

# Leveraging Meaningful Use to Reduce Health Disparities

## AN ACTION PLAN

August 2013



Consumer  
Partnership  
for **eHealth**

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# Leveraging Meaningful Use to Reduce Disparities: An Action Plan

AUGUST 2013

## Executive Summary

**T**he heterogeneity of the United States is growing by leaps and bounds. We are a nation as diverse as we are advanced. However, as our nation's diversity has grown, so has a parallel increase in health disparities. In recent years health information technology (health IT) has begun to offer great promise in addressing and reducing health disparities by increasing individuals' access to their own health information and improving communication and information flow between providers and patients.<sup>1</sup> Health IT allows us to more easily identify the unique needs of all individuals, and focus particular attention on the unmet needs of underserved and marginalized populations. Indeed, if we can make the system work for the most vulnerable among us, it will work for everyone.

There is perhaps no more immediate opportunity to reduce health disparities than the Electronic Health Record (EHR) Incentive Program (commonly known as "Meaningful Use" or "MU"). However, while the reduction of disparities is one of the stated goals of the Health Information Technology for Economic and Clinical Health (HITECH) Act, from which the EHR Incentive Program stems, there has been little actual progress on this critical issue.

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### Consumer Partnership for eHealth

**CPeH is a coalition of more than 50 consumer, patient, and labor organizations working at the national, state, and local levels to advance private and secure health information technology (health IT) in ways that measurably improve the lives of individuals and their families. The combined membership of CPeH represents more than 127 million Americans.**

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<sup>1</sup> For purposes of brevity, we refer throughout this report to "patient" and "care," given that the Meaningful Use incentive program is rooted in the medical model. It is important to note, however, that meeting the goals of the Triple Aim (healthier populations, better care, and more affordable health care costs) will require a shift away from an exclusive medical approach toward a more person- and family-centered approach that emphasizes wellness, prevention, and community-based supports, in addition to traditional medical interventions. "Patients" and "care" imply a medical model with a focus on episodes of illness and exclusive dependency on professionals; people with disabilities frequently refer to themselves as "consumers" or merely "persons." Any effort to improve patient and family engagement must include the use of terminology that also resonates with the numerous consumer perspectives not adequately reflected by medical model terminology.

To this end, we have come together to create an evidence-based action plan for leveraging the EHR Incentive Program to reduce health disparities. The areas chosen – data collection and use to identify disparities; language, literacy, and communication; and care coordination and planning – were chosen based on an extensive review of scientific literature. The EHR uses outlined below reflect what we believe to be realistically achievable for Stage 3 based on the criteria proposed by the HIT Policy Committee in November 2012. We have also identified some critical criteria that might be too ambitious for Stage 3, but should be listed and incorporated as early as possible in future stages. By including the following modest but strategic requirements, the Health IT Policy Committee, the Office of the National Coordinator for Health IT, and the Centers for Medicare & Medicaid Services can enable providers to meet the HITECH Act’s promise to address health disparities, not to mention make a positive life-altering impact for the nation’s underserved and vulnerable populations.

#### The Collaborators

As consumer advocates on behalf of some of our most underserved populations, we are dedicated to ensuring increased health equity, access, and quality for all populations, regardless of race, ethnicity, sex, gender, sexual orientation, gender identity, language access, socio-economic status, or physical, cognitive, mental and other disabilities. We are partnering to lend our collective voices and expertise to an action plan that fills existing gaps and helps empower our nation’s most vulnerable populations.

The table below details our recommendations alongside the corresponding Stage 3 criteria as proposed in the HIT Policy Committee’s Request for Comment, released on November 16, 2012. Evidence-based explanations of these areas of focus can be found below, and a more detailed chart of recommendations and the Stage 3 criteria can be found in Appendix A.

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**"It's impossible to achieve better health outcomes and significantly reduce health care costs without tackling health disparities, which are a pervasive and costly problem. We have the chance to leverage Stage 3 of the Meaningful Use program to make significant progress in addressing disparities. We must not squander this opportunity. CPeH has created a bold, yet achievable, path forward for including criteria in Stage 3 that will begin to reduce disparities and, in doing so, help us achieve patient- and family-centered care, better outcomes, and lower costs for everyone." Debra L. Ness, National Partnership for Women & Families.**

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| <b><u>I. Data Collection and Use to Identify Disparities</u></b>  | <b>Stage 3 RFC<br/>Criteria ID<br/>Numbers</b>   |
|---|--|
| <i>Stage 3:</i> EHRs should accommodate collection of more granular data on patients' race, ethnicity, and language by using HHS standards rather than OMB standards, and moving toward the eventual approach recommended by the Institute of Medicine                | <a href="#">104</a>  |
| <i>Stage 3:</i> EHRs should enable and incentivize new types of data collection, such as sexual orientation; gender identity; occupation and industry codes; and physical, behavioral, and cognitive disability   | <a href="#">104</a> , <a href="#">113</a>  |
| <i>Stage 3:</i> The population health dashboard should include views of patient populations across multiple disparity variables, even if certain objectives related to recording disparity variables are retired  | <a href="#">104</a> , <a href="#">108</a> , <a href="#">109</a> ,<br><a href="#">112</a> , <a href="#">113</a> , <a href="#">115</a> ,<br><a href="#">119</a>  |
| <i>Stage 3:</i> Reported quality measures should be stratified by at least two disparity variables, with reduction in disparities demonstrated in at least one measure  | All CQMs   |
| <i>Stage 3:</i> EHRs should capture patient preferences with regard to sharing their health information for research purposes   | <a href="#">104</a>  |
| <i>Stage 3:</i> Patient experience data should be collected in patients' preferred language and/or alternative formats that accommodate disabilities. Providers should use anonymized results to improve care delivery  | <a href="#">204B</a> , <a href="#">304</a>   |
| <i>Stage 3:</i> Care summaries and plans should require recording of caregiver status and roles using DECAF standards (Direct care provision, Emotional support, Care coordination, Advocacy, and Financial) as appropriate   | <a href="#">303</a>  |
| <i>Stage 3:</i> EHRs should incorporate data collection and real-time integration from home monitoring devices, including apps and smart phones   | <a href="#">204A</a> , <a href="#">204B</a> ,<br><a href="#">207</a> , <a href="#">304</a>   |
| <b><u>II. Language, Literacy, and Communication</u></b>   | <b>Stage 3 RFC<br/>Criteria ID<br/>Numbers</b>   |
| <i>Stage 3:</i> All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments | <a href="#">105</a> , <a href="#">204A</a> ,<br><a href="#">204B</a> , <a href="#">204D</a> ,<br><a href="#">205</a> , <a href="#">206</a> , <a href="#">207</a> ,<br><a href="#">208</a> , <a href="#">303</a> , <a href="#">304</a> ,<br><a href="#">127</a> , <a href="#">308</a> |

|  |   |
|--|---|
| <i>Stage 3:</i> EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual information accessible to patients and displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments | <a href="#">204A</a> , <a href="#">204B</a> ,<br><a href="#">204D</a> , <a href="#">205</a> ,<br><a href="#">206</a> , <a href="#">207</a> , <a href="#">303</a> ,<br><a href="#">304</a> , <a href="#">127</a>   |
| <i>Stage 3:</i> V/D/T and Blue Button function should include information displayed in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments  | <a href="#">204A</a> , <a href="#">204B</a> ,<br><a href="#">204D</a> , <a href="#">208</a>   |
| <i>Future Stages:</i> EHRs should facilitate patient tutorials on use of systems (such as online access) with built-in explanations of individual functions and features (via hover box) and videos in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments                              | <a href="#">204A</a> , <a href="#">204B</a> ,<br><a href="#">205</a> , <a href="#">206</a> , <a href="#">207</a> ,<br><a href="#">208</a> , <a href="#">303</a> , <a href="#">304</a> ,<br><a href="#">127</a>  |
| <i>Future Stages:</i> Patient-interfaces (such as texting and smartphone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs   | <a href="#">105</a> , <a href="#">116</a> ,<br><a href="#">204A</a> , <a href="#">204B</a> ,<br><a href="#">204D</a> , <a href="#">205</a> ,<br><a href="#">206</a> , <a href="#">207</a> , <a href="#">208</a> ,<br><a href="#">303</a> , <a href="#">304</a> , <a href="#">127</a> ,<br><a href="#">308</a> |
| <b><a href="#">III. Care Coordination and Planning</a></b>   | <b>Stage 3 RFC<br/>Criteria ID<br/>Numbers</b>  |
| <i>Stage 3:</i> Care plans should enable patient access and ability to contribute and correct health information (such as family health history, goals, chosen support individuals and networks, and advance directive content) to help manage their care and wellbeing  | <a href="#">112</a> , <a href="#">119</a> ,<br><a href="#">204A</a> , <a href="#">204B</a> ,<br><a href="#">204D</a> , <a href="#">205</a> ,<br><a href="#">303</a> , <a href="#">304</a>   |
| <i>Stage 3:</i> EHRs should have capacity for real time clinical trial identification and eligibility checking   | <a href="#">209</a>   |
| <i>Stage 3:</i> Blue Button functionality should be implemented for Medicaid and CHIP beneficiaries  | <a href="#">204A</a>  |
| <i>Future Stages:</i> EHRs should enable identification of community-based programs/supports from which patients may benefit, including by accessing an automated directory of community resources   | <a href="#">108</a> , <a href="#">109</a> , <a href="#">113</a> ,<br><a href="#">115</a> , <a href="#">206</a> , <a href="#">303</a> ,<br><a href="#">304</a> , <a href="#">305</a>   |

