**Alliance for Nursing Informatics Position to the
ONC Federal Information Technology Strategic Plan 2011-2015**

The Alliance for Nursing Informatics (ANI) advances NI leadership, practice, education, policy and research through a unified voice of nursing informatics organizations. We transform health and health care through nursing informatics and innovation. ANI is a collaboration of organizations that represents more than 5,000 nurse informaticists and brings together 28 distinct nursing informatics groups globally. ANI crosses academia, practice, industry, and nursing specialty boundaries and works in collaboration with the nearly 3 million nurses in practice today.

Given the nature of patient data collection, nurses are integral to proper collection of meaningful use data. As EHRs become more refined and integrated, nurses must be at the table to define additional meaningful use objectives. To do so, nurses must be in the right leadership positions to have that influence. Our key recommendations emphasize the importance of preparing and enabling nurses to lead change to advance health care services. Public, private and governmental health care decision makers should include nurses at every level. Nurses are the most trusted professionals, outranking medical physicians in recent surveys.[1] The membership organizations of the Alliance for Nursing Informatics are well positioned to assist with future development efforts related to the implementation of technology in health care and we welcome the opportunity to collaborate on this important endeavor.

Recommendations:
ANI's position is that "meaningful use" of health information technology, when combined with best practice and evidence-based care delivery, will improve healthcare for all Americans. This is an essential foundation for the ONC Federal Information Technology Strategic Plan and the effective use of information technology to impact the quality and efficiency of healthcare services. The ONC Federal Information Technology Strategic Plan must recognize that nurses have a profound impact on the quality and effectiveness of healthcare and therefore must be supported to enable their knowledge-based work as:
- Integrating disparate information
- Standardizing infrastructure within the EHR
- Improving workflows
- Preparing the current and future workforce
- Fully partnering in decision making
- Improving care coordination across disciplines and settings
- Improving quality, safety, efficiency while reducing health disparities
- Engaging patients and families

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[1] http://www.gallup.com/poll/145043/nurses-top-honesty-ethics-list-11-year.aspx

Goal #1:
Achieve Adoption and Information Exchange through Meaningful Use of Health IT

Expand the Vision of the ONC Plan to All Care Providers

We recommend that every instance of the term "physician" be broadened and replaced with the term "provider" to expand the vision of the ONC Federal Information Technology Strategic Plan; as demonstrated below:

- p. 9 – in the box highlighting use of EHRs to improve outcomes – change "computerized physician order entry" to "computerized provider order entry"
- p. 15 – right column, second paragraph, replace the "physician" with "provider in the following sentence "For example, by leveraging Direct, a primary care physician can send a secure email with a clinical summary of a patient to a referring specialist."
- p. 42 – in the box highlighting "A learning health system can contribute to improving health outcomes", first sentence in the right column, change physician to provider in the sentence – "The nationwide adoption and meaningful use of EHRs could facilitate the collection of clinical and research data from disparate sources such as hospital systems, physicians' offices, laboratories, biorepositories, registries, and other research databases."
- p. 49 Appendix A – change every instance of the word "physician "to "provider" in the objectives
- Goal 1 – Objectives - Better performance for physicians: Increase the percentage of office-based primary care providers [replace physician] who have adopted EHRs

The use of terms shapes the vision of who is providing care and affects patient outcomes. All health care providers are involved in the meaningful use of EHRs and the words used to represent this vision are important.

In order to achieve the ONC Federal Information Technology Strategic Plan Goals, we must leverage sources of patient care technologies and information management competence to ensure that our investment in health IT and health information exchange (HIE) is implemented properly and effectively over the next five years. ONC should collaborate with CMS to expand the scope of the advanced nurse practitioners and midwives who are eligible for meaningful use incentive payments, to remove barriers for practicing at the fullest extent of their license and professional practice, and be appropriately reimbursed for their services. [2]For instance, home health care nurses develop orders for home care and hospice which then must be signed by a physician.

