January 14, 2013

Office of the National Coordinator for Health Information Technology
Health IT Policy Committee
Department of Health and Human Services
Hubert H. Humphrey Building
200 Independence Avenue, S.W.
Washington, D.C. 20201

Submitted electronically via www.regulations.gov

RE: RE: Request for Comment Regarding the Stage 3 Definition of Meaningful Use of Electronic Health Records (EHRs)

Dear Members of the Health IT Policy Committee:

Intel Corporation (Intel) appreciates this opportunity to comment on the recommendations from the Health IT Policy Committee (HITPC) regarding the Stage 3 Definition of Meaningful Use (MU) of Electronic Health Records (EHRs) for Health Information Technology. We commend the HITPC for developing a set of recommendations that steadily builds momentum toward providing both clinicians and patients with the information tools needed to create a nationwide learning health system with underlying data to enable care coordination. We look forward to working with the HITPC and the Office of the National Coordinator for Health Information Technology (ONC) to achieve the goals that Congress and HHS have established for our nation's health care system.

Moreover, we are pleased to see the emphasis on patient engagement and interoperability following the strides made in the final order for Meaningful Use Stage 2. Overall, we find HITPC's recommendations to be well-constructed and impactful. This comment is accompanied

by an attached table in which we propose to strengthen the specific criteria for the third and final phase of this important program. Below we summarize the themes of our comments:

1. Structured data requirements should be coded to the fullest extent possible to move toward greater semantic interoperability, enabling more comprehensive patient records to support better analytics and clinical decision support.

2. To achieve more ubiquitous data sharing, the rule should be strengthened by requiring that: (a) certified EHRs are able to send a copy of an HL7 CDA patient summary to a health information exchange (HIE), and (b) participating providers and hospitals increasingly transmit such copies to HIEs accessible across institutional boundaries as they make changes in the patient's care. Document once, make available to all authorized parties.

3. Privacy and security continue to be paramount to ensuring adoption by both clinicians and patients in achieving the MU goals. Security and privacy should be addressed in a holistic approach that includes the use of policy, risk assessments, procedure, training and technology.

4. Patient-generated data is essential for a comprehensive patient record and should therefore be required for EHR integration. EHRs should be required to demonstrate compliance with open industry standards for interoperability for remote patient monitoring equipment/devices. Additionally, target goals should be established for remote patient monitoring for patients with one or more high-priority conditions.

5. The required percentages for data exchange should be raised. Ten percent compliance is not sufficient to create an EHR interoperability tipping point that can transform the ecosystem.

6. Intel supports including the sharing of imaging data as a core MU3 requirement. Efficient solutions for the costs of storage of big data, including imaging data,

should include central repositories or pointers to the availability of a patient's information across institutional boundaries.

Intel and Health Care

Intel is known as a world leader in silicon innovation, but our company and our 500+ subsidiaries have also been active in the health care arena both directly and indirectly.[1] Our technologies help to power the Internet, the broadband connected world, and many health care institutions globally with whom we increasingly work to connect patients, families, providers, and health care researchers with one another. For more than a decade Intel has focused a portion of its research and development efforts specifically on health care to better understand how to connect all of the major players through a wide array of health information technologies. Intel social scientists, medical informaticists, clinicians, and engineers have studied more than 1,000 patient homes and 250 hospitals and clinics in more than 20 countries to inform the development of products and solutions that can help bring forth a connected world for health care.

Our technologists and architects have advised and led health IT and standards efforts creating what we call solution blueprints for health care entities in many parts of the world. For example, Intel architects helped the UK with its National Health Information Backbone (Spine) and N3 Architecture. We have worked with similar regional and national health exchange efforts in Canada (with Health Infoway) and China (with its Regional Health Information Network or RHIN requirements) among many others. We were invited to serve as the non-voting technical advisor to the recently formed Open Data Center Alliance, a consortium of over 300 global organizations that have come together to help make the vision of cloud computing a reality for health care and other industries.

The second perspective for which we submit comments is as an employer providing health care benefits to 100,000 employees worldwide, with 127,000 covered lives in the United States alone. We spent $1B in 2011 on employees' and their dependents' benefits worldwide and are

[1] Additional information about Intel is available at www.intel.com/healthcare.

committed to providing comprehensive, cost-effective coverage for our employees and dependents. We were an early adopter of biometrics for wellness in 2006 and took the bold step in 2013 to establish an employer-based Accountable Care Organization in New Mexico and medical health homes in Oregon. We founded Dossia in 2006 with seven other Fortune 500 companies to offer employees free personal health records populated with data from insurers and providers. We have learned firsthand the importance of data sharing, patient engagement, and the barriers today that prevent the execution of the goals for interoperability.

Intel also has a strong commitment to supporting industry-led, voluntary standards because market-driven solutions have often proved the best way to maximize the dynamic efficiencies of innovation and the beneficial effects on the economy. We acknowledge the important role that the U.S. government plays, not only as the largest payer of heath care costs but also its efforts to protect the public welfare, provide access to more patients and control the escalating costs. We concur with the goals to specify certain technology requirements to achieve a robust, secure platform to accelerate the exchange of patient health information to improve the nation's health. As technology evolves and presents more efficient and effective solutions, any governmental requirements must support market innovation and adoption of new technologies reflecting lessons from patient, provider, and caregivers.