## Our Vision

We envision design and robust use of secure health information technology nationwide that redresses existing disparities, avoids creating new disparities, and improves health care, services, and supports for vulnerable populations. Ensuring that health IT improves health care first and foremost for these individuals will translate to improvements for everyone, including patients, family and other caregivers as appropriate, and practitioners. We believe the “Meaningful Use” EHR Incentive Program offers a significant, unprecedented opportunity to reduce health disparities by addressing not only the multi-faceted needs of individuals and groups, but also the overlapping needs of all populations. To date, this potential has not been fully realized, and it is an opportunity we cannot afford to squander.

## Introduction: The Opportunity

As we work to strengthen America’s health care system and move towards a healthier population, better care, and more affordable health care costs, it is imperative that we take into account not only the depth of America’s diversity, but also how dramatically our diversity is growing. Today, 58 million people ages five and older speak a language other than English at home, and 56 million people live with a disability. Women account for 50.8 percent of the population. The U.S. Hispanic population reached 50.5 million, increasing 43 percent from the year 2000 and accounting for over half of the total population increase in the U.S. Those identifying as non-Hispanic White have decreased as a percentage of the total population by approximately 5.4 percent since 2000, with over 57 million people identifying solely as Black or African-American, American Indian or Native Alaskan, Asian, or Native Hawaiian and Other Pacific Islander.<sup>2</sup> Additionally, new, more accurate data have begun to emerge as social acceptance has grown and legal systems have become more affirming of the lesbian, gay, bisexual, and transgender (LGBT) populations. While recent studies estimate that overall LGBT individuals comprise 3.8 percent of the national population (or roughly 9 million people), some states report significantly larger populations of people that identify as LGBT.<sup>3</sup> Moreover, our diversity characteristics also merge and cross within individuals and groups, ensuring that we are a nation as diverse as we are advanced.

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**There is perhaps no more immediate opportunity to make an extraordinary difference for patients, families, and caregivers in the reduction of health disparities than the "Meaningful Use" EHR Incentive Program.**

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<sup>2</sup> US 2010 Census Data.

<sup>3</sup> Gates G, Newport F. Gallup Special Report: New Estimates of the LGBT Population in the United States. The Williams Institute. February 2013. <http://williamsinstitute.law.ucla.edu/research/census-lgbt-demographics-studies/gallup-lgbt-pop-feb-2013/>



However, an unfortunate byproduct of our growth and increased diversity is a parallel increase in disparities. Given that the diversity of our nation is growing by leaps and bounds, it is essential that our health care system, along with the policies and regulations that govern it, keep pace with the dynamic nature of the population. In recent years though, health information technology (health IT) has begun to offer great promise in addressing and reducing health disparities by increasing individuals' access to their own health information and improving communication between providers and patients. Improving population and individual health outcomes, and reducing disparities, require widespread use of health IT to identify the unique needs of all individuals, with particular attention to the unmet needs of underserved and marginalized populations, and to deliver care and services that improve their health and quality of life. In fact, if we can make the health care system work for our most vulnerable individuals, it can work for everyone.

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**"This action plan presents a great opportunity to improve quality of care, enhance patient participation and understanding, and reduce health disparities nationwide through health information technology. It is important that we implement these recommendations so that the health disparities of today are not replicated in electronic health systems tomorrow." Kathy Ko Chin, Asian & Pacific Islander Health Forum.**

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While adoption of health IT is growing exponentially, there is significant risk that underserved populations will continue to be left behind due to structural and economic barriers to equal access to health IT, widening what has come to be known as the "digital divide." To date, many efforts to address disparities through the use of health IT have focused on ensuring broadband access to technology, which is a critical first step. However, the design of the technology and its use are equally important. It is vital that the health IT currently in place be utilized for and among underserved populations as well as to address the causes of health disparities. Moreover, as the technology is being built, updated, and upgraded, it is essential that this be done with underserved populations in mind, along with the intent of using the technology to address and reduce the causes of health disparities.<sup>4</sup>

There is perhaps no more immediate opportunity to make an extraordinary difference for patients, families, and caregivers in the reduction of health disparities than the "Meaningful Use" EHR Incentive Program. Through the program's phased approach to increase eligible providers' and eligible hospitals' adoption and meaningful use of certified electronic health records, and to shift the focus from performing services to improving health care quality and outcomes, the EHR Incentive Program

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<sup>4</sup> Asian & Pacific Islander American Health Forum, California Pan-Ethnic Health Network, Consumers Union, and National Council of La Raza. Equity in the Digital Age: How Health Information Technology Can Reduce Disparities. February 2013. <http://www.cpehn.org/pdfs/EquityInTheDigitalAge2013.pdf>



is an essential catalyst for improving the quality, safety, and efficiency of health care as well as reducing health disparities.

There has been much talk about the promise of health IT to reduce health disparities, but unfortunately little actual progress in federal health IT policy, and specifically in the Meaningful Use program, on this critical issue. Both Stage 1 and Stage 2 of the Meaningful Use functional criteria require providers to record a patient's demographic information and to generate at least one list of patients by specific condition to use for quality improvement, reduction of disparities, research, or outreach. However, there is no requirement to view lists of patients by disparity variables such as race, ethnicity, language, gender identity, sexual orientation, socio-economic status, or disability status. Moreover, neither stage requires anything more to explicitly identify, report, address, and reduce health disparities.

The HITECH Act, from which the EHR Incentive Program stems, states that the National Coordinator should develop a nationwide electronic health information technology infrastructure that “(2) improves health care quality, reduces medical errors, reduces health disparities, and advances the delivery of patient-centered medical care.”<sup>5</sup> With Stage 3, the Meaningful Use program must incorporate infrastructure and uses of certified EHRs that will reduce health disparities as a measurable health outcome.

To this end, we have come together to create an evidence-based action plan for leveraging the EHR Incentive Program to reduce health disparities. The three areas identified – data collection and use to identify disparities; language, literacy, and communication; and care coordination and planning – stem from an extensive review of scientific literature. The EHR uses reflect what we believe to be realistically achievable for Stage 3 based on the criteria proposed by the HIT Policy Committee. We have also identified some critical criteria that might be too ambitious for Stage 3, but should be listed and incorporated as early as possible in future stages. By including the following modest but strategic requirements, the Health IT Policy Committee, ONC, and CMS can enable providers to meet the HITECH Act's promise to address health disparities, not to mention make a life-altering impact for the nation's underserved and vulnerable populations.

The areas on which we focus below stem from our careful review of the literature. They are pieces of a larger vision and are only the first steps of the work that must be undertaken. Our proposed criteria can be found in the Appendix; an explanation of our areas of focus follows.

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<sup>5</sup> Health Information Technology for Economic and Clinical Health (HITECH) Act. 42 U.S.C. § 300jj-11. (2009).

## I. Data Collection and Use to Identify Disparities

In order to reduce health disparities, they must first be identified and understood in terms of prevalence, root causes, and major contributors. Standardized, granular data collection is foundational to this effort, for which health IT is an essential tool. Ensuring that EHRs can capture and record factors pertinent to individuals' health, such as sexual orientation, gender identity, occupation, disability status, environmental factors, caregiver presence, and race, ethnicity, and language, ensures that providers see the whole picture surrounding their patients and are more adequately equipped to identify and address factors associated with health disparities. Subsequently, using these data to provide care that is patient-centered, such as through automated decision support and reminders, helps to reduce disparities at the point of care.

**Data Collection Standards:** Currently, data collection capabilities of ONC-certified EHRs are based on the standards created by the Office of Management and Budget (OMB). These standards provide a minimum set of categories for race and ethnicity and act as a foundation upon which more granular race and ethnicity data collection should be built. In a 2009 report, the Institute of Medicine (IOM) articulated that while the OMB categories “can reveal important disparities in care, they are not always sufficiently descriptive to target interventions most effectively.”<sup>6</sup> The IOM recommended more detailed, granular data collection reflecting the populations served in different communities.

