

APPENDIX C

CENTERS FOR DISEASE CONTROL AND PREVENTION'S GUIDELINES FOR DEFINING PUBLIC HEALTH RESEARCH AND PUBLIC HEALTH NON-RESEARCH REVISED JUNE 25, 1999

Purpose

The Centers for Disease Control and Prevention (CDC) is committed to preventing disease and injury and improving health for all Americans. CDC is also committed to protecting individuals who participate in all public health activities. In the conduct of public health research, CDC follows the Code of Federal Regulations, Title 45, Part 46, The Public Health Service Act as amended by the Health Research Extension Act of 1985, Public Law 99-158, which sets forth regulations for the protection of human subjects.

This document, *Defining Public Health Research and Public Health Non-Research*, sets forth CDC guidelines on the definition of public health research conducted by CDC staff irrespective of the funding source (i.e., provided by CDC or by another entity). Under federal regulations (45 CFR 46), the final determination of what is research and whether the federal regulations are applicable lies with CDC and, ultimately, with the Office for Protection from Research Risks (OPRR). Thus, this document is intended to provide guidance to state and local health departments and other institutions that conduct collaborative research with CDC staff or that are recipients of CDC funds. The guidelines are intended to ensure both the protection of human subjects and the effective practice of public health.

Background

In 1974, the Department of Health and Human Services (formerly the Department of Health, Education and Welfare) developed regulations to assure the protection of human subjects from research risks. These regulations were developed to address ethical issues raised in connection with biomedical or behavioral research involving human subjects. Because most biomedical research is funded by the National Institutes of Health (NIH), the regulations were developed to deal specifically with the types of research funded by NIH. The regulations have been revised several times; currently the Department is operating under Title 45 Code of Federal Regulations Part 46, 1991 revision. The regulations will be referred to as 45 CFR 46.

The practice of public health poses several challenges in implementing 45 CFR 46. Although some public health activities can unambiguously be classified as either research or non-research, for other activities the classification is more difficult. The difficulty in classifying some public health activities as research or non-research stems either from traditionally held views about what constitutes public health practice or from the fact that 45 CFR 46 does not directly address many public health activities. In addition, the statutory authority of state and local health departments to conduct public health activities using methods similar to those used by researchers is not recognized in the regulations. Human subject protections applicable for activities occurring at the boundary between public health non-research and public health research are not readily interpretable from the regulations.

The regulations state that “research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.” Obtaining and analyzing data are essential to the usual practice of public health. For many public health activities, data are systematically collected and analyzed, blurring the distinction between research and non-research. Scientific methodology is used both in non-research and research activities that comprise the practice of public health. Because scientific principles and methodology are applied to both non-research and research activities, knowledge is generated in both cases. Furthermore, at times the extent to which that knowledge is generalizable may not differ greatly in research and non-research. Thus, non-research and research activities cannot be easily defined by the methods they employ. Three public health activities - surveillance, emergency responses, and program evaluation - are particularly susceptible to the quandary over whether the activity is research or non-research.

The key word in the regulations’ definition of research for the purpose of classifying public health activities as either research or non-research is “designed.” The major difference between research and non-research lies in the primary intent of the activity. The primary intent of research is to generate or contribute to generalizable knowledge. The primary intent of non-research in public health is to prevent or control disease or injury and improve health. Knowledge may be gained in any public health endeavor to prevent disease or injury and improve health. In some cases, that knowledge may be generalizable, but the primary intention of the endeavor is to benefit a population by controlling a health problem in the population from whom the information is gathered.

Classifying an activity as research does not automatically lead to review by an institutional review board (IRB) for the protection of human subjects. Once an activity is classified as research, two additional determinations must be made: (1) does the research involve human subjects and, if so, (2) does the research meet the criteria for exemption from IRB review. This policy deals only with the first determination of whether a public health activity is research or non-research.

Definitions

Research - As defined in 45 CFR 46, research means “a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.”

Human Subjects - As defined in 45 CFR 46, a human subject means “a living individual about whom an investigator conducting research obtains (1) data through intervention or interaction with the individual or (2) identifiable private information. Intervention includes both physical procedures by which data are gathered and manipulations of the subject or the subject’s environment that are performed for research purposes. Interaction includes communication or interpersonal contact between investigator and subject. Private information includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, and information which has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a medical record). Private information must be individually identifiable (i.e., the identity of the subject is or may readily be ascertained by the investigator or associated with the information) in order for obtaining the information to constitute research involving human subjects.”

