

# Maryland State Medicaid HIT Plan

*Version 3.0*

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## Introduction

## Introduction

### 1. Purpose

The State Medicaid Health Information Technology Plan (SMHP) describes the activities Maryland will be engaged in relative to implementing Section 4201 Medicaid provisions of the American Recovery and Reinvestment Act (ARRA). These activities will fall into three main areas:

1. *Administer the incentive payments* to eligible professionals (EPs) and hospitals (EHs);
2. *Conduct adequate oversight of the program*, including tracking meaningful use by providers; and
3. *Pursue initiatives to encourage the adoption of certified electronic health record (EHR) technology* to promote health care quality and the exchange of health care information.

This document will describe how Maryland intends to:

- Administer the EHR incentive payments to eligible providers;
- Monitor EHR incentive payments to eligible providers; and
- Coordinate all ongoing health IT (HIT) initiatives including: the Medicaid EHR Incentive Program, statewide health information exchange (HIE) initiatives and Regional Extension Centers (REC) supported by the Office of the National Coordinator for Health Information Technology (ONC) and other programs.

The SMHP consists of the following main sections:

- Section A: Maryland's "As-Is" HIT Landscape
- Section B: Maryland's "To-Be" HIT Landscape
- Section C: Maryland's Medicaid EHR Incentive Program Implementation Plan
- Section D: Maryland's Audit Strategy
- Section E: Maryland's HIT Roadmap

## Introduction

### 1.1 *Overview of the SMHP*

The Department of Health and Mental Hygiene (DHMH) will administer the State's Medicaid EHR Incentive Program. DHMH developed this SMHP and is also responsible for developing the Implementation Advanced Planning Document (I-APD). This SMHP describes Maryland's approach to administering and monitoring the EHR Incentive Program.

DHMH convened an EHR Planning and Implementation Committee (the Committee) to begin planning for the EHR Incentive Program. These meetings began in January 2010 when the Committee aided in the completion of Maryland's Planning – Advanced Planning Document (P-APD). Up through the approval of Version 1.2 of the SMHP (December 20, 2011), the Committee has made significant progress in developing its processes for administering and overseeing the EHR Incentive Program. The Committee has reviewed and attempted to address every question posed by CMS in its SMHP template.

Further, the Committee expanded its membership to include auditing and implementation expertise from DHMH's Office of Health Services (OHS) in May of 2011. Sub-committee meetings have also been established to address functional areas as the need arises, such as Health Information Exchange (HIE) administrative funding coordination with the expertise of the Maryland Health Care Commission (MHCC), Maryland's HIE and Regional Extension Center (REC), the Chesapeake Regional Information System for our Patients (CRISP).

This document describes Maryland's vision and process for implementing, administering and overseeing key aspects of the program and describes the Roadmap that will take Maryland from the present or prior to the EHR Incentive Program ("As Is") to the future HIT vision ("To Be"). The sections of the SMHP are structured as follows.

Section A, the State's HIT "As Is" Landscape, acts as a baseline prior to implementation of the EHR Incentive Program, describing the current extent of EHR adoption by professionals and hospitals and their readiness and willingness to participate in the EHR Incentive Program. This section also describes other aspects of the State's HIT landscape including coordination with other organizations on HIT. This section also provides updated information on Medicaid providers adopting, implementing, and upgrading certified EHR systems.

Section B, the State's HIT "To Be" Landscape, describes Maryland's vision for HIT and HIE. Medicaid works closely with the MHCC and CRISP to align Health IT plans. In this section, DHMH also discusses plans for the MMIS and Medicaid IT Architecture (MITA) system changes as they relate to administering the incentive program, making payments, and collecting and

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analyzing the data that will become available once meaningful use is in place, e.g., clinical quality measures.

Section C, the State's Implementation Plan, describes the processes DHMH will employ to ensure that eligible professionals and hospitals have met Federal and State statutory and regulatory requirements for the EHR Incentive Program. As part of the planning process DHMH has created a process flow that follows providers through every stage of the incentive payment program process from educating providers about the program to encouraging them to register at the Medicare and Medicaid EHR Incentive Program Registration and Attestation System (R&A) and apply in Maryland's Registration and Attestation System, also known as eMIPP. The process flow also describes how providers are approved for payment and informed that they will receive a payment. Finally, oversight mechanisms and the process for receiving future payments are described along with the process for educating, informing and providing technical assistance to providers to ensure they remain in the incentive program and become meaningful users.

Section D, the State's Audit Strategy, describes the preliminary audit, controls and oversight strategy for the State's Medicaid EHR Incentive Program. Many of the pre-payment controls employed are based on system edits and checks within eMIPP. The eMIPP system will allow providers to apply for the incentive program and make all required attestations. The system edits and checks will generate lists of providers denied and approved for the incentive payment. For the initial years of the Program, Maryland will leverage existing Medicaid program integrity resources and other program integrity agencies and offices around the State to address fraud and abuse. Maryland is in the process of designing an RFP for post-payment auditing for Meaningful Use and future Adopt, Implement, and Update (AIU) attestations.

Section E is the State's HIT Roadmap, which describes the strategic plan and tactical steps that DHMH will take to successfully implement the EHR Incentive Program and its related HIT and HIE goals and objectives. This includes updates to previous years' annual benchmarks and results, which can be measured for each programmatic goal related to provider adoption, quality, and the administrative processes. This section describes the measures, benchmarks, and targets that will serve as indicators of progress in achieving overall program goals.

### **1.2**      *About this Document*

The SMHP will be a "living" document and will be reviewed and updated annually. Revisions will be submitted to the Centers for Medicare and Medicaid Services (CMS) for its approval. The most current approved version will be available at both the Maryland Health Care Commission (MHCC) website: [http://mhcc.dhmd.maryland.gov/hit/ehr/Pages/ehr\\_main.aspx](http://mhcc.dhmd.maryland.gov/hit/ehr/Pages/ehr_main.aspx)

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and the Maryland Medicaid EHR Incentive Program website:  
<https://mmcp.dhmh.maryland.gov/ehr/SitePages/Home.aspx>

### *1.3 Public Input*

The State solicited public input and stakeholder engagement on the development of the Medicaid EHR incentive program as part of discussions related to HIE and HIT in Maryland and as part of the regularly scheduled Medicaid meetings with stakeholders and advocates. Comments will be accepted on an ongoing basis. Comments should be directed to [dhmh.MarylandEHR@maryland.gov](mailto:dhmh.MarylandEHR@maryland.gov) with the subject of *SMHP Comment*. The SMHP is a living document and appropriate comments will be addressed and potentially incorporated into subsequent versions of the SMHP or as part of Medicaid operations as appropriate.

## Section A: The Maryland “As-Is” HIT Landscape

### Section A: Maryland “As-Is” HIT Landscape

Figure A.1 – Section A Questions from the CMS State Medicaid HIT Plan (SMHP) Template

Please describe the State's "As-Is" HIT Landscape:

1. What is the current extent of EHR adoption by practitioners and by hospitals? How recent is the data? Does it provide specificity about the types of EHRs in use by your State's providers? Is it specific to just Medicaid or an assessment of overall statewide use of EHRs? Does the SMA have data on EHR adoption by types of provider (e.g., children's hospitals, acute care hospitals, pediatricians, nurse practitioners, etc.)?
2. To what extent does broadband internet access pose a challenge to HIT/E in your State's rural areas? Did your State receive any broadband grants?
3. Does the State have Federally Qualified Health Center networks that have received or are receiving HIT/EHR funding from the Health Resources Services Administration (HRSA)? Please describe.
4. Does your State have Veterans Administration or Indian Health Services clinical facilities that are operating EHRs? Please describe.
5. What stakeholders are engaged in any existing HIT/E activities and how would the extent of their involvement be characterized?
6. Does the SMA have HIT/E relationships with other entities? If so, what is the nature (governance, fiscal, geographic scope, etc.) of these activities?
7. Specifically, if there are health information exchange organizations in your State, what is their governance structure and is the SMA involved? How extensive is the geographic reach and scope of participation?

## Section A: The Maryland "As-Is" HIT Landscape

Figure A.1 – Section A Questions from the CMS State Medicaid HIT Plan (SMHP) Template (cont.)

Please describe the State's "As-Is" HIT Landscape (cont.):

8. Please describe the role of the MMIS in your current HIT/E environment. Has the State coordinated their HIT Plan with their MITA transition plan and if so, briefly describe how.
9. What State activities are currently underway or in the planning phase to facilitate HIE and EHR adoption? What role does the SMA play? Who else is currently involved? For example, how are the Regional Extension Centers (RECs) assisting Medicaid eligible providers to implement EHR systems to achieve meaningful use?
10. Explain the SMA's relationship to the State HIT Coordinator and how the activities planned under the Office of the National Coordinator (ONC)-funded HIE cooperative agreement and the RECs (and local extension centers, if applicable) would help support the administration of the EHR Incentive Program.
11. What other activities does the SMA currently have underway that will likely influence the direction of the EHR Incentive Program over the next five years?
12. Have there been any recent changes (of a significant degree) to State laws or regulations that might affect the implementation of the EHR Incentive Program? Please describe.
13. Are there any HIT/E activities that cross State borders? Is there significant crossing of State lines for accessing health care services by Medicaid beneficiaries? Please describe.
14. What is the current interoperability status of the State Immunization registry and Public Health Surveillance reporting database(s)?
15. If your State was awarded an HIT-related grant, such as the Transformation Grant or a CHIPRA HIT grant, please include a brief description.

## Section A: The Maryland “As-Is” HIT Landscape

### Overview

Maryland has a number of advantages for implementing health information technology (health IT or HIT), such as the presence of early innovators, strong state leadership in the Health Information Exchange (HIE), and the creation of a State-Regulated Payer EHR Adoption Incentive Program.<sup>1</sup> Hospitals and other health care providers are actively engaged in efforts to expand HIT throughout Maryland. The State’s collaborative nature, diverse population, and relatively small size (roughly 5.7 million in 2010 according to the U.S. Census Bureau) have made it convenient for stakeholders from around the state to meet regularly to explore options for expanding HIT, and to develop policies to protect the exchange of electronic health information. Maryland is rich in geographic and cultural diversity that includes rural and inner city areas and diverse minority populations. Maryland is also home to a diverse health care community; including three Veteran Affairs (VA) medical centers; five VA clinics; and numerous nursing homes, long term care facilities, and Federally Qualified Health Centers (FQHCs).

Maryland is considered a leader in adopting HIT. Over the last five years, the State has placed considerable emphasis on advancing HIT and engaging stakeholders in planning and implementation activities. The State has a long tradition of hospital-to-hospital and hospital-to-government collaboration on projects, including the award-winning Maryland Patient Safety Center. Located in the State are three prominent regional medical systems (Johns Hopkins, MedStar, and the University of Maryland), several local hospitals belonging to national hospital systems, and a number of independent community hospitals. The three regional medical systems of Johns Hopkins, MedStar, and the University of Maryland are the founding organizations in the Chesapeake Regional Information System for our Patients (CRISP), which is a not-for-profit organization that serves as the state-designated entity in partnership with the State of Maryland to build the statewide health information exchange (HIE) and it also serves as the Regional Extension Center (REC) in Maryland.

#### **A.1.a What is the current extent of EHR adoption by practitioners and by hospitals?**

##### *Physicians – Pre-EHR Incentive Program Implementation*

To understand the pre-EHR Incentive Program EHR environment, Maryland conducted two environmental scans: (1) a preliminary survey done by selecting current Medicaid providers with patient volumes close to that required for EHR Incentive Program participation (see Appendix A) and, (2) one performed with P-APD funds by a vendor to achieve more detailed estimates (see Appendix B).

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<sup>1</sup> Electronic Health Records - Regulation and Reimbursement. HB 706. 19 May 2009. COMAR, 2009. Available at: <http://mlis.state.md.us/2009rs/billfile/hb0706.htm>.

## Section A: The Maryland “As-Is” HIT Landscape

Before implementation of the EHR Incentive Program, Maryland had roughly 16,141 physicians in active practice. These physicians treat patients in approximately 5,965 practices (2009 physician data). The number of primary care physicians is nearly 3,796 and the number of primary care practices is around 2,012. In 2010, physician EHR adoption in Maryland paralleled the nation at approximately 24 percent, though that number is closer to 20 percent for Medicaid-only providers. However, many of these EHRs did not have clinical decision support, computerized physician order entry (CPOE), e-prescribing, or results receipt and delivery functionalities. Approximately 70 percent of active physicians accept Medicaid patients and about 20 percent have adopted an EHR. Table A.1 depicts Maryland physicians, Medicaid, and EHR adoption.

**Table A.1 – Physician EHR Use**

| Physicians          | Number of Physicians (#) | EHR Adoption (#) | Overall EHR Adoption (%) | Practices (#) | Practices that have an EHR (#) | Practice EHR Adoption % |
|---------------------|--------------------------|------------------|--------------------------|---------------|--------------------------------|-------------------------|
| <b>Non-Medicaid</b> | 11,449                   | 2,677            | 23.38                    | 3,777         | 722                            | 19.12                   |
| <b>Medicaid</b>     | 4,692                    | 927              | 19.76                    | 2,188         | 297                            | 13.57                   |
| <b>Total</b>        | <b>16,141</b>            | <b>3,604</b>     | <b>22.33</b>             | <b>5,965</b>  | <b>1,019</b>                   | <b>17.08</b>            |

The primary purpose of the environmental scan conducted as part of the HIT P-APD activities, was to assess EHR adoption, provider likeliness to apply for the Medicaid EHR Incentive Program, and support needed to achieve meaningful use. The environmental scan was designed to identify how many providers might apply for the incentive, the extent of current and future EHR use among responding practices, and the concerns about EHR implementation among practices that do not currently have an EHR system in place. Surveys were sent to 297 Medicaid physicians, and Medicaid received responses from 103 physicians – a response rate of 35 percent.

A full copy of the survey findings is available in Appendix B. Physicians responding to the environmental scan reported an EHR adoption rate of approximately 37 percent. Environmental scan results indicate about 50 percent of physicians that adopted an EHR also reported using the EHR for three or more years. Environmental scan findings indicate approximately 52 percent of physicians that have not adopted an EHR plan to adopt an EHR within two years. Approximately 45 percent of physicians in the environmental scan were undecided about EHR adoption.

## Section A: The Maryland “As-Is” HIT Landscape

### *Physicians – After Year 1*

As of August 30, 2012, Medicaid approved Adopt, Implement, or Upgrade (AIU) attestations for 644 eligible providers. Assuming that roughly 2,600<sup>2</sup> providers were potentially eligible to adopt EHRs, Year 1 of the EHR Incentive Program reached 24 percent of the estimated number of eligible providers.

### *Physicians – After Year 2*

As of mid-October, 2013, Medicaid approved AIU attestations for 1,108 providers and MU Stage 1 attestations for 15 providers;<sup>3</sup> a 70 percent increase from 2012. According to CMS’s Registration and Attestation System, as shown in Table A.2, 6,224 Medicare and Medicaid providers have attested with Maryland. Since inception, 44 percent of eligible Maryland Medicare and Medicaid providers have participated in the EHR Incentive Program.<sup>4</sup>

**Table A.2 – EPs’ EHR Incentive Program Participation**

|                       | EPs Registered # | EPs Registered % | EPs Paid # | EPs Paid % |
|-----------------------|------------------|------------------|------------|------------|
| <b>Medicare</b>       | 4,680            | 33               | 5,101      | 36         |
| <b>Medicaid</b>       | 2,117            | 15               | 1,123      | 8          |
| <b>Total Maryland</b> | 6,804            | 48               | 6,224      | 44         |

*Note: the % of EP Registered/ Paid was calculated using the total number of health care providers as denominator.<sup>1</sup>*

Using CMS’ Business Intelligence Registration and Payment reports, Medicaid created two county-level maps to analyze eligible providers’ participation in Maryland’s EHR Incentive Program. As Figure A.1 shows, Baltimore City, and two rural counties, Caroline and Worcester have the highest registration rates. The high participation rate in Baltimore city is expected given the high concentration of providers and Medicaid population. The high registration rates in the two rural counties might result from the relative low number of eligible providers.

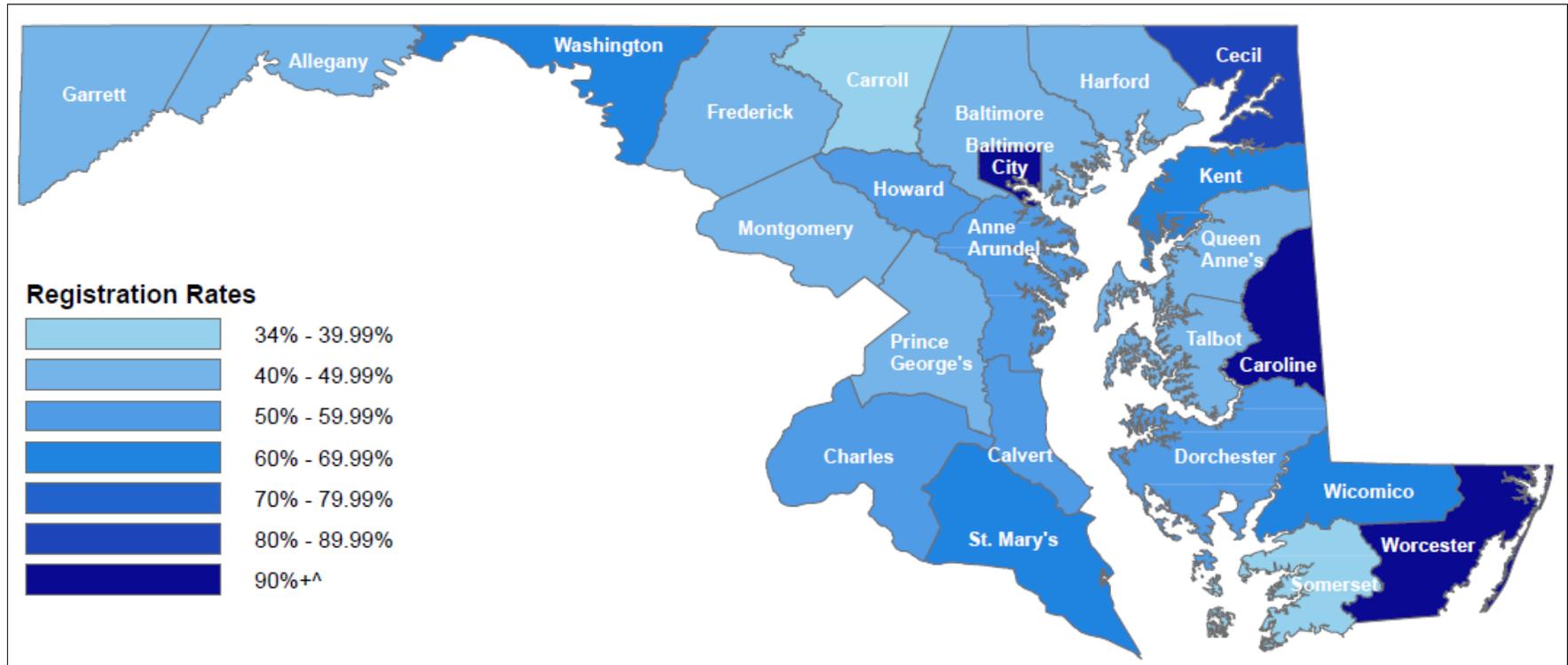
<sup>2</sup> Using the national estimated provided by CMS in the *Proposed Rule* (Table 35), around 30 percent of Medicaid providers are eligible to participate in the program. Taking 30 percent of the difference between the estimated number of Medicaid providers (2,677) and the total number of Medicaid providers (11,449), this leaves 2,632 providers who are eligible to participate but have not adopted EHR.

<sup>3</sup> Numbers were based on data from the CMS’s Registration and Attestation System as of October 18, 2013.

<sup>4</sup> Using ONC’s eligible healthcare provider number—14,307 in June, 2013.

Section A: The Maryland “As-Is” HIT Landscape

Figure A.1 – Registration Rates for the EHR Incentive Program by Eligible Professional\* in Maryland as of 2013\*\* (by County)<sup>5</sup>



Note: \* SK&A may define some hospital-based physicians as “Eligible Professionals” for the EHR Incentive Programs; the EHR Incentive Programs distinguish between “Eligible Professionals” and “Eligible Hospitals.”

\*\*Data limitations required calculations that mixed 2012 and 2013 data. Adjusting the 2012 health care provider data to 2013 levels—by a factor derived from Young, Chaudry, Thomas, and Dugan (2013)—creates little change in the calculated results. See Appendix H.

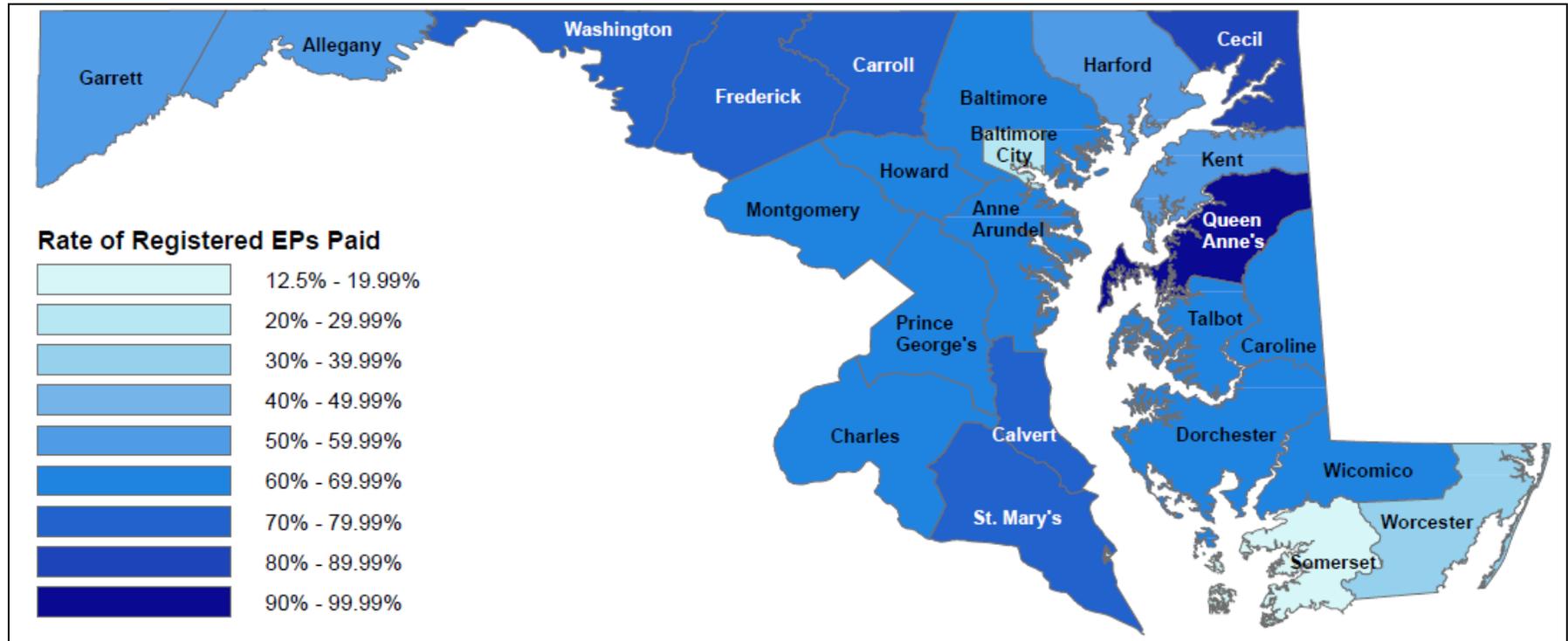
<sup>^</sup>Due to limitations of the data (e.g. perhaps limited sample size), overestimations in some counties may be possible. See Appendix H

<sup>5</sup> Author’s calculations based on EP and EH EHR registration report (Centers for Medicaid & Medicare Services, 2013a), and SK&A 2012 data in the Health IT Dashboard (Office of the National Coordinator, 2013). Detail methodology is in Appendix H.

## Section A: The Maryland “As-Is” HIT Landscape

Figure A.2 shows the percent of registered providers receiving incentive payments. Less than 30 percent of registered providers have received an incentive for Baltimore City and Worcester County. On average, almost 50 percent of providers who have registered in the State have received an incentive payment.

**Figure A.2 –Rates of Registered EPs in Maryland Paid by the EHR Incentive Program as of 2013 (by County)<sup>6</sup>**



<sup>6</sup> Author's calculations based on EP and EH EHR registration report (Centers for Medicaid & Medicare Services, 2013a). Detail methodology is in Appendix H.

## Section A: The Maryland “As-Is” HIT Landscape

### *Preparing for Year 3*

In Year 2, Maryland conducted another environmental scan to reassess the EHR adoption and Meaningful Use rate among two populations—providers that are likely eligible but have not yet participated in Maryland’s EHR Incentive Program and providers who have attested for AIU with Medicaid, but have not attested for Meaningful Use. The purpose of surveying non-participating providers is to identify their (1) likelihood to participate, (2) concerns about EHR implementation, and (3) the type of assistance they would like in order to better prepare them for participation. For those providers who have already attested for AIU, Medicaid wanted to know about their EHR experience, satisfaction with their EHR system, barriers to adoption and use, and the type of support they would need to achieve Meaningful Use. Because Medicaid is still analyzing results from this survey, only summary measures are available at this time. Where applicable, we have included these measures within this SMHP update. The full report will be submitted with future updates to the SMHP.

Medicaid sent surveys to 5,179 non-participating Fee for Service (FFS) providers and received valid responses from 521 solo and group providers.<sup>7</sup> In order to select a representative sample, Medicaid stratified the population by provider types eligible to participate in the EHR Incentive Program. For each provider type, Medicaid either selected all or a random sample of the population to be surveyed. As a result, Medicaid selected all vision care providers<sup>8</sup> (N=445), dental providers (N=1,228), nurse midwives (N=157), nurse practitioners (N=1,435) and a random sample of physicians (n=1,920, N=26,043). Survey results indicate that 75 percent of those providers responding to the survey have adopted or plan to adopt EHR technology in the next three years.

To survey providers who had successfully attested with Maryland Medicaid for AIU, Medicaid identified unique email addresses listed during attestation. After de-duplicating addresses that resulted from a single contact attesting for groups using the group proxy method, Medicaid arrived at 385 unique contacts from an initial total of 1,015 unique providers. Sending survey requests to all 385 unique contacts, we received 140 responses -- a response rate of 36 percent. Environmental scan results reveal that 73 percent of the EHR adopters have used the system over the past year and 79 percent of the participants indicated the intention to attest for Meaningful Use in 2013-2015.