It may be too far of a leap for certified EHR technology to go directly from our current OMB standards to those recommended by the IOM. However, the granularity of IOM's recommendations should be our guiding light as health IT and EHR systems continue to develop and be updated. To meet the HITECH Act's goals to address health disparities, EHR systems should collect better, more sophisticated detail beyond the basic OMB standards. As an immediate next step, we propose (as many others have proposed) advancing from the OMB standards to the more granular Health and Human Services (HHS) standards. The HHS standards build upon the OMB standards, adding the type of granularity for Asian and Latino populations that is used in the American Community Survey (ACS) and Decennial Census.

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<sup>6</sup> Institute of Medicine. Race, Ethnicity, and Language Data: Standardization for Health Care Quality Improvement. August 2009. <http://www.iom.edu/~media/Files/Report%20Files/2009/RaceEthnicityData/Race%20Ethnicity%20report%20brief%20FINAL%20for%20web.pdf>

It is equally imperative that data be collected on disability status and sexual orientation and gender identity (SOGI). While arguments have been made that necessary standards do not exist, that simply is not the case. HHS has, in fact, established standards for the collection of information on disability status.<sup>7</sup> These standards consist of six questions and stem from those used in the ACS, as well as other major surveys. They define disability “from a functional perspective”<sup>8</sup> and are meant to serve as a baseline, with the potential for additional questions to be added. And an IOM workshop on SOGI data collection in EHRs found that many health care facilities around the country, including hospitals, community health centers, and managed care organizations, are already recognizing the LGBT individuals in their patient populations and implementing efforts to collect and safeguard important sexual orientation and gender identity data in their patient records systems.<sup>9</sup> Such efforts should be scaled up and standardized, building on the efforts of organizations such as the Fenway Institute, which has completed extensive studies on the matter and has published information on how to gather SOGI data in clinical settings.<sup>10</sup>

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**"According to the Institute of Medicine, collecting sexual orientation and gender identity data in electronic health records is crucial to understanding and addressing the health disparities that affect the lesbian, gay, bisexual, and transgender (LGBT) population. The Disparities Action Plan is a key step in turning that recommendation into action to finally end the culture of 'don't ask, don't tell' for LGBT people in our healthcare system." Kellan Baker, Center for American Progress.**

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The development of more granular data collection standards for race, ethnicity, sex, language, and disability status was required under section 4302 of the Patient Protection and Affordable Care Act for the purpose of data collection in all federal surveys.<sup>11</sup> As we continue to reform our health care delivery system, it is imperative that EHRs are adapted to use the same data collection standards.

**Data Collection for Clinical Decision Support (CDS):** One essential component of EHR systems is clinical decision support (CDS), which offers automated decision-making assistance at the point of care by arming providers with tools such as condition-specific order sets, clinical guidelines, and diagnostic support. CDS offers a unique ability to assist in disparities elimination. However, because these tools

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<sup>7</sup> U.S. Dept. of Health and Human Services. Implementation Guidance on Data Collection Standards for Race, Ethnicity, Sex, Primary Language, and Disability Status. <http://aspe.hhs.gov/datacncl/standards/ACA/4302/index.pdf>

<sup>8</sup> Ibid.

<sup>9</sup> Institute of Medicine. Sexual Orientation and Gender Identity Data Collection in Electronic Health Records: A Workshop. October 2012. [www.iom.edu/lgbtdata](http://www.iom.edu/lgbtdata)

<sup>10</sup> Bradford J, Cahill S, Grasso C, Makadon HJ. How to Gather Data on Sexual Orientation and Gender Identity in Clinical Settings. Fenway Institute. October 2011. [http://www.fenwayhealth.org/site/DocServer/Policy\\_Brief\\_HowtoGather...v3\\_01.09.12.pdf?docID=9142](http://www.fenwayhealth.org/site/DocServer/Policy_Brief_HowtoGather...v3_01.09.12.pdf?docID=9142)

<sup>11</sup> U.S. Dept. of Health and Human Services, Office of Minority Health. Explanation of Data Standards for Race, Ethnicity, Sex, Primary Language, and Disability. <http://minorityhealth.hhs.gov/templates/content.aspx?ID=9228>

require person-specific data, more granular data collection of race, ethnicity, language, disability status, and sexual orientation and gender identity is all the more vital. Even when access to health care is universal, disparities may still exist. These may stem from intentional or unintentional provider bias and manifest themselves through explicit attitudes or implicit perceptions and stereotypes, leading to differential clinical treatment.<sup>12</sup> Disparities can also stem from not knowing clinical guidelines for care, which is a gap that CDS can fill.

For example, the care of certain underserved populations, such as transgender people, is often excluded from medical training, despite the fact that these populations may be at increased risk for certain health conditions, such as depression, suicide, and HIV, and frequently do not receive appropriate “gendered” preventive screenings such as Pap tests, mammograms, and prostate exams. This leads providers to approach encounters with members of these populations with uncertainty as to how to meet these patients’ needs, and leads patients to anticipate that their providers might not know how to best meet their needs.<sup>13</sup> CDS offers a solution to the problem of a lack of awareness or training in clinical guidelines to care, such as in the example of transgender people. However, the assistance that CDS provides is contingent on the EHR systems capturing critical clinical information, such as patients’ SOGI status.

**Data Stratification and Reporting:** Solely collecting data is not enough to reduce disparities. While Stages 1 and 2 of the Meaningful Use functional criteria require providers to record a patient’s demographic information and to generate at least one list of patients by specific condition,<sup>14</sup> they do not require those lists to be stratified by disparity variables such as race, ethnicity, language, gender identity, sexual orientation, socio-economic status, or disability status. Providers need to have the ability to stratify patient data, allowing them to find patterns among patients, particularly those not readily apparent. Allowing providers to see such patterns can alert them to health outcome disparities among their patient populations that they might not have known.

Additionally, Stages 1 and 2 of Meaningful Use require providers to report on a num-

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**"Health information technologies must integrate and use all health care and related community services and support strategies and tools to overcome health disparities faced by persons with all types of disabilities. The Action Plan incorporates these necessary strategies and tools, and thus has great potential to overcome disparities." Clarke Ross, American Association on Health and Disability.**

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<sup>12</sup> Sabin J, Nosek BA, Greenwald A, Rivara FP. Physicians' Implicit and Explicit Attitudes about Race by MD Race, Ethnicity, And Gender. *J Health Care Poor Underserved*. 2009 Aug;20(3):896–913.

<sup>13</sup> Poteat T, German D, Kerrigan D. Managing Uncertainty: A Grounded Theory of Stigma in Transgender Health Care Encounters. *Social Science & Medicine*, Volume 84, May 2013, Pages 22-29, ISSN 0277-9536, 10.1016/j.socscimed.2013.02.019.

<sup>14</sup> We recognize that there are certain populations for whom markers of specific conditions are rarely recorded due to the health care system's lack of ability to facilitate and/or accommodate this data collection. Such markers would be lacking in population health dashboards, stratification of disparity variables, and quality measure reporting and stratification. As we further improve our health care system, we must recognize that this is an area of need that must be met.

ber of quality measures. Those reported quality measures should be stratified by at least two disparity variables, with reduction in disparities demonstrated in at least one measure.

**Patient Generated Health Data:** Moreover, data collection should not solely be restricted to examination rooms, but should include patient-generated health data collected via smartphones, which are actively bridging the digital divide.<sup>15</sup> Data from the Pew Research Center's Internet & American Life Project indicate that while 42 percent of non-Hispanic Whites own smartphones, smartphone ownership increases to 49 percent for Hispanics and 47 percent for non-Hispanic Blacks.<sup>16</sup> As smartphones serve as platforms for running mobile health applications, which are an increasing source of patient-generated health data, this provides an important point of health care access to communities that are often underserved.

## II. Language, Literacy, and Communication

Health information technology can be leveraged to address underlying causes of health inequity such as health literacy, access to quality information, and difficulties in communication with providers, but information and communication platforms must be made easily accessible and understandable. The principle of using and making available multiple formats and channels for all electronic communications must be a standard requirement for all patient-facing health IT. All electronic health information must be available in human readable and useable formats, including appropriate health literacy and numeracy levels, languages in addition to English, and formats appropriate for individuals with visual, hearing, cognitive, and communication impairments and physical disabilities. If these requirements are not explicit, then the implementation of health IT will only increase disparities experienced by diverse and underserved patients and communities.

