



DEPARTMENT OF THE ARMY
MADIGAN HEALTHCARE SYSTEM
9040 JACKSON AVENUE
TACOMA, WA 98431-1100

REPLY TO
ATTENTION OF

MCHJ-CLF

19 May 2011

MEMORANDUM THRU

Commander, Madigan Healthcare System, Tacoma, WA 98431-1100
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Leesburg Pike, Falls Church, VA 22041-3258
Commander, US Army Medical Command, 2050 Worth Road, Suite 10, Fort Sam Houston, TX
78234-6010

FOR HQDA Office of the Surgeon General (DASG-PSZ-MG/Ms. Susan Reed), Skyline 6, Suite
291, 5109 Leesburg Pike, Falls Church, VA 22041-6010

SUBJECT: Proposal for the Establishment of a Clinical Informatics Fellowship at Madigan
Army Medical Center

1. This is to request approval for Madigan Army Medical Center to establish a two-year Clinical Informatics Fellowship with a proposed date of July 2012.
2. Documentation of the need for a Clinical Informatics Fellowship. The deployment of the electronic health record in the Military Health System brought a global longitudinal EHR to the care of soldiers, family members and retirees. It also brought the need for clinical information management, clinical business intelligence and analytics, and clinically focused training. Clinical Informatics is now pervasive in large healthcare organizations. It was established as an Additional Skill Identifier in the Army Medical Department (ASI) in November 2007. Informatics provides a clinical interface between the end user technical solutions and focuses on shaping and leveraging technology to support clinical workflow, improve patient safety, enhance clinical care deliver, increase access to care, support clinical and business decision support and promote health outcomes. According to the International Medical Informatics Association there is increasing evidence the Health Information Technology (HIT) improves health, health care, public health and medical research. Informatics improves clinical decision support, information and communication technology interventions and telemedicine. These claims are supported by the April 2010 Health Affairs article, "The Value from Investments in Health Information Technology at the U.S. Department of Veterans Affairs. The increased reliance on electronic health records and their ancillary electronic systems has made health care more accessible and also created a plethora of locations where the data is stored and accessed. Clinical Informatics bridges the gaps between systems and leverage reports, databases, web enabled graphic user interfaces and other technologies to collect and distribute information to users groups in ways that are much more accessible and easily consumable. Data from Madigan Army Medical Center show significant clinical informatics value to business operations. Capture of relative value units (RVUs) for consult care performed on inpatients and capturing individual orders for

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care that could be billed to 3rd party bill payers have returned hundreds of thousands of dollars to the facility each year. Clinical Informatics has improved delivery of behavioral health care and traumatic brain injury diagnostics through the use of algorithmic patient surveys, electronic triage and tools to deliver information to multiple systems for viewing and action by providers and commanders.

3. Define the specialty and proposed number of trainees.

a. Clinical Informatics is recognized by the International Medical Informatics Association and the American Medical Informatics Association.

b. Number of fellows to be selected: Two Medical Corps. Additional positions for other clinician disciplines (dietician, optometrists, pharmacists, etc) as defined within their corps. Individuals selected will be board certified, Medical Corps Officers (O-3 to O-6) who currently practices in their discipline. Any applicants will incur two years of service in Clinical Informatics after the fellowship. Clinicians will maintain a limited medical practice during the fellowship.

c. Accepted fellows will incur an obligation on completion of the fellowship IAW AR 351-3, Chapter 10 and DOD Instruction 6000-13. Selectees must maintain standards for Army physical fitness test and height/weight standards throughout fellowship training IAW current Army regulations.

4. Define the curriculum.

a. The length of the Clinical Informatics Fellowship will be two years.

b. The Fellowship will be conducted at Madigan Army Medical Center under the direction of the fellowship director in conjunction with the academic centers that will provide a Masters Degree on successful completion of the program.

c. There is no ACGME accrediting body for Clinical Informatics. The fellowship will incorporate ACGME accreditation as the specialty is formally recognized and boarded by the ACGME.

d. The curriculum is derived from the current civilian Clinical Informatics training standards.

e. Fellows will receive a competency-based education that focuses on Clinical Informatics core competencies.