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[2] IOM Report: The Future of Nursing: Leading Change, Advancing Health October 5, 2010
http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx

CMS prohibits nurse practitioners from independently signing orders for home care, even though it is within their scope of practice and educational preparation.

In this regard, nurses have proactively contributed resources to the development, use, and evaluation of information standards for decades, and have assumed numerous leadership roles during this time. Sharing knowledge gained from these endeavors across the broader domain of nursing and healthcare will serve to advance the national health information infrastructure. Broad-based nursing involvement in setting the ONC Federal Information Technology Strategic Plan at all levels is essential if we are to achieve desired goals.

Nurses are the "glue" of acute care and other health system venues yet EHRs often are not designed to support the cognitive processes and workflow of nurses. Since nurses are the caregivers closest to the patient, EHRs must be designed to efficiently support documentation of their care. The technology should wrap around and leverage the workflow, not the other way around. We recommend that the ONC Federal Information Technology Strategic Plan focus efforts on the partnership between nurses and informaticists to determine the future of health care. A focus on improving the cognitive support of technology and EHRs for nurses in the future should be considered, with integrative views of patient data, enhanced information and knowledge at the point of care and the use of technology and system design methods that facilitate nurses' decision-making.

In a recent study of the value and impact of informatics nurses, nurse informaticists had the greatest impact on patient safety, workflow, and end user acceptance. These findings[3] suggest that the informatics nurse acts as a driver for quality care and as an enabler of clinician adoption within their organizations. Through ANI's efforts and those of its members, nursing informatics experts are also perceived as valued resources for providing expert testimony and serving on national committees. These national initiatives include those focused on health IT policy, standards harmonization, and EHR adoption, certification, and providing guidance on the effective use of technology and content for nurses and other clinicians. Informatics nurses play a crucial role across a wide variety of settings and areas of technology innovation. It is essential to the ONC Federal Information Technology Strategic Plan that this specialty is leveraged to ensure that patient care needs and those of our profession are addressed in the evolving transformation of our healthcare system. Care plans need to be linked to documentation systems.

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[3] HIMSS 2009 Informatics Nurse Impact Survey Results available at :
http://www.himss.org/content/files/HIMSS2009NursingInformaticsImpactSurveyFullResults.pdf

Standardize Infrastructure within the EHR

ANI endorses the use of recommended standards integrated across systems that record, transmit, collect, and share information that is clear, concise, and unambiguous in all settings of healthcare services. Health information that is usable, reliable, and universally understood must be available whenever and wherever clinicians and patients need it. Healthcare professionals as knowledge workers must have access to information and the knowledge of enabling technologies necessary for distilling data into information and information into knowledge so that it provides value in any clinical setting.

Furthermore, ANI believes that an infrastructure using standardized nursing and other health terminologies enables the capture of structured nursing data that supports data sharing, aggregation, and the development and integration of new evidence derived from clinical research This terminology core is necessary and a prerequisite for decision support, discovery of disparities, outcomes reporting, improving performance, maintaining accurate lists of problems and medications, and the general use and re-use of information needed for quality, safety, and efficiency.

ANI supports the ONC Strategic objective to *facilitate information exchange to support meaningful use of electronic health records.* Future stages of meaningful use should include interoperability requirements that are more rigorous, so that patient information follows patients to the point of care and informs critical decisions. Lack of integration and interoperability is a significant barrier to the adoption and use of EHRs.

In the *2011 HIMSS Nursing Informatics Workforce Survey*, and for the first time in this triennial survey, almost one-third of respondents mentioned lack of integration/ interoperability as the top barrier to their success, followed by lack of financial resources (26 percent) and lack of administrative support (23 percent). [4] Financial resources had previously been the number one barrier in both the 2004 and 2007 surveys. For the majority of the 660 nurse informaticists that participated in this research, their work settings are hospitals where they reported frequently experiencing the negative impact of disconnected systems on transitions of care, medication reconciliation and their ability to achieve optimal patient outcomes.