Moreover, ensuring that information and communication platforms are easily accessible and understandable is directly aligned with the mission of the National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Health

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**"Health IT holds the promise to increase access to health care information; however, such access will not be possible for many people with disabilities unless accessibility features are built into health information systems from the beginning. For health care providers, ready access to disability status information is also critical. This Action Plan presents well-crafted, detailed recommendations for reaching these goals." Rhonda Neuhaus, Disability Rights Education and Defense Fund.**

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<sup>15</sup> Smith, A. Smartphone Adoption and Usage. Pew Internet and American Life Project. July 2011. <http://pewinternet.org/Reports/2011/Smartphones.aspx>

<sup>16</sup> Rainie, L. Two-thirds of Young Adults and Those with Higher Income are Smartphone Owners. Pew Internet and American Life Project. September 2012. [http://pewinternet.org/~media/Files/Reports/2012/PIP\\_Smartphones\\_Sept12%209%2010%2012.pdf](http://pewinternet.org/~media/Files/Reports/2012/PIP_Smartphones_Sept12%209%2010%2012.pdf)



Care, which provide a framework for delivering culturally and linguistically competent care and services. The CLAS Standards are aligned with the HHS Action Plan to Reduce Racial and Ethnic Health Disparities and the National Stakeholder Strategy for Achieving Health Equity,<sup>17</sup> and meeting them is fundamental to delivering genuinely patient- and family- centered care.

**Patient Education and Health Information:** Studies have shown that significant disparities exist not only in access to care, but in the type and quality of care accessed. Minority populations not only experience greater barriers to high quality care, but are more likely to lack a stable, ongoing relationship with a provider.<sup>18, 19, 20</sup> Such disparities can translate to a dearth of education flowing from the provider to the patient, as well as a lack of communication from the patient to the provider, resulting in both providers and patients who are not fully informed and do not have a full, holistic view of the patient's needs and treatment and/or care recommendations. Health IT offers a solution to these problems.

Health IT not only provides consumers with unprecedented access to both their own health information and health education materials at large, but a route for patients to communicate with and provide personal, care-informing information to providers. For example, Blue Button and the View, Download, Transmit (V/D/T) function of certified EHRs (for Stage 2 of Meaningful Use) are game-changing ways for consumers to access their own health information. However, it is essential that both the educational materials, along with the media and interfaces that consumers use to receive health information, be truly effective and offer a meaningful experience. To this end, education materials, media, interfaces, and other patient-facing tools should be displayed in patients' preferred languages, at a reading level no higher than sixth to eighth grade, accessible to those with visual, hearing, cognitive, and communication impairments, and use common terminology rather than medical jargon whenever

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**All electronic health information must be available in human readable and useable formats, including appropriate health literacy and numeracy levels, languages in addition to English, and formats appropriate for individuals with visual, hearing, cognitive, and communication impairments and physical disabilities.**

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17 U.S. Dept. of Health and Human Services, Office of Minority Health. National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care: A Blueprint for Advancing and Sustaining CLAS Policy and Practice. April 2013. <http://www.dbhds.virginia.gov/2008CLC/documents/EnhancedCLASStandardsBlueprint.pdf>

18 Mead H, Cartwright-Smith L, Jones K, Ramos C, Woods K, Siegel B. Racial and Ethnic Disparities in U.S. Health Care: A Chartbook. Commonwealth Fund. March 2008. [http://www.commonwealthfund.org/usr\\_doc/mead\\_racial-ethnicdisparities\\_chartbook\\_1111.pdf](http://www.commonwealthfund.org/usr_doc/mead_racial-ethnicdisparities_chartbook_1111.pdf)

19 Angood P, Armstrong E, Ashton D, Burstin H, Corry M, Delbanco S, Fildes B, Fox D, Gluck P, Gullo S, Howes J, Jolivet R, Laube D, Lynne D, Main E, Markus A, Mayberry L, Mitchell L, Ness D, Nuzum R, Quinlan J, Sakala C, Salganicoff A. Blueprint for Action: Steps Toward a High-Quality, High-Value Maternity Care System. Women's Health Issues - January 2010 (Vol. 20, Issue 1, Supplement, Pages S18-S49, DOI: 10.1016/j.whi.2009.11.007)

20 Gaskin G, Longhurst C, Anoshiravani A. Internet Access and Attitudes Toward Online Personal Health Information Among Detained Youth. Pediatrics. 2012; 130(5): 914-917

possible, with links to explanatory, contextual information as needed.<sup>21, 22, 23, 24</sup>

Many have expressed concern regarding a dearth of low-literacy patient education materials. Others have pointed to the lack of high quality patient education materials in languages other than English. In fact, studies have shown that the quality of health information websites is greatly reduced when providing information in languages other than English and on minority health.<sup>25</sup> Moreover, a great deficiency exists in patient education materials offered in alternative formats (such as those for the visually impaired, for example) and manual languages such as American Sign Language. Vendors, developers, providers, patients, advocates, and academics ought to work together to develop such materials as well as the mediums, interfaces, and communications platforms that support them.

**Communication Platforms:** Beyond the health information provided to patients, the communication platforms around which systems are built should facilitate consumers' ability to understand how they can be active, engaged members of the health care team. Using culturally and linguistically competent technology to tailor information to the unique needs of patients and their caregivers could significantly improve health equity for populations experiencing health disparities. Since a cornerstone to patient-centered care is the ability of patients and family caregivers to provide pertinent information to their providers, it is important that communication not solely flow from the provider to patients and families, but from the consumers to the providers as well. This extends to the collection of family health history, for which the patient is the best source of information, as well as additional sources of patient-generated health data, which can help inform which (if any) community and support resources patients and families may benefit from. To that end, platforms and mediums should be tailored to the patients' and caregivers' linguistic and cognitive

**"The Action Plan is a guide to improving the health quality of low-income populations, communities of color, women, individuals with limited English proficiency, and other underserved communities. It serves as the missing link that connects the mission of the HITECH Act with existing laws, HHS strategies, and advocacy efforts that support health equity." Deborah A. Reid, National Health Law Program.**

21 Kattlove, J. School-Based Telehealth: An Innovative Approach to Meet the Health Care Needs of California's Children. The Children's Partnership. Digital Opportunity for Youth Issue Brief. No. 6: October 2009.

22 Dutta, M. J., Bodie, G. D., & Basu, A. (2008). Health Disparity and the Racial Divide among the Nation's Youth: Internet as a Site for Change. In A. Everett (Ed.), *Learning Race and Ethnicity: Youth and Digital Media*. The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning (pp. 175-198). Cambridge, MA: The MIT Press.

23 Salovey P, Mowad L, Pizarro J, Edlund D, Moret M. Developing Computer Proficiency Among Head Start Parents: An In-Progress Case Study of a New England CIS Digital Divide Project. *The Electronic Journal of Communication*. Volume 11: Numbers 3 and 4. 2002.

24 Jimison H, Gorman P, Woods S, Nygren P, Walker M, Norris S, et al. Barriers and Drivers of Health Information Technology Use for the Elderly, Chronically Ill, and Underserved. *Evidence Reports/Technology Assessments*. 2008;(no. 175):1-1422.

25 Dutta, M. J., Bodie, G. D., & Basu, A. (2008). Health Disparity and the Racial Divide among the Nation's Youth: Internet as a Site for Change. In A. Everett (Ed.), *Learning Race and Ethnicity: Youth and Digital Media*. The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning (pp. 175-198). Cambridge, MA: The MIT Press.



needs in order to facilitate the best information upload possible.

**Patient-Provider Communication:** When patients encounter barriers in accessing providers and/or have disjointed care experiences, their ability to communicate openly, honestly, and in an easily accessible manner with providers is adversely affected. Research indicates that some underserved populations with the most health risks have the hardest time communicating with their providers, mostly due to language issues (irrespective of the availability of interpreter services), leading to worse health outcomes.<sup>26, 27</sup> Health IT, however, could and should facilitate communication to and from the consumers in their preferred language, including reminders and secure messaging, thereby improving communication. For example, secure messaging has been shown to improve health outcomes, treatment adherence, and patient satisfaction.<sup>28, 29</sup> Secure messaging with a built in translation function allowing patients to receive information in their preferred language could be the key to improving communication with providers, and lead to improved health outcomes. Moreover, patients should also be able to provide anonymous feedback on their care experience (as well as barriers experienced) in their preferred language and through means such as secure online surveys.