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<sup>7</sup> Ten percent of all providers surveyed responded, resulting in a statistically significant sample (P>0.05); however, the survey did not produce statistically significant results within provider type subgroups.

<sup>8</sup> As a result of a change to our State Plan, Maryland moved optical services under the category of physician services, thus making optometrists eligible for the Medicaid EHR Incentive Program.

## Section A: The Maryland “As-Is” HIT Landscape

### *Hospitals– Pre-EHR Incentive Program Implementation*

To estimate the use of HIT among Maryland hospitals, the Maryland Health Care Commission (MHCC) conducted a series of surveys, the most recent of which was completed in August 2010. For details on the most recent survey, see Appendix C. Maryland has approximately 46 acute care hospitals and most hospitals have some level of HIT in their facility. This varies from a fully functional EHR to a limited EHR that may only be used in a few departments. According to the survey conducted in 2010, EHR adoption is reported at around 81 percent with varying functionality<sup>9</sup>:

- 55 percent are fully implemented
- Nearly 68 percent have Computerized Physician Order Entry (CPOE)
- Roughly 79 percent have electronic medication administration record
- Approximately 57 percent have bar code medication administration
- Nearly 43 percent use infection surveillance software
- Almost 28 percent e-prescribe to a community pharmacy

The ability to share health information electronically with community providers improves care coordination by delivering information to the provider when it matters most – at the point of care. About 50 percent of hospitals reported exchanging some patient information electronically with providers in their service area. As of September, 2012 the HIE, CRISP, currently receives patient demographic data feeds from all 46 acute care hospitals in the state, and over 90 clinical data feeds from hospitals, long term care facilities, and other large radiology centers and laboratories.

### *Hospitals – After Year 1*

As of August 30, 2012, Medicaid approved attestations for 19 of the State’s 47 eligible hospitals. Of these, 13 (68 percent) attested to have adopted a certified EHR, and 6 (32 percent) selected Meaningful Use for their first year of participation.

While the number of Maryland hospitals adopting, implementing, and upgrading and meaningfully using certified EHR technology has increased, so has the number of hospitals participating in and utilizing the HIE. Table A.3 shows the progress Maryland has made towards connecting hospitals to the HIE and the types of data available within the HIE.

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<sup>9</sup> Survey coders grouped functionality into these general bins based on responses, thus percentages represent estimates of functionality.

## Section A: The Maryland “As-Is” HIT Landscape

**Table A.3 – HIE Key Metrics as of October, 2013**

| Area                                   | Result 2012 | Result 2013 |
|--|-------------|-------------|
| Hospitals Connected                    | 48*         | 46          |
| Live Labs and Radiology Centers        | 5           | 5           |
| Live Hospital Clinical Data Feeds      | 61          | 98          |
| Identities in the Master Patient Index | 3.3 million | 6.7 million |

\* Includes 46 acute care hospitals and two specialty hospitals.

### Hospitals – After Year 2

Since program inception, as of October, 2013, Medicaid approved a total of 41 hospital attestations, 37 of which were from unique hospitals. According to the 2013 Health IT Assessment conducted by the MHCC, as of 2012, over 80 percent of Maryland hospitals had received incentive payments, totaling \$67.9 million, either through Medicaid, Medicare or both.<sup>10</sup> Overall, 41 hospitals in Maryland had attested to receive an incentive and 25 of them had achieved Meaningful Use Stage 1. Table A.4 lists the number and percent of acute-care hospitals adopting in Maryland by year.

**Table A.4 – EHR Adoption Among Maryland Acute Care Hospitals**

| Year | #  | %  |
|------|----|----|
| 2008 | 34 | 77 |
| 2009 | 38 | 81 |
| 2010 | 41 | 89 |
| 2011 | 41 | 89 |
| 2012 | 41 | 89 |

### A.1.c Types of EHRs in use by the State’s physicians

Based on results from a survey conducted in 2009-2010 (See Appendix A), GE Centricity was the most-frequent company cited from which providers purchased their EHR systems (n=5; 38 percent). Other companies include Allscripts and E-Clinical Works. There does not appear to be

<sup>10</sup> The full report is available at [http://mhcc.dhmd.maryland.gov/hit/Documents/2013\\_hospital\\_health\\_it\\_assessment.pdf](http://mhcc.dhmd.maryland.gov/hit/Documents/2013_hospital_health_it_assessment.pdf).

## Section A: The Maryland “As-Is” HIT Landscape

a dominant EHR system in use. Similarly, 83 percent of providers report a unique vendor implemented their EHR. The most common vendor, Allscripts, implemented systems in seven (24 percent) practices. It is unknown at this time the types of EHRs used by non-Medicaid providers.

Similar to the previous environmental scan findings, our Year 2 survey results also indicate there is no single dominant EHR product adopted among Medicaid providers. The most frequent cited company is E-Clinical Works (n=28; 24 percent). Other most-frequent vendors include Amazing Charts and Practice Fusion.

As part of Maryland’s Regional Extension Center (REC) education and outreach agreement with Medicaid, the REC collects and shares data with Medicaid on the practices they serve. The REC records the primary EHR used by providers participating in the Medicare and Medicaid EHR Incentive Program. Table A.5 lists the primary EHR for practices participating in the REC program. Consistent with the survey results, the three most frequent vendors cited in the environmental scan are also listed in the top 10 primary EHR for providers participating in the REC program.

The primary EHR in use by hospitals in Maryland are still unclear. However, the MHCC is attempting to collect this data from hospitals, which, if available, will be published in the 2014 hospital health IT assessment report.

**Table A.5– Primary EHR for Practices Participating in Maryland’s REC Program, Comparing 2012 to 2013(as of October 30, 2013)**

| Primary EHR Vendor                                | 2012             |                 |             | 2013             |                 |             |
|---|------------------|-----------------|-------------|------------------|-----------------|-------------|
|   | Existing EHR Yes | Existing EHR No | Grand Total | Existing EHR Yes | Existing EHR No | Grand Total |
| <b>NextGen Healthcare Information Systems Inc</b> | 12               | 4               | 16          | 80               | 157             | 237         |
| <b>eClinicalWorks</b>                             | 20               | 32              | 52          | 112              | 57              | 169         |
| <b>GE</b>   | 2                | 26              | 28          | 155              | 7               | 162         |
| <b>Allscripts</b>                                 | 27               | 9               | 36          | 33               | 125             | 158         |
| <b>Amazing Charts</b>                             | -                | -               | -           | 38               | 23              | 61          |
| <b>Quest Diagnostics</b>                          | -                | -               | -           | 4                | 57              | 61          |
| <b>Practice Fusion</b>                            | 10               | 7               | 17          | 13               | 43              | 56          |
| <b>e-MDs</b>                                      | 1                | 2               | 3           | 40               | 15              | 55          |
| <b>Vitera Healthcare Solutions</b>                | -                | -               | -           | 51               | 0               | 51          |
| <b>McKesson</b>                                   | 1                | 0               | 1           | 13               | 20              | 33          |
| <b>BizMatics EHR</b>                              | -                | -               | -           | 22               | 7               | 29          |

## Section A: The Maryland “As-Is” HIT Landscape

|  |    |    |    |    |    |    |
|--|----|----|----|----|----|----|
| Connexin   | -  | -  | -  | 16 | 11 | 27 |
| Epic   | 7  | 2  | 9  | 16 | 10 | 26 |
| Greenway Medical Technologies Inc                | -  | -  | -  | 15 | 8  | 23 |
| DigiChart  | 1  | 4  | 5  | 14 | 7  | 21 |
| Athenahealth                                     | 0  | 3  | 3  | 11 | 2  | 13 |
| SuiteMed LLC                                     | 0  | 1  | 1  | 5  | 8  | 13 |
| SOAPware Inc                                     | 3  | 2  | 5  | 4  | 4  | 8  |
| Glenwood Systems                                 | -  | -  | -  | 5  | 2  | 7  |
| ADP  | -  | -  | -  | 6  | 0  | 6  |
| Cyfluent   | -  | -  | -  | 0  | 5  | 5  |
| eCastSoftware                                    | 0  | 2  | 2  | 5  | 0  | 5  |
| Other  | 10 | 13 | 23 | 1  | 4  | 5  |
| Conceptual MindWorks Inc                         | 0  | 2  | 2  | 4  | 0  | 4  |
| DrFirst  | -  | -  | -  | 4  | 0  | 4  |
| Elekta AB  | -  | -  | -  | 0  | 4  | 4  |
| Meditab  | -  | -  | -  | 0  | 4  | 4  |
| CompuGroup Medical                               | -  | -  | -  | 2  | 1  | 3  |
| Document Storage Systems Inc                     | -  | -  | -  | 3  | 0  | 3  |
| Drchrono   | -  | -  | -  | 3  | 0  | 3  |
| Oxbow  | -  | -  | -  | 3  | 0  | 3  |
| Cerner   | -  | -  | -  | 0  | 2  | 2  |
| Infor*Med Corporation                            | -  | -  | -  | 0  | 2  | 2  |
| Intivia Inc                                      | -  | -  | -  | 2  | 0  | 2  |
| MTBC (Medical Transcription Billing Corporation) | -  | -  | -  | 0  | 2  | 2  |
| NueSoft Technologies Inc                         | -  | -  | -  | 0  | 2  | 2  |
| Aprima   | 1  | 0  | 1  | 0  | 1  | 1  |
| ASP.MD Inc                                       | -  | -  | -  | 0  | 1  | 1  |
| HealthFusion Inc                                 | -  | -  | -  | 1  | 0  | 1  |
| iSalus Healthcare                                | 1  | 0  | 1  | 0  | 1  | 1  |
| Medical Informatics Engineering                  | -  | -  | -  | 1  | 0  | 1  |
| Medical Office Online                            | -  | -  | -  | 1  | 0  | 1  |
| Office Ally                                      | 0  | 1  | 1  | 1  | 0  | 1  |
| OptumInsight                                     | -  | -  | -  | 1  | 0  | 1  |
| AdvancedMD                                       | 0  | 2  | 2  | -  | -  | -  |
| Allscripts-Misys                                 | 0  | 1  | 1  | -  | -  | -  |

## Section A: The Maryland “As-Is” HIT Landscape

|                       |     |     |     |     |     |       |
|-----------------------|-----|-----|-----|-----|-----|-------|
| Care360 (Quest)       | 8   | 2   | 10  | -   | -   | -     |
| Eclipsys              | 0   | 1   | 1   | -   | -   | -     |
| Greenway Prime Suite  | 1   | 3   | 4   | -   | -   | -     |
| Intergy               | 0   | 5   | 5   | -   | -   | -     |
| Lytec MD EMR          | 1   | 0   | 1   | -   | -   | -     |
| Medisoft Clinical EMR | 1   | 0   | 1   | -   | -   | -     |
| Office Practicum      | 1   | 2   | 3   | -   | -   | -     |
| Practice Partner      | 1   | 1   | 2   | -   | -   | -     |
| Quest 360 EHR         | 15  | 4   | 19  | -   | -   | -     |
| Sage                  | 0   | 5   | 5   | -   | -   | -     |
| <b>Grand Total</b>    | 134 | 164 | 298 | 685 | 592 | 1,277 |

### A.1.d Is it specific to just Medicaid or an assessment of overall statewide use of EHRs?

The previous environmental scan data on EHR use focused on the Medicaid and hospital population when estimating EHR adoption rates. However, a Maryland Board of Physicians licensure survey conducted by the MHCC in 2008-2009 found that roughly 23 per cent of providers in the State had adopted an EHR.<sup>11</sup>

The Year 2 environmental scan focused on two groups of Medicaid eligible providers—providers who have at least attested A.I.U. with Medicaid and who have not participated in the EHR Incentive Programs. However, among non-participated providers, 30 percent of them are interested in participating with Medicare’s EHR Incentive Program over Medicaid’s.

### A.1.e Data and estimates on eligible providers broken out by types of provider

Among the sample of providers potentially eligible to participate in the EHR Incentive Program in 2009 and within practice types, about 26 percent of community health centers had plans to implement an EHR (n=39). When only non-urban centers are considered, this percentage drops to 7.69 percent (n=26). Only about 11 percent of non-hospital dental providers had plans (n=18), 33 percent of non-hospital based pediatricians (n=48) and 43 percent of non-hospital based physicians (n=75).<sup>12</sup>

<sup>11</sup> See: Maryland Health Information Technology State Plan FY 2011- FY2014. Accessed at: [http://mhcc.maryland.gov/electronichealth/hit\\_state\\_plan/HITStatePlan.pdf](http://mhcc.maryland.gov/electronichealth/hit_state_plan/HITStatePlan.pdf) on June 6, 2011.

<sup>12</sup> See Appendix A.

## Section A: The Maryland “As-Is” HIT Landscape

### A.1.f Does the SMA have data on EHR adoption by types of provider (e.g. children’s hospitals, acute care hospitals, pediatricians, nurse practitioners, etc.)?

To estimate baseline EHR adoption rates by provider types, in 2009, DHMH performed an MMIS query of Medicaid providers who may meet the federal criteria for EHR incentives as defined by ARRA. Providers deemed potentially eligible based on patient volume estimates received a survey, the results of which are available in Table A.6. The full results of the survey are available in Appendix A.

In 2009’s environmental scan, FQHCs had the highest percentage of practices within their provider type using an EHR. At the time of the survey, Certification Commission for Health Information Technology (CCHIT) was the only EHR certifying body. Overall, a majority of practices with EHRs had CCHIT certified technology.

In 2013’s environmental scan, DHMH surveyed 5,179 non-participating providers and received valid responses from 521 solo and group providers. Among the valid sample respondents, 50.8 percent (N=264) are currently using a certified EHR system in their practice. After breaking down to provider types, as shown in Table A.6, family practice physicians have the highest percentage of EHR use within their provider type. The results also show that over 80 percent of pediatricians, nurse practitioners, and midwives within their provider types have adopted an EHR.

The overall 50.8 percent adoption rate across Maryland is statistically significant ( $P>0.05$ ); however, the survey did not produce statistically significant results within provider type due to low response rates. Thus, the results of adoption prevalence by provider types can only account for the survey respondent population and not be generalized to the total population. In addition, providers who have adopted an EHR may have a stronger incentive to fill out the survey. Given the above reasons, an overall adoption for non-participating providers by their types of practices remains unclear.

Section A: The Maryland “As-Is” HIT Landscape

Table A.6 – Percent EHR Within Provider Type

| Provider Type                                   | 2010<br>EHR User %<br>(#) | 2013<br>EHR User %<br>(#) |
|---|---------------------------|---------------------------|
| Acute Care Hospitals                            | 33.33<br>(3)              | -                         |
| Community Health Centers                        | 4.88<br>(41)              | -                         |
| Federally Qualified Health Center (FQHC)        | 66.67<br>(12)             | 100<br>(1)                |
| Hospital-owned group practice                   | -                         | 70.37<br>(19)             |
| Privately-owned group practice or partnership   | -                         | 69.77<br>(120)            |
| Other Organization Type                         | -                         | 40.74<br>(11)             |
| Physician, Pediatrician*                        | 20<br>(60)                | 84.96<br>(209)            |
| Physician, Family Practice*                     | -                         | 93.78<br>(203)            |
| Physician, other*                               | 21.88<br>(96)             | 75.37<br>(477)            |
| Dentist*  | 14.29<br>(21)             | 32.83<br>(119)            |
| Midwife*  | -                         | 90<br>(72)                |
| Certified Registered Nurse Practitioner (CRNP)* | -                         | 86.93<br>(276)            |
| Other Provider Type*                            | -                         | 68.29<br>(42)             |

\*Indicates non-hospital based individual providers.

Note: Because Medicaid surveyed different provider types in 2010 and 2013, estimates are not available for all provider types.

**A.2.a To what extent does broadband internet access pose a challenge to HIT/E in the State’s rural areas?**

Relative to most states, Maryland has a fairly extensive broadband infrastructure.<sup>13</sup> Maryland recognizes that broadband access is essential to achieving increased EHR adoption and

<sup>13</sup> Supra, fn. 1.

## Section A: The Maryland “As-Is” HIT Landscape

connecting practices to the statewide HIE. Nearly all physician practices have access to broadband and roughly 94 percent of the state’s populations are covered by broadband. Generally speaking, the lack of broadband coverage in rural areas of the state is considered to be minimal. Figure A.3 outlines existing broadband capabilities in the state and include physicians and physician practices.

A report prepared for the Maryland Health Cost and Quality Council in December 2011 by a Telemedicine Task Force investigated, among other things, the availability of high-speed broadband service.<sup>14</sup> The report noted that rural area access to broadband is a discussion held by the Rural Maryland Broadband Board. The Board is responsible for coordinating efforts to address deficiencies in infrastructure in areas of the state and for reviewing and approving disbursements from the Broadband Assistance Fund, which is administered by the Department of Business and Economic Development. Detailed maps of coverage and service availability by census block are available at the Maryland Broadband Map.<sup>15</sup> Important maps are displayed below in Figures A.3-A.6

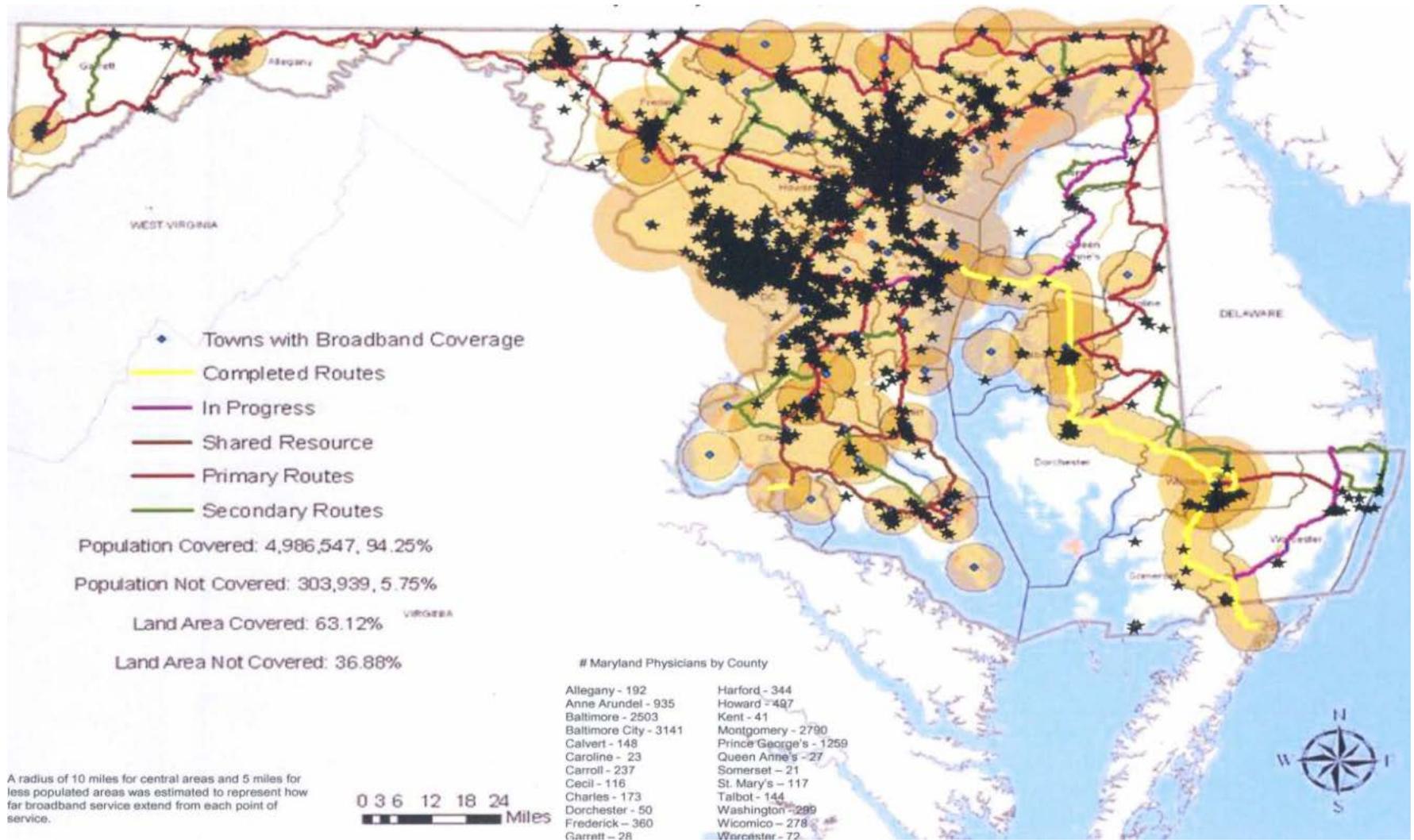
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<sup>14</sup> Telemedicine Recommendations: A report prepared for the Maryland Quality and Cost Council. December 2011. Accessed at: [http://mhcc.dhmdh.maryland.gov/hit/Telemedicine/Documents/sp.mhcc.maryland.gov/telemed/md\\_telemedicine\\_report.pdf](http://mhcc.dhmdh.maryland.gov/hit/Telemedicine/Documents/sp.mhcc.maryland.gov/telemed/md_telemedicine_report.pdf) on July 2, 2012.

<sup>15</sup> See: <http://www.mdbroadbandmap.org/Map.aspx>.

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Figure A.3 – Estimated Broadband Coverage and Physicians



## Section A: The Maryland "As-Is" HIT Landscape

Figure A.4 – Estimated Broadband Coverage and Number of Physicians

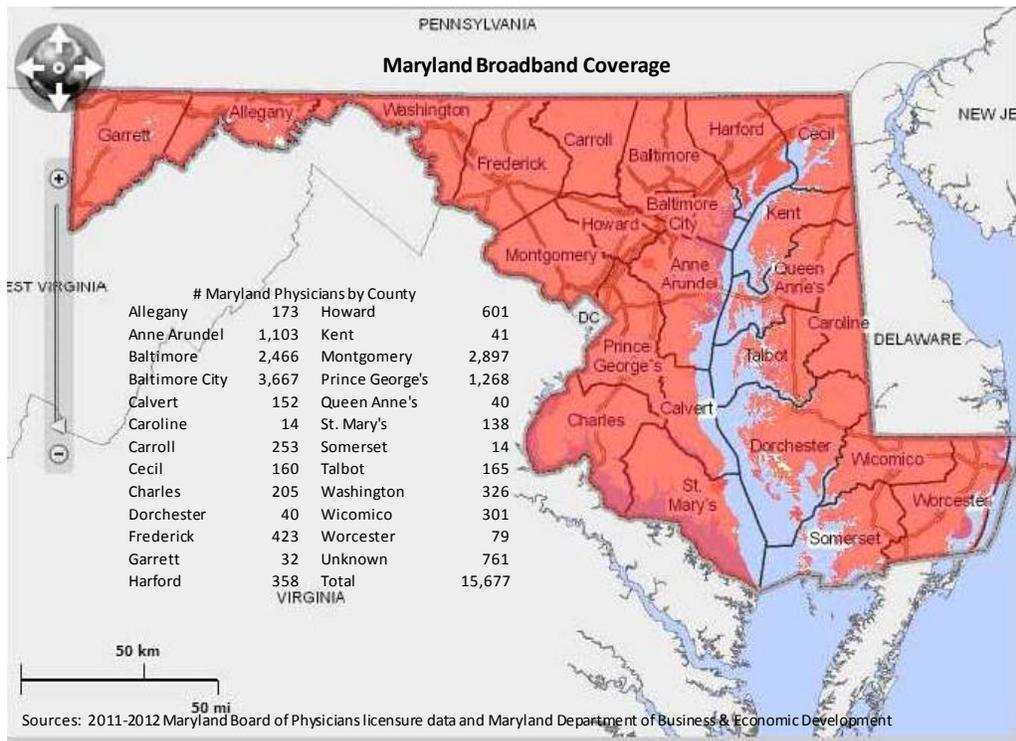
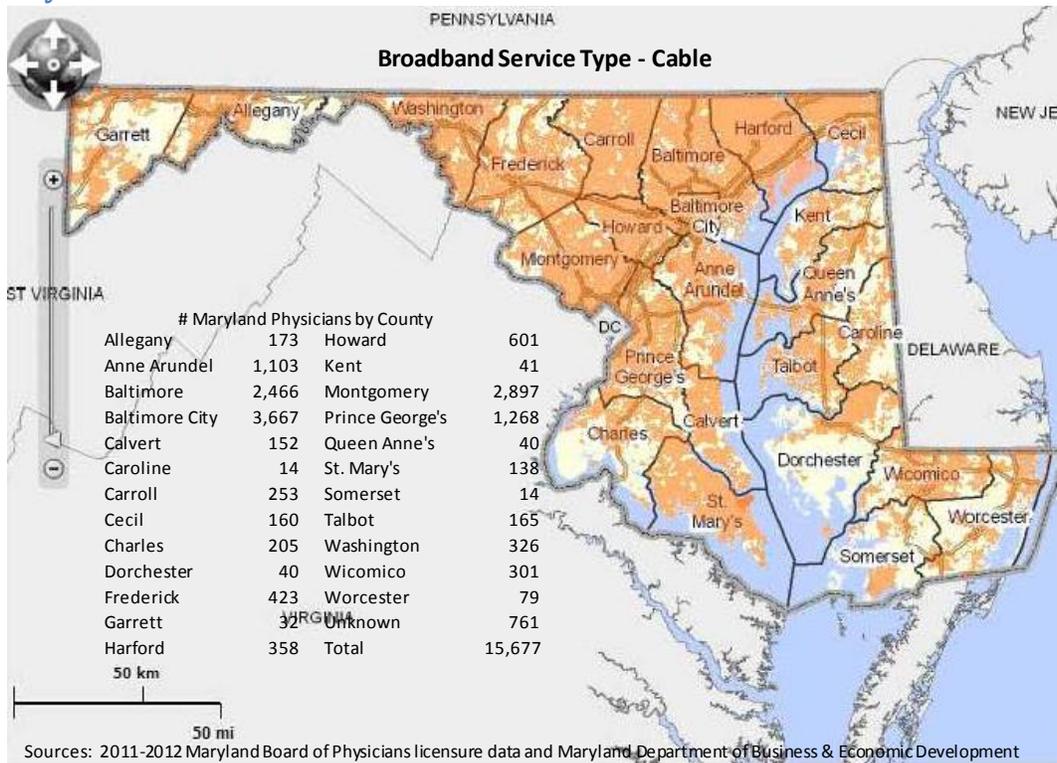
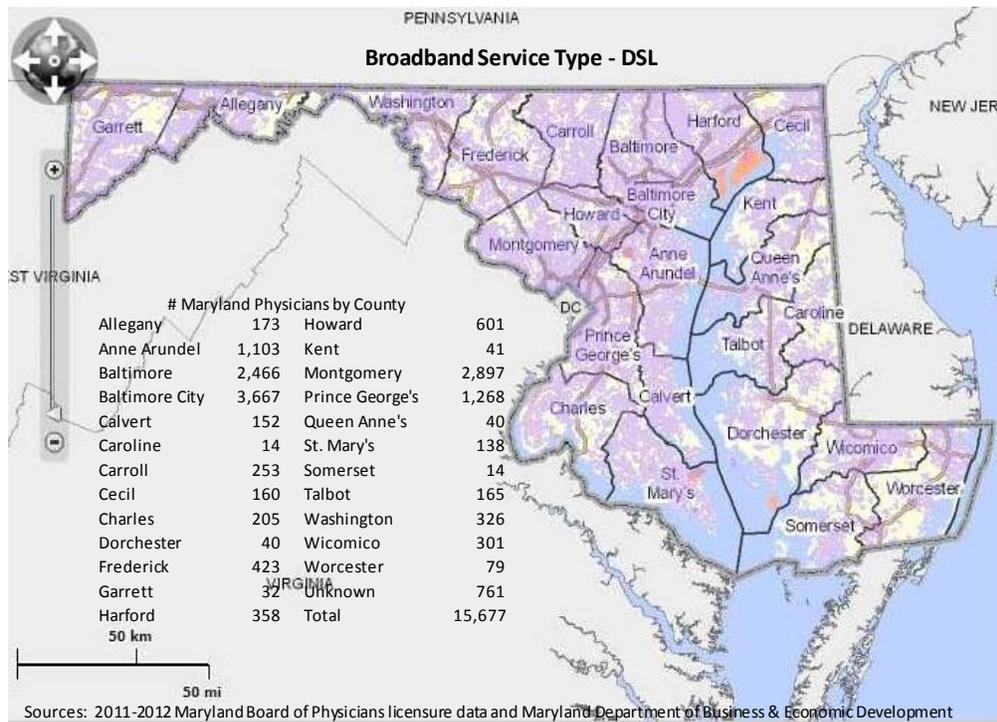


Figure A.5 – Estimated Broadband Coverage of Cable Service and Number of Physicians



## Section A: The Maryland "As-Is" HIT Landscape

**Figure A.6 – Estimated Broadband Coverage of DSL Service and Number of Physicians**



### A.2.b Did the State receive any Broadband grants?

In November 2009, the Department of Commerce’s National Telecommunications and Information Administration announced that Maryland was one of seven states to receive funding under HITECH. Maryland received about \$1.5 million for broadband data collection and mapping activities over a two-year period and almost \$480,000 for broadband planning activities over a five-year period, bringing the total grant award to approximately \$2 million.

