

## **Intramural Research Program Report of FY13-14 Inclusion Data**

### **I. Background/Overview (required)**

- The mission of the NIH Intramural Research Program (IRP) is to conduct distinctive, high-impact laboratory, clinical, and population-based research; facilitate new approaches to improve the public health through prevention, diagnosis and treatment; respond to public health emergencies; train the next generation of biomedical researchers; and maximize the impact of IRP discoveries through information sharing and partnerships with academia, industry, and other government agencies. The Clinical Center's mission is to improve human health by investigating the pathogenesis of disease; conduct first-in-human clinical trials with an emphasis on rare diseases and diseases of high public health impact; develop state-of-the-art diagnostic, preventive, and therapeutic interventions; train the current and next generations of clinical researchers; and, ensure that clinical research is ethical, efficient, and of high scientific quality.
- The Intramural Program is comprised of 18 Institute's conducting research on approximately 2, 110 active protocols. The majority of the intramural research, approximately 1,573 protocols, is conducted at the main NIH Clinical Center which consists of the Warren G. Magnuson Clinical Center and the Mark O. Hatfield Research Center. The other 537 protocols conducted are at offsite locations such as Research Triangle Park, N.C., (NIEHS), Baltimore, MD., (NIDA, NIA and NHGRI), Frederick, MD., (NCI) and Phoenix, AZ., as well as at foreign locations
- The Intramural Research Program uses a centralized system to capture data on all active intramural clinical research protocols and falls under the auspices of the NIH Clinical Center. This system, Protrak, maintained by the Office of Protocol Services includes protocol related data for all protocols, but specifically captures target and cumulative enrollment data for protocols conducted outside the NIHCC. A second complimentary system, the Clinical Research Information System (CRIS), captures actual accrual data relative to ethnicity, sex/gender, and race as reported by each participant at the NIHCC. With CRIS, protocol assignment data can be generated by the Office of Protocol Services for review by investigators and clinicians. The Biomedical Translational Research Information System (BTRIS), also provides a resource for investigators and clinicians to generate protocol specific attribution. BTRIS provides an automated method of generating enrollment data from demographic data received from the Clinical Center CRIS system and subject protocol attribution from several sources; CRIS, Institute clinical trial management systems and from the principal investigator. The principal investigator or their designee can generate and validate the protocol accrual data from their desktop. If users note discrepancies in the data, they submit a correction request which is sent to the Medical Record Department, where the required follow-up is conducted.

### **II. Strategies for Ensuring Compliance (required)**

- The Intramural Research Program provides a number of comprehensive training programs to ensure investigators conducting research are educated about the aspects to conduct clinical research. Over the years enrollment has expanded and now offers teleconferencing to external sites. The following educational opportunities are offered:
  - **Clinical Research Training Course**  
This web-based training course addresses the standards approved by the NIH for conducting clinical research in the Intramural Research Program and all intramural principal investigators are required to take the course, or an equivalent, and successfully complete a final exam. The web-based course is also open to extramural investigators wishing to fulfill the requirements for training in clinical research standards at their home institutions. Since inception in 2000 and through FY 2014, a total of 36,639 clinical investigators have completed this course. This cumulative number reflects both NIH intramural investigators (24,572) and investigators from around the country and world (12,067).

- **Introduction to the Principles and Practice of Clinical Research**  
This program, which is part of the Clinical Center's core curriculum in clinical research, is designed to train participants on how to effectively conduct clinical research. The course focuses on the spectrum of clinical research and clinical research processes by highlighting epidemiologic methods, study design, protocol preparation, patient monitoring, quality assurance, and Food and Drug Administration (FDA) issues. Other areas covered include data management, building a research budget and bioethical issues, including protection of human subjects, plus many special topics. For the 2013-2014 course, 48 remote sites (26 nationally and 22 internationally) participated via long distance learning. There have been 15,998 registrants since the course was initiated in 1995.
  
- **Principles of Clinical Pharmacology**  
This course is designed to meet the needs of researchers, fellows in training, and others who have an interest in the clinical pharmacologic aspects of contemporary drug development and utilization. This course consists of weekly lectures covering the fundamentals of pharmacokinetics, pharmacodynamics, drug metabolism, pharmacogenomics, adverse drug reactions, drug discovery and development, FDA regulations, and optimization of therapy in special populations (pediatrics, geriatrics, pregnancy and lactation), viewing clinical pharmacology as a translational scientific discipline focused on rational drug development and utilization. For the 2013-2014 course, in addition to the NIH Clinical Center, 29 sites (17 nationally, 12 internationally) participated via long distance learning. There have been 9,633 registrants since the course was initiated in 1998.
  
- **Ethical and Regulatory Aspects of Human Subjects Research**  
Implemented in 1999, offers formal education and training in research ethics. Participants are exposed to a broad range of issues important to the ethical conduct of clinical research. Individual sessions and group institutional review board (IRB) reviews are presented by leading experts in various areas of clinical research ethics. To date, 5,532 students have enrolled in the program which is also broadcast by satellite and the internet to participants at remote sites.
  