Structured Data Issues

Intel supports the movement to one standard for a summary care document and commends ONC for the decision to direct development around the globally accepted standards to include HL7, ICD10, LOINC, and SNOMED CT. We were pleased to see that requirements for coded structured data to be included in the summary of care document were adopted for three categories: problem list, medication list and medication allergy list. **We urge the HITPC to include the recommended fields for Stage 2 to now become required for Stage 3.**

We recommend that the proposed rule (Medicare and Medicaid Programs; Electronic Health Record Incentive Program – Stage 2 Notice of Proposed Rulemaking published in the *Federal Register* on March 7, 2012) to require an electronic transmission of the summary-of-care record for more than 10 percent of transitions of care or referrals outside of organizations with a different EHR vendor be adopted for Stage 3 with a higher threshold than 20 percent. We urge

ONC and CMS to increase the required percentage to make more substantial progress toward the goal of including all health care institutions.

Structured Data Requirement for CCDA

Intel believes HL7 CDA is the gold standard of health care informatics for clinical messaging and longitudinal health records or summary health records. Acknowledging the additional flexibility that a CCDA may bring to the market, we recommend a path forward to ensure semantic interoperability based on a series of templates that have been blended from a variety of specifications. Whether Direct or SOAP transport standards are used to transmit the data, the payload of PHI must be structured, coded data that will populate section fields.

Unfortunately, today few certified EMR vendors are actually able to import or export a fully consolidated CDA consistently at scale. Few consistently observe the measurement units, data types, range of values or terminology standards as specified by the HL7 CDA. Certification must require populating coded sections of the CDA, as opposed to free text which cannot readily enable decision support. Intel supports the use of HL7 CDA specifications and recommends the following approach:

1. **Leverage existing standards work and iterate from existing baseline.**
   Existing standards work from HL7 CCDA, HL7 CDA Implementation Guides, NwHIN and earlier HITSP specifications draw upon the expertise of industry standards development.

2. **Require software vendors to certify consistent adoption.**
   Require EHR vendors to produce a CCDA that has corresponding sections populated and encoded, and establish a robust certification process to demonstrate consistent adoption.

3. **Require that an electronic submittal of the CCDA be sent to a regional HIE.**
   EHR systems should be able to query another entity for outside records across vendor boundaries and to respond to such queries, We believe that Meaningful Use

should do more to incentivize the use of HIEs, not only as a trusted source that providers query to find relevant health information, but also as a secure location to store health information that may be needed across multiple providers and treatment settings to give access to the care team in real time at minimal costs.

We recommend HL7 CDA greater than Level 2 for consistency that builds toward semantic interoperability for clinical decision support, quality measurement and patient care coordination. Until we have consistently encoded sections and entries, we will not obtain the goal of a summary patient record reflective of changes.

Privacy and Security

Many health care organizations still take a traditional "perimeter" approach to privacy and security, where there is over-reliance on perimeter controls such as firewalls in the logical sense and buildings in the physical sense. End user technologies enable anytime, anywhere access to Protected Health Information (PHI) inside this perimeter. Cloud moves PHI out of this perimeter and into the cloud provider's data center. Malware infections routinely occur inside security perimeters of health care organizations. With this in mind, Intel strongly recommends protecting health care data directly, wherever it is at rest or in transit, including the use of encryption on EHR clients, servers, databases and backup systems.

Intel strongly advocates a holistic approach to privacy and security, including the use of policy, risk assessments, procedures, training, and technology. We believe a robust and successful privacy and security practice should include the use of policy, procedures, training and technology. All usage modes and use cases touching the EHR should be covered in the risk analysis conducted by providers, including the creation/collection, processing, retention, disclosure/exchange, and disposal of PHI. Risks resulting from implementation vulnerabilities and operational aspects of the EHR also should be analyzed, including use cases for security key management. Highest priority risks identified should be mitigated through a combination of administrative, physical, and technical controls. With health care worker end users having so many technical options for getting their job done, compounded by the rapid growth of BYOD and social media, it is critically important they have adequate training on risks associated with

various options, and their responsibilities in protecting health information integrated into their clinical workflows. Health care information moving as part of workarounds outside of the EHR risk not only the confidentiality of such information but also the integrity (completeness) of the patient record in the EHR since such out-of-band workflows generally don't update the patient record, which consequently becomes incomplete.

We believe that health care risks to the integrity and availability of health care information need to be assessed and mitigated together with risks to the confidentiality of PHI. Preserving integrity of PHI is particularly important in support of evidence-based medicine, where it is essential for healthcare data to be complete, accurate and up to date. Similarly, health care information needs to be accessible on end point devices for EPs, EHs and CAHs, especially for those administering urgent patient care where the quality of care is critically dependent on timely and reliable access to health care data. We believe the use of "what you know" (username / password) authentication alone is dangerously inadequate for ensuring only authorized access to EHRs, and recommend the use of strong multi-factor authentication to minimize risk of unauthorized access to EHRs.

Patient Engagement/ Patient-Generated Data

EHRs should integrate with remote patient monitoring because clinical evidence demonstrates, that it can improve care, particularly for the chronically ill, in ways that reduce hospitalization and complications while improving satisfaction. St. Vincent Health, a major hospital system in Indiana and recipient of a Beacon Community Program grant, has announced initial results from a remote care management program designed to help reduce readmissions.[2] Preliminary findings show a **75 percent reduction** in hospital readmissions compared to the control group and national average. This model of care was implemented through the Intel-GE Care Innovations™ Guide, a remote care management solution designed to deliver care in the home.

