**Summary and Impact of New Program Requirements
for Graduate Medical Education in Clinical Informatics**

Describe, as appropriate, how the new program requirements:

1) **Impact the quality and safety of patient care;**

   The Institute of Medicine's landmark reports on patient safety and quality, *To Err Is Human: Building A Safer Health System* [2000]; *Crossing The Quality Chasm: A New Health System For The 21st Century* [2001]; *Patient Safety: Achieving A New Clinical Standard For Care* [2004] and *Preventing Medication Errors* [2006] articulate the central role of health information systems and a national health information infrastructure in meeting the nation's goals for quality health care. There is a growing consensus that the country must implement comprehensive clinical informatics capabilities throughout the United States which culminated in passage of the American Recovery and Reinvestment Act of 2009 and the accompanying Title XIII HITECH Act. These pieces of legislation codified that a comprehensive national health information network and supporting electronic systems for clinical information management and direct patient care are fundamental to quality improvement and enhanced efficiency in health care.

   The fellowship in clinical informatics (CI) will support these efforts by providing physicians who have foundational education in all areas of medicine with the knowledge and skills to lead the implementation and management of clinical information systems.

2) **improve the quality of resident education;**

   Competency in CI cuts across all fields of medicine; however, the curricular demands of a general residency do not allow the required degree of focus in clinical information systems. In all areas of medicine, clinical practice using information systems is rapidly evolving, and residency education in CI will become increasingly important. CI fellowships can support residency education by providing opportunities for interested residents to have elective rotations in CI, and for faculty expertise for resident clinical education, didactic sessions, and research.

3) **affect the way the resident, the service, and the staff provide patients with continuing care;**

   Educating physicians in CI will produce leaders who understand both clinical medicine and information and communication systems to help ensure the best use of technology in patient care. Physicians who practice CI will be leaders of multidisciplinary and interprofessional teams that support improved clinical decision making in outpatient and inpatient settings, improve access to care, and secure the legal and ethical use of patient clinical information.

4) **require a change in institutional resources (e.g., facilities; organization of other services; addition of faculty; financial impact);**

   Most of the change needed in institutional resources will involve securing qualified faculty members and program directors. Graduate programs in CI have historically been located in traditional academic degree programs in large institutions. Board-certified clinical faculty members will become available due to the recent initiation of ABMS board certification in CI, and fellowships therefore may need to partner with existing academic programs, or support board certification for clinical faculty members. Resources to support distance education to provide didactic education may also be needed for some programs. Most institutions already have the requisite technology infrastructure in place,

as well as numerous projects that fellows can use to fulfill the educational requirements.

5) **may change the volume and variety of patients required to provide proper educational resources in the institution(s); and,**

There will be no impact on the volume or variety of patients required. Instead, CI fellowships are structured to give sponsoring institutions the ability to develop programs specific to their environments, and to give programs the ability to create individualized learning plans for fellows that are specific to their disciplines.

6) **impact on residency education in other specialties.**

There should be no negative impact on residency or fellowship programs in other disciplines.