

## **Educational Goals and Objectives of the UCSF\_UCB Joint Residency in Preventive Medicine**

### ***Introduction:***

This document describes the educational goals of the Residency in terms of the knowledge, skills, and competencies that residents will attain at each level of the program and in each major assignment. Residents should use this description in conjunction with the Residency Competencies document and the General Requirements Document.

### ***Prior Clinical Year(s)***

All Residents admitted into the Program will have completed at least one year of clinical training that satisfies the requirements of both the ACGME and the ABPM. The Residency expects that, during their clinical training, the resident will have acquired significant mastery of the following core competencies

**Patient Care:** the ability to provide compassionate, appropriate, and effective care for treatment of health problems and the promotion of health;

**Medical Knowledge:** a demonstrated understanding about established and evolving biomedical, clinical, and cognitive sciences as well as the application of this knowledge to patient care

**Practice-based Learning and Improvement:** skills to investigate and evaluate of care for their patients appraise and assimilate scientific evidence and make improvements in patient care

**Interpersonal and communication skills:** communication abilities that result in the effective exchange of information and collaboration with patients, their families, and other health professionals

**Professionalism:** a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds

**Systems-based practice:** a demonstrated awareness of and responsiveness to the larger context and systems of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care

Although these are competencies that residents will have begun to master in their clinical training, it is the expectation of the UCS-UCB Preventive Medicine Residency that our residents will continue to evolve these skills in the course of their 2-years of preventive medicine training. With the possible exception of direct patient care, which is not a focus of this program, all of these other

competencies—and their counterparts in the field of public health and preventive medicine—have clear relevance to the training goals of this program.

### ***Academic Year***

Residents may enter into different divisions of the School of Public Health for the Academic year, as described in the General Requirements for the Residency. This description describes the goals and objectives of the Residency for the Academic year as a whole with a focus on the core program that all Residents will follow.

During the academic year the residents shall establish an in-depth foundation of knowledge in each of the core knowledge content areas of:

- Health services administration, public health practice, and managerial medicine
- Biostatistics
- Epidemiology
- Clinical Preventive Medicine
- Behavioral Aspects of Health
- Environmental Health

In addition, Residents will begin to attain the advanced preventive medicine and public health practice competencies that are referenced in the Preventive Medicine Residency Competencies document.

The required courses and their objectives are as follows:

#### Public Health (PH) 141-S: Statistics

Students will learn the basics of parametric and non-parametric biostatistics, including basic regression analysis, the selection of appropriate statistical analyses, and use of computers for statistical analysis

#### PH 254 Multivariate Statistics

Residents will learn multivariate and logistic regression techniques and the use of computers to apply these techniques to actual study situations

#### PH 250B Epidemiology

Residents will learn the principles of epidemiology, including the design and conduct of an epidemiological study, the characterization of the health of a community, the operation of surveillance systems, the approach to an outbreak analysis, and the translation of epidemiological findings into interventions

#### PH 200C Public Health Core Course and Public Health 200D

This course will give residents core knowledge and basic competencies in behavioral aspects of health, environmental health, and health services

administration. They will develop skills to: manage ambient and place-specific toxins; to manage behaviors that increase collective and individual risk of illness; and to use the power of public health agencies to manage these issues.

This course will also teach residents to identify and manage ethical, social, and cultural issues relating to preventive medicine and public health. They will gain experience in identification and coordination of resources to improve the community's health

Residents will learn principles of management and administration, including ability to assess data, formulate policy, and develop a plan to address a specific public health problem.

### PH 288A Clinical Preventive Medicine

Residents will learn the principles of Clinical Preventive Medicine. This course will give residents an understanding of the primary, secondary, and tertiary preventive approaches to individual and population-based disease prevention and health promotion. Residents will gain experience in developing, implementing, and evaluating the effectiveness of clinical preventive services at the individual and the population levels.

### PH 269E Current Topics in Environmental Medicine

Residents will learn the principles of environmental health, the assessment of environmental health risks to community health and to working populations, and the public health options for a response. Residents will also receive core knowledge of toxicology. Preventive Medicine Residents taking this course will receive supplemental assignments in the area of Occupational Medicine.