Systems must enable the sharing of integrated information while maintaining patient privacy and allowing for de-identification of subjects involved in clinical research to generate new knowledge about health and healthcare services. Patients and providers must be certain that privacy and security concerns are strictly and appropriately handled. This will ensure confidence in the technology and reliance in the accuracy and security of the information.

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[4] http://www.himss.org/content/files/2011HIMSSNursingInformaticsWorkforceSurvey.pdf

Goal #2: Improve Care, Improve Population Health, and Reduce Health Care Costs through the Use of Health IT

Improve Care Coordination across Disciplines and Settings

ANI recognizes that patient care invariably requires collaborative interactions among multiple clinicians from a broad array of specialties, often in different locations. Therefore "meaningful use" of EHR systems should strive for nothing less than an integrated healthcare community, including the patient as an enabled, engaged, and active participant. Patients should be the "center of the (care delivery) universe," where enabling technologies promote usable, efficient and seamless information flow. ONC should emphasize in the meaningful use criteria that the problem list as well as care plans be integrated and represent all care providers involved collaborating with patients to optimize their health. This would include patient documentation in EHR systems that can enhance cross-continuum, interprofessional communication, thereby enabling improved safety, quality, and processes of care delivery. Nurses are instrumental in coordinating the patient's care across the continuum and as such, are often the focal point for connecting acute, ambulatory, long-term, community, home care, and public health based settings. As coordinators, nurses are central to ensuring that data and information necessary for managing specific patients and these populations is not only shared but translated into action.

As we consider the ONC Federal Information Technology Strategic Plan, ANI recommends taking a broad perspective utilizing documentation from all members of the clinical team; specifically incorporating nursing and other clinical plans of care and progress notes into a patient centered EHR. To achieve this, EHR systems should integrate patient care information obtained from the patient by all healthcare professionals into the person's health record, including the exchange of patient summary data after each transition of care. This integrated approach sets the foundation for evolutionary growth providing the building blocks for health information exchange between disparate HIT systems while promoting consistency and repetition of the patient care communication in transitions of care. Valid measures of continuity of care must include evidence that key information is available in the EHR and that members of the patient's care team can utilize that information to deliver care.

Improve Quality, Safety, Efficiency and Reduce Health Disparities

ANI supports the electronic capture and reporting of coded patient information for purposes of care delivery, decision support, and outcomes analysis. Nurses have a profound impact on the quality and effectiveness of healthcare and are large contributors of the patient information contained within EHRs. Standardized clinical performance measures that are adapted to consider unique complexities of various environments of care should be collected as a byproduct of care delivery and clinician documentation. It is our belief that adaptation and further development of real-time and concurrent measures to address unique attributes of care environments are needed.

This will serve two important national goals: a) clinical decision support and trending in patient outcomes for real-time decision making and intervention at the point of care delivery, and b) the ability to aggregate enterprise-wide performance evaluations in order to further understand the impact of interventions on patient care and add to the body of evidence that defines best practice. ANI applauds the work of the HIT Policy Committee Quality Measures Work Group in recognizing the ANI call (supported by the American Nurse's Association) to include a New Pressure Ulcer Risk and Prevention Measure in their proposed Stage 3 Meaningful Use Quality Measures. ANI is also very supportive of the inclusion of a new Fall Prevention Measure in their proposed Stage 2 Meaningful Use Quality Measures. Including these two measures that evaluate the impact of nursing care demonstrate the need for an interprofessional team to achieve the highest quality health care.

Goal #3: Inspire Confidence and Trust in Health IT

Nurses Are Integrators of Information
Nurses must be involved with every aspect of selecting, designing, testing, and implementing information systems. EHRs must incorporate nursing's unique body of knowledge with the nursing process at the core. Technology must represent the clinical workflow of how nurses think and work in accordance with evidence-based practice. Additionally, nurses interface with every aspect of communicating continuing care needs from birth to death with all the derivations of care provided between them and across all settings. Therefore, in their role as the "central hub" of information, nurses have significant responsibility for quality and safety of patient care. When information systems are implemented in any healthcare setting, nurses must be involved in decision making about usefulness, efficiency, and satisfaction with information technologies to assure continuity of patient care is maintained.