- St. Vincent Health designed an innovative research study with the goal of reducing hospital readmissions for patients with congestive heart failure (CHF) and chronic

[2] Beacon Community Program. Available at: http://www.beaconcommunityprogram.com/category/indiana-health-information-exchange/.

obstructive pulmonary disease (COPD). They selected the Care Innovations™ Guide, a remote care management platform, to facilitate care delivered in the home.

- This study is part of a $16.1 million government-funded Beacon Grant awarded to the Indiana Health Information Exchange. The project has currently enrolled over 300 subjects recently discharged with a primary diagnosis of CHF or COPD. It will include ten different hospitals spanning care over 43 Indiana counties and representing various geographical locations and size of facilities. Participation in the study began in December 2010 and will continue until December 2012.
- Initial results of the study showed a 30-day readmissions rate of 5 percent for patients participating in the program, compared to 20 percent in the control group.
- The national average for patients readmitted within 30 days of being discharged is almost one fifth or 19.6%.[3] The cost to Medicare of unplanned re-hospitalizations is $17.4 billion per year and expected to grow.[4] In the near future, as a result of recent health reform laws, this is money that will no longer be fully reimbursed to hospitals.
- Behavioral factors, such as noncompliance with follow-up appointments with their primary care physicians, medication errors, lack of adherence to care plans, and not following recommended diets, frequently contribute to early readmissions.[5] Using technology as part of an overall care plan to address these issues has been shown to reduce readmissions.

Additionally, staff at St. Vincent's observed that when the patient's doctors were involved and recommended usage of the biometric monitoring program, patient adherence and health outcomes increased. Sharing the data between the clinicians and patients was a key to the success in driving the readmissions rate to 5 percent.

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[3] Medicare Hospital Quality Chartbook 2011. Available at: http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/Downloads/HospitalChartBook2011.pdf.

[4] CMS National Medicare Readmission Findings. Available at: http://www.academyhealth.org/files/2012/sunday/brennan.pdf.

[5] Medicare Hospital Readmissions: Issues, Policy Options and PPACA. Available at: http://www.ncsl.org/documents/health/Medicare_Hospital_Readmissions_and_PPACA.pdf.

The technology, standards and products are available today to facilitate the data exchange to a clinical EHR. The Continua Health Reporting Network Interface, which establishes standards for exchange of patient summaries between remote monitoring systems and EHRs, is one such standard. The interface was co-developed by Continua, HL7 and IHE (Integrating the Healthcare Enterprise).

Intel recommends that adoption by ONC of the standards endorsed by The Continua Health Reporting Network Interface which include:

- HL7 CDAR2 Personal Health Monitoring Report (PHMR), to enabled exchange of patient vital signs, notes, summaries, and other kinds of narrative information http://www.hl7.org/implement/standards/product_brief.cfm?product_id=33
- HL7 CDAR2 Consent Directives, to enable exchange of patient specified consent for sharing http://www.hl7.org/implement/standards/product_brief.cfm?product_id=280
- IHE Cross Enterprise Document Reliable Interchange (XDR), a direct exchange mechanism for documents http://wiki.ihe.net/index.php?title=Cross-enterprise_Document_Reliable_Interchange
- IHE Cross Enterprise Document Media Interchange (XDM), an indirect (email/USB stick, etc) exchange mechanism for documents http://wiki.ihe.net/index.php?title=Cross-enterprise_Document_Media_Interchange
- IHE Patient Identifier Cross-reference (PIX) profile, a way to manage patient identities across different systems http://wiki.ihe.net/index.php?title=Patient_Identifier_Cross-Referencing
- IHE Document Digital Signature (DSG), to ensure integrity, data origin authentication and non-repudiation of the exchanged documents http://wiki.ihe.net/index.php?title=Document_Digital_Signature
- IHE Document Encryption (DEN), to enable consent enforcement of the exchanged documents http://wiki.ihe.net/index.php?title=Document_Encryption

By mid-2013, the Continua Health Alliance expects the HL7 CDAR2 implementation guide for Patient Reported Outcomes, to be ready and in use.

Intel as the Employer Accountable Care Organization

The following effort by Intel provides yet another example of why an HIE approach is critical to long-term healthcare transformation through team-based models of care. Intel stood up a totally new framework for benefits coverage this year for our New Mexico employees. The next-generation model promotes an attitude of "expecting health," encouraging engagement and personal accountability by all members. Members are supported and encouraged to make the most of the medical home model and to actively manage their personal health.

The model promotes system-wide efficiency via payment reform, accountability, continuous process improvement, and waste reduction, all supported by patient-focused IT and using open information standards whenever possible. Value-based compensation is based on a global per-member per-month (PMPM) target with shared risks and rewards if results fall outside a buffer zone of expected results.

The model's success will be measured by objectives referred to as the Five Requirements. They are:

- **Right care**: use of evidence-based medicine
- **Right time**: same-day access to care
- **Right price**: material decrease in the cost of care
- **Best life**: rapid return to productivity for the member
- **Best outcome**: patient satisfaction 100 percent of the time

A fundamental goal is to have complete interoperable electronic health records available for employees in each of the facilities where they are receiving care. The primary hospital's EHR will provide patient data to Dossia, the employer-offered PHR for a per person fee covered annually. However, the PHI is limited to data from the hospital and does not cover all of the providers. Therefore, we may be faced with paying for data from labs, therapists, etc. for the same employee. And, we cannot guarantee that all the data has been captured.