### III. Care Coordination and Planning

A lack of coordination and communication contributes not only to poor quality and unaffordable care, but health care disparities as well.<sup>30</sup> Oftentimes, underserved populations and members of racial and ethnic minority groups suffer from lack of care coordination more acutely than the general population.<sup>31, 32</sup> While the process of care planning is driven by human interaction, technology can help make necessary information more readily available and actionable, connect all people who have a role in an individual's care plan, and provide a shared platform for the ongoing maintenance and management of an individual's care and wellbeing. Health IT systems should

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**Oftentimes, underserved populations and members of racial and ethnic minority groups suffer from lack of care coordination more acutely than the general population.**

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<sup>26</sup> Collins KS, Hughes DL, Doty MM, Ives BL, Edwards JN, Tenney K. Diverse Communities, Common Concerns: Assessing Health Care Quality for Minority Americans, The Commonwealth Fund, March 2002

<sup>27</sup> Hablamos Juntos and Robert Wood Johnson Foundation. Physician Perspectives on Communication Barriers: Insights from Focus Groups with Physicians Who Treat Non-English Proficient and Limited English Proficient Patients. March 2004. [http://www.hablamosjuntos.org/pdf\\_files/lsp.report.final.pdf](http://www.hablamosjuntos.org/pdf_files/lsp.report.final.pdf)

<sup>28</sup> Goldzweig CL, Towfigh AA, Paige NM, et al. Systematic Review: Secure Messaging Between Providers and Patients, and Patients' Access to Their Own Medical Record: Evidence on Health Outcomes, Satisfaction, Efficiency and Attitudes [Internet]. Washington (DC): Department of Veterans Affairs (US); 2012 Jul.

<sup>29</sup> Zhou YY, Kanter MH, Wang JJ, Garrido T. Improved Quality at Kaiser Permanente Through E-Mail Between Physicians and Patients. *Health Affairs*. 2013; 32:7. doi: 10.1377/hlthaff.2010.0048

<sup>30</sup> Lu M, Kotelchuck M, Hogan V, Johnson K, Reyes C. Innovative Strategies to Reduce Disparities in the Quality of Prenatal Care in Underresourced Settings. *Med Care Res Rev*. 2010;67:198S. doi: 10.1177/1077558710374324.

<sup>31</sup> Ibid

<sup>32</sup> Toomey SL, Chien AT, Elliott MN, Ratner J, Schuster MA. Disparities in Unmet Need for Care Coordination: The National Survey of Children's Health. *Pediatrics*. 2013 Feb;131(2):217-24. doi: 10.1542/peds.2012-1535.

contain a range of information about patient support systems, including chosen family members, friends, and other key supports alongside individuals designated by state next-of-kin laws, as it is an important part of care coordination and planning. This information is sometimes captured in advanced directives, but many people, particularly members of marginalized populations, do not have them.

Care plans also offer a place for communication and coordination between not only the patients, caregivers, and providers, but also community entities offering services and supports.<sup>33, 34</sup> As health care has evolved and advanced, many health conditions have become chronic, rather than acute, shifting the disease burden from acute care to primary care providers and community supports and entities. Therefore, ensuring information sharing and automated connections between health care providers and community-based agencies has become vital. Moreover, for many underserved populations, health is more deeply connected to basic survival needs, such as food, shelter, transportation and community-based services and supports, than to clinical care.<sup>35</sup> Individuals experiencing health disparities often have difficulties accessing the supports and resources necessary to be active and engaged in their own health and health care. Health IT could be used to connect people, their providers and the community resources that support them, as well as to coordinate efforts among them in ways that support health.

## The Path Forward

The heterogeneity of the United States is growing by leaps and bounds. We are a nation as diverse as we are advanced. However, while the U.S. is home to the best doctors, clinicians, and treatments in the world, many of our communities and populations lack equitable access to and experience with the health care system. As we have learned from the past, retro-fitting is expensive and, in this case, unnecessary. We are past the tipping point of EHR adoption and have the opportunity to build our health IT infrastructure the right way on the first go-around. This is not an opportunity to be squandered. The recommendations we propose would make a significant impact on the largest cross-section of underserved populations, comprising well over one fifth of the nation's population, while also considering what is feasible for vendors, developers, and providers. Implementation of these recommended criteria will help reduce health care disparities and will result in a healthier population, more equi-

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**We are past the tipping point of EHR adoption and have the opportunity to build our health IT infrastructure the right way on the first go-around.**

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<sup>33</sup> Calman N, Kitson K, Hauser D. Using Information Technology to Improve Health Quality and Safety in Community Health Centers. *Progress in Community Health Partnerships*. 2007;1(no. 1):83–88.

<sup>34</sup> Kattlove, J. School-Based Telehealth: An Innovative Approach to Meet the Health Care Needs of California's Children. The Children's Partnership. Digital Opportunity for Youth Issue Brief. No. 6: October 2009.

<sup>35</sup> Dutta, M. J., Bodie, G. D., & Basu, A. (2008). Health Disparity and the Racial Divide among the Nation's Youth: Internet as a Site for Change. In A. Everett (Ed.), *Learning Race and Ethnicity: Youth and Digital Media*. The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning (pp. 175-198). Cambridge, MA: The MIT Press.

table care, and the kind of health care system all people need and deserve.

## APPENDIX A

### Most Immediate Recommendations for Stage 3

In the table that follows, we set forth recommendations for improvements to the Stage 3 criteria that could begin to make the contribution to reducing health disparities that the HITECH Act requires of the nation’s health information technology infrastructure.<sup>36</sup> To save space and aid readability, the table abbreviates the Stage 2 and Stage 3 criteria as the HIT Policy Committee set them out in its Request for Comment published November 26, 2012. The bold criteria represent core objectives, while the non-bold criteria represent menu objectives. The elements set forth in the columns labeled “CPeH Stage 3 Recommendations” and “CPeH Future Stages Recommendations” represent our collective interim recommendations, for the reasons we have explained above. Some of the recommendations are relevant to multiple Stage 3 proposals in the HIT Policy Committee’s Request for Comment, and so we state them at each relevant point for purposes of clarity.

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<sup>36</sup> Health Information Technology for Economic and Clinical Health (HITECH) Act, 42 U.S.C. § 300jj-11. (2009).

| ID  | Stage 2<br>Final Rule  |   | HITPC Stage 3<br>Recommendations  |   | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations   | CPeH Future Stages<br>Recommendations |
|-----|--|---|---|---|--|---|---------------------------------------|
|     | EP   | EH  | EP  | EH  |  |   |                                       |
| 104 | <p>More than 80% of unique patients have the following demographics recorded:</p> <ul style="list-style-type: none"> <li>•Preferred language</li> <li>•Sex</li> <li>•Race</li> <li>•Ethnicity</li> <li>•Date of birth</li> </ul> | <p>More than 80% of unique patients have the following demographics recorded:</p> <ul style="list-style-type: none"> <li>•Preferred language</li> <li>•Sex</li> <li>•Race</li> <li>•Ethnicity</li> <li>•Date of birth</li> <li>•Date and prelim cause of death (EH only)</li> </ul> | <p>Retire objective because it topped out</p> <p>Include occupation and industry codes, SO/GI and disability status in certification criteria</p> | <p>Retire objective because it topped out</p> <p>Include occupation and industry codes, SO/GI and disability status in certification criteria</p> |  | <ul style="list-style-type: none"> <li>•EHRs should accommodate collection of more granular data on patients' race, ethnicity, and language by using HHS standards rather than OMB standards, and moving toward the eventual approach recommended by the IOM</li> <li>•EHRs should enable and incentivize new types of data collection, such as sexual orientation; gender identity; occupation and industry codes; and physical, behavioral, and cognitive disability</li> </ul> |                                       |

| ID  | Stage 2<br>Final Rule |    | HITPC Stage 3<br>Recommendations |    | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations   | CPeH Future Stages<br>Recommendations |
|-----|-----------------------|----|----------------------------------|----|--|---|---------------------------------------|
|     | EP                    | EH | EP                               | EH |  |   |                                       |
| 104 |                       |    |                                  |    |  | <ul style="list-style-type: none"> <li>•The population health dashboard should include views of patient populations across multiple disparity variables, even if certain objectives related to recording disparity variables are retired</li> <li>•EHRs should capture patient preferences with regard to sharing their health information for research purposes</li> </ul> |                                       |

| ID  | Stage 2<br>Final Rule   |   | HITPC Stage 3<br>Recommendations  |   | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations  | CPeH Future Stages<br>Recommendations  |
|-----|---|---|---|---|--|--|--|
|     | EP  | EH  | EP  | EH  |  |  |  |
| 105 | Consolidated into Summary of Care objective - Maintain an up-to-date problem list of current and active diagnosis | Consolidated into Summary of Care objective - Maintain an up-to-date problem list of current and active diagnosis | Certification only: use of lab results, medications, and vital signs to provide decision support about additions, edits, and deletions for clinicians' review | Certification only: use of lab results, medications, and vital signs to provide decision support about additions, edits, and deletions for clinicians' review | Patient input to reconciliation of problems              | •All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments | •Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs |

| ID  | Stage 2<br>Final Rule   |   | HITPC Stage 3<br>Recommendations              |   | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations   | CPeH Future Stages<br>Recommendations   |
|-----|---|---|---|---|--|---|---|
|     | EP  | EH  | EP  | EH  |  |   |   |
| 108 | <b>Record and chart changes in vital signs for more than 80% of unique patients</b><br>•Height/length<br>•Weight<br>•BP<br>•BMI<br>•Growth charts | <b>Record and chart changes in vital signs for more than 80% of unique patients</b><br>•Height/length<br>•Weight<br>•BP<br>•BMI<br>•Growth charts | <b>Retire objective because it topped out</b> | <b>Retire objective because it topped out</b> |  | •The population health dashboard should include views of patient populations across multiple disparity variables, even if certain objectives related to recording disparity variables are retired | •EHRs should enable identification of community-based programs/supports from which patients may benefit, including by accessing an automated directory of community resources (such as healthy weight programs) |



| ID  | Stage 2<br>Final Rule   |   | HITPC Stage 3<br>Recommendations              |   | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations  | CPeH Future Stages<br>Recommendations   |
|-----|---|---|---|---|--|--|---|
|     | EP  | EH  | EP  | EH  |  |  |   |
| 109 | <b>Record smoking status for 80% of all unique patients 13 yo and older</b> | <b>Record smoking status for 80% of all unique patients 13 yo and older</b> | <b>Retire objective because it topped out</b> | <b>Retire objective because it topped out</b> |  | <ul style="list-style-type: none"> <li>The population health dashboard should include views of patient populations across multiple disparity variables, even if certain objectives related to recording disparity variables are retired</li> </ul> | <ul style="list-style-type: none"> <li>EHRs should enable identification of community-based programs/supports from which patients may benefit, including by accessing an automated directory of community resources (such as smoking cessation programs)</li> </ul> |

| ID  | Stage 2<br>Final Rule |   | HITPC Stage 3<br>Recommendations  |  | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations   | CPeH Future Stages<br>Recommendations |
|-----|-----------------------|---|---|--|--|---|---------------------------------------|
|     | EP                    | EH  | EP  | EH   |  |   |                                       |
| 112 | N/A                   | More than 50% of all unique patients 65 yo or older have advance directive status recorded as structured data | More than 50% of all unique patients 65 yo or older have advance directive status recorded as structured data | <b>More than 50% of all unique patients 65 yo or older have advance directive status recorded as structured data</b> |  | <ul style="list-style-type: none"> <li>•The population health dashboard should include views of patient populations across multiple disparity variables, including advance directive status</li> <li>•Care plans should enable patient access and ability to contribute and correct health information (such as advance directive content) to help manage their care and wellbeing</li> </ul> |                                       |

| ID  | Stage 2<br>Final Rule  |  | HITPC Stage 3<br>Recommendations   |  | HITPC<br>Recommendations<br>Proposed for Future<br>Stage                           | CPeH Stage 3<br>Recommendations   | CPeH Future Stages<br>Recommendations  |
|-----|--|--|--|--|--|---|--|
|     | EP   | EH   | EP   | EH   |  |   |  |
| 113 | <b>Implement 5 CDS interventions related to 4 or more CQMs</b> | <b>Implement 5 CDS interventions related to 4 or more CQMs</b> | <b>Implement 15 CDS interventions related to 5 or more CQMs</b><br><br>The 15 CDS interventions should include 1 or more interventions in each of the following areas: | <b>Implement 15 CDS interventions related to 5 or more CQMs</b><br><br>The 15 CDS interventions should include 1 or more interventions in each of the following areas: | Certification criteria:<br>Explore greater specificity for food-drug interactions. | <ul style="list-style-type: none"> <li>EHRs should enable and incentivize new types of data collection, such as sexual orientation; gender identity; occupation and industry codes; and physical, behavioral, and cognitive disability</li> <li>The population health dashboard should include views of patient populations across multiple disparity variables, even if certain objectives related to recording disparity variables are retired</li> </ul> | <ul style="list-style-type: none"> <li>EHRs should enable identification of community-based programs/supports from which patients may benefit, including by accessing an automated directory of community resources</li> </ul> |

| ID  | Stage 2<br>Final Rule |    | HITPC Stage 3<br>Recommendations  |   | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations | CPeH Future Stages<br>Recommendations |
|-----|-----------------------|----|---|---|--|---------------------------------|---------------------------------------|
|     | EP                    | EH | EP  | EH  |  |                                 |                                       |
| 113 |                       |    | <ul style="list-style-type: none"> <li>•Preven-<br/>tive care</li> <li>•Chronic<br/>disease<br/>mgmt.</li> <li>•Appropri-<br/>ateness of<br/>lab/<br/>radiology<br/>orders</li> <li>•Advanced<br/>medi-<br/>cation-<br/>related<br/>decision<br/>support</li> </ul> | <ul style="list-style-type: none"> <li>•Preven-<br/>tive care</li> <li>•Chronic<br/>disease<br/>mgmt.</li> <li>•Appropri-<br/>ateness of<br/>lab/<br/>radiology<br/>orders</li> <li>•Advanced<br/>medi-<br/>cation-<br/>related<br/>decision<br/>support</li> </ul> |  |                                 |                                       |

| ID  | Stage 2<br>Final Rule                                   |     | HITPC Stage 3<br>Recommendations   |     | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations  | CPeH Future Stages<br>Recommendations   |
|-----|---|-----|--|-----|--|--|---|
|     | EP  | EH  | EP   | EH  |  |  |   |
| 115 | <b>Generate at least 1 report by specific condition</b> | N/A | <b>Generate lists of patients for multiple specific conditions and present near real-time patient-oriented dashboards, which are actionable, not retrospective</b> | N/A |  | <ul style="list-style-type: none"> <li>•The population health dashboard should include views of patient populations across multiple disparity variables</li> </ul> | <ul style="list-style-type: none"> <li>•EHRs should enable identification of community-based programs/supports from which patients may benefit, including by accessing an automated directory of community resources</li> </ul> |

| ID  | Stage 2<br>Final Rule  |     | HITPC Stage 3<br>Recommendations  |     | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations | CPeH Future Stages<br>Recommendations  |
|-----|--|-----|---|-----|--|---------------------------------|--|
|     | EP   | EH  | EP  | EH  |  |                                 |  |
| 116 | More than 10% of all unique patients having 2 or more visits w/ in 24 mos prior to reporting period sent reminder, per pt preference | N/A | More than 20% of all unique patients having 2 or more visits w/ in 24 mos prior to reporting period sent reminder, per pt preference (specialists may be excluded for prevention reminders) | N/A |  |                                 | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> </ul> |

| ID  | Stage 2<br>Final Rule  |  | HITPC Stage 3<br>Recommendations   |  | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations  | CPeH Future Stages<br>Recommendations |
|-----|--|--|--|--|--|--|---------------------------------------|
|     | EP   | EH   | EP   | EH   |  |  |                                       |
| 119 | More than 20% of all unique patients have a structured data entry for family health history (1 or more 1st degree relatives) | More than 20% of all unique patients have a structured data entry for family health history (1 or more 1st degree relatives) | <b>More than 40% of patients seen during reporting period have high priority family history recorded</b> | <b>More than 40% of patients seen during reporting period have high priority family history recorded</b> |  | <ul style="list-style-type: none"> <li>•The population health dashboard should include views of patient populations across multiple disparity variables, including family health history</li> <li>•Care plans should enable patient access and ability to contribute and correct health information (such as family health history) to help manage their care and wellbeing</li> </ul> |                                       |



| ID   | Stage 2<br>Final Rule  |   | HITPC Stage 3<br>Recommendations   |  | HITPC<br>Recommendations<br>Proposed for Future<br>Stage   | CPeH Stage 3<br>Recommendations   | CPeH Future Stages<br>Recommendations  |
|------|--|---|--|--|--|---|--|
|      | EP   | EH  | EP   | EH   |  |   |  |
| 204A | <b>50% of all patients are provided online access (within 4 business days) to their health information, subject to EP's discretion to withhold certain info.</b> | <b>50% of all patients are provided online access to their health information, within 36 hrs of d/c</b><br><br><b>5% of all patients view, download, or transmit their health info to a 3rd party</b> | <b>Info should be available within 24 hours if generated during course of visit</b><br><br><b>Labs and other info not generated during course of visit should be available within 4 business days of becoming available to EPs</b> | <b>Info should be available within 24 hours if generated during course of visit</b><br><br><b>Labs and other info not generated during course of visit should be available within 4 business days of becoming available to EPs</b> | Building on Automated Transmit<br>•Create ability for EPs to review patient-transmitted info and accept updates into EHRs<br>•Standards needed for provider directories in order to facilitate more automated transmissions per patients' designations | •V/D/T and BB function should include information displayed in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments<br>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments | •Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs<br>•EHRs should facilitate patient tutorials on use of systems (such as online access) with built-in explanations of individual functions and features (via hover box) and videos in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments |

| ID   | Stage 2<br>Final Rule  |    | HITPC Stage 3<br>Recommendations  |   | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations  | CPeH Future Stages<br>Recommendations |
|------|--|----|---|---|--|--|---------------------------------------|
|      | EP   | EH | EP  | EH  |  |  |                                       |
| 204A | <b>5% of all patients view, download, or transmit their health info to a 3rd party</b> |    | Automated Transmit (building on Blue Button): 50% of all patients are provided ability to designate to whom and when a summary of care document is sent to patient-designated recipient<br><br>Potential to increase both thresholds based on Stage 2 | Automated Transmit (building on Blue Button): 50% of all patients are provided ability to designate to whom and when a summary of care document is sent to patient-designated recipient<br><br>Potential to increase both thresholds based on Stage 2 |  | <ul style="list-style-type: none"> <li>EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual information accessible to patients and displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>Care plans should enable patient access and ability to contribute and correct health information (such as chosen support individuals and networks) to help manage their care and wellbeing</li> </ul> |                                       |

| ID   | Stage 2<br>Final Rule |    | HITPC Stage 3<br>Recommendations   |  | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations  | CPeH Future Stages<br>Recommendations  |
|------|-----------------------|----|--|--|--|--|--|
|      | EP                    | EH | EP   | EH   |  |  |  |
| 204A |                       |    |  |  |  | <ul style="list-style-type: none"> <li>•EHRs should incorporate data collection and real-time integration from home monitoring devices, including apps and smart phones</li> <li>•Blue Button functionality should be implemented for Medicaid and CHIP beneficiaries</li> </ul> |  |
| 204B |                       |    | 10% of patients provided w/ ability to submit patient-generated health info to improve performance on high priority health conditions, and/or to | 10% of patients provided w/ ability to submit patient-generated health info to improve performance on high priority health conditions, and/or to |  | <ul style="list-style-type: none"> <li>•Patient experience data should be collected in patients' preferred language and/or alternative formats that accommodate disabilities. Providers should use anonymized results to improve care delivery.</li> </ul>                       | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> </ul> |

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|------|-----------------------|----|--|--|--|---|--|
|      | EP                    | EH | EP   | EH   |  |   |  |
| 204B |                       |    | improve patient engagement in care. This could be done through semi-structured questionnaires w/ EPs/EHs choosing info that's most relevant for their patients and/or related to high priority health conditions they elect to focus on. | improve patient engagement in care. This could be done through semi-structured questionnaires w/ EPs/EHs choosing info that's most relevant for their patients and/or related to high priority health conditions they elect to focus on. |  | <ul style="list-style-type: none"> <li>•V/D/T and BB function should include information displayed in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual</li> </ul> | <ul style="list-style-type: none"> <li>•EHRs should facilitate patient tutorials on use of systems (such as online access) with built-in explanations of individual functions and features (via hover box) and videos in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> |

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|------|-----------------------|----|----------------------------------|----|--|---|---------------------------------------|
|      | EP                    | EH | EP                               | EH |  |   |                                       |
| 204B |                       |    |                                  |    |  | <p>information accessible to patients and displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</p> <ul style="list-style-type: none"> <li>•Care plans should enable patient access and ability to contribute and correct health information to help manage their care and wellbeing</li> <li>•EHRs should incorporate data collection and real-time integration from home monitoring devices, including apps and smart phones</li> </ul> |                                       |

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|------|-----------------------|----|---|---|--|--|--|
|      | EP                    | EH | EP  | EH  |  |  |  |
| 204D |                       |    | <b>Provide patients with ability to request amendment to their record online through V/D/T in an obvious manner</b> | <b>Provide patients with ability to request amendment to their record online through V/D/T in an obvious manner</b> |  | <ul style="list-style-type: none"> <li>•V/D/T and BB function should include information displayed in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual information accessible to patients and</li> </ul> | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> </ul> |

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|------|-----------------------|----|----------------------------------|----|--|--|---------------------------------------|
|      | EP                    | EH | EP                               | EH |  |  |                                       |
| 204D |                       |    |                                  |    |  | <p>displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</p> <ul style="list-style-type: none"> <li>•Care plans should enable patient access and ability to contribute and correct health information to help manage their care and wellbeing</li> </ul> |                                       |



| ID  | Stage 2<br>Final Rule  |     | HITPC Stage 3<br>Recommendations   |     | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations   | CPeH Future Stages<br>Recommendations  |
|-----|--|-----|--|-----|--|---|--|
|     | EP   | EH  | EP   | EH  |  |   |  |
| 205 | <b>Clinical summaries provided to patients (or patient-authorized representatives) within 1 business day for 50% of office visits.</b> | N/A | <b>Clinical summaries should be pertinent to office visit, not just abstract from medical record</b> | N/A |  | <ul style="list-style-type: none"> <li>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual information accessible to patients and displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> <li>•EHRs should facilitate patient tutorials on use of systems (such as online access) with built-in explanations of individual functions and features (via hover box) and videos in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> |

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|-----|---|--|--|--|--|---|---|
|     | EP  | EH   | EP   | EH   |  |   |   |
| 205 |   |  |  |  |  | <ul style="list-style-type: none"> <li>•Care plans should enable patient access and ability to contribute and correct health information to help manage their care and wellbeing</li> </ul>   |   |
| 206 | <p><b>Patient-specific education resources are provided to patients for more than 10% of all office visits.</b></p> | <p><b>More than 10% of all unique patients are provided patient-specific education resources</b></p> | <p><b>For the top 5 non-English languages spoken nationally, provide 80% of patient-specific education materials in at least 1 of those languages based on EP's or EH's local population</b></p> | <p><b>For the top 5 non-English languages spoken nationally, provide 80% of patient-specific education materials in at least 1 of those languages based on EP's or EH's local population</b></p> |  | <ul style="list-style-type: none"> <li>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual information accessible to patients and displayed in no higher than 6th-8th</li> </ul> | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> <li>•EHRs should facilitate patient tutorials on use of systems (such as online access) with built-in explanations of individual functions and features (via hover box) and videos in patients' preferred languages</li> </ul> |

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|-----|---|-----|---|-----|--|---|--|
|     | EP  | EH  | EP  | EH  |  |   |  |
| 206 |   |     |   |     |  | <p>grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</p> <ul style="list-style-type: none"> <li>•Patient education and decision support materials should include information regarding research participation in languages other than English and accessible to those with visual and/or cognitive impairments</li> </ul> | <p>and accessible to those with visual, hearing, cognitive, and communication impairments</p> <ul style="list-style-type: none"> <li>•EHRs should enable identification of community-based programs/supports from which patients may benefit, including by accessing an automated directory of community resources (particularly if programs/supports exist in patients' preferred languages)</li> </ul> |
| 207 | <b>5% of all unique patients (or their authorized representative) seen during</b> | N/A | <b>More than 10% of patients use secure messaging to communicate w/ EPs</b> | N/A | Create capacity for electronic episodes of care (telemetry devices, etc.) and to do e-referrals and e-consults | <ul style="list-style-type: none"> <li>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive</li> </ul>   | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smartphone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> </ul>  |

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|-----|--|----|----------------------------------|----|--|--|--|
|     | EP   | EH | EP                               | EH |  |  |  |
| 207 | reporting period<br>send a secure message using electronic messaging |    |                                  |    |  | <p>and communication impairments</p> <ul style="list-style-type: none"> <li>•EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual information accessible to patients and displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•EHRs should incorporate data collection and real-time integration from home monitoring devices, including apps and smart phones</li> </ul> | <ul style="list-style-type: none"> <li>•EHRs should facilitate patient tutorials on use of systems (such as online access) with built-in explanations of individual functions and features (via hover box) and videos in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> |

| ID  | Stage 2<br>Final Rule                                  |   | HITPC Stage 3<br>Recommendations                               |  | HITPC<br>Recommendations<br>Proposed for Future<br>Stage | CPeH Stage 3<br>Recommendations   | CPeH Future Stages<br>Recommendations  |
|-----|--|---|--|--|--|---|--|
|     | EP   | EH  | EP   | EH   |  |   |  |
| 208 | <b>Not included separately (in reminder objective)</b> | Not included separately (in reminder objective) | <b>20% of patients have communication preferences recorded</b> | <b>20% of patients have communication preferences recorded</b> |  | <ul style="list-style-type: none"> <li>•V/D/T and BB function should include information displayed in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> <li>•EHRs should facilitate patient tutorials on use of systems (such as online access) with built-in explanations of individual functions and features (via hover box) and videos in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> |