Nurses as Full Partners in Decision Making
The nursing profession is the largest provider of healthcare today, and the National Sample Survey of Registered Nurses[5] identified that the majority of nurses are employed in acute care settings. Subsequently, they are closely involved in all aspects of implementing technologies such as EHR systems. Nurses manage implementations, analyze workflow processes, build content for EHRs, analyze data, configure systems design, provide training, act as super-users, and support other disciplines in using EHRs. With their intricate role in information processing, nurses are in a position to identify what works and what does not work in the use of EHRs.

For health information technologies to be effective, nurses must be at the table as full partners through design, implementation, and evaluation. Nurses must be included in committees within their own organizations and be supported and encouraged to

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[5] National Sample Survey of Registered Nurses available at: http://bhpr.hrsa.gov/healthworkforce/rnsurvey04/3.htm

participate in state and national policy committees. The health initiative for quality patient care is dependent on a nursing profession that continues to perform an instrumental role in patient safety, change management, design, quality improvement and system usability as evidenced by quality outcomes, enhanced workflow, and user acceptance. These areas highlight the value of nurses as knowledge workers and their role in the adoption of health information technologies with greater integration across systems to deliver higher quality clinical applications in healthcare organizations.

Goal #4: Empower Individuals with Health IT to Improve their Health and the Health Care System

Engage Patients and Families

In order to effectively achieve health outcome improvements, patients and families need access to their health information along with health education services delivered in a patient-appropriate learning environment and format. Nurses have an extensive knowledge base in patient education methods and tools. ANI strongly recommends that this body of knowledge be leveraged to facilitate the definition of achievable objectives in the area of health information literacy. Patients and families should be provided with access to data, knowledge, and tools to make informed decisions about their health. This requires the development of resources that address literacy, culture and language levels. EHR systems should provide an integrated view of patient/family learning needs and facilities should provide access to condition specific, credible education material.

A key recommendation of the IOM Future of Nursing[6] report states that interoperable EHRs linked with personal health records and shared support systems will influence how collaborative care teams work and share clinical activities. Personal health information is a valuable resource to individuals, their families, and the doctors, nurses, and other healthcare professionals who provide treatment and care. The ultimate goal is to help clinicians offer a wider range of considerations and options for patients, while also providing patients with resources that encourage proactive behavior and empowering them to be active partners in their health plan

Goal #5: Achieve Rapid Learning and Technological Advancement

Preparing the Workforce

Nurses are at the center of patient care and are expected to provide safe, competent, and compassionate care in an increasingly technical and digital environment. Nurses are directly engaged with information systems and technologies as the foundation for evidence-based practice, clinical-decision support tools, and the EHR. With the increasing appreciation of the importance of evidence-based practice comes the

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[6] http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx

translation of research into practice. Evolution to this complexity in the health care environment mandates new competencies that in turn necessitate new educational strategies and curricular content to prepare the workforce. These changes are just beginning to emerge in some educational and practice settings. The TIGER Initiative's goal of engaging more nurses in leading both the development of national healthcare information technology infrastructure and health care reform should be included in the ONC Federal Information Technology Strategic Plan. Nurses are cultivating informatics competencies in order to re-evaluate workflow design and participate in the current rapid pace of systems implementation. Historically, nursing informatics has been an American Nurses' Association (ANA) recognized specialty since 1992, has had an ANA defined Scope of Practice since 1994, and has had a national specialty certification program through the American Nurses Credentialing Center (ANCC) since 1995.