We would much prefer to have a central repository such as an HIE to access for the information that would be comprehensive and supported by an interoperable system among providers, hospitals and the healthcare ecosystem. As we recommended for MU Stage 2, we continue to advocate for a copy of any patient document be sent to the appropriate HIE when it is in transport. Intel recommends that MU Stage 3 require that a copy of the patient care summary and

other PHI be sent to the HIE within 24 hours of the visit to create a virtual shared care summary record.

Intel is pleased to see increasing requirements for an audit trail to identify who is "touching" the data and to where it is being transmitted and accessed. The audit log is a critical component to maintain trust among data-sharing participants.

Percentages for compliance

As we review the recommendations from the HITPC, it remains disappointing to see many thresholds for achievement in the range of 10 percent, 20 percent, or 30 percent. The goal to transform the ecosystem cannot be achieved with requirements in the 10th percentile range. At Intel, our goal is to have ***complete EHRs for 100 percent of our employees*** and their dependents in the New Mexico ACO. We have established quality measurements for all aspects of employee health, which will depend upon the quality and completeness of the shared documents. We could not recommend any lower standards for the entirety of the Medicare and Medicaid population.

Imaging inclusion as a core requirement

The HITPC recommends that "imaging results be included with an accompanying explanation" as a core objective for MU Stage 3. It also asks the question of what barriers may exist to accomplish this objective. Intel supports this requirement becoming a core requirement in MU Stage 3. HHS-endorsed standards for medical image sharing need to promote the interoperability of imaging among different EMR systems while remaining open to different market models, such as vendor-neutral PAC archiving systems and cloud computing models that EPs may choose to deploy. HIEs could also serve as a central repository for imaging.

Potential barriers to including this functionality as a core requirement may include existing deployed, siloed PAC systems that inhibit interoperability among different EPs and EHRs. Funding constraints by EPs and EHs to upgrade and deploy new vendor-neutral storage archival systems available in the marketplace could serve as another barrier, and network limitations

could inhibit an organization's ability to exchange images as all organizations respond to increased market demands for imaging.

According to the *IDC Health Insights Worldwide Healthcare IT Spending Guide, 2011 to 2015*, provider investments in IT storage will grow by 42 per cent over 5 years, representing an annual growth of approximately 9.6 percent.[6] Also as highlighted by IDC in the same report, 50 percent to 80 percent of the health care storage and storage software spend is attributed to PAC image management. This requirement is expected to grow based upon the increased numbers of studies, the growth in capacity required per study, and advanced imaging technologies such as visualization.

As Intel has experienced in working with leading storage suppliers, centralized vendor-neutral storage archival systems now available in the marketplace provide significant benefits to EPs and EHs, and also do not require redundant imaging be stored within an EHR. As outlined by IDC, archiving and image repositories are increasingly centralized and vendor-neutral, providing multiple benefits such as:

- Ease of migration and leveraging commodity storage.
- Sharing of images across PACS, EHRs, and community of care.
- Longitudinal imaging records for patients with the ability to monitor cumulative radiation exposure.
- Radiologist productivity improvements attributed to workflow improvements and a single interface to advance views.
- Ability to deploy administrative and security policies to effectively manage imaging data stored.

Intel recommends that HITPC encourage EHRs to maintain a pointer/integration capability to solutions such as vendor-neutral storage archive solutions, and other compute models available

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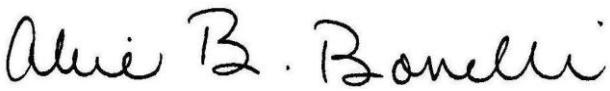
[6] [6] IDC Worldwide PACS and EMR/EHR Storage Infrastructure 2011–2015 Forecast: The Storage Opportunity Behind Key Healthcare Provider Workloads , July 2011, Document Doc # 228888.

in the marketplace (e.g., cloud services). This approach will allow for the efficient access of images, consolidation and centralization of image repositories, better security and management of images, a reduction in sometimes unneeded duplicate images, and ideally, the more efficient exchange of images among EPs and EHs.

Responses to the HITPC Questions and Recommendations

The Health IT Policy Committee has raised important recommendations and questions in the following comprehensive grid. We appreciate the format and the ability to comment in a thoughtful, yet efficient format. Please find our responses in the attached charts.

Sincerely,



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Key Points from Intel Corporation's Response Letter in Table Form

ID #	Stage 3 Recommendation/ Question	Response(s)
IMPROVING QUALITY, SAFETY AND REDUCING HEALTH DISPARITIES		
SGRP 101	CPOE use; 60% or more med, lab, and radiology orders; Incorporation of Never DDIs from external source	For SGRP 101 through SGRP 112, and SGRP 114, 116, 117, 119, 120, 121: These basic EHR functions should be retained as continued requirements as they are important to the functional objectives and basic performance of EHRs. We support increasing percentage thresholds when possible as an essential mechanism to improve performance and incent the EHR marketplace and providers of care to continuously improve and expand EHR use. Additional Recommendation: Require medication reconciliation features to CEHRT and provide a copy directly to the patient for lab results. Maintain these measures, do not retire. Additional recommendation: Add a requirement to share coded, structured problem lists with patients electronically. Allow patients to review for accuracy, with mechanism to resolve discrepancies when needed. Recommend adopting standards for logic development to assist maintenance of accurate problem list, and move this requirement to Stage 3. Require data capture using standard vocabularies to facilitate data sharing across vendors. Suggestion: Retain vital sign requirement. Additional recommendation: Include patient generated vital sign and blood glucose monitoring data.
SGRP 130	New; CPOE for referrals/ transitions; 20% or more	
SGRP 103	eRx: 50% or more all MD prescripts; 30% or more hospital discharge med orders Question posed: How to incorporate med formulary checking?	
SGRP 104	Record demographics; add occup, sex orientation, and disability status codes for certification	
SGRP 105	Add functionality for Certification: accurate problem list Question: How	