### A.3 Does the State have Federally-Qualified Health Center networks that have received or are receiving HIT/EHR funding from the Health Resources Services Administration (HRSA)? Please describe.

Maryland’s FQHCs are recipients of funding to advance HIT from the Health Resources Services Administration (HRSA). Most recently, HRSA funded the Community Health Integrated Partnership (CHIP) with about \$1M to advance EHRs. In 1996, nine regional community health centers joined together to address a shared challenge—the growing economic and regulatory issues that tested their ability to offer accessible, high quality, and affordable health care to the state’s uninsured and low-income residents. As an agent of change to address these issues, CHIP was formed as a nonprofit Health Center Controlled Network (HCCN) that provides services for quality improvement, operational and clinical management, revenue enhancement, and health IT to its members. About three years ago, CHIP launched an EHR initiative in eight of

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the state's 16 FQHCs. These FQHCs represent 57 delivery sites throughout rural, suburban, and urban Maryland.

### **A.4 Does the State have Veterans Administration or Indian Health Service clinical facilities that are operating EHRs? Please describe.**

The VA in Maryland has deployed VistA as their EHR solution. The Baltimore and Perry Point VA Medical Centers, in addition to the Baltimore VA Rehabilitation & Extended Care Center, and five community-based outpatient clinics all work together to form a comprehensive health care delivery system for Maryland veterans. Connecting public programs to the statewide HIE is an essential part of demonstrating the vision and future of meaningful use to achieve measurable improvements in health care quality, safety, and efficiency. Discussions of VA connectivity with the statewide HIE will result in Use Case development in the near future. The strategy that will be deployed consists of utilizing the statewide HIE's system architecture team and equivalent individuals connected with VA clinics to perform a detailed evaluation of the technology that is in place and required to support data sharing.

Maryland does not have any IHS clinical facilities at this time.

### **A.5 What stakeholders are engaged in any existing HIT/E activities and how would the extent of their involvement be characterized?**

In 2006, Maryland began the process of planning for HIT/E by engaging numerous stakeholders to address fundamental policy and technology issues. The support and broad collaboration among the stakeholders was an essential first step in enabling the state to implement HIT/E and continues to be crucial to implement HIT/E in Maryland. Stakeholder engagement includes support from payers, providers, consumers, and employers. Figure A.7 represents the wide-range of stakeholders that have supported Maryland's HIT/E efforts.

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**Figure A.7 – HIE Policy Board Members Stakeholders**

| <i>Health Information Exchange Policy Board Members</i> |                           |               |  |  <b>MARYLAND HEALTH CARE COMMISSION</b> |
|---|---------------------------|---------------|--|--|
| Name  |                           | Category      | Title  | Organization   |
| 1   | Wole Akpose               | Business      | Chief Information Officer                                  | Morgan State University  |
| 2   | Salliann Alborn           | Provider      | Chief Executive Officer                                    | Community Health Integrated Partnership, Inc.  |
| 3   | Linda Aldoorj             | Public Health | Endowed Chair & Director, Associate Professor              | Herschel S. Horowitz Center for Health Literacy  |
| 4   | Jennifer Bailey           | Provider      | Director, Transformation & Reform                          | Johns Hopkins  |
| 5   | Craig Behm                | Provider      | Executive Director   | MedChi Network Services  |
| 6   | Kimberly Cammanata        | Public Health | Assistant Attorney General, Director                       | Office of the Attorney General   |
| 7   | Cathleen Casagrande       | Provider      | Privacy Officer  | Frederick Regional Health  |
| 8   | Anthony (Tony) D'Agostino | Public Health | Chief Executive Officer                                    | Health Care Data Analytics Start-up  |
| 9   | Shve Davis                | Consumer      | Physician  | Fuse Health Strategies LLC   |
| 10  | Maryjo Deering            | Consumer      | Senior Policy Advisor                                      | U.S. DHHS, Office of the National Coordinator for HIT  |
| 11  | Damen Doyle               | Provider      | Medical Director   | United Health Care - Evercare/CarePlus   |
| 12  | Adrienne Ellis            | Consumer      | Director, Maryland Parity Project                          | Mental Health Association of Maryland  |
| 13  | Brian England             | Business      | President  | British American Auto Care, Inc.   |
| 14  | Spencer Gear              | Provider      | Chief Systems Officer                                      | Mosaic Community Services, Inc.  |
| 15  | Melvin Gerald             | Provider      | President & Chief Executive Officer                        | Gerald Family Care, P.C.   |
| 16  | David Hallwanger          | Consumer      | Health Care Consumer                                       | Retired from Chase Brexton Health Services   |
| 17  | Ron Hess                  | Payer         | Senior Business Analyst Consultant                         | Coventry Health Care   |
| 18  | David Horrocks            | Business      | President & Chief Executive Officer                        | Chesapeake Regional Information for our Patients   |
| 19  | Clay House                | Payer         | Vice President Architecture, Security & Strategic Sourcing | CareFirst, Inc.  |
| 20  | Ray Isian                 | Consumer      | Chief Executive Officer                                    | Darnell Associates, Inc.   |
| 21  | Jack Kemery               | Provider      | Director, EHR Integration                                  | Genesis Healthcare LLC   |
| 22  | Gunes Kuru                | Public Health | Associate Professor  | University of Maryland Baltimore County  |
| 23  | Shannah Koss              | Consumer      | President/Co-founder                                       | Koss on Care LLC/Connected Health Resources  |
| 24  | Mary Kraaj                | Consumer      | Retired Nurse Administrator                                | AARP-MD  |
| 25  | Shve Kravel               | Provider      | President, Johns Hopkins Community Physicians              | Johns Hopkins  |
| 26  | Traci LaValle             | Provider      | Vice President, Financial Policy & Advocacy                | Maryland Hospital Association  |
| 27  | Luigi Leblanc             | Business      | Vice President of Technology                               | Zane Networks, LLC   |
| 28  | Tom Lewis                 | Provider      | Chief Information Officer                                  | Primary Care Coalition of Montgomery County, MD  |
| 29  | Munty Magee               | Public Health | Assistant Attorney General                                 | MHEMS  |
| 30  | Anumani Mansundaram       | Provider      | Director, Center for Connected HIE                         | Adventist Healthcare   |
| 31  | Paul Messino              | Public Health | Chief, Health IT Policy                                    | Maryland Department of Health and Mental Hygiene   |
| 32  | Catherine Percy           | Payer         | Privacy and Security Officer                               | Kaiser Permanente (KPHP-MAS)   |
| 33  | Sarah Posner              | Consumer      | Consumer   | Retired from Attorney General's Office, CT   |
| 34  | Debra Roper               | Business      | Director, Ambulatory Information Systems                   | Anne Arundel Health System   |
| 35  | Amanda Tomko              | Consumer      | Chief Executive Officer                                    | Potomac Physician Associates   |
| 36  | Wendy Utz                 | Provider      | Chief Executive Officer                                    | Achieve Health Services, LLC   |
| 37  | Colin Ward                | Provider      | Executive Director   | Greater Baltimore Health Alliance (ACO)  |
| 38  | Kathryn Whitmore          | Business      | Founder & Managing Principal                               | STS Consulting Group, LLC  |
| 39  | Cheri Wilson              | Public Health | Faculty Research Associate/Program Director                | Johns Hopkins Bloomberg School of Public Health  |
| 40  | Jennifer Witten           | Consumer      | Senior Government Relations Director                       | American Heart and Stroke Association  |
| 41  | Lucy Wilson               | Public Health | Chief Surveillance, Infection Prev, Outbreak Res           | Department of Health and Mental Hygiene, IDEOR   |
| 42  | Marisa Wilson             | Business      | Assistant Professor/Director of Masters Programs           | University of Maryland School of Nursing   |

*Last updated 10/04/2013*

### A.6 Does the SMA have HIT/E relationships with other entities? If so, what is the nature (governance, fiscal, geographic scope, etc) of these activities?

The Maryland Department of Health and Mental Hygiene works closely with the state-designated HIE and Regional Extension Center (REC), both of which are overseen by CRISP, and the State's public health office, the Infectious Disease and Environmental Health Administration (IDEHA).

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The Director of the Office of Planning holds a seat on the HIE Policy Board as does the Chief for Health IT Policy within the Office of Health Services. The responsibilities of HIE Policy Board members include the development and recommendation of policies for privacy and security of protected information exchanged through an HIE operating in Maryland. In addition, the EHR Team meets monthly with the REC to discuss education and outreach and continues to work with the HIE and MHCC to develop plans for the use of EHR administrative funds. The EHR Team is working with the REC to expand their outreach efforts to provide assistance to Medicaid providers potentially eligible for the EHR Incentive Program. By leveraging CRISP's involvement in HIT and HIE infrastructure and expansive provider outreach program for the REC program, DHMH hopes to both reach a large number of providers without having to duplicate current outreach activities and improve the uptake of HIE connectivity and use.

Understanding that both Medicare and Medicaid providers and hospitals participating in the EHR Incentive Program must work through Public Health to fulfill public health meaningful use reporting requirements, the Department is in constant communication with Public Health and the Office of Information Technology (OIT) to monitor and assist with scheduling testing and continuous data submission. To help prepare the Public Health Agency for the production of submitted public health data, DHMH has built in funding in the State's I-APD.

The partnership with Public Health and OIT has led to the development of a web-based tool to capture physician and hospital intent to submit public health data to meet Meaningful Use. In addition, the web tool records the status of the submission (failed or passed) as well as whether the physician or hospital has submitted a test file, claimed an exclusion, or is in continuous submission. Medicaid validates the provider's status and sends acknowledgement letters through the web-based tool.

### **A.7 Specifically, if there are health information exchange organizations in the State, what is their governance structure and is the SMA involved? \*\* How extensive is their geographic reach and scope of participation?**

In 2006, the MHCC began the process of planning the implementation of a statewide HIE by engaging stakeholders to address the fundamental policy issues and plan a course of action. State legislation passed in 2009 required the MHCC to designate a multi-stakeholder group to implement the statewide HIE; CRISP was selected based upon their response to the State's RFA. The statewide HIE makes possible the appropriate and secure exchange of data, facilitates and integrates care, creates efficiencies, and improves outcomes. MHCC's efforts are targeted towards developing a widespread and sustainable HIE that supports the meaningful use definition that qualifies providers for CMS incentive payments. This strategy also supports state

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public health programs to ensure that public health stakeholders prepare for HIE and mobilize clinical data needed for consumer engagement and health reform in Maryland.

The statewide HIE supports high quality, safe, and effective health care; make certain that data is exchanged privately and securely; ensure transparency and stakeholder inclusion; support connectivity regionally and nationally; achieve financial sustainability; and serves as the foundation for transforming health care in Maryland. The HIE architecture has already succeeded in connecting 48 hospitals (which includes all 46 acute care hospitals in the State) and will be capable of connecting roughly 7,914 physician practices throughout Maryland. The infrastructure is intended to support the meaningful use requirements and eventually connect with other HIEs regionally and nationally. The governance of the statewide HIE will guide the development of the five domains that support the grant program, establish the policies governing the exchange, and determine Use Case implementation. The statewide HIE will provide a mechanism for authorized individuals to perform sophisticated analytics and reporting for public health, bio-surveillance, and other appropriate secondary uses of data.

The statewide HIE utilizes a hybrid approach that combines a federated or distributed model, keeps the data at its source facilities or with providers, and uses the HIE as the conduit for sharing. In general, the HIE provides a roadmap for properly routing information to the appropriate location. The HIE maintains a central master patient index (MPI) and a separate registry (Registry) of the record's location within the system. The HIE is also investigating other value-added features, such as a Master Provider Index and central credentialing services. The HIE has also adapted to the emergence of Direct Messaging, offering this service to participating providers. The design also includes the use of a Health Records Bank (HRB) or Personal Health Record (PHR) that is controlled by the consumer, which does not use MPI or Registry.

The hybrid model also allows the centralization of records when directed by consumers. This does not constitute a centralized record, but rather directory information that allows records to be identified and located throughout the distributed system. The hybrid model used in Maryland is less threatening to participants and individual consumers because it is less disruptive to existing, trusted relationships between individuals and their care providers, and raises fewer regulatory issues in today's privacy and security focused regulatory environment. A disadvantage of a hybrid approach is the absence of a single database that can be queried for a variety of health services research, public health reporting, and post marketing surveillance purposes. This disadvantage can be minimized by efficient queries to the statewide HIE, long retention times on edge servers, and special purpose databases with privacy protections subject to the statewide HIEs controls and data sharing policies. A single HRB associated with

## Section A: The Maryland "As-Is" HIT Landscape

the statewide HIE can also deliver a robust resource to monitoring capability together with consumer control.

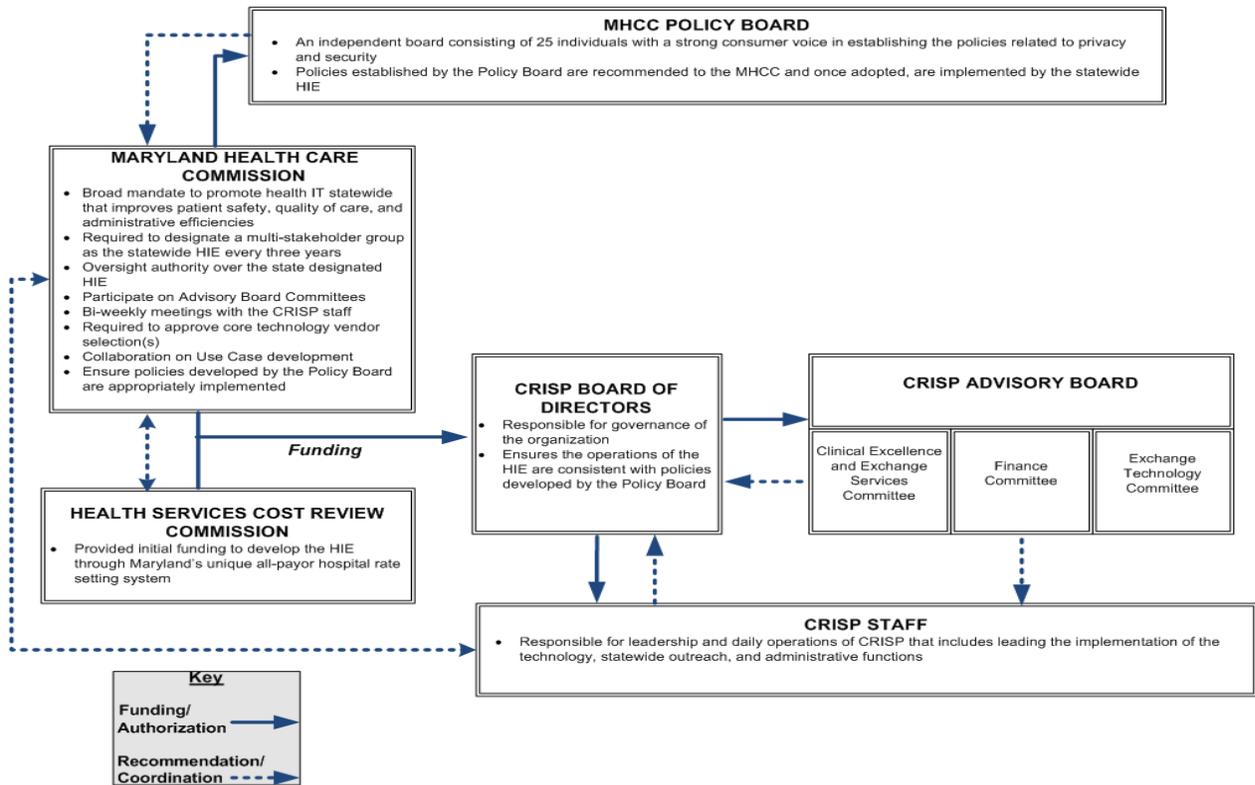
The successful development and implementation of the statewide HIE will be defined by how beneficial health information is in improving quality, reducing health care costs, and improving health outcomes. The infrastructure of the statewide HIE ensures flexibility so that the organization can respond to market changes and eventually connect providers throughout the State. The technological design of the statewide HIE is based on federally-endorsed standards and integration protocols that bridge proprietary boundaries. It is hoped that the incremental approach to building the statewide HIE will ensure sustainability for a core set of services within five years. Should additional services beyond the core services be identified by the stakeholder community or the legislature, the need for additional funding to support the development of these services would be required. In order to tip the scales of sustainability, the HIE and Medicaid are collaborating on a plan to incorporate the enhanced federal fiscal participation for administrative costs associated with the EHR Incentive Program.

Medicaid and the HIE submitted a plan in Appendix D of the IAPD to provide a package of HIE-related services, public health reporting assistance, and single sign on and context passing for those providers who are eligible for participation in the EHR Incentive Program. Medicaid and the HIE will continue to request funding to build on this plan through at least 2017. Details on progress are available in the IAPD.

The existing governance structure of the statewide HIE represents a sound model for ensuring that all providers meet the meaningful use requirements. The statewide HIE developed an integrated governance approach involving key stakeholders in addressing clinical, technical, and financial aspects of the HIE. The governance model includes a Board of Directors; an Advisory Board, which is organized into four committees, and an independent Policy Board.

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Figure A.8 – HIE Governance Model



### HIE Connectivity

In July 2010, the Health Information Technology Forum (Forum) brought together elected officials, media, and more than 200 hospital representatives to discuss information sharing and care coordination. The Forum included Governor Martin O'Malley, Lieutenant Governor Anthony Brown, and then Secretary of the Department of Health and Mental Hygiene John Colmers, along with the Health Information Technology Forum (Forum) at Sinai Hospital in Baltimore with the hospital Chief Executive Officers (CEOs) and other senior level executives from Maryland's acute care hospitals. State leaders stressed the value of the HIE and the significance of sharing information between places of care and coordinating efforts across different providers. They also mentioned that electronic health information will become even more important in an era of personalized medicine and accountable care. The Governor, Lieutenant Governor, and Secretary encouraged the CEOs to sign a Letter of Intent (LOI) conveying their hospital's intent in connecting to the statewide HIE. The statewide HIE received a signed LOI from each of the acute care hospitals in September of the same year. Hospitals selected one of four timeframes for connecting (see Table A.6 for the *Timeframes Specified by Hospitals for Connecting to the HIE*).

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**Table A.7 – Timeframes Specified by Hospitals for Connecting to the HIE**

| Timeframe for HIE Connectivity<br>(Beginning in 2010) | Percent of Hospitals | Completed? |
|---|----------------------|------------|
| Early (6 months)                                      | 38                   | Yes        |
| Mainstream (6-12 months)                              | 23                   | Yes        |
| Deferred (12-18 months)                               | 22                   | Yes        |
| Late (18-24 months)                                   | 17                   | Yes        |

Efforts to connect providers to the statewide HIE have centered on hospitals, since they are considered large suppliers of data, and will then proceed to connect ambulatory care practices. The Montgomery County hospitals were the first to begin connecting to the statewide HIE; most of these hospitals as well as Quest Diagnostics, LabCorp, RadNet, and American Radiology are connected to the HIE.

In MHCC's 2013 hospital Health IT assessment, it indicates that hospital adoption of the CRISP portal in Maryland has increased to nearly 41 percent. All Maryland hospitals submit admission, discharge, and transfer (ADT) information to CRISP, and are at various stages of data submission for laboratory results, radiology reports, and transcribed documents.

DHMH hopes to use the ease of the HIE to encourage providers to connect in order to submit public health data to the State. As functionality increases, DHMH hopes that providers will find value in services such as Direct Messaging and discharge summaries. By partnering with CRISP, DHMH will be able to clearly convey this message and provide the technical assistance to aid in connection in the near future.

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### Figure A.9 – HIE Participants as of October, 2013

| Sources of Data   | Patient Demographic | Lab Results | Radiology Reports | Electronic Reports |
|---|---------------------|-------------|-------------------|--------------------|
| <b>Hospitals</b>  |                     |             |                   |                    |
| Anne Arundel Medical Center   | ✓                   | Jun-12      | Jun-12            |                    |
| Atlantic General Hospital   | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| Baltimore Washington Medical Center                                     | ✓                   |             |                   |                    |
| Bon Secours Baltimore Health System                                     | ✓                   | Feb-13      | Feb-13            |                    |
| Calvert Memorial Hospital   | ✓                   | Dec-12      | Dec-12            | Dec-12             |
| Carroll Hospital Center   | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| Civista Medical Center  | ✓                   |             |                   |                    |
| Doctor's Community Hospital   | ✓                   | Sep-12      | Sep-13            |                    |
| Fort Washington Hospital  | ✓                   | Sep-12      | Jun-12            | Jun-12             |
| Frederick Memorial Hospital   | ✓                   | Jun-12      | Jun-12            |                    |
| Garrett County Memorial Hospital  | ✓                   | Jun-12      | Jun-12            |                    |
| Greater Baltimore Medical Center  | ✓                   | Nov-12      | Sep-12            | Sep-12             |
| Harford Memorial Hospital   | ✓                   | Jul-12      | Jul-12            | Jul-12             |
| Holy Cross Hospital   | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| Howard County General Hospital  | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| Johns Hopkins Bayview Medical Center                                    | ✓                   |             | Jun-12            | Jul-12             |
| Johns Hopkins Hospital  | ✓                   |             | Jun-12            | Jun-12             |
| Laurel Regional Hospital  | ✓                   |             |                   | Jul-12             |
| McCready Memorial Hospital  | ✓                   | Aug-12      |                   |                    |
| MedStar Franklin Square Hospital  | ✓                   | Jun-12      | Jun-12            | Nov-12             |
| MedStar Good Samaritan Hospital   | ✓                   | Jun-12      | Jun-12            | Nov-12             |
| MedStar Harbor Hospital   | ✓                   | Jun-12      | Jun-12            | Nov-12             |
| MedStar Montgomery Medical Center                                       | ✓                   | Mar-13      | Jun-12            | Jun-12             |
| MedStar Southern Maryland Hospital Center                               | ✓                   |             | Jun-12            | Jun-12             |
| MedStar St. Mary's Hospital   | ✓                   | Jun-12      | Jun-12            | Dec-12             |
| MedStar Union Memorial Hospital   | ✓                   | Jun-12      | Jun-12            | Nov-12             |
| Mercy Medical Center  | ✓                   |             | Nov-12            |                    |
| Meritus Medical Center  | ✓                   | Jul-12      | Jul-12            | Jul-12             |
| Mt. Washington Pediatric  | ✓                   | Jun-12      |                   |                    |
| Northwest Hospital Center   | ✓                   | Jun-12      | Jun-12            | Aug-12             |
| Peninsula Regional Medical Center                                       | ✓                   |             |                   |                    |
| Prince George's Hospital  | ✓                   |             |                   | Jul-12             |
| Shady Grove Adventist Hospital  | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| Sinai Hospital  | ✓                   | Jun-12      | Jun-12            | Aug-12             |
| St. Agnes Hospital  | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| Suburban Hospital   | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| Union Hospital of Cecil County  | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| University of Maryland Rehabilitation and Orthopaedic Institute         | ✓                   |             |                   | Jul-12             |
| University of Maryland Shore Medical Center at Chestertown              | ✓                   |             |                   |                    |
| University of Maryland Shore Medical Center at Dorchester               | ✓                   |             |                   |                    |
| University of Maryland Shore Medical Center at Easton                   | ✓                   |             |                   |                    |
| University of Maryland Medical Center                                   | ✓                   |             |                   | Jul-12             |
| University of Maryland Medical Center Midtown Campus                    | ✓                   |             | Apr-13            | Apr-13             |
| University of Maryland St. Joseph Medical Center                        | ✓                   | Jun-12      | Jun-12            |                    |
| Upper Chesapeake Medical Center   | ✓                   | Jul-12      | Jul-12            | Jul-12             |
| Washington Adventist Hospital   | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| Western Maryland Health System  | ✓                   | Jun-12      | Jun-12            | Jun-12             |
| <b>Long Term Care Facilities</b>  |                     |             |                   |                    |
| Erickson Oak Crest  | ✓                   | Jun-12      |                   | Jun-12             |
| Erickson Riderwood  | ✓                   | Jun-12      |                   | Jun-12             |
| Genesis Franklin Woods  | ✓                   | Jun-12      |                   |                    |
| Genesis Heritage Center   | ✓                   | Jul-12      |                   |                    |
| Lifefridge Courtland Gardens  | ✓                   | Aug-12      | Aug-12            |                    |
| Lifefridge Levindale  | ✓                   | Aug-12      | Aug-12            |                    |
| <b>Radiology</b>  |                     |             |                   |                    |
| Advanced Diagnostic Radiology   |                     |             | Nov-12            |                    |
| Advanced Radiology  |                     |             | Jun-12            |                    |
| American Radiology  |                     |             | Jun-12            |                    |
| Community Radiology   |                     |             | Jun-12            |                    |
| Maryland Open MRI   |                     |             | Nov-12            |                    |
| Progressive Radiology   |                     |             | Jun-12            |                    |
| Radiation Physics   |                     |             | Sep-13            |                    |
| Shady Grove Radiology   |                     |             | Jun-12            |                    |
| <b>Labs</b>   |                     |             |                   |                    |
| Available only from ordering providers who have authorized release to C |                     |             |                   |                    |
| LabCorp   |                     | Jun-12      |                   |                    |
| Quest   |                     | Jun-12      |                   |                    |

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### A.8 Please describe the role of the MMIS in the SMA's current HIT/E environment. Has the State coordinated their HIT Plan with their MITA transition plans and if so, briefly describe how.