Surveillance - The ongoing, systematic collection, analysis, and interpretation of outcome-specific data, closely integrated with the timely dissemination of these data to those responsible for preventing and controlling disease or injury (Thacker and Berkelman, 1988).

Emergency Response - A public health activity undertaken in an urgent or emergency situation, usually because of an identified or suspected imminent health threat to the population, but sometimes because the public and/or government authorities perceive an imminent threat that demands immediate action. The primary purpose of the activity is to document the existence and magnitude of a public health problem in the community and to implement appropriate measures to address the problem (Langmuir, 1980).

Program Evaluation - The systematic application of scientific and statistical procedures for measuring program conceptualization, design, implementation, and utility; making comparisons based on these measurements; and the use of the resulting information to optimize program outcomes (Rossi and Freeman, 1993; Fink, 1993).

Policy

CDC is required to and has an ethical obligation to ensure that individuals are protected in all public health research activities it conducts. All CDC activities must be reviewed to determine whether they are research involving human subjects. When an activity is classified as research involving human subjects, CDC and its collaborators will comply with 45 CFR 46 in protecting human research subjects.

Some surveillance projects, emergency responses, and program evaluations are research involving human subjects; others are not. Each project must be reviewed on a case-by-case basis. Although general guidance can be given to assist in classifying these activities as either research or non-research, no one criterion can be applied universally. The ultimate decision regarding classification lies in the intent of the project. If the primary intent is to generate generalizable knowledge, the project is research. If the primary intent is to prevent or control disease or injury, and no research is intended at the present time, the project is non-research. If the primary intent changes to generating generalizable knowledge, then the project becomes research.

Guidance for Compliance

I. General

The Human Subjects Contact (HSC) in each Center, Institute, or Office (CIO) determines whether the project constitutes research. If the HSC is unclear about classifying a project, the HSC should consult with the CDC's Deputy Associate Director for Science. Whether a project is research is determined by examining the intent of the project. What is the primary purpose for which the project was designed?

General Attributes of Public Health Research - Intent of the project is to generate generalizable knowledge to improve public health practice; intended benefits of the project may or may not include study participants, but always extend beyond the study participants, usually to society; and data collected exceed requirements for care of the study participants. Generalizable knowledge means new knowledge, or information that is added to a body of knowledge. Knowledge that can be generalized is collected under systematic procedures that reduce bias, allowing the knowledge to be applied to populations and settings different from the ones from which it was collected. Generalizable, for purposes of defining research, does not refer to the statistical concept of population estimation or to the traditional public health method of collecting information from a sample to understand health in the population from which the sample came. Holding public health activities to a standard of studying every case in order to classify an activity as non-research is not practical or reasonable.

General Attributes of Non-Research - Intent of the project is to identify and control a health problem; intended benefits of the project are primarily or exclusively for the participants or the participants' community; data collected are needed to assess and/or improve the health of the participants or the participants' community; and project activities are not experimental.

Other attributes, such as publication of findings, statutory authority (see discussion in next section), methodological design, selection of subjects, and hypothesis testing/generating, do not necessarily differentiate research from non-research because these types of attributes can be shared by both research and non-research projects.

A non-research project may generate generalizable knowledge after the project is undertaken even though generating this knowledge was not part of the original, primary intent. In this case, since the primary intent was not to generate or contribute to generalizable knowledge, the project is not classified as research at the outset. However, if subsequent analysis of identifiable private information is undertaken to generate or contribute to generalizable knowledge, the analysis constitutes human subjects research that requires IRB review.

If a project includes multiple components and at least one of those components is designed to generate generalizable knowledge, then the entire project is classified as research unless the components are separable.