	to incorporate into cert criteria for pilot testing?	Utilize standards as recommended by the Continua Health Alliance to incorporate patient generated vital signs data into EHRs.
SGRP 106	Add functionality for Certification: accurate medication list Question: How to incorporate into cert criteria for pilot testing?	Retain requirement
SGRP 107	Add functionality for Certification: Code Med Allergies and Link to Drug Families	Retain requirement
SGRP 108	Retire Measure of Recording Vital Signs because achieved 80%	Retain Requirement
SGRP 109	Retire Measure of Smoking Status because achieved 80%	
SGRP 113	Clinical decision support use for high priority conditions; implement 15 clinical decision support interventions or guidance for 5+ CQMs in preventive care; chronic disease management; approp lab/radiology; adv medic. Decision support. [page	Strongly support SGRP 113, as CDS is essential as a means for EHRs to improve quality of care, patient safety and achieve value in our health care system. Recommendation: Increase the threshold number of clinical decision support interventions. This criteria is the heart of the utility and value of EHRs and we strongly support keeping it and, to the extent possible. Recommendation: Align SGRP 113 with the S&I Health eDecisoins Initiative: http://wiki.siframework.org/Health+eDecisions+Project+Charter+and+Members

	10 of RFC]	
SGRP 114	Inc clinical lab results into EHR structured data; 80% or more	Strongly recommend maintaining the 80% measurement. Data storage of imaging results should be addressed given the large volume of data associated with addition of image data to EHRs. Please refer to narrative for a discussion of the issue.
SGRP 115	Generate lists of patients for multiple spec. conditions and present near real time pt oriented dashboard for QI, Research, etc.	Recommend adding requirements for highly visual actionable dashboards focused on conditions with high volume or clinical implications, to power continuous quality improvement, research, and care management. Recommendation: Twice monthly dashboard reports for one pre-chosen condition per provider, including quantified care improvement targets.
SGRP 116	Use Clinical Info to id patients who need reminders re: follow up and preventive care; 20% or more unique patients sent a reminder	[see SGRP 101-112 comments] Recommend a higher threshold. Twenty percent is far too low as nearly every patient has a reason to engage with a provider at least once per year.
SGRP 117	Hospital – Track Medication from order to admin using assistive tech and eMAR; 30% or more med orders tracked by eMAR; Mismatches tracked for QI	Because the results of medication mismatches or errors can be lethal, it is critical that this measurement be significantly increased, with a stretch goal of 100%
SGRP 118	Imaging results include image and accompanying explan info; MAKE THIS A CORE OBJECTIVE; 10% or more ordered by hosp or CAH	Strongly support making SGRP 118 a core objective. This capability is essential to enabling enhanced care coordination. Some EPs and EHs draw upon still siloed electronic based PAC systems to store and retrieve images, e.g., across Radiology, Pathology, Opthamlogy, pediatric cardiology, etc. Others depend on patients to care images from provider to provider. SGRP118 will enhance the decision support capabilities of the provider and provide for a more efficient exchange of images among EPs and EHs. Interoperability of imaging among different EMR systems must

		be supported through standards. Multiple market models, such as vendor neutral PAC archiving systems, HIE and other cloud image management service models should be supported. Providers would be best served with EHR functionality enhanced to provide open pointer/system integration to these other solutions, eliminating the cost of storing duplicating images within an EHR. Potential barriers that need to be overcome include migrating from legacy PAC solutions, funding constraints that may exist to deploy new vendor neutral storage archival systems available, and network limitations as organizations respond to anticipated imaging growth requirements.
SGRP 119	Record high priority family history; MAKE THIS A CORE MEASURE; 40% of patients seen	[see SGRP 101-112 comments] - Yes Recommendation: As genomics mapping becomes more readily available, genomics test results should be incorporated into the EHR. The EHR could also contain a pointer to genomics data housed outside the EHR.
SGRP 120	Record electronic notes for 30% patients within 4 calendar days	Recommend shortening the timeline to real-time, as transcription delays may result in documentation inaccuracies.
SGRP 121	Provide Structured electronic lab results to ordering providers; MAKE THIS A CORE MEASURE; 80% hospital lab orders	Yes, agree that this is a core measure. Coded data should use LOINC with lab results interface. http://wiki.siframework.org/Lab+Results+Interface+(LRI)+Initiative). Yes, Core measure with goal of 80% lab orders stored in a coded data format.
122	10% of test results are acknowledged with 3 days	Review of 10% of test results within 3 days is not adequate. By way of analogy, you wouldn't spell check only one in 10 documents.
SGRP 204a	Providers make info generated during visit	SGRP 204a is critically important, so that patients can designate where data should be deposited – including third party PHR's.