The State of Maryland uses several IT systems to manage the health care environment. Primarily, these systems do not communicate with each other. However, as the State develops a new MMIS and increases functionalities in the HIE, many of these systems will either be able to connect with each other directly via the HIE or at least operate with similar data standards. Among the disparate systems, many providers are already required to submit multiple files for secondary uses by public health officials for monitoring and reporting purposes, and providers under contract with the State's Managed Care Organizations (MCO) report on many Healthcare Effectiveness Data and Information Set (HEDIS) measures.

In regards to Maryland Medicaid, the primary Medicaid IT system is the State's Medicaid Management Information System II (MMIS). The MMIS functions primarily as a payment processing system, but has evolved over the years to manage operational responsibilities associated with the management of Maryland Medicaid Program.

The State Immunization registry – ImmuNet – and public health surveillance reporting database – ESSENCE – receive numerous data submissions. Both systems, as well as electronic lab reporting, are capable of receiving data through the HIE. Maryland's immunization registry is ImmuNet operated by the Center for Immunization at the DHMH. The Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) is a web-based syndromic surveillance system designed for the early detection of disease outbreaks, suspicious patterns of illness, and public health emergencies. Discussions are currently underway to integrate ImmuNet into the statewide HIE. Data in the Immunization registry and ESSENCE is through a push model from the provider to Medicaid. The goal is to centralize the flow of these data through the statewide HIE; a Use Case has been created, and public health officials and HIE representatives are working on data standardization and reporting to facilitate transactions between providers, the HIE, and ImmuNet.

#### *MITA Transition Planning*

##### *Medicaid IT Systems*

In June 2010 the State of Maryland began an initiative to replace its almost 20 year old MMIS. The legacy system was bid as a transfer system in 1992 and was used for the claims processing needs of the State of Maryland with largely batch operations running on a mainframe processor. The legacy system is replaced with a new MMIS system based on MITA 2.0 principles and includes imaging and workflow management and a robust business rules engine to aid in creating and managing flexible benefit plans. The MMIS has the ability to process all

## Section A: The Maryland "As-Is" HIT Landscape

Medicaid claims and eliminate the duplicative adjudication of the Mental Hygiene Administration, Developmental Disabilities Administration, and Dental claims. In addition, the MMIS system supports coordination of benefits, surveillance and utilization review, Federal and management reporting, and case management that supports commercial-off the- shelf solutions, call center, document management and customer relationship management activities.

On March 1, 2012, DHMH began working with Computer Sciences Corporation (CSC) on implementing a new MMIS. The new MMIS will advance MITA maturity in every area. The new MMIS will be a web-based Service Oriented Solution consistent with MITA guidelines that has online capabilities for all users, including providers and recipients. The web portal includes the ability to view remittance and status reports; and submit and view the status of service authorization requests via web screens for authorized providers and other users. The web portal allows providers to complete, submit, resubmit, modify, check status, view deficient documentation listings, save partial applications, disenroll, or cancel applications and updates. Estimated to be operational in mid-to-late 2015, the web-based MMIS solution should connect to the State's current EHR Registration and Attestation System, eMIPP. eMIPP is the EHR solution designed by the new MMIS vendor, CSC, and is based on the same service-oriented architecture and user interface as the future MMIS.

In addition to the State Medicaid Health IT Plan (SMHP) and the accompanying Implementation Advanced Planning Document (I-APD), Maryland maintains a host of Health Information Technology documents, including our MITA transition plan, Statewide Health Information Exchange policy documents and working papers, and a Health Information Technology State Plan (HITSP).<sup>16</sup> This SMHP draws from the HITSP and the MITA transition plan. The State's ultimate goal is to use the HIE to push, pull, and query health information among the disparate State health systems.

### **A.9.a What State activities are currently underway or in the planning phase to facilitate HIE and EHR adoption? What role does the SMA play?**

#### **Facilitating the HIE**

Maryland's approach to governance is to create a coordinated governance model that emphasizes public/private partnerships. The HIE governance structure consists of the CRISP Board of Directors, the Advisory Board, and an independent Policy Board convened by the

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<sup>16</sup> The Maryland Health Care Commission (MHCC) prepares and hosts the State's HIE policy papers and implementation plans as well as the Health Information Technology State Plan at [http://mhcc.dhmh.maryland.gov/hit/hiepolicyboard/Documents/mhcc.maryland.gov/hit\\_state\\_plan\\_fy2011\\_2014\\_final\\_web\\_reportsection.pdf](http://mhcc.dhmh.maryland.gov/hit/hiepolicyboard/Documents/mhcc.maryland.gov/hit_state_plan_fy2011_2014_final_web_reportsection.pdf)

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MHCC. The Board of Directors is comprised of members appointed by the respective founding member organizations. The Advisory Board is divided into four committees. While a strong provider representation on the Advisory Board guides the CRISP Board of Directors on the development and operation of the statewide HIE, a consumer focused Policy Board establishes the policies governing data sharing. This separation of responsibilities assures that policies that govern the exchange of electronic health information are consumer oriented (see Figure 1 for an illustration of the Maryland HIE Governance Structure).

In regards to DHMH specifically, DHMH worked with the HIE to design an HIE-specific plan for use of IAPD approved administrative funds. This collaboration resulted in the requested items for HIE-related services explained in Appendix D. These services do not include Meaningful Use auditing activities.

Collectively, DHMH, MHCC, and CRISP want the HIE to provide benefits to both Medicaid providers and DHMH. Enhanced 90/10 administrative funds could be used to fulfill the following goals:

1. Develop and maintain a Medicaid provider directory;
2. Connect eligible Medicaid providers to the statewide HIE;
3. Develop an approach to electronically submit clinical quality measures to Medicaid using HIE;
4. Enable Medicaid providers to submit data to various public health registries;
5. Enable secure electronic messaging for Medicaid providers to communicate with patients;
6. Increase Medicaid provider awareness and education of meaningful use requirements related to electronic health information exchange; and
7. Provide Medicaid patients with the ability to view online, download, and electronically transmit their health information.

Medicaid discussed these options with CRISP and developed the funding and scope plan outlined in Appendix D of the IAPD. As the EHR/HIT landscape evolves, Medicaid will explore additional options for IAPD funding.

### *Board of Directors*

The statewide HIE Board of Directors is the authoritative entity overseeing the operations of the statewide HIE. The Board of Directors considers the recommendations of the Advisory Board and ensures that the policies developed by the Policy Board are implemented. The

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governance structure of the statewide HIE is fairly consistent with those implemented by other HIEs nationally. The statewide HIE bylaws provide a mechanism to support changing the composition of the Board of Directors as long as these revisions do not have a significant impact on governance, best practices, or legal considerations, such as those for tax-exempt organizations.

### *Advisory Board*

The statewide HIE operates under the guidance of an Advisory Board. The statewide HIE Advisory Board is organized into the following four committees - technology, finance, clinical excellence and exchange services, and small practice; each committee is comprised of approximately 10 to 15 members. Members are identified through a nomination process and appointed by the Board of Directors. Most of the work done by the Advisory Board is accomplished at the committee level. The Advisory Board is tasked with making recommendations on matters such as the technology to support the core infrastructure, early Use Case implementation, and sustainability models.

### *The Policy Board*

The Policy Board is comprised of approximately 25 members selected based upon their expertise, the breadth of stakeholder representation, and a strong consumer voice, which is essential to building trust among stakeholders. Ex-officio members of the Policy Board consist of representatives from CRISP and state government including Medicaid, the MHCC, and the HSCRC. The responsibilities of this Policy Board primarily include the development of policies for privacy and security. The MHCC will consider the policies developed by the Policy Board; the statewide HIE is required to implement policies adopted by the MHCC.

### **Facilitating EHR Adoption**

To help facilitate EHR adoption, DHMH partners with the REC to provide education and outreach to Medicaid providers. The REC and DHMH participate in standing monthly meetings to update each other on outreach activities, to discuss current and future strategies, and to identify common barriers. Medicaid's Year 1 I-APD listed the REC as a contractor to provide these services; Year 2 of the IAPD will formalize this relationship through a Memorandum of Understanding (MOU). In Year 2, Medicaid increased the staff dedicated to the implementation of this program. New staff work closely with the REC to measure the effectiveness of outreach and to use data provided by Maryland's Registration and Attestation System (eMIPP) and the Office of the National Coordinator (ONC) on provider interest in the program and common barriers to adoption and use of certified EHR technology. This information is further detailed in the IAPD.

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### A.9.b Who else is currently involved? For example, how are the regional extension centers (RECs) assisting Medicaid eligible providers to implement EHR systems and achieve meaningful use?

The statewide HIE received \$5.5 million in funding from the Office of the National Coordinator (ONC) under the HITECH Act to establish a regional extension center (REC) in Maryland. The goal of the REC was to help 1,000 priority primary care providers, as defined by the ONC, in Maryland with adopting EHRs and achieving the meaningful use requirements. On June 6, 2012, the REC met this goal. Even though the REC has met their goal, they still provide free resources to providers interested in adopting and meaningfully using certified EHRs. In Maryland, the statewide HIE is also the Regional Extension Center (REC) and is a significant partner in encouraging EHR adoption among Maryland providers. The model that is being deployed relies on a group of Management Service Organizations (MSO) to promote physician adoption of EHRs and meet the meaningful use requirements. Maryland developed the MSO model as a result of HB 706: Electronic Health Records – Regulation and Reimbursement<sup>17</sup>. HB 706 requires the Maryland Health Care Commission to certify MSOs that will offer centrally hosted EHRs instead of EHRs maintained at the practice. These MSOs became the implementation arm of the REC to get primary care providers to adopt and then meaningfully use certified EHRs. At a minimum, the MSOs must assist a combined total of 1,000 priority primary care providers with EHR adoption and provide support as they work toward meeting each stage of meaningful use. At the present time, roughly 22 MSOs are participating with the REC.

The REC relies on MSOs that have State Designation to address the challenges associated with provider adoption and upgrades to EHRs. These challenges include the cost and maintenance required for the technology, and the responsibilities that accompany the storage of electronic data privacy and security. The MHCC provides State Designation to MSOs that meet stringent criteria for privacy and security and have received national accreditation. Unlike the traditional EHR client-server model where the data and technology is hosted locally at the provider site, MSOs offer EHRs hosted in a centralized secure data center.

The data is safeguarded through a network operating center that, by design, ensures high quality and uninterrupted service. MSOs enable physicians to access a patient's record wherever access to a high speed Internet connection exists. Remotely hosted EHRs enable providers to focus on practicing medicine rather than dedicating staff to support the application. The model in use in Maryland is expected to help all providers throughout the state meet the meaningful use requirements. The state anticipates modifying the State Designation criteria each year based on feedback it receives from the MSOs and evolving technology. Today, the criteria includes nearly 100 requirements that center around data

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<sup>17</sup> See: [http://mlis.state.md.us/2009rs/chapters\\_noln/Ch\\_689\\_hb0706T.pdf](http://mlis.state.md.us/2009rs/chapters_noln/Ch_689_hb0706T.pdf).

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protection, business practices, data center security, disaster recovery, and business continuity planning. The business model that was developed by the REC to rely on the services of the MSOs to increase EHR adoption is based on free market principles. The MSOs can market hosted EHR solutions across the state and a variety of other services that includes billing, workflow management, training, performance data monitoring, etc. Each time an MSO signs up an eligible provider practice to participate with the MSO, they receive a payment from the REC and from the practice. The MSOs have a milestone schedule that enables them to earn an additional incentive for meeting the requirements. These requirements have been established in a way to ensure that practices met the meaningful use requirements.<sup>18</sup>

To aid in promoting the EHR Incentive Program, Medicaid continues to partner with Maryland's Regional Extension Center (REC), CRISP. As is outlined in our IAPD, we leverage the outreach activities already supported by the REC to include all EHR Incentive providers. Through this extension, DHMH will continue to participate in provider outreach calls and webinars hosted by the REC. Medicaid attends these calls to answer specific questions posed by providers interested in participating in the EHR Incentive Program. Medicaid has also invited the REC to speak to the Maryland Medicaid Advisory Committee (MMAC), a committee created to improve and maintain the quality of the State's Managed Care program by assisting Medicaid with the implementation, operation and evaluation of the program. The REC has also presented alongside Medicaid at the Public Health Officers Roundtable and at meetings with MCO directors.

The REC's association with MHCC increases information sharing between these groups and Medicaid. All groups coordinate websites, with each hyperlinking to the other when information on varying aspects of the program is better suited for the other's website. For example, Medicaid contains programmatic information about the EHR Incentive Program, while the REC supplies assistance with indentifying EHR vendors and the MHCC provides an online EHR Product Portfolio.

After an analysis conducted by the MHCC regarding MU acceleration (forthcoming), the MHCC recommended building a single point of contact for providers regarding EHRs and the EHR Incentive Program. Medicaid supports the creation of this one-stop-shop and recommended that the REC take over this task. Medicaid, MHCC, and the REC continue to discuss this option, including the development of a sustainability model, and assignment roles and responsibilities.

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<sup>18</sup> More information on MSOs is available at [http://mhcc.dhmf.maryland.gov/hit/mso/Pages/mso\\_main.aspx](http://mhcc.dhmf.maryland.gov/hit/mso/Pages/mso_main.aspx).

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### **A.10 Explain the SMA's relationship to the State HIT Coordinator and how the activities planned under the ONC-funded HIE cooperative agreement and the Regional Extension Centers (and Local Extension Centers, if applicable) would help support the administration of the EHR Incentive Program.**

The MHCC's Center for Health Information Technology (Center) Director, David Sharp, is the Maryland Government HIT Coordinator. MHCC is an independent regulatory agency whose mission is to plan for health system needs, promote informed decision-making, increase accountability, and improve access in a rapidly changing health care environment by providing timely and accurate information on availability, cost, and quality of services to policy makers, purchasers, providers and the public. The Center reports to the Secretary of the Department of Health and Mental Hygiene. The Center Director also oversees CRISP, Maryland's HIE and REC.

The Center Director is actively involved in HIT and HIE in Maryland and previously participated on the National Health Information Security and Privacy Collaboration, Adoption of Standard Policies Collaborative. The Center Director has worked with Medicaid in creating initial drafts of the SMHP and I-APD, and he is currently working with Medicaid to explore data sharing opportunities under the MITA transformation project and is actively involved with CMS as part of its EHR Demonstration Project. As the HIT Coordinator for Maryland, the Center Director also sits on the Steering Committee for the Community Health Integrated Partnership's (CHIP) Electronic Patient Record System Implementation project. CHIP provides roughly nine community health centers with the business expertise to achieve the shared goal of quality improvement in the care they deliver, and is a recipient of HIT funding from the Health Resources and Services Administration. The Center Director is an ex-officio member on the CRISP Advisory Board, a participant on the state Policy Board, and is actively involved with the state's medical society and hospital association.

DHMH plans to use the services of the REC to promote the adoption of EHR technology by leveraging their current outreach strategy to include all providers potentially eligible for the EHR Incentive Program. As discussed previously, DHMH worked with the MHCC and CRISP to release a bid board for vendor services to secure EHR Incentive Program enhanced administrative funding for HIE-related activities.

### **A.11.a What other activities does the SMA currently have underway that will likely influence the direction of the EHR Incentive Program over the next five years?**

#### ***CMS EHR Demonstration Project***

Maryland is one of four states that participated in the CMS EHR Demonstration Project (CMS project); the other states included Louisiana, Pennsylvania, and South Dakota. In Maryland, the CMS project studied EHR adoption in 255 small to medium-sized primary care physician

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practices. The MHCC provided physician practices with support in the evaluation of EHRs and educational material related to the adoption and meaningful use of EHRs. The CMS project began in June 2009 and was originally scheduled to continue through May 2014.

The EHR Demonstration completed its second full year on May 31, 2011. Later that year, the demonstration project was scheduled to enter a new phase with the collection of clinical quality measure data. Prior to this new phase, CMS decided it was an appropriate time to review the progress of the demonstration project and determine whether it was on track to measure the effect of a financial incentive on the adoption and use of EHRs.

According to CMS, there was a significant decrease in the number of practices participating in the study's treatment group. For the most part, this decrease is a result of practices from other states that decided to no longer participate in the demonstration project; Maryland had roughly 11 practices that exited the demonstration project. CMS was concerned that findings from the study could be negatively impacted if the treatment group were to continue to decline. CMS made the decision to terminate the demonstration project effective August 1, 2011.

### *ARRA Related Projects*

Maryland has been successful in obtaining funding under the ARRA. These funds are intended to provide the necessary technical assistance for providers to become meaningful users of EHRs, coordinate the State's efforts with regard to the electronic exchange of health information, and provide the needed training and education to increase the health IT workforce. The table below describes the funding that has been received in Maryland.

**Table A.10 – Maryland ARRA Funding**

| Project  | Amount | Awardee  | Purpose   |
|--|--------|--|---|
| <b>State HIE Cooperative Agreement Grant Program</b>                         | \$9.3M | <i>Maryland Health Care Commission</i>                         | Build capacity for exchanging health information across the health care system                |
| <b>HIT Extension Program: Regional Centers Cooperative Agreement Program</b> | \$5.5M | <i>Chesapeake Regional Information System for our Patients</i> | A regional extension center established in Maryland for EHR adoption assistance to physicians |
| <b>Program of Assistance for University-Based Training</b>                   | \$3.7M | <i>Johns Hopkins University School of Medicine</i>             | Offer training programs for highly specialized health IT roles                                |
| <b>Expand Health IT Capacity</b>   | \$2.9M | <i>Community Health Integrated Partnership, Inc.</i>           | Expand EHR technology in Federally Qualified Health Centers                                   |
| <b>Curriculum Development Centers Program</b>                                | \$1.8M | <i>Johns Hopkins University School of Nursing</i>              | Development of graduate level programs for health IT  |
| <b>HIT Planning-Advanced Planning Document</b>                               | \$1.3M | <i>Maryland Medical Assistance Program (Medicaid)</i>          | An award from CMS for state planning activities to implement the EHR incentive                |

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|  |                |   |   |
|--|----------------|---|---|
| <b>Community College Consortia Program</b> | \$325K         | <i>Baltimore County Community College</i> | Create non-degree health IT training programs with completion in six months or less |
| <b>TOTAL</b>                               | <b>\$24.8M</b> |   |   |

### *Additional Funding Opportunities*

#### **Patient Centered Medical Home**

A Patient Centered Medical Home (PCMH) is a model of primary care delivery designed to improve care by replacing episodic care with coordinated care and more long-term relationships between patients and providers. It is a practice where a team of health care professionals, guided by a primary care provider, offer coordinated and integrated care in a culturally sensitive manner, considering patient needs and collaborating with other qualified professionals to meet those needs. The "Maryland Multi-Payer Patient Centered Medical Home," or "MMPP" pilot program was established by legislation enacted by the Maryland General Assembly in 2010 and effective July 1, 2010. It charged the Maryland Health Care Commission to establish a program if it concluded that the program is likely to result in the delivery of more efficient and effective health care services and is in the public interest (Maryland Annotated Code, Section 19-1A.) The statute requires that the program promote the development of patient centered medical homes by adopting standards, forms and processes with consultation of stakeholders. The MMPP is expected to lower costs through its focus on the person and patient self-management and engagement.

The PCMH pilot program was initiated in 2011 with 52 practices and 339 practitioners from urban, suburban, and rural settings with primary and multispecialty practices ranging from primary care to pediatric groups. The three goals of the MMPP are to improve patient experience and satisfaction, reduce costs, and increase quality of care.

Some key elements of the program include:

- Integrated care plans for ongoing medical care in partnership with patients and their families
- Chronic disease management, with the assistance of specialized care coordinators
- Medication reconciliation for every visit
- Increased access to a primary care provider through "24/7" telephone response
- Same-day appointments for urgent care
- Enhanced modes of care communication, such as email.

Maryland law requires the State's five major carriers of fully insured health benefit products (i.e. Aetna, CareFirst, CIGNA, Coventry, and United Healthcare) to participate in the MMPP. The

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Federal Employee Health Benefit Plan (FEHBP), the Maryland state employee health benefits plan, TRICARE, and private employers such as Maryland hospital systems have also voluntarily elected to offer this program to their employees. The MHCC is collaborating with the University of Maryland Department of Family Medicine, Johns Hopkins Community Physicians, Kaiser Health Plan of the Mid-Atlantic and the Program management staff at the Maryland Health Care Commission, Community Health Resources Commission, and Department of Health and Mental Hygiene, to encourage more than 300 primary care clinicians throughout Maryland to adopt these advanced principles in primary medical care.

To better align the PCMH project with the EHR Incentive Program, the PCMH incorporates core and alternate core measures in the practice evaluation criteria.<sup>19</sup>

**Table A.11– Maryland’s Patient Centered Medical Home Project Milestones**

| Date             | MMPP Program Milestones 2013  |
|------------------|---|
| <b>1/1/2013</b>  | Fixed Transformation Payment Payments-Cycle 4   |
| <b>3/8/2013</b>  | Quality Measures submitted to MHCC on the Quality Measure web portal from February 15-March 8                                       |
| <b>3/15/2013</b> | Practices refreshed their individual clinician data on their web portal data site   |
| <b>3/20/2013</b> | MHCC provided an updated practice attributes ("control file") to MCOs   |
| <b>4/19/2013</b> | Commercial carriers submitted retrospective professional services files as of March 1 by April 19                                   |
| <b>5/1/2013</b>  | Medicaid MCOs submitted files of enrollees as of March 1  |
| <b>5/11/2013</b> | Last day for new self-funded employers to enter MMPP for the July 1, 2013 Cycle 5 FTP payments                                      |
| <b>5/11/2013</b> | MHCC confirmed control file for commercial carriers and Medicaid MCOs-NCQA levels as of May 11 were used for July 1, 2013 payments  |
| <b>5/11/2013</b> | SSS identified Medicaid enrollees for whom there is commercial coverage   |
| <b>5/19/2013</b> | MHCC informed Medicaid of special payments needed for July 1, 2012- Cycle 5 payments  |
| <b>5/19/2013</b> | SSS sent attributed patient files to commercial carriers  |
| <b>6/15/2013</b> | Medicaid issued special payments to Medicaid MCOs   |
| <b>6/30/2013</b> | Carriers submitted 2012 data to MHCC's MCDB   |
| <b>7/1/2013</b>  | FTP Payments-Cycle 5  |
| <b>7/15/2013</b> | Practices refreshed the individual provider attributes (as of July 1) on their practice data file on the MMPP web portal by July 15 |
| <b>8/1/2013</b>  | 2012 data made available to Discern   |
| <b>9/1/2013</b>  | Discern released shared savings calculations to carriers/MCOs   |
| <b>9/30/2013</b> | Shared Savings Payments due to Practices  |

<sup>19</sup> See: <http://mhcc.maryland.gov/pcmh/documents/PCMH%20Prog%20Partic%20Agmt%20050411.pdf>.

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|                   |  |
|-------------------|--|
| <b>10/1/2013</b>  | Commercial Carriers submitted retrospective professional services files as of Sept 1 by Oct 1  |
| <b>10/1/2013</b>  | Medicaid MCOs submitted files of enrollees as of Sept 1  |
| <b>10/15/2013</b> | SSS identified Medicaid enrollees for whom there is commercial coverage  |
| <b>11/1/2013</b>  | Last day for new self-funded employers to enter MMPP for the Jan 1, 2013 Cycle 4 FTP payments  |
| <b>11/1/2013</b>  | SSS sent attributed patient files to commercial carriers   |
| <b>11/1/2013</b>  | MHCC confirmed control file for commercial carriers and Medicaid MCOs-NCQA levels as of Oct 31st were used for Jan 1, 2014 payments-Cycle 6 payments |
| <b>11/1/2013</b>  | SSS identified Medicaid enrollees for whom there is a commercial coverage  |
| <b>11/8/2013</b>  | MHCC informed Medicaid of special payments needed for Jan 1, 2014- Cycle 6 payments  |
| <b>12/15/2013</b> | Medicaid issued special payments to Medicaid MCOs. Commercial Carriers and MCOs begin issuing FTP payments for January 1, 2014 in late December      |

### A.11.b Medicaid Activities Influencing the EHR Incentive Program

Medicaid supports the vision of using health IT to improve patient care, increase efficiency, and reduce health care costs. The implementation of a new MMIS system is expected to have a positive impact on the administration of the ARRA EHR incentives. In fact, Medicaid's strategy will ensure that a sound program is developed on top of the current and future MMIS and that the State's implementation strategy evolves with the improved MMIS. Further, with the implementation of our Registration and Attestation System, eMIPP – an off-the-shelf product that is designed to interface with the State's new MMIS – we will be in a better position to implement meaningful use attestations, support live data exchange, and move closer to payment reform.

Medicaid's 2009 and 2010 environmental scans of Medicaid physicians' use of EHRs has aided in our ability to identify implementation barriers. These barriers have helped us to design outreach strategies and provider assistance, which we implemented in Year 2 of the EHR Incentive Program. Medicaid also completed a feasibility assessment of the EHR Incentive Program. Available in Appendix C, the Assessment found that the EHR Incentive Program aligns with current HIT, MMIS, and MITA expansions within the State.

Based on our 2013 Environmental Scan, for the providers who have not adopted any EHR system, their top 3 barriers include: lack of capital resources to invest in EHR, uncertainty about which EHR to purchase, and disruption to office business processes. We are actively working with the REC to modify outreach approaches to facilitate these new barriers, particularly offering EHR implementation and HIE integration into practice work flow.