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- f. Fellows will complete a curriculum that satisfies educational requirements, projects the thesis in accordance with defined criteria (attached).
- g. Fellows will develop a comprehensive understanding of Clinical Informatics, including the techniques, technology, limitation and scope of this discipline.
- h. Fellows will acquire knowledge of and skill in educating Military Treatment Facility (MTF) staff in Clinical Informatics.
- i. Fellows will demonstrate an understanding of the practice and application of Clinical informatics at all levels of clinical practice and within the enterprise.
- j. Fellows demonstrate competence in the technical, writing and cognitive skills to leverage Clinical informatics safely, objectively, securely and cost effectively.
- k. Fellows will receive formal instruction and experience in Clinical informatics topic and projects. Instruction and practical application will be documented in each fellow's record and will include appropriate quality indicators. Competencies will not be based solely on minimum number of projects performed. Competencies will be assessed and determined through a formal evaluation process which includes objective performance criteria.
- l. During the fellowship the fellows will meet academic requirements for the associated masters Degree as well as practical work within Informatics at Madigan Army Medical Center which delivers solutions for MAMC, the Western Regional Medical Command (WRMC) and subordinate MTFs, other regional MTFs, AMEDD, the Military Healthcare System (MHS), DOD-VA sharing projects and Health Information Exchange (HIE) projects, providing a broad spectrum of experience that other programs cannot offer.
- m. Fellows will receive extensive didactic and hands-on training in Clinical Informatics, Nursing informatics, Bioinformatics, Research Informatics, Project management, security requirements and clinical workflow analysis.
- n. Fellows will perform the following scholarly activities: write a review article an area of Clinical informatics, write an online publication, participate in ongoing research and organize an Informatics workshop.
- o. Fellow will learn effective techniques for training informatics personnel and contribute to educational lectures and seminars for Madigan staff.
- p. Fellows will perform a limited practice in their clinical discipline.

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5. Conduct of the Training.

a. Access to care at Madigan Army Medical Center will not be negatively affected by the establishment of a Clinical Informatics Fellowship and the ongoing contributions of Clinical Informatics to the clinical and business performance of MAMC and other MYFs will be enhanced.

b. Madigan Army Medical Center has a diverse patient population and a large compliment of services as well as a tri-service and VA mission that will contribute to the education, experience and opportunities of the fellows.

c. No additional staff members are required to initiate the fellowship.

d. Office space for the fellows will be provided from within the informatics current space foot-print. Office furniture and automation equipment will be needed for personnel as well as phones and /or Blackberry.

6. Estimated annual TDY costs for professional conferences and presentations are summarized in the appendix. Costs will be supported through OTSG GME and CIO directorates.

7. Positive and negative effects on other training programs. The fellowship will positively impact the other training programs and care at Madigan Army Medical Center through the increased availability of expertise and personnel for providing Informatics services and support to the facility, staff and patients.

8. Why Training should take place in a military facility.

a. The Army Medical Department (AMEDD) has supported Long Term Health Education and Training for Clinical Informatics for many years, primarily for nurses but in the last five years by sending clinicians to various programs within the continental United States. These programs are tailored in content to support military medicine. With the early adoption of health information technology by the military and the advanced capabilities HIT provides, it is necessary to train the emerging workforce in the discipline of informatics with an orientation to Military Clinical Informatics Systems.

b. Establishing a Clinical Informatics Fellowship provides the opportunity for recruitment and retention of providers in the Army Medical Department as the need for leaders in the discipline is emerging in all healthcare organizations. With the established fellowship, in addition to the ASI designators for Informatics personnel it will be possible to establish a career path and plan to manage and utilize these specialized professionals for the benefit of the AMEDD, assigning them based on the needs and requirements of the organization.

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c. No military medicine focused Clinical Informatics Fellowship exist today.

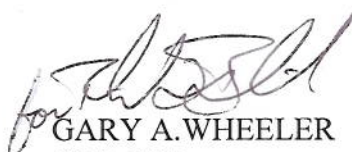
d. Madigan Army Medical Center has the assets, expertise and leadership necessary to establish an Army Clinical Informatics Fellowship. The Informatics Division has already trained several residents in rotations as well as partnered with the University of Washington and other colleges to support internships in informatics.

e. The development of a Clinical Informatics Fellowship will allow for increased education, recruitment and retention of Clinical Informaticians and can retain mid-career clinicians who are proven in their specialty and desire to contribute to the emerging discipline of Informatics as a mid-career transition.


f. Clinical Informaticians will provide a valuable service to the Army Medical Department, their staff and beneficiaries by enhancing the emerging automated support systems that are driving the transformation of healthcare delivery and clinical-business decision support. AMEDD leaders in Informatics will drive improvement in future MHS and Federal Healthcare delivery.

