

## § 1330.5

or center. The four stages of research are:

(a) *Exploration and discovery* mean the stage of research that generates hypotheses or theories through new and refined analyses of data, producing observational findings and creating other sources of research-based information. This research stage may include identifying or describing the barriers to and facilitators of improved outcomes of individuals with disabilities, as well as identifying or describing existing practices, programs, or policies that are associated with important aspects of the lives of individuals with disabilities. Results achieved under this stage of research may inform the development of interventions or lead to evaluations of interventions or policies. The results of the exploration and discovery stage of research may also be used to inform decisions or priorities;

(b) *Intervention development* means the stage of research that focuses on generating and testing interventions that have the potential to improve outcomes for individuals with disabilities. Intervention development involves determining the active components of possible interventions, developing measures that would be required to illustrate outcomes, specifying target populations, conducting field tests, and assessing the feasibility of conducting a well-designed intervention study. Results from this stage of research may be used to inform the design of a study to test the efficacy of an intervention;

(c) *Intervention efficacy* means the stage of research during which a project evaluates and tests whether an intervention is feasible, practical, and has the potential to yield positive outcomes for individuals with disabilities. Efficacy research may assess the strength of the relationships between an intervention and outcomes, and may identify factors or individual characteristics that affect the relationship between the intervention and outcomes. Efficacy research can inform decisions about whether there is sufficient evidence to support “scaling-up” an intervention to other sites and contexts. This stage of research may include assessing the training needed for wide-scale implementation of the

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intervention, and approaches to evaluation of the intervention in real-world applications; and

(d) *Scale-up evaluation* means the stage of research during which a project analyzes whether an intervention is effective in producing improved outcomes for individuals with disabilities when implemented in a real-world setting. During this stage of research, a project tests the outcomes of an evidence-based intervention in different settings. The project examines the challenges to successful replication of the intervention, and the circumstances and activities that contribute to successful adoption of the intervention in real-world settings. This stage of research may also include well-designed studies of an intervention that has been widely adopted in practice, but lacks a sufficient evidence base to demonstrate its effectiveness.

### § 1330.5 Stages of development.

For any Disability, Independent Living, and Rehabilitation Research Projects and Centers Program competition, the Department may require in the notice inviting applications for the competition that the applicant identify the stage(s) of development in which it will focus the work of its proposed project or center. The three stages of development are:

(a) *Proof of concept* means the stage of development where key technical challenges are resolved. Stage activities may include recruiting study participants, verifying product requirements; implementing and testing (typically in controlled contexts) key concepts, components, or systems, and resolving technical challenges. A technology transfer plan is typically developed and transfer partner(s) identified; and plan implementation may have started. Stage results establish that a product concept is feasible.

(b) *Proof of product* means the stage of development where a fully-integrated and working prototype, meeting critical technical requirements is created. Stage activities may include recruiting study participants, implementing and iteratively refining the prototype, testing the prototype in natural or less-controlled contexts, and

verifying that all technical requirements are met. A technology transfer plan is typically ongoing in collaboration with the transfer partner(s). Stage results establish that a product embodiment is realizable.

(c) *Proof of adoption* means the stage of development where a product is substantially adopted by its target population and used for its intended purpose. Stage activities typically include completing product refinements; and continued implementation of the technology transfer plan in collaboration with the transfer partner(s). Other activities include measuring users' awareness of the product, opinion of the product, decisions to adopt, use, and retain products; and identifying barriers and facilitators impacting product adoption. Stage results establish that a product is beneficial.

### **Subpart B—Requirements for Awardees**

#### **§ 1330.10 General requirements for awardees.**

(a) In carrying out a research activity under this program, an awardee must:

(1) Identify one or more hypotheses or research questions;

(2) Based on the hypotheses or research question identified, perform an intensive systematic study in accordance with its approved application directed toward:

(i) New or full scientific knowledge; or

(ii) Understanding of the subject or problem being studied.

(b) In carrying out a development activity under this program, an awardee must create, using knowledge and understanding gained from research, models, methods, tools, systems, materials, devices, applications, or standards that are adopted by and beneficial to the target population. Development activities span one or more stages of development.

(c) In carrying out a training activity under this program, an awardee shall conduct a planned and systematic sequence of supervised instruction that is designed to impart predetermined skills and knowledge.

(d) In carrying out a demonstration activity under this program, an awardee shall apply results derived from previous research, testing, or practice to determine the effectiveness of a new strategy or approach.

(e) In carrying out a utilization activity under this program, a grantee must relate research findings to practical applications in planning, policy making, program administration, and delivery of services to individuals with disabilities.

(f) In carrying out a dissemination activity under this program, a grantee must systematically distribute information or knowledge through a variety of ways to potential users or beneficiaries.

(g) In carrying out a technical assistance activity under this program, a grantee must provide expertise or information for use in problem-solving.

#### **§ 1330.11 Individuals with disabilities from minority backgrounds.**

(a) If the director so indicates in the application materials or elsewhere, an applicant for assistance under this program must demonstrate in its application how it will address, in whole or in part, the needs of individuals with disabilities from minority backgrounds.

(b) The approaches an applicant may take to meet this requirement may include one or more of the following:

(1) Proposing project objectives addressing the needs of individuals with disabilities from minority backgrounds.

(2) Demonstrating that the project will address a problem that is of particular significance to individuals with disabilities from minority backgrounds.

(3) Demonstrating that individuals from minority backgrounds will be included in study samples in sufficient numbers to generate information pertinent to individuals with disabilities from minority backgrounds.

(4) Drawing study samples and program participant rosters from populations or areas that include individuals from minority backgrounds.

(5) Providing outreach to individuals with disabilities from minority backgrounds to ensure that they are aware