## Section A: The Maryland "As-Is" HIT Landscape

### A.12 Have there been any recent changes (of a significant degree) to State laws or regulations that might affect the implementation of the EHR Incentive Program? Please describe.

The Maryland legislature recognized that changes in state law may be required to support the private and secure exchange of patient information. Changes in state laws that are necessary to provide for the effective operation of an HIE are required to be recommended to the state legislature. These recommendations include: define in statute an HIE and qualified HIE; clarify that making data available through the HIE is not considered to be a disclosure under existing state law; establish liability protections for the exchange and providers that participate in the HIE; and require HIEs that are non-commonly owned, such as a hospital or health system, to adhere to the exchange policies recommended by the Policy Board.

In the 2011 Session, HB 736, Electronic Health Records – Incentives for Health Care Providers – Regulations<sup>20,21</sup>, provided more information on the State's EHR Incentive program for state-regulated payers.

The Maryland Health Care Commission (MHCC) released guidance on the program beginning October 21, 2011.<sup>22</sup> The State-Regulated Payer EHR Adoption Incentive is a one-time cash incentive or an incentive of equivalent value agreed upon by the primary care practice and payer that an eligible primary care practice can receive from each payer. Practices are eligible to receive a *Base Incentive* up to \$7,500 and an *Additional Incentive* up to \$7,500 for a total maximum monetary value of \$15,000 per practice per payer. Incentives of equivalent value include: specific services; lump sum payments; gain-sharing arrangements; rewards for quality and efficiency; in-kind payments; or other items or services that can be assigned a specific monetary value.

#### ***Base Incentive***

The *Base Incentive* is calculated by the number of payer members treated by the practice based on a per member amount. Incentives are calculated at \$8 for each Maryland resident on the practice panel who is a member of the payer at the time a practice makes a request for the incentive payment. In cases where the payer does not assign a primary care provider, the patients enrolled with that payer who have been treated by the practice in the last 24 months will qualify.

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<sup>20</sup> See: [http://mlis.state.md.us/2011rs/chapters\\_noln/Ch\\_533\\_hb0736T.pdf](http://mlis.state.md.us/2011rs/chapters_noln/Ch_533_hb0736T.pdf).

<sup>21</sup> [Under HB 736](#), §19–142(h)(2), the State Regulated Incentive Program excludes Managed Care Organizations from participation.

<sup>22</sup> For more information, see: <http://mhcc.dhmh.maryland.gov/hit/ehr/Pages/stateincentive/stateehrincentive.aspx>

## Section A: The Maryland "As-Is" HIT Landscape

### ***Additional Incentive***

An *Additional Incentive* may be available to practices that have achieved one of the following in the immediate 90 days prior to submitting the payment request:

1. Contracts with a State Designated Management Service Organization (MSO) or MSO in Candidacy Status<sup>23</sup> for EHR adoption or implementation services,
2. Demonstrates advance use of EHRs, or
3. Participates in the payer's quality improvement outcomes initiative and achieves the performance goals as established by the payer.

The payer to which the practice applies will determine a practice's eligibility for additional incentives based on the information provided by the practice within an application and payment request.

### ***Moving Forward***

In the summer of 2013, leadership from the General Assembly's Maryland House Health & Government Operations (HGO) Committee requested that the Maryland Health Care Commission (MHCC) evaluate the State incentive program and determine if changes are necessary to ensure the intent of the law continues to be met.<sup>24</sup> The report indicates that while approximately 50 percent of primary care physicians have adopted an EHR, only about four percent of Maryland's eligible primary care physician practices had received an incentive payment, as of April 2013. The performance of the State incentive program trails significantly when compared to the participation in the CMS's Medicare and Medicaid EHR Incentive Program (federal incentive program), where approximately 29 percent of Maryland's eligible primary care physician practices have received a federal incentive program payments. The finding suggests that the federal incentive programs are the leading reason that providers have begun adopting EHRs. Therefore, Maryland plans to align the current State-Regulated Payer EHR Incentive Program requirements with the Meaningful Use requirements.

### **Table A.12 – Participation in Maryland's State Regulated Payer EHR Incentive Program**

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<sup>23</sup> See: [http://mhcc.dhmh.maryland.gov/hit/mso/Pages/mso/mso\\_providers.aspx](http://mhcc.dhmh.maryland.gov/hit/mso/Pages/mso/mso_providers.aspx).

<sup>24</sup> The full report is available at

[http://mhcc.dhmh.maryland.gov/hit/Documents/EHR\\_State\\_Incentives\\_and\\_Usability\\_November\\_2013.pdf](http://mhcc.dhmh.maryland.gov/hit/Documents/EHR_State_Incentives_and_Usability_November_2013.pdf)

## Section A: The Maryland "As-Is" HIT Landscape

| <b>Incentive Program Payments Summary</b><br><b>October 2011 – April 2013</b><br><i>Eligible Practices = 2,349</i> |                   |                                       |   |                        |                               |
|--|-------------------|---------------------------------------|---|------------------------|-------------------------------|
| Payor  | Payments Made (#) | Total Base Incentive Amount Paid (\$) | Total Additional Incentive Amount Paid (\$) | Total Amount Paid (\$) | Average Incentive Amount (\$) |
| Aetna, Inc.  | 84                | 226,342                               | 622,500                                     | 848,842                | 10,105                        |
| CareFirst BlueCross BlueShield   | 86                | 287,736                               | 645,000                                     | 932,736                | 10,846                        |
| CIGNA Health Care Mid-Atlantic Region  | 80                | 25,288                                | 6,124                                       | 31,412                 | 393                           |
| Coventry Health Care   | 70                | 26,592                                | 525,000                                     | 551,592                | 7,880                         |
| Kaiser Permanente  | 5                 | 1,728                                 | 37,500                                      | 39,228                 | 7,846                         |
| United Healthcare, MidAtlantic Region  | 85                | 123,792                               | 123,792                                     | 247,584                | 2,913                         |
| <b>Total</b>   | <b>410</b>        | <b>691,478</b>                        | <b>1,959,916</b>                            | <b>2,651,394</b>       | <b>6,467</b>                  |
| <b>Total Unique Practices</b>  | <b>106</b>        |                                       |   |                        |                               |
| <b>% of Eligible Practices</b>   | <b>4</b>          |                                       |   |                        |                               |

### A.13.a Are there any HIT/E activities that cross state borders?

Maryland has participated in discussions with neighboring states about HIT and HIE and is in talks with neighboring states about coordinating monitoring efforts. Maryland is also interested in participating in a learning and implementation collaborative with our fellow CMS Region III states.

Since the last SMHP, Maryland's HIE, CRISP, engaged in information sharing with the District of Columbia and Delaware.

The DC Department of Health Care Finance (DHCF) and the DC Health Information Exchange (DC HIE) have partnered with CRISP (Maryland's HIE) to offer a number of different services to DC hospitals, providers, and ambulatory providers and clinics. DHCF has created a voucher

## Section A: The Maryland "As-Is" HIT Landscape

program in which DC acute care hospitals can apply for grant funding in order to connect to CRISP. By connecting to CRISP, DC Hospitals, practices, FQHCs, Medicaid, and other stakeholder will have access to the same tools and services that are available to Maryland stakeholders. The DC hospitals have started their connectivity efforts and they are expected to continue into the early spring of 2014.

CRISP and Delaware's HIE, the Delaware Health Information Network (DHIN) have entered into an agreement to share encounter data between the two organizations. Under this partnership, when a Maryland resident arrives at a Delaware hospital, the encounter message will be sent to CRISP and included in services such as the real-time encounter notification service. Similarly, any time a Delaware resident arrives at a Maryland hospital CRISP will route the encounter message to the DHIN.

### **A.13.b Is there significant crossing of State lines for accessing health care services by Medicaid beneficiaries? Please describe.**

Due in large part to its relatively small size and its shared contiguous borders with Pennsylvania, Delaware, Washington DC, Virginia, and West Virginia, Maryland experiences a significant crossing of State lines by Medicaid beneficiaries to access health services. The Health Services Cost Review Commission (HSCRC) estimates that in CY 2010 around two percent of all Maryland Hospital visits (inpatient and outpatient) were provided for Medicaid beneficiaries with primary addresses from surrounding states. And in the same calendar year, 7.4 percent of all hospital visits by Maryland Medicaid patients were provided in out-of-state hospitals. Further, Maryland has already paid a number of providers who see both Maryland Medicaid beneficiaries and one or more Medicaid beneficiaries from the District of Columbia, Virginia, or Delaware.

### **A.14 What is the current interoperability status of the State Immunization registry and Public Health Surveillance reporting database(s)?**

DHMH and CRISP are in the process of assessing the feasibility of EHR provider connection with these systems and the impact this may have on increasing the adoption of the HIE. Currently, Maryland can accept point-to-point electronic submission of public health data via a secure file transfer protocol (sftp). While Maryland will accept public health measures via this method, we hope to encourage the use of the HIE for public health data submission once the Department configures a different transport method with the HIE.

#### ***Public Health Systems***

Maryland has history of using health IT to improve public health issues since 2005. Maryland employs the National Electronic Disease Surveillance System (NEDSS) for legally-mandated infectious disease reporting, recently including electronic reporting from laboratories. In addition, Electronic Surveillance System for the Early Notification of Community-based

## Section A: The Maryland "As-Is" HIT Landscape

Epidemics (ESSENCE) is a syndromic surveillance system developed for early detection of disease outbreaks, suspicious patterns of illness, and public health emergencies. Finally, Maryland employs an electronic immunization registry known as ImmunNet. These systems have been continually improved over the years and provide an excellent base to build the new meaningful use requirements on. Data in NEDSS, ESSENCE, and ImmuNet are currently transferred through a push model from the provider to DHMH. The goal is to centralize the flow of these data through the statewide HIE. DHMH is also exploring the feasibility of offering public health reporting for chronic diseases such as cancer; however, a decision has not been made.

### *NEDSS*

The Maryland Code Annotated, Health-General § 18-201, § 18-202 and § 18-205 and Code of Maryland Regulations (COMAR) 10.06.01 mandate that certain infections and other conditions be reported to local health departments and to DHMH. Since 2007, most of those reports have been entered into and maintained in NEDSS. For these purposes, Maryland uses the NEDSS Base System (NBS) which was developed by CDC and is employed by at least 30 other states in addition to Maryland. NBS is a secure, web-based system that serves to support the electronic processes involved in notifiable disease surveillance and analysis as well as transmission of surveillance data securely between local health departments, DHMH, and CDC. In production currently is NBS version 4.1. NEDSS is capable of and receives electronic reports directly from clinical laboratory information systems ("electronic laboratory reporting"). While the Department prefers Logical Observation Identifiers Names and Codes (LOINC), there is no Electronic Lab Reporting (ELR) regulation requiring it, unless submissions follow meaningful use guidelines. Over time, the Department expects submissions to standardize. Currently, Maryland NEDSS receives electronic reports from two major national laboratories (Mayo Medical Laboratories and Lab Corp), and will soon receive electronic reports from several other large laboratories. Existing electronic laboratory reporting requires one-to-one connections between the reporting laboratories and DHMH; however, such reporting could potentially be performed more efficiently from laboratories through the statewide HIE to DHMH. In fact, one of the primary milestones of the HIE is its connection with the hospital labs in the State. CRISP and DHMH are working through use cases to push labs to the State's NEDSS system.

### *ESSENCE*

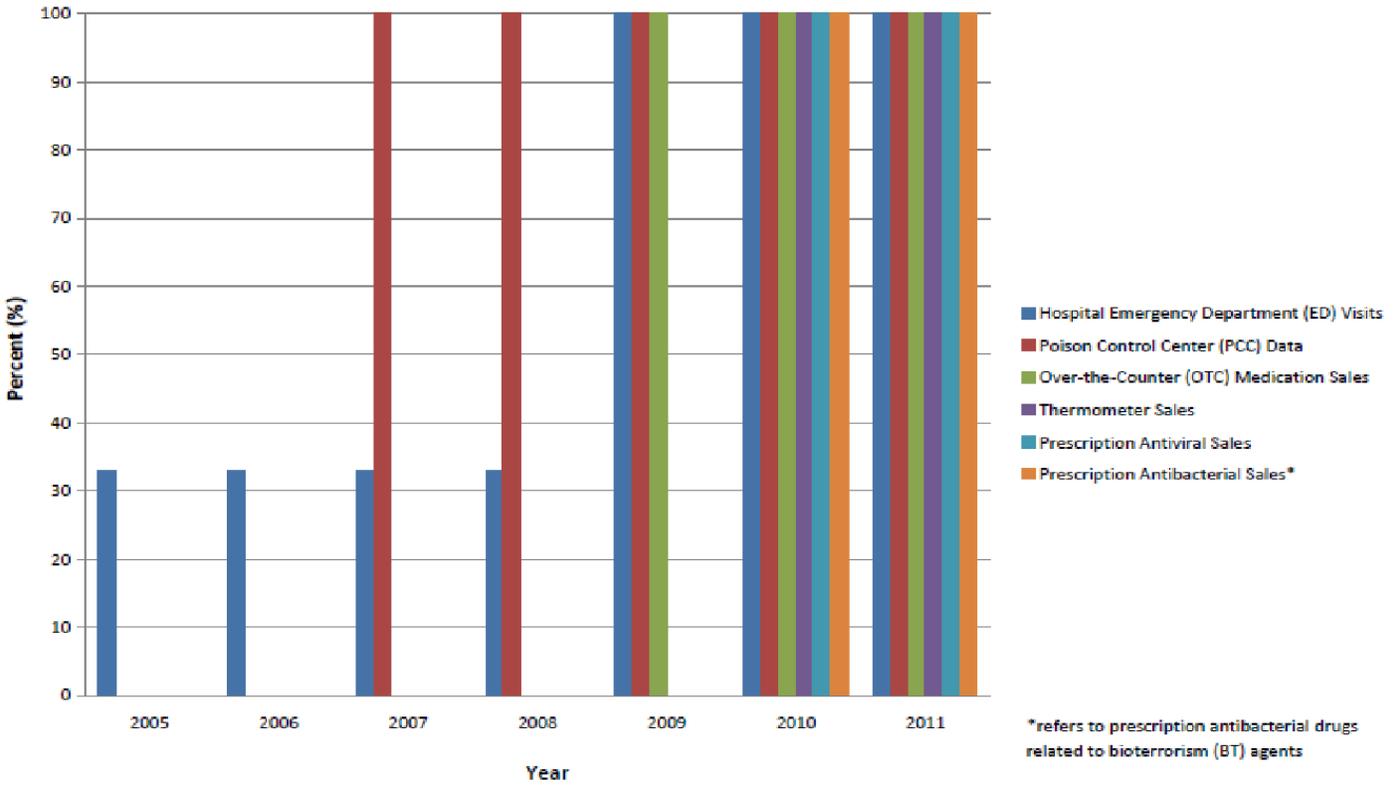
The field of biosurveillance involves monitoring measures of diagnostic activity for the purpose of finding early indications of disease outbreaks. By providing early notification of potential outbreaks, the aim is to provide public health officials the opportunity to respond earlier and thus more effectively. DHMH uses ESSENCE for the early detection of public health emergencies. Initially, 15 acute care hospitals in the National Capital Region and Baltimore

## Section A: The Maryland "As-Is" HIT Landscape

Metro Region of the state were sending emergency department data to ESSENCE. In 2007, Maryland Governor Martin O'Malley introduced a homeland security initiative that outlined 12 Core Goals for A Prepared Maryland. One of the core goals is to improve biosurveillance so that every region in Maryland has access to a real-time, 24/7 statewide biosurveillance system. To accomplish this goal, DHMH began the expansion of ESSENCE to incorporate data from all acute care hospitals in the state. ESSENCE has incrementally expanded its capabilities through a series of targeted project implementations, adding the following traditional and non-traditional data sources: hospital emergency department visits, poison control center data, over-the-counter medication sales, thermometer sales, prescription antiviral sales, prescription antibacterial sales, and school absenteeism data. All data sources in the ESSENCE system provide coverage for all 24 Maryland jurisdictions. Currently, Maryland is the only state which has 100% of its acute care hospital EDs participating in its ESSENCE system, however, these hospitals are in the process of converting their data format to be MU-compliant. Maryland is also the only state that has 100% of its public school systems participating in its ESSENCE system. NEDSS reportable disease data has also been incorporated into the ESSENCE system allowing users to view this surveillance data with analytical and graphical tools that are unavailable in the NBS.

Section A: The Maryland "As-Is" HIT Landscape

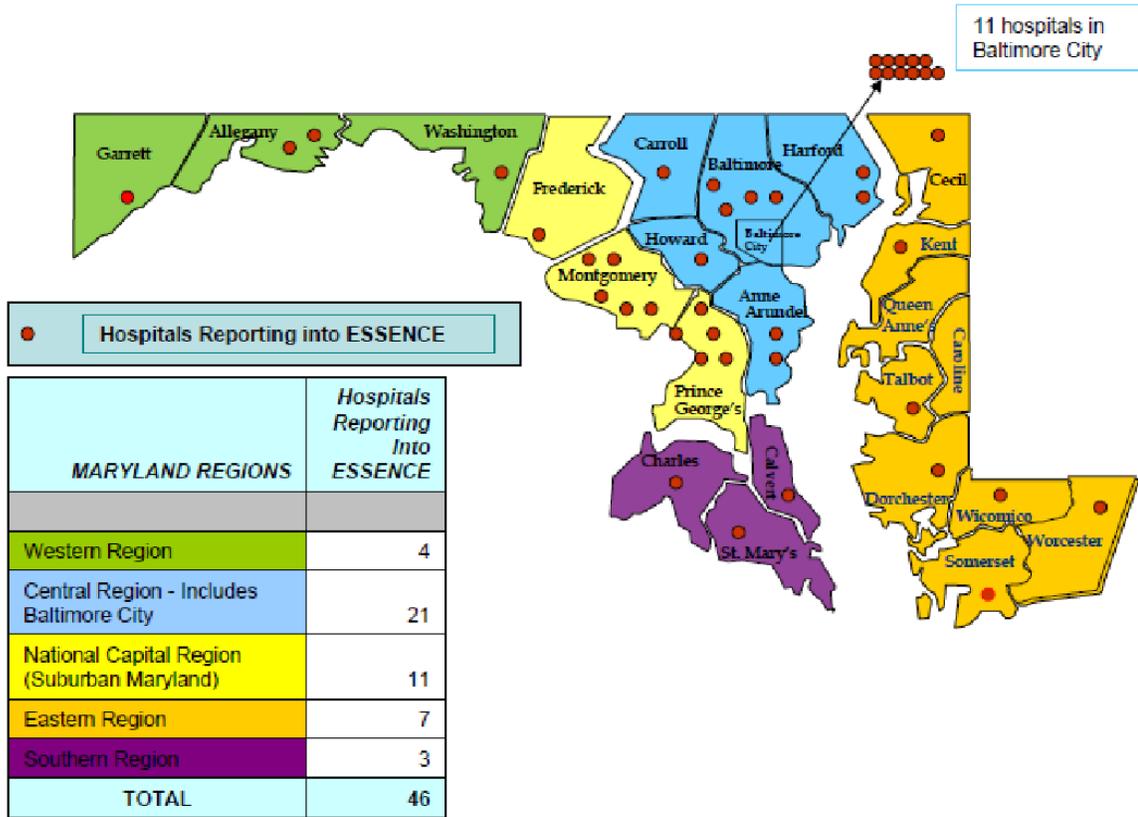
Figure A.10 – Percent (%) of Maryland Coverage by ESSENCE Data Source According to Year



Note: ESSENCE no longer has the prescription anti-viral and anti-biotic sales data

Section A: The Maryland "As-Is" HIT Landscape

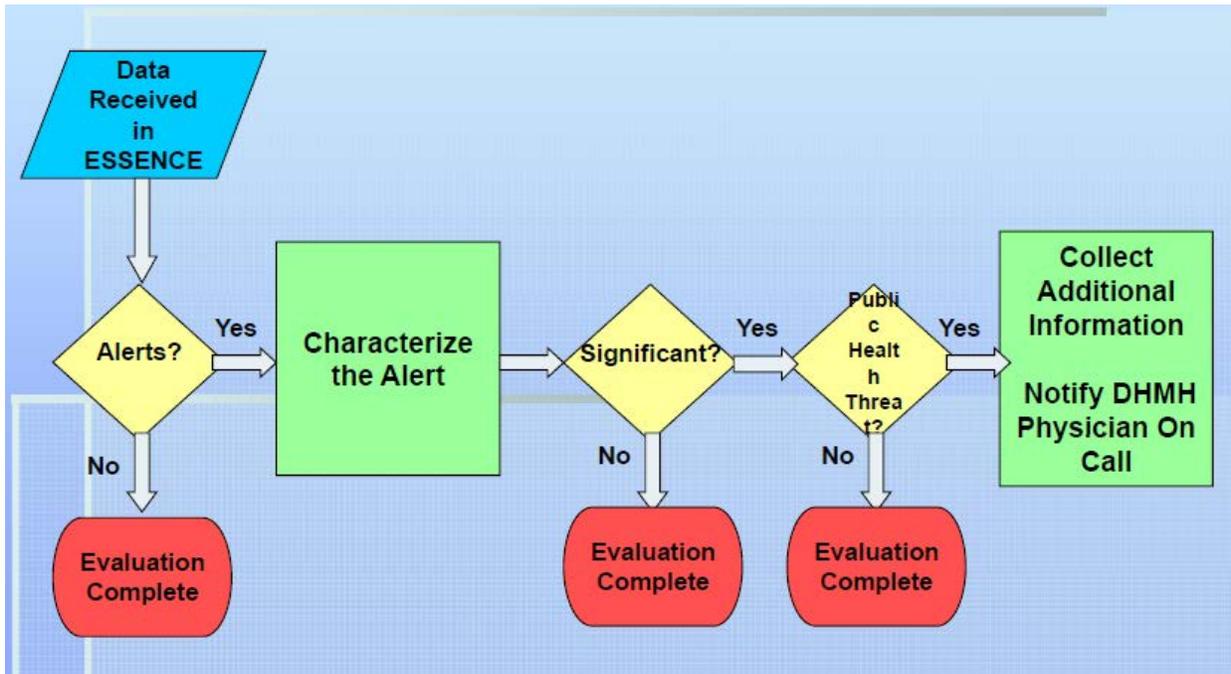
Figure A.11 – Maryland Acute Care Hospitals Reporting into ESSENCE



Note: There are 45 acute care hospitals in Maryland. The additional one in the map is Bowie Health Center which is a free standing emergency medical facility.

ESSENCE utilizes a secure, automated process for transfer of hospital data to the system that is consistent with Federal standards for electronic disease surveillance. Data is categorized into syndromes to detect aberrations in the expected level of disease. Automated statistical algorithms are run on each syndrome and alerts are generated when the observed counts are higher than expected. ESSENCE allows for situational awareness, identification of disease clusters, early identification of cases related to outbreaks, and early indication of influenza season and assessing disease burden. The below flowchart depicts the process for the investigation of alters.

Figure A.12 – ESSENCE Investigation of Alerts



Technical enhancements are being done to allow for more data feeds to be incorporated into Maryland ESSENCE. Future goals for the ESSENCE program include incorporating new data variables into the hospital emergency department data feeds. Data fields such as discharge diagnosis, discharge disposition, race, ethnicity, etc. will be included within the ED data in addition to the chief complaint field. This will greatly enhance the surveillance capabilities of the system. It will also give new insight into other public health activities carried out through utilization of the ESSENCE system.

### *ImmuNet*

ImmuNet is Maryland's immunization registry, a confidential and secure computer database designed to collect and maintain accurate, confidential and current vaccination records of children and adults residing in Maryland. ImmuNet promotes effective and cost-efficient disease prevention and control that will improve the health of Maryland's children. In 2001, Senate Bill 626 was passed and established guidelines for creating and implementing ImmuNet. ImmuNet has proven to be extremely effective as a centralized repository for immunizations administered in the state. To date, ImmuNet contains more than 1,000,000 patient records and 12,000,000 vaccinations. In addition to tracking patients in need of vaccination, ImmuNet assists in vaccine management; prints a completed school immunization certificate; consolidates immunization records; and provides offices with the capability to print reminders. Maryland has recently upgraded to a more robust version of ImmuNet, which allows for secure data exchange of electronic immunization records via the Internet using HL7 or other syntax

## Section A: The Maryland "As-Is" HIT Landscape

formats. ImmuNet is fully capable of accepting HL7 data in the versions required for Meaningful Use. For accepting incoming data messages from EHRs or other data systems, the program offers a SFTP transport method. However, in the near future the ImmuNet program will be implementing SOAP web services as an additional data transport option, which will allow for real-time, bi-directional data exchange.

The Maryland Childhood Immunization Partnership (MCIP) has functioned as the advisory committee for ImmuNet. MCIP was established by the Maryland Chapter of the American Academy of Pediatrics and the DHMH. The partnership has worked closely with the DHMH Center for Immunization to identify the pertinent issues relevant to implementation of an immunization registry. MCIP is composed of public and private organizations, which are concerned with the issues of childhood immunization and registry development.

### *Public Health Systems Collaboration with Medicaid*

The Public Health program areas for ESSENCE, ImmuNet and NEDSS have a history of collaboration with Medicaid. In addition to informing policy decisions, data from public health systems is currently being used to help develop a Maryland State Health Improvement Plan 2011-2014.<sup>25</sup> The Plan sets forth measurable objectives and targets in key areas of health, with a special focus on health equity. The process to develop the Plan involved meetings with many health-related agencies, including public health, to better understand current objectives, measures, and data and then to develop additional objectives and data sources. On a regular basis, Medicaid participates with the Public Health program areas on the Center for Disease Control Meaningful Use Nationwide calls for the purposes of aligning EHR Incentive Program public health objectives with Medicaid planning. Medicaid also attends internal meetings between the Public Health Program areas and CRISP over connecting public health data reporting systems with the HIE.

Through Medicaid's collaboration with the Public Health Program areas, we have been able to successfully test with and move to production eligible providers and hospitals participating in both the Medicare and Medicaid EHR Incentive Program. Table A.8 shows Medicaid's progress towards collecting public health data

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<sup>25</sup> See: [hnh.maryland.gov/ship/](http://hnh.maryland.gov/ship/).