II. Specific

- A. Surveillance - Surveillance is a term describing a method for public health data collection. Surveillance systems may be either research or non-research. Surveillance systems are likely to be non-research when they involve the regular, ongoing collection and analysis of health-related data conducted to monitor the frequency of occurrence and distribution of disease or a health condition in the population. Data generated by these systems are used to manage public health programs. They have in place the ability to invoke public health mechanisms to prevent or control disease or injury in response to an event. Thus, the primary intent of these surveillance systems is to prevent or control disease or injury in a defined population by producing information about the population from whom the data were collected. These attributes of surveillance that is non-research are generally found in state statute or regulation where the intent of the activity, its purposes, and uses of the data are specified. Surveillance systems that most easily fit into this category are ones in which the data are limited to describing the occurrence of a health-related problem (disease reporting) and systems in which no analytic (etiologic) analyses can be conducted. Subjects are rarely selected according to a design; rather, all cases are entered into the surveillance system because they are passive reporting systems. Hypothesis testing is not part of the system.

Surveillance systems are likely to be research when they involve the collection and analysis of health-related data conducted either to generate knowledge that is applicable to other populations and settings than the ones from which the data were collected or to contribute to new knowledge about the health condition. The information gained from the data collection system may or may not be used to invoke public health mechanisms to prevent or control disease or injury, but this is not a primary intent of the project. Thus, the primary intent of these surveillance systems is to generate generalizable knowledge. Characteristics of surveillance systems that most easily fit into this category are: longitudinal data collection systems (e.g., follow-up surveys and registries) that allow for hypothesis testing; the scope of the data is broad and includes more information

than occurrence of a health-related problem; analytic analyses can be conducted; and cases may be identified to be included in subsequent studies.

In general, lawful state disease reporting, monitoring requirements and other data collection activities conducted under state statute or under recognized public health authority are non-research. Disease reporting activities are not research. Disease reporting, for these purposes, is defined narrowly to include the reporting of the specific health condition or disease, demographic information; and accepted, known risk factors as specified in state statutes or regulations. When reporting systems collect data beyond standard reporting information, the reporting activity is not automatically considered to be non-research. Collection of data that would allow etiologic analysis is likely to be research.

If other activities are added to a surveillance project with the specific intent of generating new or generalizable knowledge, these additional activities are considered to be research. It becomes important to distinguish between disease reporting activities that are non-research and uses of the reported data that may be either non-research or research.

Sometimes, CDC funds state and local health departments to establish surveillance systems with dual intentions on the part of CDC: to build state capacity in disease reporting and for CDC to generate new knowledge. Disease reporting activities conducted at the state level are generally non-research. However, if CDC uses the data collected through such reporting to generate new knowledge, CDC would be engaged in research. CDC may consider state health departments to be engaged in the research depending upon their role. If state health departments are participating beyond merely providing the data, they may be considered as engaged in the research. Institutions providing information to state health departments would not be considered engaged in the research (see OPRR memorandum dated 1/26/99).

Some surveillance projects do not fit easily into the categories described above. For these projects, the primary intent and elements of the project must be examined carefully.

- B. Emergency Responses - Most emergency responses tend to be non-research because these projects are undertaken to identify, characterize, and solve an immediate health problem and the knowledge gained will directly benefit those participants involved in the investigation or their communities. However, an emergency response may have a research component if: (1) samples stored for future use are intended to generate generalizable knowledge or (2) additional analyses are conducted beyond those needed to solve the immediate health problem. When investigational new drugs are used or drugs are used off-label, the emergency response is almost always research.

C. Program Evaluation - Program evaluations may or may not be research. When the purpose is to test an intervention so that the intervention, if effective, could be used in other sites, the program evaluation is research. When the purpose is to assess the success of an established intervention program in achieving its objectives in a specific population and the information gained from the evaluation will be used to provide feedback to that intervention program, the evaluation is non-research. In the non-research scenario, the intent is management of the intervention program.

For both emergency responses and program evaluation, whenever a systematic investigation of a non-standard intervention or a systematic comparison of standard interventions occurs, the activity is research.

References

Fink, An Evaluation fundamentals. Newberg Park: California: Sage Publication, Inc., 1993

Langmuir, A. D. The Epidemic Intelligence Service of the Center for Disease Control. Public Health Reports 1980. 95:470-477.

OPRR Memorandum. Engagement of Institutions in Research, January 26, 1999.

Rossi, P. H., and H. E. Freeman. Evaluation: A systematic Approach. Newberg Park, California: Sage Publications, Inc., 1993.

Thacker, SB and R. L. Berkelman, Public Health Surveillance in the United States. Epidemiologic Review, 1988. 10:164-190.