9. POC is the undersigned at (253)-968-3255 or gary.a.wheeler@amedd.army.mil.

Encl
OHSU Informatics
Graduate Curriculum


GARY A. WHEELER
COL, MC
Chief, Informatics

Approve Disapprove


STEPHEN SALERNO
COL, MC
Director, Medical Education

Approve Disapprove



DALLAS W. HOMAS
COL, MC
Commanding

Table 2 – Domains and courses in OHSU informatics graduate program medical informatics track (credit-hours in parentheses). OHSU is on an academic quarter system, so a three credit-hour course will have the equivalent of three contact hours over an 11-12 week quarter.

BIOMEDICAL INFORMATICS

- BMI 510 - Introduction to Biomedical Informatics (3)
- BMI 512 - Clinical Information Systems (3)
- BMI 514 - Information Retrieval (3)
- BMI 520 - Consumer Health Informatics (3)
- BMI 521 - Public Health Informatics (3)

HEALTHCARE

- BMI 530 - Practice of Health Care (3)
- BMI 536 - Evidence-based Medicine (3)
- BMI 537 - Healthcare Quality (3)
- BMI 538 - Medical Decision Making (3)

COMPUTER SCIENCE

- BMI 540 - Computer Science & Java Programming (3)
- BMI 542 - Computer Networks (3)
- BMI 544 - Databases (3)
- BMI 546 - Software Engineering (3)
- BMI 548 - Human-Computer Interaction in Biomedicine (3)

EVALUATIVE SCIENCES

- PPHM 524 - Introduction to Biostatistics (4)
- BMI 560 - Design & Evaluation in Health Informatics (3)
- BMI 561 - Qualitative Research Methods (3)
- BMI 562 - Quantitative Research Methods (3)

ORGANIZATIONAL BEHAVIOR & MANAGEMENT

- BMI 517 - Organizational Behavior and Management (3)

- BMI 518 - Project Management (3)
- BMI 519 - The Business of Healthcare Informatics (3)

CAPSTONE/THESIS PREP

- BMI 515 - Ethical, Legal & Social Issues (2-3)
- BMI 570 - Scientific Writing and Communication for Informatics Students (2)

HEALTH INFORMATION MANAGEMENT

- BMI 582 - Health Care Data Management (2)
- BMI 583 - IT in Health Information Practice (2)
- BMI 584 - Clinical Classification Systems & Applied Reimbursement Methodologies (2)
- BMI 585 - Applied Management in Health Information Practice (2)
- BMI 586 - Applied Legal and Ethical Issues in Health Information Practice (2)
- BMI 587 - Research, Statistics, and Quality Applied to Health Information Practice (2)

GRADUATION REQUIREMENTS

- BMI 581 - Capstone Project (1-6)
- BMI 503 – Thesis (12)

INDIVIDUAL EXPERIENCES

- BMI 501 - Research
- BMI 502 - Independent Study
- BMI 504 - Internship
- BMI 505 - Reading & Conference
- BMI 507 - Seminar
- BMI 509 - Practicum

Our two master's degree programs differ only in their culminating project. The Master of Science (MS) requires a 12-credit research thesis, while the Master of Biomedical Informatics (MBI) is a "professional master's" and requires a 6-credit capstone project. The remaining 48 hours of both curricula from the courses in Table 2, with the specific requirements shown in Table 3. Both programs are available on-campus or via distance learning, with on-line master's students required to take two or more one-week "short" courses on the OHSU campus.

Table 3 – Curricula for OHSU master's degree programs. Required, individual competency, and elective courses in each domain are shown.

Domain	Required courses	Individual competency courses	Electives
Biomedical Informatics (6)	BMI 510	Choose 1: BMI 512, BMI 514, BMI 520, BMI 521	(Other individual competency courses in domain)
Healthcare (6)	BMI 530	Choose 1: BMI 536, BMI 537, BMI 538	(Other individual competency courses in domain)
Computer Science (9)	BMI 540, BMI 544	Choose 1: BMI 542, BMI 544, BMI 546, BMI 548	(Other individual competency courses in domain)
Evaluative Sciences (7)	PHPM 524, BMI 560		BMI 561, BMI 562
Organizational and Behavioral Sciences (6)	BMI 517, BMI 518		BMI 519
Capstone/Thesis Prep (4)	BMI 515, BMI 570		
Graduation Requirements (6 for MBI; 12 for MS)	BMI 503 (thesis) or BMI 581 (capstone)		
Additional Electives - BMI 501, BMI 502, BMI 504, BMI 505, BMI 507, BMI 509, BMI 582, BMI 583, BMI 584, BMI 585, BMI 586, and BMI 587			