Section A: The Maryland "As-Is" HIT Landscape

Table A.13 – Public Health Data Submissions by Public Health Type, Program, and Year

|                               | Attestation Year<br>2011 |                     |                     | Attestation Year<br>2012 |                     |                     | Attestation Year<br>2013 |                     |                     |
|-------------------------------|--------------------------|---------------------|---------------------|--------------------------|---------------------|---------------------|--------------------------|---------------------|---------------------|
|                               | Providers<br>Passed      | Providers<br>Failed | Hospitals<br>Passed | Providers<br>Passed      | Providers<br>Failed | Hospitals<br>Passed | Providers<br>Passed      | Providers<br>Failed | Hospitals<br>Passed |
| <b>Medicare</b>               |                          |                     |                     |                          |                     |                     |                          |                     |                     |
| <b>Immunization</b>           | 227                      | 0                   | 3                   | 2303                     | 4                   | 12                  | 6870                     | 5                   | 13                  |
| <b>Lab</b>                    | 0                        | 0                   | 0                   | 0                        | 0                   | 6                   | 3                        | 0                   | 12                  |
| <b>Syndromic Surveillance</b> | 680                      | 26                  | 2                   | 883                      | 57                  | 14                  | 148                      | 3                   | 9                   |
| <b>Cancer</b>                 | 0                        | 0                   | 0                   | 0                        | 0                   | 0                   | 0                        | 0                   | 0                   |
| <b>Total</b>                  | 907                      | 26                  | 5                   | 3186                     | 61                  | 32                  | 7021                     | 8                   | 34                  |
| <b>Medicaid</b>               |                          |                     |                     |                          |                     |                     |                          |                     |                     |
| <b>Immunization</b>           | 97                       | 0                   | 1                   | 1810                     | 1                   | 6                   | 6749                     | 1                   | 14                  |
| <b>Lab</b>                    | 0                        | 0                   | 0                   | 0                        | 0                   | 3                   | 3                        | 0                   | 14                  |
| <b>Syndromic Surveillance</b> | 646                      | 0                   | 2                   | 530                      | 5                   | 12                  | 124                      | 0                   | 9                   |
| <b>Cancer</b>                 | 0                        | 0                   | 0                   | 0                        | 0                   | 0                   | 0                        | 0                   | 0                   |
| <b>Total</b>                  | 743                      | 0                   | 3                   | 2340                     | 6                   | 21                  | 6876                     | 1                   | 37                  |

Note: No hospital failed the submission from 2011 to 2013.

## Section A: The Maryland "As-Is" HIT Landscape

### **A.15 If the State was awarded an HIT-related grant, such as a Transformation Grant or a CHIPRA HIT grant, please include a brief description.**

Although Maryland is a co-recipient of a CHIPRA Quality Demonstration Grant, the multi-state collaborative proposal does not focus on HIT. Rather, the proposal focuses on Category C: "Provider Based Models Which Improve the Delivery of Children's Health Care." All participating states are committed to improving the health and social outcomes for children with serious behavioral health needs. In regards to this grant, Maryland is interested in learning from any implementation efforts around Electronic Health Records to see how we can integrate and incorporate with our Management Information Systems (MIS) for the Care Management Entities (CME).

## Section B: The Maryland "To-Be" HIT Landscape

### Section B: Maryland's "To-Be" HIT Landscape

Figure B.1 – Section B Questions from the CMS State Medicaid HIT Plan (SMHP) Template

Please describe the SMA's "To Be" Landscape

1. Looking forward to the next five years, what specific HIT/E goals and objectives does the SMA expect to achieve? Be as specific as possible; e.g., the percentage of eligible providers adopting and meaningfully using certified EHR technology, the extent of access to HIE, etc.
2. \*What will the SMA's IT system architecture (potentially including the MMIS) look like in five years to support the achievement of the SMA's long term goals and objectives? Internet portals? Enterprise Service Bus? Master Patient Index? Record Locator Service?
3. How will Medicaid providers interface with the SMA IT system as it relates to the EHR Incentive Program (registration, reporting of MU data, etc.)?
4. Given what is known about HIE governance structures currently in place, what should be in place five years from now in order to achieve the SMA's HIT/E goals and objectives? While we do not expect the SMA to know the specific organizations that will be involved, etc., please discuss HIE in the context of what is missing today that would need to be in place five years from now to ensure EHR adoption and meaningful use of EHR technologies.
5. What specific steps is the SMA planning to take in the next 12 months to encourage provider adoption of certified EHR technology?
6. \*\* If the State has FQHCs with HRSA HIT/EHR funding, how will those resources and experiences be leveraged by the SMA to encourage EHR adoption?
7. \*\* How will the SMA assess and/or provide technical assistance to Medicaid providers around adoption and meaningful use of certified EHR technology?
- 8.\*\* How will the SMA assure that populations with unique needs, such as children, are appropriately addressed by the EHR Incentive Program?
9. If the State included a description of an HIT-related grant award (or awards) in Section A, to the extent known, how will that grant, or grants, be leveraged for implementing the EHR Incentive Program, e.g. actual grant products, knowledge/lessons learned, stakeholder relationships, governance structures, legal/consent policies and agreements, etc.?
10. Does the SMA anticipate the need for new State legislation or changes to existing State laws in order to implement the EHR Incentive Program and/or facilitate a successful EHR Incentive Program (e.g. State laws that may restrict the exchange of certain kinds of health information)? Please describe.

## Section B: The Maryland "To-Be" HIT Landscape

### B.1 Looking forward to the next five years, what specific HIT/E goals and objectives does the SMA expect to achieve? Be as specific as possible.

#### *General Medicaid HIT/E Goals*

With Medicaid's Year 1 SMHP submission, we had envisioned within five years to have fully enabled an infrastructure to support a bi-directional, real-time interface with the State's Client Automated Resources Eligibility System (CARES) to improve access to the complete eligibility record, resolve data integrity issues across systems, enhance claims payment accuracy by capturing the most current eligibility information, and support inter-agency coordination to provide appropriate and cost-effective medically necessary care management services. With the continued progress of creating a Health Insurance Exchange (HIX) and a new MMIS, the State is determining the future of CARES. Within the next five years, this system will need to either be modified to allow for bi-directional interfacing or to be retired in favor of a new enrollment system that is either stand alone or a part of the MMIS or HIX. The five year goal includes having in place the technology to support existing and new EHR initiatives, and provide enough flexibility to respond to the changing needs of EHRs. Medicaid will also be positioned to accommodate system modifications made by the statewide HIE and to access and utilize data from other state HIEs.

With Stage 2, Medicaid is working with the HIE and our Registration and Attestation System (eMIPP) vendor, CSC/CNSI to prepare for real-time Clinical Quality Measure (CQM) submissions. Medicaid is only in the planning phase for this solution, but we hope to offer a solution to providers in 2015.

Health IT and the EHR Incentive Program have an enormous potential to improve care and outcomes. Medicaid has identified several key areas and related goals and outcomes. The five year journey is predictable in many ways, yet filled with challenges that cannot be fully anticipated. In its planning efforts, Medicaid has made a number of assumptions that could require plan modification at a later date. The State began its journey into implementing a statewide HIE nearly four years ago through an elaborate multi-stakeholder planning phase and the development of a number of key policy reports. In five years, Maryland expects to have in place a fully functional statewide HIE, a new MMIS system, and have completed the integration of Medicaid with the statewide HIE.

#### *EHR Incentive Administrative Goals and Outcomes*

Medicaid will work to increase EHR adoption and ensure that as many providers who are eligible participate in the EHR Incentive Program. Medicaid will accomplish this goal by minimizing the barriers to participating and streamlining the registration process and providing

## Section B: The Maryland "To-Be" HIT Landscape

registration training and assistance. Before Year 1, Medicaid anticipated that approximately 3,000 EPs would participate in the program. As of August, Maryland has already paid 633 providers -- over six times the number we anticipated would participate given eligibility data and interest.

DHMH calculated this Year 1 estimate based on survey responses from the Environmental Scan available in Appendix B. This report found that around 42 percent of Medicaid providers within CMS-defined eligible provider type categories may be eligible for participation in the Program given their patient volume. Among this group, 49 percent reported that they would likely participate. Using these percentages, DHMH estimated the number of providers enrolled in MMIS that met provider type criteria, estimating that around 1,300 providers would participate over the lifetime of the program. Yearly estimates are based on provider readiness, also derived from the Environmental Scan.

Table B.1 shows the history of payment goals. Table B.1 should be read as follows. Maryland lists each SMHP version's goals in their entirety. Each SMHP version adjusts goals based on actual AIU or MU attestations as of the date of the updated SMHP. For example, for Program Year 2011, Medicaid listed 100 as our goal for AIU. In Program Year 2012, we exceeded that goal by 533 percent. As a result, we increased our AIU goal for future years. Similarly, in SMHP V.2, we over-estimated MU payment by 74 percent; thus in this year's SMHP, we adjust our goal downward to reflect actual program participation.

Since the program inception, we have exceeded our goals for 2011 and 2012 by over 500 percent and 90 percent, respectively. With two years of data and experience, we are better equipped to make a projection for future participation. Based on the current submission records, as of October 2013, we have received 588 attestations for program year 2013. On average, we receive 73.5 attestations monthly and approve 70 percent of them. We project the total number of paid AIU attestations for 2013 will be 617, which is close to the average of actual attestations for 2011 and 2012. We also project that providers will participate at the same rate for the next two years. Finally, we project that around 3,740 total providers will participate in AIU. We calculate this estimate based on ONC's estimated number of healthcare providers in Maryland (N=14,307) and our 2013 Environmental Scan results that showed that 26 percent of eligible providers will participate in the Medicaid Incentive Program over the next two years.

Based on our 2013 environmental scan, 64 percent of currently participating providers replied they will attest for MU for program year 2013. But given the fact that as of October 2013, we have only received 28 MU submissions for program year 2013, we discount the participation rate by 30 percent. This estimate accounts for the number of providers who attempt to attest

## Section B: The Maryland "To-Be" HIT Landscape

and who meet eligibility criteria. Finally, based on past experience, we estimate 70 percent of the MU submissions will be approved.

The MU participation rate estimate accounts for the likelihood of providers to participate in their first year of MU. This is because we lack the data to estimate the likelihood of continued MU participation. As we gather more data, we will update this projection.

Meaningful Use participation goals are calculated using the below formula:

$$\{[(\text{Total AIU to date})-(\text{Total MU to date})]*(64%)*(30%)*(70%)\}$$

Where, as explained above, 64 percent is the estimated percent of providers who signaled their intent to achieve MU for Program Year 2013; 30 percent is the discount rate used to adjust the likelihood of participation given current data on MU participation; and 70 percent is the estimated percent of all providers who meet all pre-payment verification requirements.

**Table B.1 – EP Participation Goals**

| Year   | SMHP V.1 |      |        | SMHP V.2 |          |        |         |         |        | SMHP V.3 |          |        |         |         |        |
|--------|----------|------|--------|----------|----------|--------|---------|---------|--------|----------|----------|--------|---------|---------|--------|
|        | Goal     | Actl | % Diff | AIU Goal | AIU Actl | % Diff | MU Goal | MU Actl | % Diff | AIU Goal | AIU Actl | % Diff | MU Goal | MU Actl | % Diff |
| 2011   | 100      | 633  | 533    | 100      | 633      | 533    | --      | --      | --     | 100      | 633      | 533    | --      | --      | --     |
| 2012   | 400      | --   | --     | 410      | 790      | 93     | 190     | 50      | -74    | 410      | 790      | 93     | 190     | 50      | -74    |
| 2013   | 500      | --   | --     | 520      | --       | --     | 240     | --      | --     | 617      | --       | --     | 185     | --      | --     |
| 2014   | 600      | --   | --     | 624      | --       | --     | 288     | --      | --     | 617      | --       | --     | 243     | --      | --     |
| 2015   | 1,300    | --   | --     | 749      | --       | --     | 345     | --      | --     | 617      | --       | --     | 293     | --      | --     |
| 2016 + | --       | --   | --     | --       | --       | --     | --      | --      | --     | 466      | --       | --     | 336     | --      | --     |

Note: "% Diff" is the percent difference, comparing actual ("Actl") to the past SMHP's stated goal.

Based on a 2010 HIT hospital survey conducted by MHCC, Medicaid anticipates that approximately 35 of the State's 46 acute care hospitals plan to participate in the Medicaid EHR Incentive Program.<sup>26</sup> Through Year 1, 19 hospitals have registered with Maryland Medicaid and have been paid. However, the MHCC estimates that 89 percent will participate in the Medicare EHR Incentive Program.

<sup>26</sup> This estimate is derived from a survey conducted by the Maryland Health Care Commission in 2011. See: [http://mhcc.maryland.gov/electronichealth/2011\\_Hospital\\_HIT\\_Report.pdf](http://mhcc.maryland.gov/electronichealth/2011_Hospital_HIT_Report.pdf).

## Section B: The Maryland "To-Be" HIT Landscape

In Year 2, Medicaid worked with the REC to increase outreach to all potentially eligible providers, including hospitals. Over Year 2 of the program, hospital registration and payment increased to 37.<sup>27</sup> According to the 2013 HIT hospital assessment carried out annually by the MHCC, 41 hospitals had participated in the federal incentive programs, and 25 of them had attested to meaningful use. With the REC's outreach, Maryland anticipates more hospitals will participate in Medicaid EHR Incentive Program in the following years.

**Table B.2 – EH Registration Goals**

|                | EH Participation Goal<br>(outcome) | EH Participation Goal<br>(outcome) | EH Participation Goal |
|----------------|------------------------------------|------------------------------------|-----------------------|
| Year           | SMHP V.1                           | SMHP V.2                           | SMHP V.3              |
| 2011           | 18 (15)                            | --                                 | --                    |
| 2012           | 25                                 | 25                                 | 25                    |
| 2013           | 28                                 | 28                                 | 37                    |
| 2014           | 35                                 | 35                                 | 39                    |
| 2015 and later | 35                                 | 42                                 | 42                    |

As Figure B.1 shows, Medicaid has exceeded its EP goals for Year 1, hitting its goal of 100 paid providers within the first four months that the State began making payments. Medicaid surpassed its hospital goal in November of 2012.

In Year 2, Medicaid continued to exceed its hospital goal by 40 percent while reaching its goal for eligible providers in October. Over the last two years, Medicaid has successfully met its goals for both eligible hospitals and providers.

<sup>27</sup> Forty-one EH attestations including four Year 2 payments. This amounts to 37 unique hospitals, including two children's hospitals.

Section B: The Maryland "To-Be" HIT Landscape

Figure B.1- Achievement of EHR Incentive Program Payment Goals, Year 1

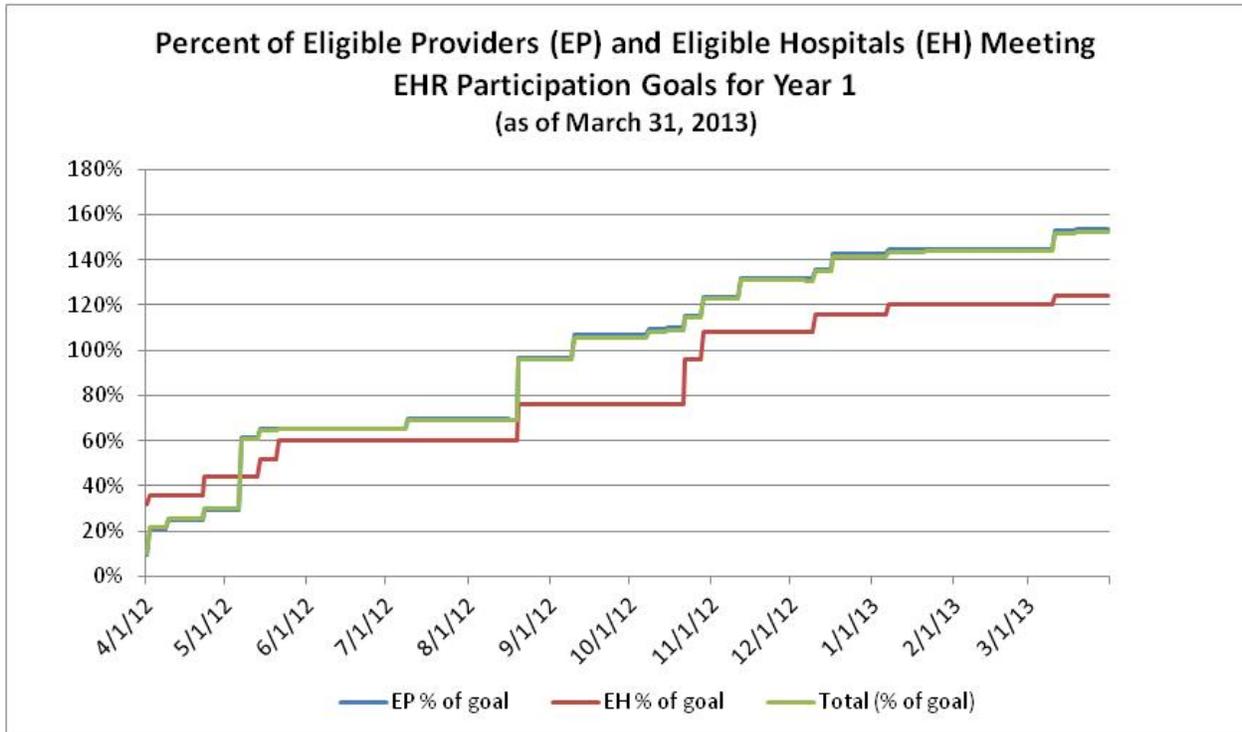
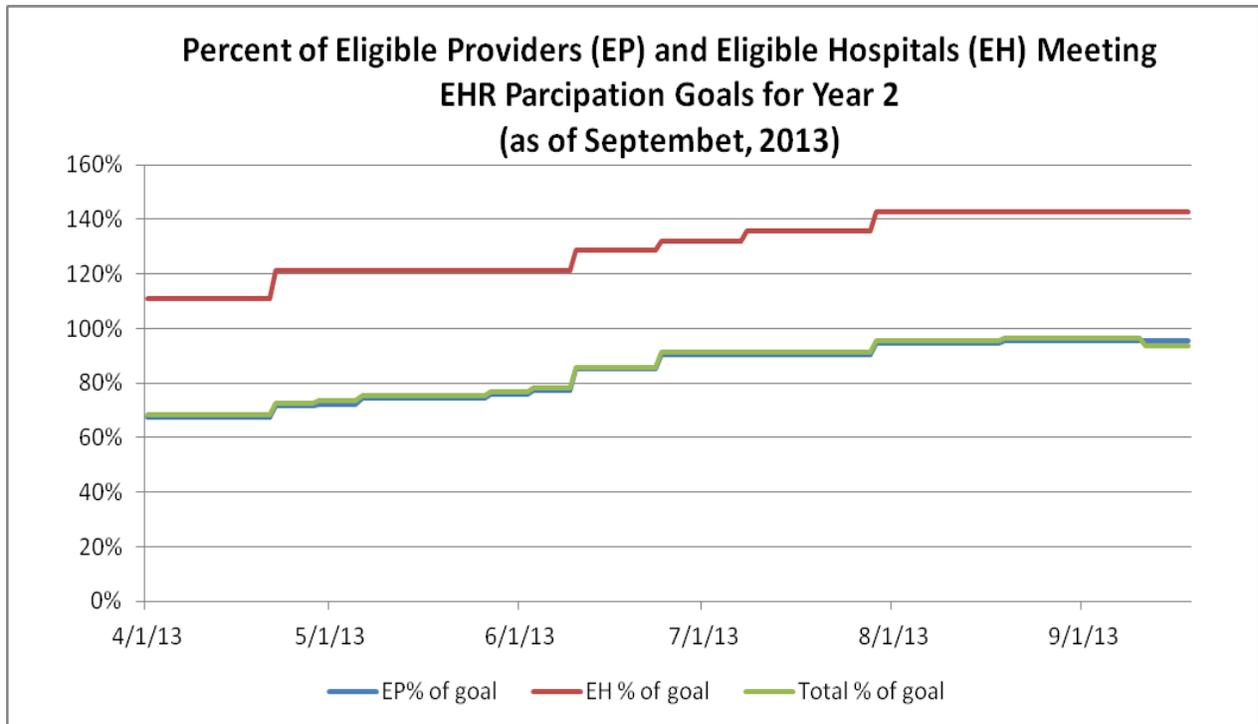


Figure B.2 - Achievement of EHR Incentive Program Payment Goals, Year 2



## Section B: The Maryland "To-Be" HIT Landscape

Once a provider is registered and has completed implementation of or upgrade to a certified EHR, their next major goal is to achieve Meaningful Use. Medicaid, in partnership with the REC and other health care stakeholder groups, intends to ensure that the majority of the providers achieve Meaningful Use in a timely manner. Medicaid, with its partners, will provide education, training and outreach activities to assist providers in achieving Meaningful Use. As Table B.3 shows, Medicaid hopes to move 50 percent of AIU providers to meaningful use within their first year of eligibility for a meaningful use incentive payment, 60 percent within their next year, and 90 percent within three years.

In Year 2, about 6 percent of AIU participants had successfully attested to meaningful use in their first year of eligibility for the MU incentive payment. However, in our 2013 environmental scan, 64 percent of AIU participants indicate their attempts to move forward to MU the first year after AIU. The gap between the number of attempts and the number of completed submission suggests the difficulty and challenges moving from AIU to MU. In the survey, about 20 percent of respondents think that Meaningful Use requirements are too burdensome to meet, while about 7 percent think they are too early in the AIU stage to begin moving towards MU, and another 7 percent think their current certified EHR is not capable of producing meaningful use measures.

Recognizing it is a big step for providers to move from AIU to MU, Medicaid will continue partnering with the REC and MHCC to accelerate Meaningful Use. In the accelerating plan (forthcoming), our strategies may include hosting biannual MU registration and attestation webinars, engaging hospitals in outreach activities, providing technical support through a virtual resource center and central point of contact. In addition, Medicaid will start monitoring the progress of participating providers and collecting data for the years they achieve MU.

**Table B.3 - Meaningful Use Achievement Goals**

| Years to Meaningful Use | Meaningful Use Achievement Goal SMHP V.2 |
|-------------------------|--|
| 1                       | 50%                                      |
| 2                       | 60%                                      |
| 3                       | 90%                                      |

Additionally, Table B.4 lists Year 1 and Year 2 administrative goals for the EHR Incentive Program.

**Table B.4 – Administrative Goals for the EHR Incentive Program**

| Administrative Goals | Outcome |
|----------------------|---------|
|----------------------|---------|

## Section B: The Maryland "To-Be" HIT Landscape

| <b>Year 1</b>   |                            |
|---|----------------------------|
| Complete R&A testing on August 15, 2011                   | Completed                  |
| EP and EH registration go-live in October – November 2011 | Completed                  |
| First EP payment on November – December 2011              | Delayed until January 2012 |
| First EH payment in December 2012                         | Completed                  |
| <b>Year 2</b>   |                            |
| eMIPP Project Plan for Year 2, Stage 2 – Sept 28, 2012    | Submitted on Oct 2, 2013   |
| Requirement Design Document – November 12, 2013           | Completed                  |
| Unit Tests for Functionality – Nov 19, 2013               | On Schedule                |
| Release Stage 2 Guidance – December 1, 2013               | On Schedule                |
| UAT – Dec 7-14, 2013                                      | On Schedule                |
| Go-Live – Dec 21, 2013                                    | On Schedule                |
| First payments – Jan 2014                                 | On Schedule                |
| Begin AIU audits – November 2013                          | Started, and ongoing       |
| <b>Year 3</b>   |                            |
| MU audit RFP Draft – February 2013 (est.)                 | On Schedule                |
| MU auditor onboard – February 2014 (est.)                 | On Schedule                |

### *EHR Incentive Oversight Goals and Outcomes*

Medicaid will provide oversight in all aspects of the EHR Incentive Program including areas in which Maryland is contracting out for support such as with eMIPP, the REC, and the monitoring and oversight contractor (described in Section D). This includes, but is not limited to, administering the incentive payments, tracking meaningful use by providers, and pursuing initiatives to encourage the adoption of certified EHR technology.

Medicaid developed an AIU post-payment auditing protocol during Year 2 and began auditing in late 2012. Depending on State resources, Medicaid plans to continue AIU post-payment auditing, but will procure the services of a vendor to perform EP Meaningful Use audits. The contractor(s) selected to administer areas of the incentive program will be required to meet established performance measures. Medicaid will require the contractor to propose performance standards related to all aspects of the contractor's work, develop a disaster recovery plan, and establish a business continuity plan.

Medicaid recognizes the importance of thoughtful planning around key benchmarks. The following list represents those considered to date in the strategic and operational planning for the administration of the incentive program:

| Item                                       | Description                               |
|--|---|
| Develop and maintain a core infrastructure | A robust web based solution               |
| Achieve all established performance goals  | Meet annual goals established by Medicaid |

## Section B: The Maryland "To-Be" HIT Landscape

|  |   |
|--|---|
| Conduct select program audits                                | Routine monthly, quarterly, and annual                |
| Implement a comprehensive and user friendly web based portal | An easy to navigate application                       |
| Build and sustain a financial reporting interface into MMIS  | Accurate and consistent data feed to MMIS             |
| Maintain all aspects of program administration               | Maintain all aspects of the operations                |
| Establish an outreach and communication initiative           | An effective program communication strategy           |
| Implement program policies established by Medicaid           | Policies governing application and payment process    |
| Implement a mechanism to manage provider disputes            | An eligibility and payment mitigation process         |
| Meet reporting and audit requirements of Medicaid            | Submit timely reports and recommendations to Medicaid |
| Manage all aspects of a fraud and abuse program              | Minimize and resolve program misuse                   |
| Calculate incentive payments                                 | Adjudicate incentive payment requests                 |

At the end of Year 1, Medicaid had only engaged the services of contractors for planning purposes. In Year 2, we had solidified an MOU with the REC to expand outreach and education to Medicaid-specific providers.

During Year 2, Medicaid also increased its staff to meet projected levels in the SMHP and IAPD, increased the organization and administration of the program by creating an Access database to maintain all records of the incentive program and to query the MMIS to validate provider patient volume, and continued to draft an RFP for MU auditing support.

### *HIT/E Goals and Outcomes*

Medicaid is an active participant in the statewide HIE efforts and is a member on the Policy Board. The Policy Board has general oversight of the statewide HIE, including the authority to evaluate and recommend to the MHCC the policies that will govern the exchange. Medicaid expects to connect with the statewide HIE as part of the implementation process of the new MMIS and to facilitate public health reporting. The vendor selected to implement the new MMIS will be required to collaborate with statewide HIE to build the interface as part of the implementation process. Medicaid has been developing the specification for the MMIS replacement system for about two years. The technology changes that Medicaid is moving toward will benefit Medicaid by improved regional health quality, reduced expense in delivering care, and improved quality in care delivery.

To help take advantage of enhanced administrative funding opportunities under HITECH and MMIS, Medicaid hired a contractor to help develop a planning and implementation document to be used for a future HITECH I-APD update. Medicaid continues to include the HIE in discussions for Health IT development and interoperability planning.

## Section B: The Maryland "To-Be" HIT Landscape

### B.2 \*What will the SMA's IT system architecture (potentially including the MMIS) look like in five years to support the achievement of the SMA's long term goals and objectives?