- **NIH-Duke Training Program in Clinical Research**  
Implemented in 1998, this collaborative training program between the NIH Clinical Center and the Duke University School of Medicine is designed primarily for clinical fellows, physicians or dentists already in staff positions, and other health professionals who desire formal training in the quantitative and methodological principles of clinical research. This program, which is designed for part-time study, provides a unique opportunity for NIH participants to receive a Master of Health Sciences in Clinical Research from the Duke University School of Medicine. This program offers formal courses in research design, research management, medical genomics, and statistical analysis and courses are offered at the NIH Clinical Center in a dedicated FAES classroom via long-distance, videoconference technology. In the fall of 2013, 16 students enrolled in the program. Since inception, a total of 225 students representing a cross-section of NIH Institutes and Centers have been enrolled; 98 have received their degrees.
  
- **Required Training for the Protection of Human Subjects Research**  
All NIH researchers and employees, participating in the conduct or support of research involving human participants within the Intramural Research Program, must complete required human subjects protection (HSP) courses per NIH Human Research Protection Program (HRPP) requirements outlined in NIH HRPP [SOP 25 - Training Requirements for the NIH Human Research Protection Program \(HRPP\)](#) . The Office of Human Subjects Research Protections (OHSRP) tracks the records of investigators who have completed

these courses. This role-based training may be fulfilled by completing a variety of online or in-person course work including:

- Clinical Research Training Course – online, see the description above.
- Ethical and Regulatory Aspects of Human Subjects Research – in-person, see the description above.
- Collaborative Institutional Training Initiative (CITI)- This online resource offers a variety of online HSP courses including a course on Good Clinical Practice (GCP) guidelines
- NIAID GCP – This online course offers similar content to the CITI GCP course, learners may take either course.

➤ **Computer Based Training Course for NIH IRB Members**

This course is required for NIH IRB Members and laypersons serving on the Institutional Review Boards (IRBs) within the Intramural Research Program (IRP). This course identifies the regulatory requirements of the DHHS Common Rule (45 CFR 46) and the ethical principles outlined in the Belmont Report needed for the effective review of human research. This course is a component of the required IRB member coursework specified in [NIH HRPP SOP 25 - Training Requirements for the NIH Human Research Protection Program \(HRPP\)](#).

### **III. Analysis and Interpretation of Data (required)**

- The intramural research program had 2,111 active protocols in FY2013 reported in FY2014, with 1,866 enrolling an aggregate of 3,847,037 participants of which, 2,621,866 (68%) constituted females, 1,155,572 (30%) constituted males, and 69,599 (2%) of the participants reported as unknown over the life of the protocols. The racial category of White had the highest enrollment with 47.13%, followed by Unknown/Other with 38.59%, Asian with 6.95%, Black or African American with 6.16%, More than One Race with 0.31%, American Indian/Alaska Native with 0.7%, Hawaiian/Pacific Islander 0.16% and More than One Race 0.31. From the aggregate population of 3,847,037, 715,594 (21%) were minority participants of which 434,906 (60%) constituted females, 270,310 (38%) constituted males, and 10,378 (2%) reported as unknown. In review of the Ethnic categories, Not Hispanic was the largest with 54.74%, Unknown/Not Reported with 40.75%, followed by Hispanic or Latino with 4.51%. From the racial category reported as Unknown/Not Reported (38.59%), 77% is attributable to an NCI protocol looking at breast and colorectal cancer trends as a function of menopausal hormone therapy and cancer screening among females. The analysis for the protocol looked at trends over time. The earlier time periods to which more recent data would be compared were in an era when race/ethnicity was not recorded on the individual electronic records. This protocol also accounts for the large differential between females and males. When comparing the total number of participants reported for protocols active in FY2012 reported in FY2013 compared to protocols active in FY2013 reported in FY2014 there is a 15% overall decrease. This is attributable to an NCI protocol that closed in FY2012. The closure of this protocol also impacted the racial distribution among participants.

At the NIH Clinical Center there were 1,574 protocols active in FY2013 reported in FY2014, with 1,439 protocols enrolling an aggregate of 292,910 participants of which 147,242 (50%) constituted females, 145,539 (49%) constituted males, and 129 (<1%) reported unknown gender, showing an almost equal distribution of females and males over the life of the protocols. Of the participants accrued 84,566 (29%) were minority with a slightly greater number of females 45,441 (53%) then males 39,093 (46%) and 32 (<1%) reported their gender as unknown.

- The Intramural Research Program had 44 Phase III clinical trials and enrolled 79% females, 21% males. The large percentage difference of females to males is a result of two NCI protocol studying a vaccine for cervical cancer in females.
- Each Institutional Review Board is charged with the responsibility to ensure that the requirements for Phase III clinical trials are met. To aid in assuring compliance, each investigator with a Phase III clinical trial addresses compliance at least yearly, at the time of continuing review, and at the completion of the study. Based on the recommendation of the Extramural Activities Working Group Subcommittee on Inclusion Governance, the Intramural Program has started to transition the responsibility of compliance, including valid analysis, from the IRBs to the Branch Chief in FY2014. At the time of the protocol's yearly review, the Branch Chief conducts a scientific review to ensure the distribution of study participants by sex/gender, race, ethnicity, and age reflects the population needed to accomplish the scientific goals of the study.