	available in 24 hours; labs available in 4 business days of info delivery; Increase both thresholds by % offer and % use?? Proposed for future stage: 1a. Create the ability for providers to review patient-transmitted information and accept updates into EHR. 1b. Related certification criteria: Standards needed for provider directories in order to facilitate more automated transmissions per patients' designations. [page 14]	Recommendation: Include all proposed recommendations in MU3. Automated transit of summary of care document is vital to breaking down "walled gardens" which currently exist. As discussed in the narrative, Intel employees could receive the lab results directly through their Dossia accounts to review and discuss with their clinicians. It is vital that the ability for providers to review patient transmitted information and accept updates into the EHR be Stage 3 Meaningful Use standards. Recommendation: Download of clinical data into PHR's should be possible without cost to the patient or PHR portal. Open industry standards exist (refer to Continua standards outlined in narrative) and Stage 3 must require that EHRs demonstrate compliance with an open industry standard that permits remote patient monitoring.
SGRP 204B	NEW: Provide 10% of patients with the ability to submit patient-generated health information to improve performance on high priority health conditions,	The Continua Health Alliance has adopted use case standards that provide direct compatibility between biometric readings that are patient generated (outside of the clinical setting) and the EHR (refer to narrative). The HITPC has raised an important question regarding how physicians can best use the data. Although use cases show the improvements in health outcomes when patients and providers agree on data flows, more research needs to be on setting standards-based data capture and usage. Questionnaires as referenced in the recommendations is a very

	and/or to improve patient engagement in care (eg patient experience, pre-visit information, patient created health goals, shared decision making, advance directives, etc.). This could be accomplished through semi-structured questionnaires, and EPs and EHs would choose information that is most relevant for their patients and/or related to high priority health conditions they elect to focus on. [page 15] Question: Readiness of standards to include medical device data from the home?	low bar considering the technologies that are available today to capture real time biometric data. Recommend discrete data capture with visualization of trend lines to support creation of educational materials that will help change behaviors. Recommendation: Require EHR systems to demonstrate compliance with an open data standard for patient generated data. Agree that this should be a menu item for MU Stage 3 Case Studies: Ascension Health- http://www.beaconcommunityprogram.com/category/indiana-health-information-exchange/. Whole System Demonstrator – UK Others upon request
AliSGRP 206	Additional language support. 80% of patients have access to patient education materials in top 5 non-English languages	Agree. Educational platforms for the secure transmission of multi- language education exist for frontline healthcare workers and patients. Recommendation: Include testing through intermittent connectivity for education attainment.
SGRP 207	More than 10% patients use secure electronic	Recommendation: Move all SGRP 207 requirements to MU Stage 3.

	messaging to communicate with providers. Assess readiness to raise threshold to 30% For future: Create capacity for electronic episodes of care (telemetry devices, etc.) and to do e-referrals and e-consults.	Consumers expect this capability from EHRs and providers because technology and standards exist and similar capability is an established part of banking and other economic sectors. Recommendation: Remove delivery system bifurcation between digital and in- person treatments.
SGRP 208	Record communication preferences for 20% of patients	Strongly support recommendation.
SGRP 209	Certification: Capability for EHR to query research enrollment systems to id clinical trials	Recommendation: Multifactor authentication should be in place when logging into the EHR.
IMPROVE CARE COORDINATION		
SGRP 302	Reconciliation of medications & problems for pt transferred between care settings; med reconciliation for 50% of transfers; problem reconciliation for 10% of transfers	We support the additional standards in the area, and that medication reconciliation at transitions of care, problems, allergies, and social history should also be included. Adding caregiver names and numbers is a critical field not yet included. We support increasing thresholds when possible as an essential mechanism to improve performance and incent the EHR marketplace and providers of care to continuously improve and expand EHR use. As stated above, adding care team members including DECAF is a critical requirement.
SGRP 303	Summary of care for transitions of site of care to include concise narrative in support of transition/referra	Recommendation: Add lab results, and any available CDA documents. The summary of care should exist as a clinical note that can be pulled to the receiving facility's EHR. Recommendation: Increase electronic transitions of care threshold beyond 30% and add care planning.

	l; setting spec goals; instructions for care for first 48 hrs; care team members contact info.; For 65% of transitions/referrals with 30% done electronically. Certification criteria: EHR able to set aside concise narrative section; WG data sets for HL7	
SGRP 304	PROPOSED FOR FUTURE: Provide listed info items for each transition to another site of care. Question: How might we advance the concept of an electronic shared care planning and collaboration tool that crosses care settings and providers, allows for and encourages team based care, and includes the patient and their non-professional caregivers? [page 19]	Recommendation: Move to MU 3 – Strongly support the team based electronic care coordination that goes beyond organizational boundaries. Intel's experience with Health Share of Oregon, demonstrates that population health tools face significant adoption challenges, including: 1. Dual-documentation: Depending on the information, the care worker may need to decide whether to document in local EHR or a global, community wide tool, or both. 2. Multiple logins and separate workflows: The population health tool is an additional location care workers need to look for information, in addition to the EHR. Population health tools must seamlessly work bi-directionally with the EHR so that necessary data elements will automatically flow to and from the community wide tool. This tool should also provide standardized WS/RESTful APIs that EHRs implement to pull data from it when the chart is opened in the EHR. It is also vital that the tool "aggregate" information that was obtained from various sources else there will be too much noise and unconnected data. For the data format, Intel recommends CDA, and the specific elements would be those defined by S&I Longitudinal Coordination of Care WG. In the end, the EHR should begin to look like an HIE-like data repository that can be queried and should be sensitive to cost

		based pricing.
SGRP 125	NEW for FUTURE: Medication reconciliation through data feed from PBM and approach to identify important signals like contra-indicated drugs or no refills.	Recommendation: Move to MU Stage 3. We support additional access for patients that can lead not only to compliance, but also to drug price transparency for informed consumer decisions.
SGRP 308	Electronic notification of significant health care event in timely manner to key members of patient's care team; 10% of patients with health care event (arrival at ED) have electronic notice sent within 2 hours.	Excellent addition, would recommend raising threshold.
SGRP 402B	NEW: PROPOSED FOR FUTURE: Capability to use externally accessed or received knowledge (eg reporting criteria) to determine when a case report should be reported and then submit the initial report to a public health	Recommendation: Move to MU Stage 3.