Although an additional platform (eMIPP) has been acquired to implement the EHR Incentive Program (see Section 4), some MMIS changes were required to make the program operational. Overall, MMIS will be used to store general provider enrollment, claims, and encounter information and will be the system through which EPs and Hospitals will be paid. But the new platform will be the primary system that is used for provider incentive registration, attestation, and MU storage. Changes to the existing MMIS and its periphery systems included: Atypical provider enrollment functional expansions, modified payment processing files, and eMIPP-to-MMIS interfaces.

Providers interested in participating in the EHR Incentive Program must use e-Medicaid, Maryland's electronic, web-based provider management system, to register. This registration will function as the link to the payment subsystem in MMIS. Managed Care Organization (MCO) network-only providers are not currently enrolled in MMIS, only fee-for-service (FFS) providers are currently required to complete the Medicaid enrollment process. All MCO provider information is maintained by the MCOs with which they are affiliated. MCO-based providers interested in participating in the Incentive Program are required to enroll with e-Medicaid so that they can be linked to the payment subsystem. More details are available in section 4.3.2.1.

To simplify interoperability between the current and future MMIS, CSC hosts EHR registration and enrollment information for Maryland's EHR Incentive Program. The secure servers will store the new registration and attestation information along with other administrative data. This information will be combined with MMIS data on eligibility and claims to accept or deny participation in the program. Gross adjustments in MMIS will be used to make payments.

CSC utilizes the Electronic Health Record Medicaid Incentive Payment Program (EHR MIPP or eMIPP), which is a web-based solution currently in use by the State of Michigan and other states. Maryland will own the system, but not the third-party hardware, such as servers. Team CSC's eMIPP solution provides the CMS's Registration and Attestation System interfaces, Provider Registration, State work-flow/eligibility determination, and data capabilities to be the system of record for State of Maryland's EHR MIPP. The solution directly interfaces with CMS to receive and send required federal data. The system can feed payment requests to the existing MMIS or send the request to the State accounting system. In order to achieve a quick implementation timeline, CSC implemented the eMIPP solution that is currently being implemented in the State of Michigan ("Baseline System") with very minimal changes. The few changes to the Baseline System included: changes pertaining to customization of the Portal for the State of Maryland (Logo, Department name etc.), named interfaces to the State's

## Section B: The Maryland "To-Be" HIT Landscape

accounting system and provider system, modification of current set of available reports to customize it for Maryland and inclusion of State specific provider payment rule/criteria into the Baseline System. These changes were minor and did not impact the functionality of the baseline system.

Team CSC's eMIPP solution core product is web-centric and services-based for improved integration and interoperability. The scope of this project is intended to cover the functionality required to make payments for EP and EH.

For Year 2, Medicaid upgraded the eMIPP system for Meaningful Use, Stage 1 changes. CSC/CNSI implemented the same changes in Michigan and Washington State. The base system screen shots have been approved by CMS. Current functional and aesthetic changes to the base system in Year 1 will be carried over into Year 2. Further, Year 2 functionality is expanded to not only include meaningful use data submissions, but will also include a document upload feature available to providers who need additional supporting documentation to verify eligibility.

For Year 3, Stage 2 enhancements, CSC/CNSI submitted a proposal to the State, which was approved by CMS in October of 2013. These enhancements will allow Maryland to meet program requirements for Stage 2. Screenshots are included in Appendix J. In 2015, eMIPP will have the capabilities to receive Clinical Quality Measures (CQMs) using Quality Reporting Data Architecture (QRDA) Category III standard. At this time, the State has not decided how to facilitate information exchange to support this capability. Options include the HIE, or direct submission to eMIPP or MMIS.

### **B.3 How will Medicaid providers interface with the SMA IT system as it relates to the EHR Incentive Program (registration, reporting of MU data, etc.)?**

Using a web-based internet portal, Medicaid-enrolled providers will register for incentive payments under the EHR program within the State of Maryland. Team CSC will implement the provider intake and payment module of eMIPP to support the registration, eligibility verification, attestation processes and payment process. The current process for registration will continue as is, with Year 2 modifications only enhancing usability and adding a meaningful use attestation screen.

The online eMIPP portal allows EPs and EHs to register in State's EHR MIPP program to receive the yearly payment. Prior to registering at the State level all providers must register with the Federal Registration and Attestation System (R&A) and obtain an R&A Registration ID. R&A notifies the State about each registered provider via one of the dedicated CMS R&A interfaces. As part of the registration process the system collects the provider's EHR "certification" information. For EPs, it collects their Medicaid patient and total encounter volume for the stipulated reporting period to confirm their eligibility. For EHs the State uses existing cost

## Section B: The Maryland "To-Be" HIT Landscape

report and discharge data submitted by the hospitals to the Health Services Cost Review Commission (HSCRC) to confirm eligibility and calculate payments.

For Year 2 and beyond the eMIPP online functionality also collects Meaningful Use (MU) information as stipulated by CMS. The eMIPP system lists both the core set and menu set objectives for MU and Clinical Quality Measures (CQMs). EP's are required to select 15 required core objectives, and 5 menu set objectives from a list of 10. Medicaid only EH providers are required to select and input data for 14 required core objectives, and 5 menu set objectives that may be chosen from a list of 10. Dual Medicare and Medicaid EHs will provide their MU information at the Medicare level. This information is sent to eMIPP using the same CMS interface as Year 1 dually eligible EHs. Figure B.4 provides a screenshot of the MU screen encountered by providers.

For Year 3, Stage 2 of the program, EPs must meet the thresholds for the 17 core and 3 menu objectives, and report on CQMs. These changes will be included in eMIPP and follow the same look and feel as Figure B.4.

**Figure B.4 – eMIPP Meaningful Use Provider Compliance Screen for Meaningful Use Submission**

The screenshot displays the 'Meaningful Use Information' window with the 'MU-Core Set' tab selected. The main heading reads 'Meaningful Use Core Measures - EPs must fill out all 17 Meaningful Use Core Measures'. A status bar indicates 'Objective Not Completed Yet' (red icon) and 'Objective Completed' (green icon). The selected objective is 'Objective 1: CPOE for Medication Orders', which is marked as completed (green checkmark). The objective description is: 'Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines.' The screen lists three measures for this objective:

- Measure 1:** The resulting percentage must be more than 60 percent in order for an EP to meet this measure. The numerator is 61 and the denominator is 100. It includes an 'Exclusion Applies to you?' section with 'No' selected and an 'Exclusion' button.
- Measure 2:** The resulting percentage must be more than 30 percent in order for an EP to meet this measure. The numerator is 31 and the denominator is 100. It includes an 'Exclusion Applies to you?' section with 'No' selected and an 'Exclusion' button.

At the bottom of the screen are 'Save' and 'Cancel' buttons.

## Section B: The Maryland "To-Be" HIT Landscape

The system will also support an offline process for providers to report their MU information. The system will allow a registered provider to download an MU compliance PDF form. The provider completes the PDF form offline, and then uploads the form through an online screen. The system then uses the PDF to populate the online MU attestation report. Providers then review this information before submission.

### **B.4 Given what is known about HIE governance structures currently in place, what should be in place five years from now in order to achieve the SMA's HIT/e goals and objectives?**

Most of the State's systems will need enhancements before they can support both meaningful use and HIE. Maryland's approach is to establish interoperability to the statewide HIE for all State systems, including ImmuNet, ESSENCE, and MMIS. Last year, Medicaid anticipated that all hospitals in Maryland would be connected to the HIE in 2012. This has occurred. The HIE will strategically connect large health systems and ambulatory providers. Many ancillary data providers are already connected to the HIE and exchanging information. The HIE is also working to build interfaces with EHR vendors. DHMH and the HIE are exploring opportunities to leverage 90/10 HITECH administrative funding to increase the uptake of EHRs and connectivity to the HIE.

As of Year 2 of the EHR Incentive Program, Medicaid has partnered with CRISP, the MHCC, and others to explore means to increase HIE uptake using enhanced HITECH or MMIS funding. Among the ideas currently being explored are the connection of the HIE to current public health reporting systems. Through IAPD funding, the HIE has been able to significantly enhance the query portal and continues to assist hospitals in connecting to Maryland's public health agency. Additional progress includes:

- Upgrading the HIE's Query Portal to improve performance and prepare for Single Sign On (SSO) expansion;
- Expanding the Encounter Notification System infrastructure;
- Increasing ED query portal usage to 4,000 per month; and
- Identifying and planning for HL7-based solutions for hospitals to submit public health data to Maryland's public health agency.

As to the particular HIE governance structure, the stakeholders present are significant and interest broad enough to ensure the HIE's continued growth. The enhanced federal funding listed above will eventually be used to increase infrastructure and increase participation until the HIE becomes self-sustaining.

## Section B: The Maryland "To-Be" HIT Landscape

### B.5 What specific steps is the SMA planning to take in the next 12 months to encourage provider adoption of certified EHR technology?

In Year 1, Maryland Medicaid's outreach strategy leveraged the current outreach strategy provided by the state-designated REC, CRISP. The REC's current outreach strategy focuses on the provider and payer side, using medical and hospital organizations. As a partner with DHMH, the REC will add to its outreach by incorporating MCOs and Departmental communication to encourage the adoption of EHRs.

The REC brings to the table strong partnerships with The Maryland State Medical Society (MediChi) and the Hospital Association, and tested outreach strategies including webinars and fax-blasts to providers. DHMH is already in discussions with MedChi about our implementation strategy and will be working with the Maryland Chapter of the American Medical Association, the Pediatric Association, and the Hospital Association to provide clear and informative information on the EHR Incentive Program overall and how the State plans to implement. Further, by using a tested EHR Incentive Program vendor to provide the portal for providers to enroll in and provide attestations for the EHR Incentive Program, we will reduce the confusion associated with enrollment, as the selected vendor has already user-tested the interface technology.

Because nearly 80 percent of Medicaid enrollees participate in the State's Managed Care program, the State will work closely with MCOs in reaching out to their provider networks. The State has already begun discussions with MCO Liaisons to begin devising an outreach strategy. As of August 23, 2011, DHMH released an informational memo through the REC about the Medicaid enrollment requirements for MCO-based providers. This memo details the enrollment process and provides contact information for those providers who need additional assistance. DHMH also posted this memo on its EHR website. The State developed and posted on our web site, a step-by-step user guide and a video tutorial for accessing the State's system.

The State also released a Transmittal providing an overview of and expectation for the program as well as the web address for our currently operational EHR Incentive Program homepage. Aside from this as well as the I-APD, the State hosts the user's guide and provides an email address for questions.

In Year 2, Maryland Medicaid had built on its more informal partnership with the REC by signing a formal MOU. The MOU helps us share data on enrollment information to better target outreach strategies. To date, outreach activities include those in Table B.5. The role of the REC will increase as providers move towards Meaningful Use, as the REC has the technical expertise to help providers implement their EHRs and to develop reports necessary to meet meaningful use thresholds.

## Section B: The Maryland "To-Be" HIT Landscape

For Year 3, Medicaid continues to work with the REC to conduct outreach. The number of activities is described below. Working with the MHCC and the REC, Medicaid developed an MU Acceleration plan (forthcoming) detailing MU achievement barriers and mitigation strategies.

**Table B.5 – REC Education and Outreach Activities**

| Activity  | Description  | 2011 Number/ Hour | 2014 Proposed Number/Hour |
|---|--|-------------------|---------------------------|
| <b>Medicaid Meaningful Use Incentive Webinars</b>               | CRISP led Webinar to review Medicaid EHR incentives and updates  | 7                 | 6                         |
| <b>Medicaid Meaningful Use Incentive CME Events</b>             | In partnership with MedChi, provides CME events to providers   | 4                 | 4                         |
| <b>Hospital In Person Meetings</b>                              | Professional support to hospitals via in person meetings   | 14                | 14                        |
| <b>Monthly Outreach via : Email Newsletter</b>                  | Information about CMS EHR incentive payments, Testimonial from recipient, MD EHR registration and attestation System information | 11                | 11                        |
| <b>Monthly Outreach via : Fax or Paper Mailings</b>             | DHMH Bulletin/ Medicaid Newsletter   | 20                | 12                        |
| <b>Promotion Material Creation</b>                              | Informational Materials created for Fax and Newsletter   | 1                 | varies                    |
| <b>Director of Outreach - Planning and Management Promotion</b> | On-going planning and management   | 110               | 110 hrs                   |
| <b>Medical Society Events</b>                                   | Medicaid program update  | 15                | 15                        |

**Table B.6– REC Meaningful Use Attestation Support**

| Activity  | Description  | 2014 Proposed Number/Hour |
|---|--|---------------------------|
| <b>E-mail and phone support</b>                               | Email and Phone support vial CRISP 1-877-95-CRISP (27477) and <a href="mailto:info@crisphealth.org">info@crisphealth.org</a> | 325 hrs                   |
| <b>Eligible Professionals and Hospitals In-person Support</b> | Individual support to Professionals via phone or in person   | 325 hrs                   |

As previously mentioned, Medicaid partnered with MHCC and the REC to develop a forthcoming MU acceleration plan. Among other things, the plan aims to streamline most of the outreach activities and resources; thus, increasing program efficiency.

## Section B: The Maryland "To-Be" HIT Landscape

### **B.6 \*\*If the state has FQHCs with HRSA HIT/EHR funding, how will those resources and experiences be leveraged by the SMA to encourage EHR adoption?**

Through our early environmental scan, DHMH established a strong relationship with FQHCs. Particularly, DHMH hopes to work closely with Community Health Integrated Partnership, Inc. (CHIP) a not-for profit (501c3) Health Center Controlled Network (HCCN) under the Health Resources and Services Administration (HRSA) whose mission it is to provide management services to federally qualified health centers (FQHC). While the overall EHR adoption rate among FQHCs is high, the rate among this group is exceptionally so.

Drawing from the experiences of HCCN and other FQHCs – who, as a group represent the highest in-provider group adoption rate percentage within the surveyed Medicaid population – will act as a model to help push adoption among other provider groups.

### **B.7 \*\*How will the SMA assess and/or provide technical assistance to Medicaid providers around adoption and meaningful use of certified EHR technology?**

See B.3 and B.5 above.

### **B.8 \*\*How will the SMA assure that populations with unique needs, such as children, are appropriately addressed by the EHR Incentive Program?**

Medicaid recognizes the significance of better understanding the needs of providers serving populations with unique needs. Getting these providers to adopt and meaningfully use EHRs is essential to improve care for children, elderly, disabled, and chronically ill consumers in the Medicaid program. As part of the environmental scan for Year 1, a contractor convened four focus group discussions with providers to identify EHR adoption and support opportunities of providers treating populations with unique needs. One focus group was dedicated to EPSDT providers. The contractor's report describes its findings and includes recommendations. These recommendations will be used by Medicaid as it completes its framing activities for EHR technical assistance that is required under the ARRA incentive program. These findings will also be shared with the REC for program consideration and Medicaid outreach.

We expect enhanced coordination of care using HIT to improve outcomes for everyone for vulnerable populations will benefit more from initiatives such as medical home. In the future, certain meaningful use measures as defined by CMS are set to be core measures for the State's Patient-Centered Medical Home (PCMH) pilot project. By wrapping these measures into the incentive payments for the practices participating in PCMH, Maryland encourages their use and makes it easier for providers who participate in PCMH to also benefit from the EHR incentive payments.

## Section B: The Maryland "To-Be" HIT Landscape

**B.9 If the State included a description of an HIT-related grant award (or awards) in Section A, to the extent known, how will that grant (or grants) be leveraged for implementing the EHR Incentive program?**

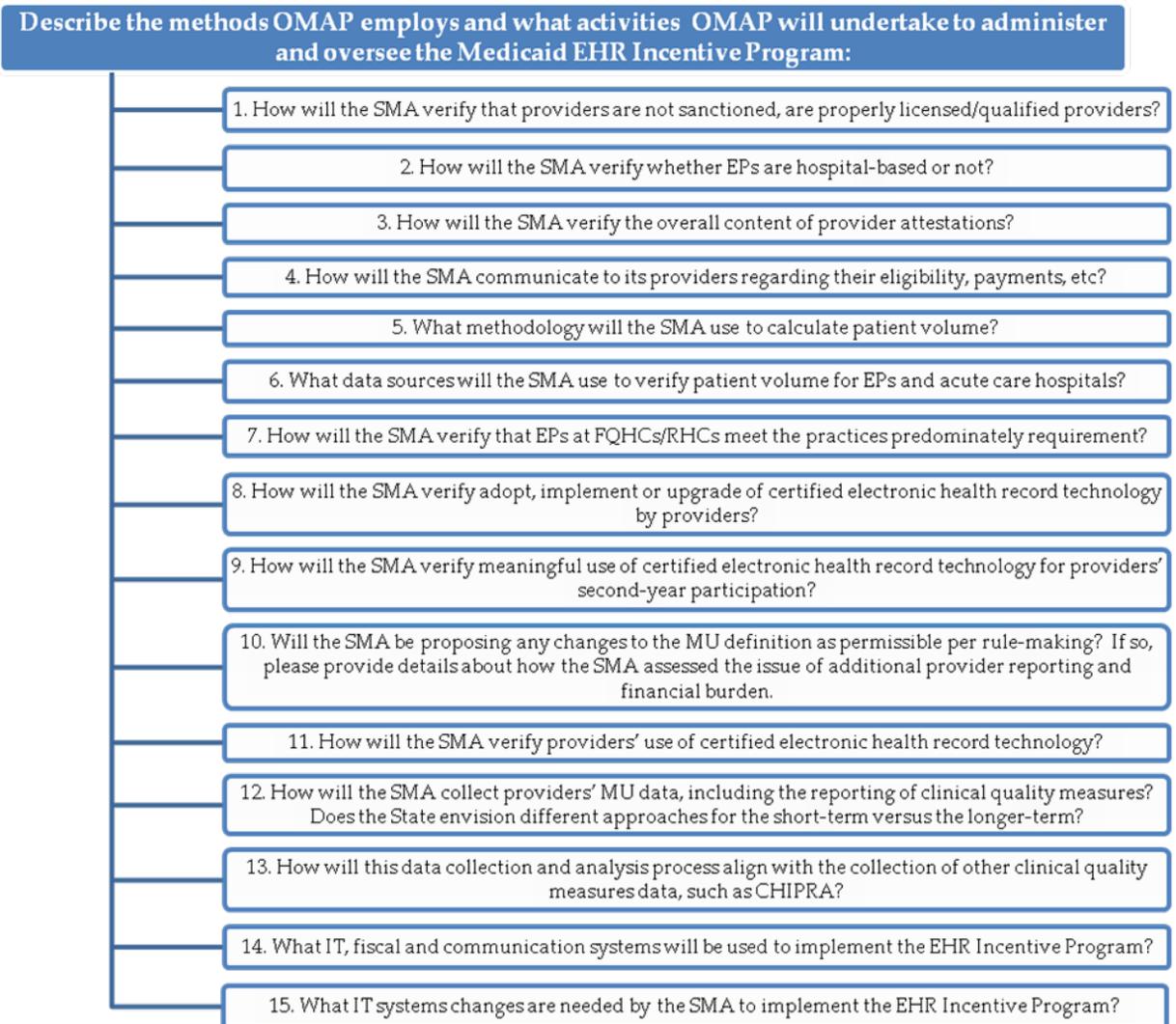
Not applicable. Our CHIPRA grant is not HIT-related.

**B.10 Does the SMA anticipate a need for new state legislation or changes to existing State laws in order to implement the EHR Incentive Program and/or facilitate a successful EHR Incentive Program? Please describe.**

See [Section A.12.a](#)

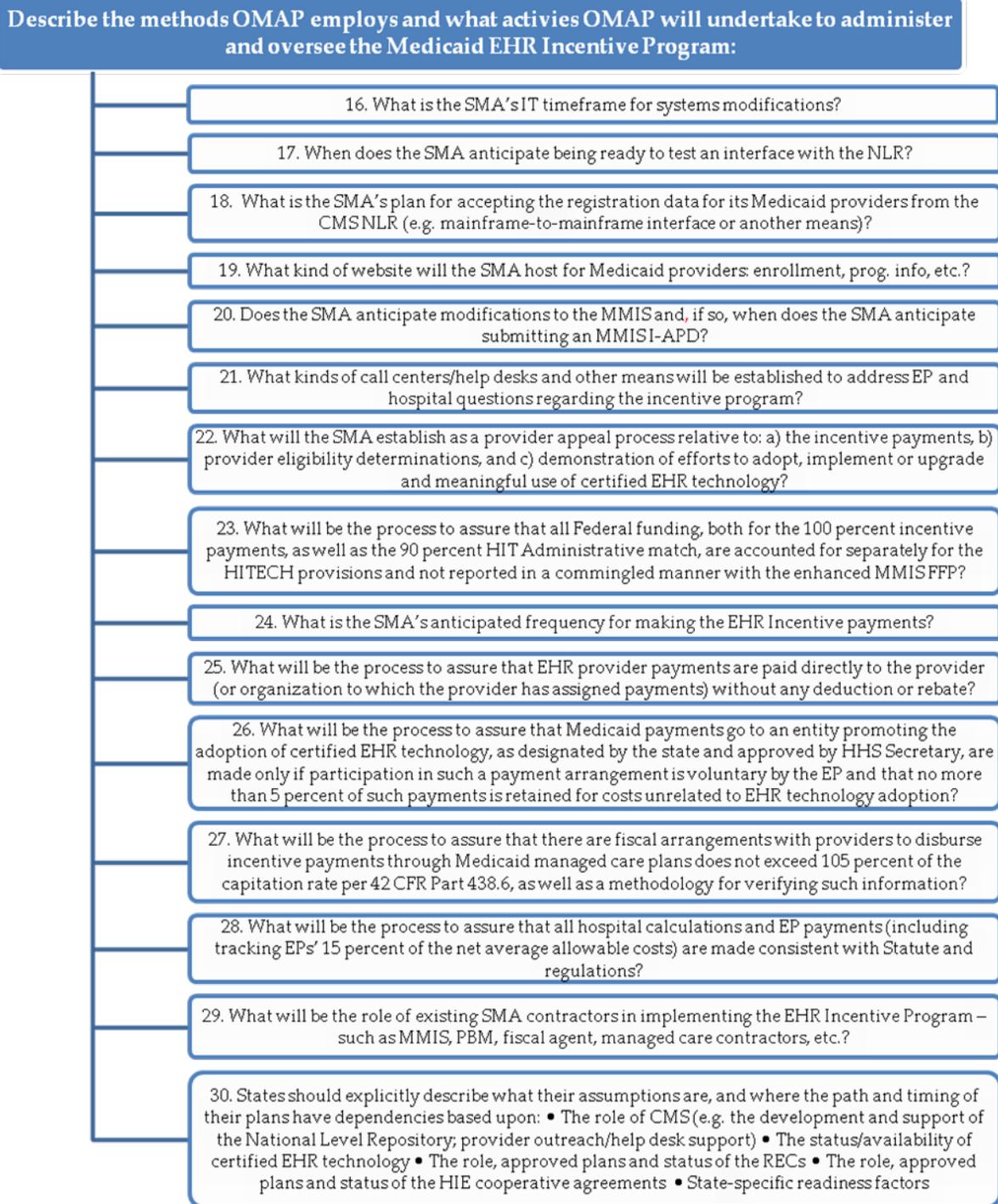
## Section C: Maryland's Implementation Plan

Figure C.1: Section C Questions from the CMS SMHP Template



## Section C: Maryland's Implementation Plan

Figure C.1: Section C Questions from the CMS SMHP Template (continued)



## Section C: Maryland's Implementation Plan

### Introduction

DHMH created a process flow for the Medicaid EHR incentive payment process that includes DHMH, eligible professionals, hospitals, the MMIS system, and an EHR provider attestation and enrollment subsystem known as the Electronic Medicaid Incentive Payment Program (eMIPP). Michigan and the State of Washington first used eMIPP for Year 1 payments. The screenshots for Year 1 are available in Appendix D of this SMHP. For Year 2 (MU Stage 1) and Year 3 (MU Stage 2), Maryland is also using the same base system used by Michigan and the State of Washington. The screen shots for this system have already been approved by CMS, and the system itself is already in production in these states. Maryland submits these screen shots in Appendix E(a),E(b), and E(c).

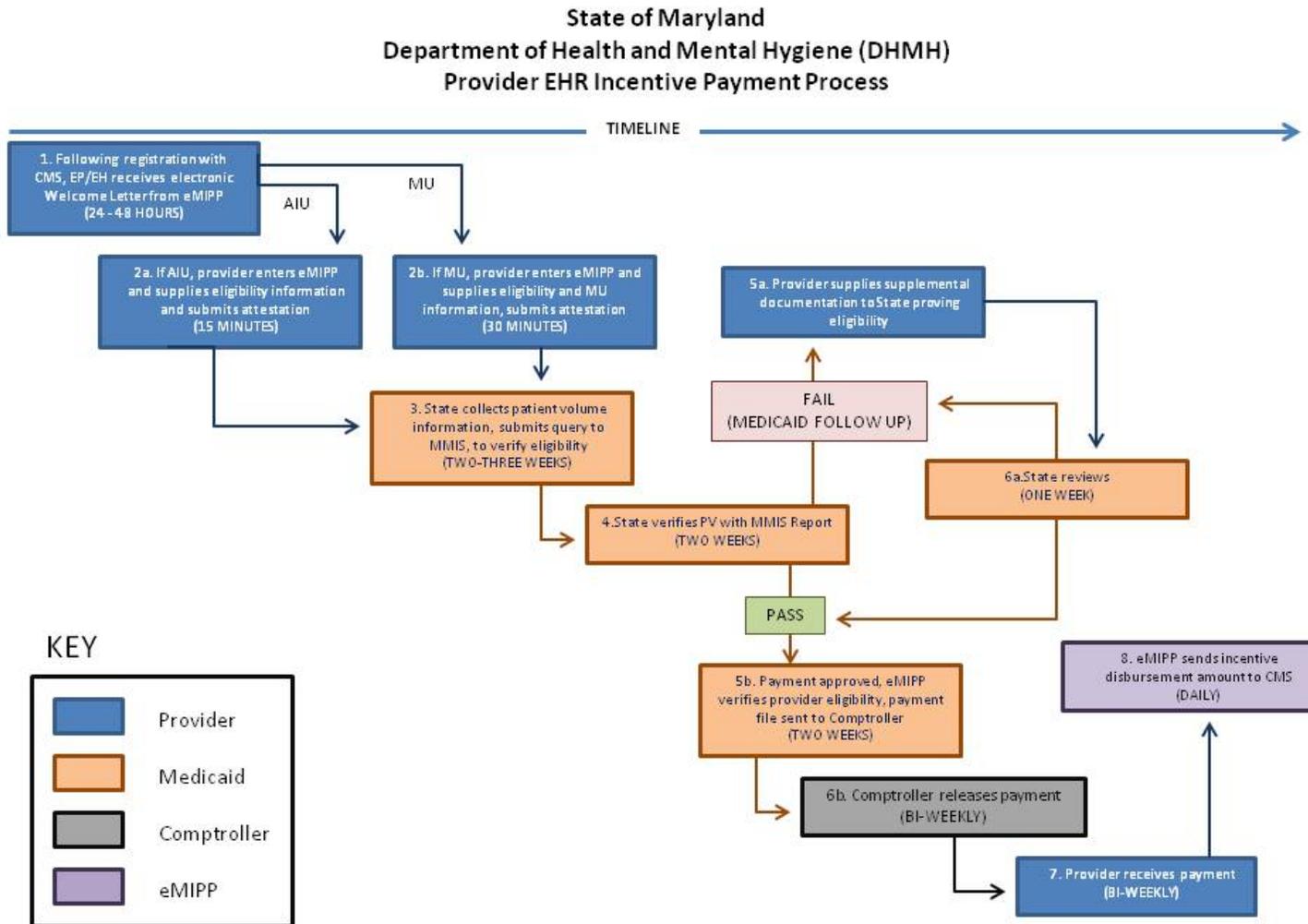
For Year 1, Maryland followed the initial time frame submitted with our first version of the SMHP: five to six months October/November 2011. DHMH developed the business requirements for eMIPP and modified an existing contract with CSC for the build. Because similar eMIPP systems are already in use, Maryland leveraged current technology, modifying the “off the shelf” product to fit the State’s needs. Each year additional funding for system modifications will be required for capturing and tracking new meaningful use objectives, for potential changes in R&A interfaces, for upgrades that may need to be performed for better provider experience, as well as additional monitoring, reporting, and outreach capabilities, etc.