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|-----|-----------------------|----|---|---|--|---|---------------------------------------|
|     | EP                    | EH | EP  | EH  |  |   |                                       |
| 209 |                       |    | Certification only:<br>Capability for EHR to query research enrollment systems to identify available clinical trials. No use req. until future stages | Certification only:<br>Capability for EHR to query research enrollment systems to identify available clinical trials. No use req. until future stages |  | •EHRs should have capacity for real time clinical trial identification and eligibility checking |                                       |

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|-----|--|--|--|--|--|---|--|
|     | EP   | EH   | EP   | EH   |  |   |  |
| 303 | <p><b>Summary of care record, including care plan and care team members, provided for 50% of transitions of care and referrals</b></p> <p><b>Summary of care record provided electronically for more than 10% of transitions and referrals</b></p> | <p><b>Summary of care record, including care plan and care team members, provided for 50% of transitions of care and referrals</b></p> <p><b>Summary of care record provided electronically for more than 10% of transitions and referrals</b></p> | <p><b>Summary of care record provided for 65% of each site transition of care and referrals, including:</b></p> <ul style="list-style-type: none"> <li>•Concise narrative (free text) in support of care transitions</li> <li>•Setting-specific goals</li> </ul> | <p><b>Summary of care record provided for 65% of each site transition of care and referrals, including:</b></p> <ul style="list-style-type: none"> <li>•Concise narrative (free text) in support of care transitions</li> <li>•Setting-specific goals</li> </ul> |  | <ul style="list-style-type: none"> <li>•Care summaries and plans should require recording of caregiver status and roles using DECAF standards (Direct care provision, Emotional support, Care coordination, Advocacy, and Financial) as appropriate</li> <li>•Care plans should enable patient access and ability to contribute and correct health information (such as chosen support individuals and networks) to help manage their care and wellbeing</li> </ul> | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> <li>•EHRs should facilitate patient tutorials on use of systems (such as online access) with built-in explanations of individual functions and features (via hover box) and videos in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> |

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|-----|--|--|--|--|--|---|---|
|     | EP   | EH   | EP   | EH   |  |   |   |
| 303 | One or more successful electronic exchanges of summary of care document with recipient who has technology designed by a different developer than sender OR one or more successful tests with the CMS designated test EHR | One or more successful electronic exchanges of summary of care document with recipient who has technology designed by a different developer than sender OR one or more successful tests with the CMS designated test EHR | •Instructions for care during transition and 48 hours afterwards<br>•Care team members, including primary care provider and caregiver name, role, and contact info (using DECAF) | •Instructions for care during transition and 48 hours afterwards<br>•Care team members, including primary care provider and caregiver name, role, and contact info (using DECAF) |  | <ul style="list-style-type: none"> <li>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual information accessible to patients and displayed in no higher than 6th-8th grade reading level in patients' preferred languages,</li> </ul> | •EHRs should enable identification of community-based programs/supports from which patients may benefit, including by accessing an automated directory of community resources |



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|-----|-----------------------|----|---|---|--|--|--|
|     | EP                    | EH | EP  | EH  |  |  |  |
| 303 |                       |    | Summary of care record provided electronically for more than 30% of transitions and referrals | Summary of care record provided electronically for more than 30% of transitions and referrals |  | and accessible to those with visual, hearing, cognitive, and communication impairments   |  |
| 304 |                       |    |   |   | For each transition of site of care, provide the care plan information including the following as applicable:<br>•Medical diagnoses and stages<br>•Functional status, including ADLs<br>•Relevant social and financial information<br>•Relevant environmental factors impacting patient's health | •Patient experience data should be collected in patients' preferred language and/or alternative formats that accommodate disabilities. Providers should use anonymized results to improve care delivery.<br>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' | •Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs<br>•EHRs should facilitate patient tutorials on use of systems (such as on-line access) with built-in explanations of individual functions and features |

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|-----|-----------------------|----|----------------------------------|----|---|---|---|
|     | EP                    | EH | EP                               | EH |   |   |   |
| 304 |                       |    |                                  |    | <ul style="list-style-type: none"> <li>•<b>Most likely course of illness or condition, in broad terms</b></li> <li>•<b>Cross-setting care team member list, including primary contact from each active provider setting, including primary care, relevant specialists, and caregiver</b></li> <li>•<b>Patient's long-term goal(s) for care, including time frame and initial steps toward meeting these goals</b></li> <li>•<b>Specific advance care plan (POLST) and setting in which it was executed</b></li> <li>•<b>For each referral, provide care plan if one exists</b></li> </ul> | <p>preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</p> <ul style="list-style-type: none"> <li>•EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual information accessible to patients and displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•Care plans should enable patient access and ability to contribute and correct health information</li> </ul> | <p>(via hover box) and videos in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</p> <ul style="list-style-type: none"> <li>•EHRs should enable identification of community-based programs/supports from which patients may benefit, including by accessing an automated directory of community resources</li> </ul> |

| ID  | Stage 2<br>Final Rule |    | HITPC Stage 3<br>Recommendations |    | HITPC<br>Recommendations<br>Proposed for Future<br>Stage  | CPeH Stage 3<br>Recommendations   | CPeH Future Stages<br>Recommendations |
|-----|-----------------------|----|----------------------------------|----|---|---|---------------------------------------|
|     | EP                    | EH | EP                               | EH |   |   |                                       |
| 304 |                       |    |                                  |    | <p><b>Referring EP/EH/CAH provides electronic care plan information for 10% of transitions of care to receiving provider and patient/ caregiver</b></p> <p><b>Certification criteria:</b><br/> <b>Develop standards for a shared care plan. Adopt standards for structured recording of other data elements, such as pt goals and related interventions</b></p> | <p>(such as care goals, chosen support individuals and networks, and advance care plans) to help manage their care and wellbeing</p> <ul style="list-style-type: none"> <li>•EHRs should incorporate data collection and real-time integration from home monitoring devices, including apps and smart phones</li> </ul> |                                       |

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|-----|-----------------------|----|--|--|--|---------------------------------|--|
|     | EP                    | EH | EP   | EH   |  |                                 |  |
| 305 |                       |    | <b>50% of referral results generated from EHR are returned to the requester, acknowledging receipt and beginning to close the loop</b><br><br><b>10% of referral results are returned electronically</b> | <b>50% of referral results generated from EHR are returned to the requester, acknowledging receipt and beginning to close the loop</b><br><br><b>10% of referral results are returned electronically</b> | Continue working to close the loop w/ acknowledgement of order receipt and tracking for completion |                                 | <ul style="list-style-type: none"> <li>EHRs should enable identification of community-based programs/supports from which patients may benefit, including by accessing an automated directory of community resources</li> </ul> |

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|-----|-----------------------|----|----------------------------------|----|--|---|--|
|     | EP                    | EH | EP                               | EH |  |   |  |
| 127 |                       |    |                                  |    | <b>Ability to maintain an up-to-date interdisciplinary problem list inclusive of versioning in support of collaborative care</b> | <ul style="list-style-type: none"> <li>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> <li>•EHRs and online access for patients should incorporate automatic links translating medical jargon to contextual information accessible to patients and displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> <li>•EHRs should facilitate patient tutorials on use of systems (such as online access) with built-in explanations of individual functions and features (via hover box) and videos in patients' preferred languages and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> |

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|-----|-----------------------|----|----------------------------------|---|--|--|--|
|     | EP                    | EH | EP                               | EH  |  |  |  |
| 308 |                       |    | N/A                              | <b>For 10% of patients with a significant healthcare event, EH/CAH will send an electronic notification to at least 1 key member of patient's care team within 2 hours of when event occurs</b> |  | <ul style="list-style-type: none"> <li>•All patient-facing information and decision support tools should be displayed in no higher than 6th-8th grade reading level, in patients' preferred languages, and accessible to those with visual, hearing, cognitive, and communication impairments</li> </ul> | <ul style="list-style-type: none"> <li>•Patient-interfaces (such as texting and smart-phone platforms, patient portals, patient reminders and secure messaging, etc.) should be able to accommodate patients' linguistic, visual, hearing, and/or cognitive needs</li> </ul> |