers, and support staff, medical facilities, and organizational structures. Together these people, institutions and resources provide the environment for the comprehensive delivery of healthcare services related to the cancer screening process. Cancer screening is a process which begins with the determination of screening eligibility through treatment of benign precursor or malignant disease diagnosed because of screening.

***Community setting**:* Environments in which the process of delivering healthcare reflects approaches followed by providers whose primary responsibilities are patient care (e.g., Federally Qualified Health Centers). Patient populations in ambulatory care clinic environments tend to be more representative of the local population, and may be populations with fewer resources than those referred to academic medical centers for specialty care, or who are enrolled in clinical trials.

Are operational characteristics of the healthcare system (e.g. Patient Protection and Affordable Care Act [ACA] mandates, incentives etc.) considered multilevel interventions?

These are appropriate characteristics to use in your study.

How strict is the definition of an abnormal 'screening' test?

According to general guidelines we are using the following definition for ***Abnormal screening test**:* Includes any clinical indications (either a true or false-positive result) from a screening test or examination that suggests the need for further evaluation to determine the presence or absence of disease.

Similarly, we use the following definition for ***Follow-up to abnormal screening test:*** Diagnostic procedures recommended, ordered, performed or received to accomplish this goal.

Would you elaborate on the description of multiple principal investigators (multi-PD/PI) applying together for the grant?

NIH encourages the multi-PD/PI option for investigators with projects that support a team science approach, rather than a single PD/PI model. If the project is collaborative or multi-PD/PI, consider whether investigators have complementary and integrated expertise; their leadership approach, and if the governance and organizational structure is appropriate for the project? Therefore, do the investigators have a record of successful collaborative work?

DESIGN, DATA COLLECTION, ANALYSIS

Does the screening regimen have to be already proven by RCT or could it be any screening procedures physicians currently use?

The NCI follows the United States Preventive Services Task Force guidance for recommended screening tests. The current program announcement does not encourage the testing of new procedures or tests.

Do interventions need to be tested prospectively using primary data collection? (i.e. is causal inference from routinely collected health data considered an intervention?

Primary data collection is preferred to be able to account for- the proportion of individuals receiving abnormal screening test results who complete follow-up evaluations. However, studies that use routinely collect health data (RCD studies) are advocated to complement evidence from randomized controlled trials (RCTs) for comparative effectiveness research and to inform health care decisions when RCTs would be unfeasible. However, whether it would be considered an intervention depends on the pivotal question being asked. The author of the question is encouraged to reach out to Dr. Erica Breslau (breslaue@mail.nih.gov) for a more thorough discussion.

If multi-component interventions are studied, is it expected that the design and analysis will be able to identify which components are responsible for the effect (or no effect)?

That is correct measurement considerations associated with multilevel intervention research require identification of key constructs and measures by level, and consideration of interactions within and across levels. It is not sufficient to measure effects at the different levels of intervention (e.g., patient and clinical team); cross-level effects *must* also be taken into consideration (e.g., the effect of patients on the clinical team, and the clinical team on the patients, or the effect of the healthcare institution on the provider and the patient).

Are the 4 required endpoints requirements for moderator and mediator analysis?

The preferred endpoints are: 1) initiation of the diagnostic evaluation; 2) completion of the diagnostic evaluation; 3) report of results to the referring provider; 4) report of results to the patient with the abnormal screening test. However, since PA-17-146 is program announcement, not an RFA, NCI cannot stipulate endpoints, just recommend them.

What is the difference between measuring impact and results for both within/between levels and the required "3" levels of intervention?

Examples of what would be considered appropriate for the goals of this FOA include, but are not limited to intervening at two or more levels, and measuring intervention outcomes at three or more levels, while accounting for interactions that occur within and across levels. For example, it is not sufficient to measure effects at the *different levels of intervention* (e.g., *within levels*, such as, patient and clinical team); *cross-level effects* must also be taken into consideration (e.g., between *levels*, such as, the effect of patients on the clinical team, and the clinical team on the patients, or the organizational effect of the healthcare institution on the provider and the patient).

Can you elaborate on the initiation of diagnostic evaluation? To what step in the continuum of care does this refer to?

Using language from the National Academies of Health, “diagnostic testing” is inclusive of all types of testing, including medical imaging, anatomic pathology, and laboratory medicine. In the schematic on slide 11, Diagnosis falls between Detection and Cancer or Precursor Treatment.

The initiation of the diagnostic evaluation begins once a patient engages with the healthcare system. Diagnostic evaluation involves an iterative process of information gathering,

information integration and interpretation, and determining a working diagnosis. Performing a clinical history and interview, conducting a physical exam, performing diagnostic testing, and referring or consulting with other clinicians are all ways of accumulating information that may be relevant to understanding a patient's health problem.

The process occurs over time within a work system that is composed of diagnostic team members, tasks, technologies and tools, organizational factors, the physical environment, and the external environment (Carayon et al., 2006, 2014; Smith and Sainfort, 1989). Reference: (https://www.nap.edu/read/21794/chapter/4#34)

FUNDING MECHANISM

What is the advantage of responding to this PA over the standard R01 approach?

The advantage of responding to PA-17-495 is that applicants are highly responsive to a priority research area identified by NCI experts. Projects will contribute to fundamental knowledge about the screening process at multiple levels of the healthcare system. Further, research outcomes will have direct implications for cancer control in that they address the failure to be screened following an abnormal examination.

We submitted a proposal to the U01. Are investigators permitted to submit an R01 application in February 2018 if an U01 application is under review?

Yes. A new R01 application may be submitted to NIH while a U01 application is under review. If you submit a new application (new R01) that overlaps with an application (previously submitted U01) already under review and the earlier submission is funded. Since the latter application (new R01) cannot also be funded due to scientific overlap, it would be withdrawn. Note, that an application that is withdrawn before the peer review meeting does not count as a submission; although they remain "active" in the application system. Refer to NIH's How Do I Withdraw my Application (https://nexus.od.nih.gov/all/2017/03/31/how-do-i-withdraw-my-application-2/) for guidance.

Is there a companion R21 funding announcement for PA-17-495?

No. The current funding announcement PA-17-495 is for the R01 mechanism. NCI considers the science to be too advanced and complicated for a small R21 mechanism.