	agency, except where prohibited, and in accordance with applicable law and practice. [page 24]	
SGRP 404	Capability to electronically participate and sent std, common format reports to mandated jurisdictional registries (cancer, children with special needs, etc) Document successful transmission and attest to 10% of patients who meet registry criteria submitted.	Support recommendation. Support recommendation.
SGRP 405	Capability to electronically submit std reports to additional registry beyond prior MU requirements. Examples include: hypertension, diabetes, BMI, devices. [page 27]	
INFORMATION EXC HANGE		
IEWG	New: EHR must	Strongly endorse, as it is essential to capture data outside the

101	be able to query another entity for outside records and respond to such queries. [page 30 for transaction requirements]	patient's primary EHR to create bilateral information exchange. The recent "Doctors Helping Doctors" survey listed interoperability among EHR's and the lack of information exchange infrastructure as the two primary barriers to adoption. The ability to query will provide a solution to the current systems. Recommendation: Send a copy of changes in health status to the HIE to support query function. Additionally, the query measure should be considered in tandem with the Receipt Acknowledgement measure (SGRP305), and that queries only be counted towards the numerator if they are completed successfully or if a failed query is reported to a PSO or ONC-ATB. We believe this will help break down the walled gardens ONC has indicated are a matter of concern, while improving patient safety.
IEWG 102	NEW: EHR must be able to query a provider director external to the EHR to obtain push-pull addresses Question: Are there sufficiently mature standards in place to support this criterion? What implementation of these standards is in place and what has the experience been?	Strongly support since standards are in place and are sufficiently mature to be adopted **- HSSP / ServD and IHE HPD profile**
Any CAN THE FOLLOWING DISEASE SPECFICI OBJECTIVES BE INTEGRATED INTO STAGE 3 MU?		
Muo1	Use EHR technology features to identify patients meeting criteria for hypertension who are not yet diagnosed and managed for the	The use of wellness technology for monitoring patients who could be susceptible to chronic disease has been widely considered as the next prevention tool. Recommendation: Establish criteria for, and integration of at home patient daily monitoring data into EHR for at risk patients to activate preventive measures.

	disorder. Certification criteria is related to problem list maintenance.	
Muo5	Is it possible to create an application programming interface API to make available the information in A CCDA so at systems can communicate it with each other? Is Direct adequate for communication between EHRs and other systems. What other technologies, standards or approaches could be implemented?	Yes it is possible to publish information about accessing the contents of a CDA/CCD through an API. As an alternative to Direct, which doesn't address integration, the publishing of healthcare APIs will speed the development of truly integrated systems. Like the Open Government Initiative, published API information, once in place, will reduce the time to consumption of data significantly. Some EHRs have initiated developer kits with open APIs. Suggestion: Like "cash for clunkers, is it conceivable to offer a "Cash for Confined Data" Program? Vendors could receive _X_ years of waived EHR certification fees if they publish an API to make it easy for hospitals to make their EHR data available to application developers. For an example, go to: https://developer.carepass.com/docs/hhs.
QUALITY MEASURES: PATIENT CENTEREDNESS – PATIENT REPORTED AND PATIENT-DIRECTED DATA		
QMWG18	Please comment on the desirability and feasibility of an innovation track – voluntary topic on component of the MU CQM requirement.	We need true "apples-to-apples" comparisons in order for quality-based incentives to work, and the part of healthcare reform that depends on this will not succeed if we're not using standardized quality measures. Recommendation: Allow providers to recommend locally-developed CQM measures for consideration for inclusion in MU. If adopted, based on CMS/ONC criteria, locally developed quality measure would have a path to become standardized measures for use in federal quality incentive programs. This approach encourages innovation while retaining the nation's ability to benchmark quality outcomes, and minimizes the risk of fraud, should facilities attest to a locally developed CQM measure that falls short of the robust MU CQM for which it was substituted.
PRIVACY AND SECURITY		
PSTT 01	How can HITP's	Care coordination and new healthcare models are driving a much