### PH 288C Health Care Organization and Management

Residents will learn about the principles of managed care and the roles of the health care manager. At the end of the course, Residents will understand the function of health care organizations, quality management, and disease management. They will have basic competencies in planning, managing, and evaluating health services to improve the health of a defined population

## PH 288D Managerial and Administrative Skills for Preventive Medicine Physicians

This seminar will teach residents core skills for managers of public health and health care organizations. Residents will learn the basic skills of budgeting, personnel administration, implementation of quality management programs, organizational decision-making, and the legal context of public health, and communication to the media and to the public. At the end of PH 288C and D residents will have the skills necessary to plan, manage, and evaluate health services to improve the health of a defined population using quality improvement and assurance systems.

## Other Public Health Courses

During their year at the School of Public Health, residents will be expected to take elective courses to complement core requirements. The Residency Competencies document contains a list of elective courses referenced under the specific competencies. Residents are urged to make use of this list in selecting electives according to their identified learning goals.

## ***Training in Clinical Research Course (TICR)***

### UCSF Training in Clinical Research

This course will be required of all residents in the summer after the Academic Year. The course will teach residents the principles of clinical research design, the application of statistical principles to clinical research, and will prepare them for the other issues involved with such research such as human subjects review, ethical principles, data collection and analysis.

At the end of this course residents will be prepared to design and conduct health and clinical outcome studies and epidemiologic studies. They will be able to use research methods to evaluate the effectiveness of clinical preventive services or to conduct research for innovative solutions to health problems.

## ***Practicum Year***

### Required Public Health Rotation

Each resident will spend a minimum of 2 months in at one of the Residency's affiliated public health agencies. Residents in the Public health Agency Pathway will spend 6-8 months in one or more of these agencies. They will be expected to show greater mastery of the objectives below and to complete the other requirements found in the General Requirements document.

The objectives of the public health agency rotation are:

- Understand the systems that support public health practice, including the structure, operations, and decision-making processes of the public health agency
- Assess the public health program needs of populations
- Inform and educate populations about health issues
- Prioritize, plan, administer and evaluate programs to promote health and prevent disease in populations
- Perform epidemiologic investigations of acute and chronic diseases, including outbreak investigation
- Learn to design, operate, and evaluate a disease surveillance system.
- Implement appropriate public health screening programs for identified conditions of concern.
- Learn to assess the impact of environmental or occupational exposures and develop approaches their control
- Perform a legislative analysis of a bill or issue and learn about the enforcement of laws and regulations that protect public health.
- Develop and utilize appropriate information systems and statistical analysis skills in relation to assigned projects.
- Develop managerial skills, including knowledge and experience in budgeting, program operations, organizational development, personnel management, and leadership.

- Develop the personal qualities required of a public health professional including accountability, ethics, excellence in interpersonal communications, and respect for others.

### Research Rotations

Most research rotations will be completed at UCSF under the supervision of Residency faculty. Research rotations may last from 2 months (as an elective) to 9 months for residents who choose the Research Pathway. Residents in this pathway must demonstrate that they satisfactorily meet the breadth of the Residency's requirements in applied public health and preventive medicine skills; these residents will normally need to engage in multiple projects in the course of the Practicum Year in order to satisfy this requirement.

The overall goals of the research rotation include:

- Design and conduct clinical and health outcomes studies
- Evaluate the effectiveness, accessibility, and quality of public health services
- Learn to conduct research for innovative solutions to health problems

The specific objectives of the research rotations include:

- Learn to identify a significant preventive medicine/public health problem for investigation
- Learn and apply techniques of study design
- Learn how to develop a research funding proposal, including resource and budget projections
- Become knowledgeable of Institutional Review Board requirements and prepare a human subjects protocol
- Manage a research staff
- Learn how to design and implement an appropriate survey instrument and other data collection techniques
- Develop advanced skills in the applications of computers to public health research, including use of large data sets
- Develop advanced skills in the selection and application of statistical tests to public health research
- Develop competencies in data analysis and interpretation
- Demonstrate effective scientific writing skills
- Communicate findings effectively to professional and lay audiences

### ***Managed Care Rotations***

The Residency has temporarily suspended the managed care pathway.