The TIGER Initiative is a national collaborative of nursing organizations, educational institutions and industry partners who have made recommendations for health IT to be the stethoscope of the 21st century. While many nursing education programs have focused on computer literacy skills, there are relatively few that have incorporated informatics competencies into their curricula. Today more than 70 professional nursing organizations, associations, vendors and governmental entities have come together through TIGER to develop and implement recommendations to achieve the following goals:

- Developing a U.S. nursing workforce capable of using electronic health records to improve the delivery of healthcare
- Engaging clinicians in the development of a Nationwide Health Information Technology infrastructure
- Accelerating adoption of smart, standards-based, interoperable, patient-centered technology that will make healthcare delivery safer, more efficient, timely, accessible, and efficient in a *new interdisciplinary approach*

The TIGER Initiative Informatics Competency Collaborative developed recommendations for all practicing nurses and graduating nursing students consisting of three parts: Basic computer competencies, information literacy, and information management. Hospitals and health systems can help ensure that nurses are competent to practice in the technology-rich healthcare environment of the future by implementing these recommendations. As Phase 3 of the initiative unfolds, nurses in acute care settings at all levels are becoming involved in implementing the TIGER[7] recommendations.

AMIA (American Medical Informatics Association) has asserted that the United States needs at least one physician and one nurse trained in applied health and medical informatics in every hospital in the country by 2010. The Department of Labor recently

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[7] Technology and Informatics Guiding Education Reform Recommendations available at: http://www.thetigerinitiative.org/

announced the availability of approximately $220 million in grant funds authorized by the American Recovery and Reinvestment Act of 2009 for projects that provide training and placement services to help workers pursue careers in healthcare. According to the September 2009 HIMSS Vantage Point Survey[8], two-thirds of the 352 respondents indicated that there is a current lack of clinical informatics positions to handle upcoming work at their organization, also noting that their organization would need to hire clinical informatics personnel. Nursing leaders in acute care settings must be prepared to support effective use of resources for health IT.

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ANI embraces the ultimate vision of the ONC Federal Information Technology Strategic Plan to enable significant and measurable improvements in population health through a transformed healthcare delivery system, enabled by the use of information technology. ANI submits the following position to achieve this vision that will require a nationwide effort to adopt and implement EHR systems in a meaningful way. This is an incredible opportunity to build upon our understanding of effectiveness research, evidence-based practice, innovation and technology to optimize patient care and health outcomes. The future of health care will rely on this transformation, as well as on the important role of nurses' in enabling this digital revolution.

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[8] September 2009 HIMSS Vantage Point Survey Findings available at:
http://www.himss.org/content/files/vantagepoint/vantagepoint_200909.asp?pg=1

The Alliance for Nursing Informatics (ANI)
Sponsored by AMIA & HIMSS

ANI Member organizations

- American Medical Informatics Association (AMIA)
- American Nursing Informatics Association-CARING (ANIA-CARING)
- Association of periOperative Registered Nurses (AORN)
- Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN)
- Center for Nursing Classification and Clinical Effectiveness (CNC)
- Central Savannah River Area Clinical Informatics Network (CSRA - CIN)
- Cerner Nursing Advisory Board
- Connecticut Healthcare Informatics Network (CHIN)
- CPM Resource Center International Consortium
- Croatian Nursing Informatics Association (CroNIA)
- Delaware Valley Nursing Computer Network (DVNCN)
- Health Informatics of New Jersey (HINJ)
- Healthcare Information and Management Systems Society (HIMSS)
- Informatics Nurses From Ohio (INFO)
- MEDITECH Nurse Informatics program
- Midwest Nursing Research Society - NI Research Section (MNRS)
- Minnesota Nursing Informatics Group (MINING)
- NANDA International
- National Association of School Nurses (NASN)
- New England Nursing Informatics Consortium (NENIC)
- North Carolina State Nurses Association Council on NI (NCNA CONI)
- Omaha System
- Puget Sound Nursing Informatics (PSNI)
- SNOMED CT Nursing Working Group
- South Carolina Informatics Nursing Network (SCINN)
- Surgical Information Systems - Clinical Advisory Task Force (SIS)
- Taiwan Nursing Informatics Association (TNIA)
- Utah Nursing Informatics Network (UNIN)

Also affiliated with the American Nurses Association

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