	recommendation be reconciled with National Strategy for Trusted Identities in Cyberspace (NSTIC)	more interconnected healthcare ecosystem. This drives the need for increased secure communication between patients, family caregivers, and various healthcare organizations specializing in health & wellness, providers, payers, life sciences and so forth. To enable these secure use cases while avoiding an explosion of one-off proprietary security solutions and credentials, an NSTIC model can be adopted in healthcare. In this case healthcare
PSTT02	approach to identification which encourages the re-use of third	organizations take the role of NSTIC "Service Providers", working with NSTIC "Identity Providers" to authenticate authorized entities. The NSTIC "Identity Provider" identify-proofs individuals and healthcare entities, as well as provides 3rd party authentication services when requested for example by
PSTT03	party credentials?	EHR "Service Providers". In this case EHR certification criteria should include
	How would ONC test the HITPC's recommendation	requirements for the EHR to interact with NSTIC "Identity Providers" during authentication. It is strongly recommended that credentials used in these authentications be multi-factor to avoid
PSTT04	in certification criteria? Should ONC permit certification of an EHR as standalone and/or and EHR with a 3rd party authentication service provider? What , if any, security risk issues for HIPSA should be subject to MU attestation in Stage 3. For example, the requirement to make staff/workforce aware of the HIPAA rule and train them is a	known issues and weaknesses in single factor, username / password only solutions. However, given usability issues often associated with separate hardware tokens used in traditional 2-factor authentication solutions, we recommend that hardware assisted 2-factor authentication solutions (that avoid the need for separate hardware tokens) be recognized as suitable multi-factor authentication solutions. Growing trends such as BYOD (Bring Your Own Device), and social media are empowering healthcare workers with many more powerful alternative tools they can use to get their jobs done. While these tools bring compelling advantages, they often also bring significant privacy and security risks. These risks include risks to the confidentiality of PHI as it moves through unsecured channels, for example unencrypted patient information exchanged through file transfer applications or texted between healthcare providers. These risks also include risks to the integrity (completeness) of patient information as the exchange of healthcare information out-of-band with the EHR through workarounds like this generally does not result in updates to the patient record, causing the patient record to become incomplete. In order to mitigate these risks, we recommend a 2-pronged approach. First, security solutions must be usable to avoid compelling users to use alternatives and workarounds that bring additional risk. We believe hardware assisted security plays a key role in improving the usability in healthcare security solutions,

	top issue for CR. Should periodic security reminders be sent to staff? Requiring EPs/EHs/CAHs to attest to implementing HIPAA security rule provision and reminders.	for example hardware accelerated encryption. Secondly, healthcare organizations must implement effective administrative security controls including policy, procedures, risk assessment, and training, with key emphasis placed on effective training. This training needs to go beyond traditional "once-a-year" security awareness training, and provide timely, well targeted security training to healthcare workers when they need it. This can be done as assignments or role changes start, and at other teachable moments such as may be detected with security controls such as DLP. For example if a healthcare worker tries to copy unencrypted healthcare information to a USB stick, out of compliance with the healthcare policy, a DLP solution should alert and provide training to the healthcare worker to avoid a breach and recurrence. Such training should also include well targeted periodic security reminders, sent to relevant staff, and such reminders should include training on relevant regulations to the healthcare organization including the HIPAA security rule. It is recommended that as security training is delivered, regardless of the format, it be recorded for auditing and compliance purposes, and healthcare organizations be held accountable through periodic audits for ensuring healthcare workers receive effective security training.
ONC ADDENDUM QUESTIONS		
Onc01	Subject area: Query For the item identified as IEWG101 – Certification criteria: The EHR must be able to query another entity for outside records and respond to such queries. The outside entity may be another EHR system, a health information exchange, or an entity on the NwHIN Exchange, for example. Could	Recommendation: Yes, query for patient data in EHR's outside of an EHR system should be included as a requirement for EHR certification. In the Stage 2 interim final rule, CMS indicated that it was eliminating the requirement that 10 percent of transitions of care must be accompanied by electronic transmission of structured data across vendor boundaries. In its place, CMS required providers to attest to a single test of their system to exchange data with a different vendor. We believe the Receipt Acknowledgement SGRP 305 is an important policy lever that will allow CMS and ONC to better observe barriers to interoperability and exchange. If the Receipt Acknowledgement measure is structured to include why an exchange failed and includes a feedback mechanism to the ONC-ATB that certified the product, ONC will be able to better inform their revisions to the rulemaking or certification processes to identify and eliminate walled gardens, among other issues.

	a MENU objective be added to recognize providers who are proactively querying (e.g. For patients transitioned without a care summary, an individual in the practice should query an outside entity). Should the measure be for a number of patients or a percentage of patients?	
Onc 02	Subject area: Identity matching What could facilitate identify matching – query e.g. maintain external patient id, standards for matching attributes?	We concur with the Bi-Partisan Policy Center recommendations: a) Standardize some of the methods that are currently used to match patients, including data fields, definitions, and validation methods designed to improve the accuracy and the quality of the information gathered from patients. b) Standardize policies that support better patient matching, including those related to the establishment of acceptable rates of error in matching. c) Develop guidance on policies to support the use of additional data fields (such as cell phone number, driver's license number, or place of birth) voluntarily provided by patients to their providers to improve rates of accuracy. d) Consider new methods of credentialing and identity management, such as those being developed by the National Institute of Standards and Technology's National Strategy for Trusted Identities in Cyberspace (NSTIC) Initiative.
Onc03	Subject area: Transitions of Care For the objective identified as SGRP303 - The EP, eligible hospital, or CAH that site	Support recommendation. Recommend increasing threshold.

	transitions or refers their patient to another setting of care (including home) or provider of care provides a summary of care record for 65% of transitions of care and referrals (and at least 30% electronically). Could the electronic threshold be raised to 50% for this measure?	
Onc04	Subject area: Patient Generated Data For the objective identified as SGRP204B - Provide 10% of patients with the ability to submit patient-generated health information to improve performance on high priority health conditions, and/or to improve patient engagement in care… What information would providers consider most valuable to receive	Recommendation: Yes, require 10% at a minimum, and preferably increase threshold. Additional data could include blood pressure monitoring, weight, blood glucose monitoring and wellness data such as sleep history, nutritional intake, exercise data.

	electronically from patients? What information do patients think is most important to share electronically with providers? What data would be most valuable as an initial minimum set for patients to send to providers electronically outside the clinical visit? What other data could be added in the future?	