As was done last year, the Department is submitting HITECH sections of the IAPD for the eMIPP implementation costs. In this section, as with the other sections, DHMH is requesting enhanced 90/10 match for all activities unless otherwise noted. Please see the IAPD for estimated amounts.

The process flow in Figure C.2 outlines DHMH’s proposed process for administering the Medicaid EHR incentive payment program. In the narrative below, DHMH describes each step and indicates which step(s) of the process flow help to respond to each CMS template question. The term “providers” is used to refer to both eligible professionals and eligible hospitals unless otherwise noted. The registration and attestation process is nearly the same in Year 2 as it was in Year 1, only a new meaningful use slide deck is added to the attestation page. For Year 3 (MU Stage 2), a new slide deck will be added to the eMIPP system.

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Figure C.2: Maryland EHR Incentive Program Process Flow Diagram



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### Step 1: The Department conducts education and outreach strategy for providers and stakeholders (Response to Questions #4, 14, 19, 21, 26, 27, 29, and 30)

The Department is responsible for communicating with providers about enrolling in the Medicaid incentive program and will:

- Inform providers of the EHR Incentive Program and the requirements for participation.
- Coordinate with the Regional Extension Center (REC) and the State's Health Information Exchange (HIE), Chesapeake Regional Information System for Our Patients (CRISP), and other resources to provide technical assistance and information related to EHR adoption, implementation, upgrade, and meaningful use of EHRs.
- Inform providers about how to begin the enrollment process with CMS's Registration and Attestation System (R&A).
- Inform providers that they will be asked for a National Provider Identifier (NPI) when they register with the R&A and are encouraged to get an NPI if they do not already have one.
- Inform providers that, to participate in the incentive program, they must be participating Medicaid fee-for-service providers. DHMH cannot conduct proper oversight, or reclaim overpayments, if they are not enrolled in Medicaid. Providers not currently enrolled in Medicaid include some Medicaid managed care providers, physician assistants, and providers that practice in FQHCs. Requiring Medicaid enrollment will help DHMH to verify when a professional attests to practicing predominantly in a FQHC since these newly enrolled providers will now have their data collected as part of being Medicaid providers. DHMH will continue to conduct outreach to encourage providers to sign up for Medicaid now if they are not already. The outreach document posted on our website is attached in Appendix K.
- Inform Physician Assistants that they are eligible for incentive payments if they are practicing in an FQHC or RHC that is so-led by a Physician Assistant but that they are not otherwise eligible for Medicaid. DHMH will require Physician Assistants who think they are eligible for the incentive program to apply through a special process. DHMH will outreach to FQHCs and RHCs to inform Physician Assistants about the program and how they can enroll in Medicaid and get an incentive payment. We do not believe that there are many (if any) Physician Assistants eligible for the incentive program so we will process these applications and any resulting incentive payments manually.

In order to communicate this information to providers, DHMH developed a communications strategy that drew heavily from the groundwork already laid by the REC which includes: identifying events, communication channels, materials, content, and audiences. The

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Department has already and will continue to release Information Provider Transmittals describing Maryland's EHR Incentive Program including program requirements, provider types eligible, the R&A, program oversight, and the application and attestation process. The Department releases these transmittals through a fax list maintained by the REC and provided by MedChi, Maryland's medical association. These transmittals are also posted on Maryland's EHR Incentive Program website. To reach hospitals, the Department uses the contact information stored by the Federal Registration and Attestation System. In addition to the Provider Transmittal, DHMH plans to develop and issue information on the Remittance Advice banner messages to address such topics as:

- Continuing to update information available on DHMH's website, link to REC website for more provider outreach information with links back to DHMH's website
- Informing providers where HIT information is located on the web and what type of information is provided there, including DHMH's, the Regional Extension Center's, the Maryland Health Care Commission's, and CMS's websites.
- Getting ready for the Medicaid incentive payment – describing the R&A and how to register, getting an NPI, requirements to be a Medicaid-enrolled provider, registering with DHMH's provider portal.
- Informing providers how to begin the application process with Maryland Medicaid once they have successfully registered at the R&A as well as the importance of providing an email address at the R&A for communication purposes.
- Developing a provider manual that will help hospitals and professionals to understand and apply for incentive payments.

Additionally, this information will also be described in a fax-blast to provider organizations, and possibly an email blast, depending on the availability of provider emails. The Department will also consider leveraging social media.

As part of the communications process and strategy, DHMH will continue to meet with provider groups, particularly the Managed Care Organization Liaison Meetings, The Maryland State Medical Society (MedChi), the Local Health Officers Round Table, Maryland Medicaid Advisory Committee (MMAC) the Maryland Chapter of the American Academy of Pediatrics, and the Hospital Association of Maryland. DHMH expects these meetings to occur on a quarterly or near-monthly frequency, with more frequent meetings as needed.

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As stated above, DHMH will rely heavily on CRISP, Maryland's Regional Extension Center (REC). Because the REC has extensive knowledge about outreaching to providers interested in adopting EHRs, DHMH is collaborating with the REC to perform Medicaid provider outreach and education activities. Coordinated activities include the communication of eligibility requirements, as well as registration and participation instructions. For example, the REC continues to hold a series of webinars to educate providers about the EHR Incentive Program in which DHMH and the REC discussed the EHR Incentive Program and how to access the technical support of the REC. Most recently, the Department and the REC developed an Attestation Tips sheet that provides answers to frequently asked questions, provides a check-list for successful attestation, and contact numbers for help.

The Department, in coordination with the REC, developed a web-based FAQ page (similar to the one available at the CMS level). This FAQ page is hosted by the REC, but linked from the Department's EHR Incentive Program web page. The Department also hosts fact sheets, user guides, and video tutorials.

To ensure that all educational materials are accurate and communicate a uniform message, DHMH will continue to develop and/or approve two types of provider education and outreach materials in coordination with the other bureaus and offices in DHMH, the Maryland Health Care Commission, the REC, CMS, and ONC, and others:

1. Materials that explain the Medicaid EHR Incentive Program; and
2. Educational and technical assistance materials on the adoption, implementation, upgrading, and meaningful use of EHRs.

The Department continues to engage its partners to help distribute outreach materials. These partners include: Managed Care Organizations, Early Periodic Screening, Diagnosis, and Treatment (EPSDT) Nursing staff, the REC, DentaQuest (Maryland's Oral Health contractor), CRISP, and others. Materials will include Maryland EHR Incentive Program-specific information and information provided by CMS, the REC, and ONC.

In terms of materials related to EHR adoption, DHMH will work with its partners, particularly the REC, and CMS to gather existing materials and tools (such as the eligibility tool under development by CMS) that describe model practices and provide background and technical assistance on adoption, implementation, upgrade, and meaningful use of EHRs. Maryland will also be requesting funds as part of the IAPD to work with the REC on outreach and provider engagement and is already engaging providers through webcasts and by answering questions

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from providers on the Medicaid EHR incentive program. DHMH will leverage an existing agreement between MHCC and the REC, which is described in more detail in the IAPD.

For Years 1 and 2, DHMH took a federated approach to providing EHR-Incentive Program information to potentially eligible providers. After an internal review of EHR program participation and barriers to participation (MHCC MU Acceleration Strategy, *forthcoming*), DHMH, MHCC, and the REC agreed to work towards creating a central website and call-center to host the major information related to the EHR Incentive Program and act as a triage point for calls or emailed questions. The exact approach is still in the planning phase, but costs associated with the consolidated web site and call center are already included in the IPAD U for FFY14.

Currently, providers can obtain information from DHMH's EHR-specific webpage, the REC's webpage, or the MHCC's webpage. All websites reference the others and provide unique information for providers. For example, DHMH's webpage provides planning information about the EHR Incentive Program from both the State and Federal perspective,<sup>28</sup> including links to syndicated content from CMS, while the REC provides information on Management Service Organization entities to help providers choose and implement certified EHRs, and the MHCC provides a robust EHR system comparison tool so that providers can easily identify the appropriate EHR systems for them. The Department hoped that these linkages with other HIT-related websites, combined with the listing of the webpage on all communications with providers about the EHR incentive program (including informational transmittals, webinars, fax blasts, and emails) would promote traffic to the website. However, the variety of information sources may have confused potentially eligible providers seeking information. The Department's new approach (central website and contact point maintained by the REC) will allow the Department to streamline their webpage to enrollment and attestation-related information, while providing providers a link to the central website for any additional information and questions.

After briefly considering the use of an Administrative Service Organization (ASO) for help center support, the Department has decided not to pursue the ASO model. Instead, we will be using our current provider enrollment and relations hotlines to ensure that provider needs are met through help center support. The Department's provider relations help center is open Monday through Friday 8 AM to 5PM. Under the centralized model proposed for FFY14, the Department will be outreaching to providers about the use of the REC hot-line for all EHR-related questions. Thus far, the REC has fielded many technical questions about the program; and, when questions

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<sup>28</sup> See: <https://mmcp.dhmf.maryland.gov/ehr/SitePages/Home.aspx>

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relate to provider enrollment, they forward this information to the Department. Under the centralized hotline strategy, the REC will be expanding its hotline services. The REC will continue to forward Medicaid-related information to the EHR Incentive Program team. The Department and the REC are able to provide feedback to any provider seeking assistance within three business days.

The Department is in the process of developing performance measures to evaluate responsiveness to provider concerns. Systems will be modified to capture and report information about the EHR Incentive Program-related calls, e.g., reason code and provider type. To help administer the incentive program, DHMH will gather information about providers that inquire about the program, e.g., to gain a sense of how many providers will apply. DHMH will also host "how-to" guides for providers registering and attesting through eMIPP.

In the case of materials for Medicaid recipients, DHMH will coordinate with CMS and ONC as part of their efforts to educate recipients. The Department will also coordinate with the State's HIE implementing organization, CRISP. The Department has a seat on the HIE's Policy Board, and will use this position to work closely with the HIE to develop a communications strategy for providers, patients, and payers on the value of HIE and to address privacy and security concerns. The Department will also continue to engage the members of the MMAC to review and provide feedback on the materials as they relate to consumers.

Although over 80 percent of Medicaid participants enroll with an MCO through the HealthChoice program, DHMH is not planning to establish fiscal arrangements with the PH-MCOs (response to question 27). However, DHMH is continuing to think of ways to leverage MCOs to support the EHR Incentive Program. Further, as mentioned in section B.5, DHMH has issued instructions for MCO-based provider enrollment and posted it to its website. These instructions, as well as a step-by-step user guide are hosted on our web page.

There are numerous organizations within Maryland that are available to serve as state-designated adoption entities including the REC and Community Health Integrated Partnership, Inc. (CHIP), a not-for profit (501c3) Health Center Controlled Network (HCCN) under the Health Resources and Services Administration (HRSA) to provide management services to federally qualified health centers (FQHC). With CHIP's help, these FQHCs maintain a robust and integrated EHR system. DHMH will continue to explore these options going forward in response to provider needs.

**Step 2: Providers will enroll in the Registration and Attestation System (R&A)  
(Response to Questions #1, 16, 17, 30)**

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Before the provider can apply to participate in the program, the provider must enroll in the R&A. The goal of the R&A is to ensure that there are no duplicate or improper payments resulting from providers switching among state Medicaid EHR Incentive Programs or between Medicaid and Medicare (applies only to eligible professionals, hospitals can receive both Medicaid and Medicare incentive payments). The Department contracted with CSC to implement the eMIPP system, which serves as the interface between the R&A and Maryland's MMIS and will also act as the registration and attestation portal for Medicaid providers applying to Maryland's Medicaid EHR Incentive Program. eMIPP was designed as part of a multi-state collective which will allow participating states to achieve cost-savings and share lessons learned.

The State of Michigan is the pioneer state for the eMIPP system. In Year 1, Maryland built on Michigan's base system; for Year 2, we will follow a similar implementation plan. The Department tested the interface with CMS's Registration and Attestation System in the second CMS group test (group 4) in September 2011.

The Department continues to operate under the understanding that the R&A will collect from providers the information listed below:

- NPI: National Provider Identifier where the source system is NPPES (National Plan and Provider Enumeration System)
- CCN: Provider number (for hospitals)
- Payee NPI: National Provider Identifier of the entity receiving payment (EPs)
- Payee TIN: Taxpayer Identification Number that is to be used for payment
- Personal TIN: Personal Taxpayer Identification Number (EPs)
- Record Number: A unique identifier for each record on the interface file
- Program Option: EP's choice of program to use for incentives. Valid values include Medicare or Medicaid. For hospitals, a selection of Dually Eligible will be available
- State: The selected State for Medicaid participation
- Provider Type: Differentiates types of providers as listed in HITECH legislation
- Confirmation number: Unique number created by the R&A and used by the State if desired to confirm the provider's identity for registration
- Providers will indicate whether they wish to assign their incentive payment (and, if so, to whom) in the R&A
- Email address of applicant

eMIPP interfaces with other sources of provider information including the Medicare Exclusions Database and the ONC's Certified Health IT Product List (CHPL), which will help to identify

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providers who are ineligible due to exclusions or sanctions and to verify certified EHR technology.

### **Step 3: The R&A will provide information to DHMH through eMIPP interfaces about providers who have applied for the incentive program (Response to Questions #14, 18, 20, 29)**

The provider applicant will begin the application process by entering information at the CMS R&A and then the R&A will send the provider information to the State in a daily batch file. Once the file of Maryland applicants is received by the R&A, it will be loaded into eMIPP. eMIPP will edit to determine if the applicant is enrolled in Maryland Medicaid program through an interface with the State's Medicaid Management Information System (MMIS).

It is our preference to communicate electronically with applying providers. DHMH will email the provider to inform them that they may visit the State's EHR Registration System provided by eMIPP to begin registration at the State level. Providers must be registered with the State's MMIS system before they can proceed with registration with eMIPP.

If a provider is not enrolled with Medicaid, they will be directed to visit DHMH's eMedicaid portal to register as a provider. A provider that does not see Fee for Service (FFS) beneficiaries, but only participates in Medicaid as a Managed Care Organization (MCO) network provider, will be informed that although they must register with DHMH as a Medicaid provider, they are still only an MCO network provider and will not be required to see FFS. Eighty percent (80%) of Medicaid clients are in MCOs, while around 70 percent of providers participating in Maryland Medicaid may only be enrolled in the HealthChoice (managed care) program. This means that a significant number of providers who may participate in the program will likely come from the MCO-only provider pool and would have to use the eMedicaid registration process before registering to participate in the EHR Incentive Program with the State. To date, the current process of enrolling providers through eMedicaid and directing providers who need additional assistance to provider relations has succeeded in getting MCO-based providers ready to enroll in the Medicaid EHR Incentive Program.

Furthermore, a number of provider types may provide medical services to beneficiaries, but may not have all of the necessary information for Medicaid to register them in the Medicaid EHR Incentive Program. These providers include Federally Qualified Health Center- (FQHC), Outpatient Mental Health Clinic- (OMHC), and Local Health Department-based providers. Medicaid made changes to the eMedicaid electronic enrollment portal to allow for these providers to enroll.

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To help inform providers of the additional registration steps, Medicaid MCO Liaisons will outreach to providers. Such a group is already in existence, and they are aware of the EHR Incentive Program.

The eMIPP system will be used to process most of the stages of the provider application process including:

- Interface to the R&A
- Verify components of the application
- Help to determine eligibility
- Accept applicant attestations
- Determine payment amounts and send message to MMIS to make payment (including confirmation)<sup>29</sup>
- Accept confirmation of applications and digital signature
- Accept meaningful use attestations

eMIPP's provider interface gathers complete information at application in a manner that reduces burden for the applicant. An eMIPP user guide and hover bubbles within the application provide additional instructions regarding the information that the provider applicant is being asked to provide or confirm. See Appendix D for the eMIPP provider application and attestation screens.

eMIPP is an application that is being added to the existing MMIS Enterprise architecture. This application provides for a user-interface web portal. This new web portal will interface with DHMH's MMIS system to validate provider information received from the R&A. Additionally, once a provider incentive application is approved for payment, the payment will be generated through the current MMIS financial system. This will allow DHMH to leverage current financial transactions, including payment via check or EFT, remittance advice notifying the provider of payment, and 1099 processing. An additional benefit of eMIPP is its portability: with Maryland engaged in MMIS upgrades, a portable system will allow for a smooth transition between the existing and future MMIS.

In addition to the provider interface, eMIPP provides interfaces that Department staff use to review and process provider applications and attestations. For example, Department users are able to access an actionable task list from the state registration workflow and receive time-

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<sup>29</sup> The payment determination will be electronically routed to MMIS for gross adjustment payments to the provider's designated Tax Identification Number (TIN) or SSN, if applicable.

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based alerts generated by the system and other data driven threshold reminders. The event management framework driving the user interface also facilitates timely user action, through escalation and reminders, and can initiate new business processes and execute a business action automatically.

### **Step 4: eMIPP runs edits on info from R&A to determine which providers to contact for the application process (Response to Questions #1, 15, 16, 29)**

Not all applications referred by the R&A will meet DHMH's requirements. eMIPP's initial edit is based on an active provider batch file sent from MMIS to eMIPP. This file contains all active, non-sanctioned, provider-type eligible professionals and hospitals. Providers who do not meet program requirements are unable to access eMIPP. Providers who are not allowed access to eMIPP can use a Department-designated email address to inquire about their difficulties logging into the eMIPP system. This email address is included in the initial "Welcome Letter" sent to the provider from DHMH upon successful enrollment with CMS's R&A. For example, providers must be enrolled as Medicaid providers without disqualifying sanctions or exclusions in order to qualify for the incentive program. Providers who are not enrolled will need to enroll with Medicaid prior to using eMIPP.

Other providers may be valid provider types for participation in the EHR Incentive Program, but may not initially meet other Program requirements. These applicants will be in a "pending" state. The pending process allows the State to notify a provider that additional steps are required before registration can occur at the State. Some may be denied, and some applicants may be referred back to the R&A to correct previously submitted information. Information on DHMH's website provides a list of federal and state-based program participation requirements.

During Year 1, the Department experimented with using the REC as an education and outreach entity, assisting the Department on providing technical support and field additional programmatic questions. This approach is both cost-effective and less confusing to the potential EHR applicant. For these reasons, the Department will maintain this relationship through Year 2, and build upon it in Year 3. Table B.5 describes the activities conducted by the REC in Year 1 and Year 2. Year 3 will feature many of the same activities but with the addition of Meaningful Use assistance and a potential build-out of the hotline and EHR-specific informational website. Costs for this partnership are described in the IAPD.

Upon receiving information from the R&A, eMIPP will perform format edits (e.g., Tax ID is numeric and nine digits, CMS Certification Number is six digits, State code is MD, program type is Medicaid/Medicare, duplicate checking) in addition to determining whether the provider is on the active MMIS Provider file.

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All providers (EPs and EHs) will enter eMIPP using their eMedicaid username and password (logon ID). eMedicaid is the Department's electronic web-service portal for reviewing such information as claims and remittance advice details. If the enrolled provider has a valid logon ID and provider type, eMIPP will perform an automated check based on the NPI number associated with the logon ID or any service locations associated with that logon ID to find a match on a R&A record. If a match is found, the provider has been verified and will begin the application process, but if no match is found then the provider will be notified that there is not a match with a record from the R&A and that the provider should contact DHMH.

If a provider does not pass the eMIPP edits, then the record will be suspended in eMIPP and DHMH will:

- Refer providers back to the R&A for errors on data provided at the R&A (e.g., incorrect Payee Tax-ID)
- Refer non-participating Medicaid providers to Provider Enrollment for assistance with program enrollment
- Resolve discrepancies between the provider type entered at the R&A and the provider type stored in the MMIS, i.e., non-EHR eligible provider type in MMIS
- Suspend and refer applicants sent from the R&A with exclusions for investigation by the Program Integrity Unit at DHMH

If edits are passed, then the provider proceeds to Step 5. If edits are not passed, DHMH will contact the provider explaining the reason for the suspension (e.g., provider not enrolled, etc.). The Department will work with those whose applications have been suspended to make every effort to resolve inconsistencies and errors before denying the application.

If the provider passes the eMIPP edits and checks in Step 4, applicants will be able to return to the eMIPP portal to attest no earlier than 24 hours from initial interface with eMIPP. This will allow systems to verify all initial information.

### **Step 5: Providers submit application and attestation form in eMIPP and eMIPP concurrently runs system edits (Response to Questions #1 – 8, 11, 14, 25, 26, 28, and 30)**

Providers may obtain information about the application process via the DHMH website and the REC. Hosted on the website, providers can find a User Guide and video tutorial about the logon

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and application Steps. The User Guide provides the basic scenarios available to the provider, while the video tutorial walks the provider through every possible application scenario available. For example, a provider may choose to practice as a pediatrician, use a group proxy, and provide out-of-state-encounters, while another provider may just practice as a Maryland Medicaid physician. Each scenario presents its own work flow in the eMIPP application process, and Maryland has insured that every combination is explained to the provider.

eMIPP has the capability to suspend and deny applications based on system logic. In the majority of cases, the Department will work directly with the applicant to resolve any issues with an attestation before denying an application. If the information entered during attestation does not match with State information, after working with the provider to resolve any issues, the State will “reject” the application. This allows the provider to re-enter eMIPP and modify any issues identified by the State and resolved with the provider. To limit confusion during the application and attestation process, eMIPP provides help along the way. Appendix D shows the provider interface slides but does not show additional informational “hover bubbles” or “question box icons” to provide real-time assistance for providers, which are a feature of the product. For example, there will be a hover button over the patient volume questions to describe the requirement and how to complete this section. Pop-up windows will also appear to warn providers if they enter invalid values in a field or do not complete a required field.

eMIPP captures the information submitted during the application and attestation process. The system applies real-time edits to verify that values entered are valid and that required fields are completed. The eMIPP web-based form allows providers to save a partially completed application, exit the system, and return later to complete the form. The following steps outline the information that providers will need to enter to apply and attest.

1. Provider is asked to first enter their eMedicaid username and password and their R&A Registration ID number. Once this has been entered, the provider encounters a screen with data obtained from R&A. Before moving forward, the provider is asked to verify information obtained from the R&A including the National Provider Identifier, CMS Certification Number (for hospitals), legal name, business name, address, phone number, personal tax ID, payee tax ID, R&A confirmation number, and (email address if provided).
2. If information is not confirmed, the applicant will be directed to the R&A to fix the information. The eMIPP record will be stored as is in the eMIPP system until the provider makes a change to their R&A file with CMS. Otherwise, the provider will not proceed to next steps. Once the data is corrected in the R&A, the provider will be able

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to reenter eMIPP to resume the application process, normally within two days. The exact time depends on the CMS R&A processing.

3. Applicant may be required to indicate type of individual provider or type of hospital: physician, dentist, midwife, nurse practitioner, physician assistants practicing in FQHCs/RHCs “so led” by an FQHC/RHC, and pediatrician (to determine required volume threshold) for eligible professionals. Generally, eMIPP uses the provider type distinction at this stage only if the patient volume threshold or calculation method is unique. For instance, the system will automatically distinguish between an EP and an EH at Step 1, but the system will need the EP to declare whether they are a physician or a pediatrician or a provider who practices at an FQHC/RHC (see Step 5). The latter provider types have unique patient volume requirements or methodologies. Physician Assistants are not currently eligible for Medicaid providers and DHMH will develop a way to enroll them to make payments that was described earlier.
4. Providers are asked if they are a “hospital-based provider.” A “hospital-based provider” is a provider who furnishes 90% or more of their covered professional services in either the inpatient (Place of Service 21) or emergency department (Place of Service 23) of a hospital. According to Stage 2 Finale Rule § 495.5, if the EPs can demonstrate that the EP funds the acquisition, implementation, and maintenance of Certified EHR Technology, including supporting hardware and any interfaces necessary to meet meaningful use without reimbursement from an eligible hospital or CAH; and uses such Certified EHR Technology in the inpatient or emergency department of a hospital (instead of the hospital’s CEHRT), they would be deemed non-hospital based. Medicaid EPs practicing predominantly in an FQHC or RHC are not subject to the hospital-based exclusion. If the threshold is not reached, then the applicant is directed to proceed to the next question.
5. Applicant is asked if s/he “practices predominantly” in an FQHC or RHC. An EP “practices predominantly” at an FQHC or RHC when the clinical locations for over 50 percent of his or her total patient encounters over a period of 6 months occurs at an FQHC or RHC. If the applicant responds, “Yes” then the applicant will complete the patient volume table including, numerator (consisting of Medicaid and “needy individuals”) and denominator. A “needy individual” is anyone who meets any of the following criteria: (1) they are receiving medical assistance from Medicaid or the Children’s Health Insurance Program (CHIP); (2) they are furnished uncompensated care by the provider; or (3) they are furnished services at either no cost or reduced cost based on a sliding fee scale determined by an individual’s ability to pay.

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If an applicant does not practice predominantly in an FQHC or did not meet the 30 percent patient volume requirement based on FQHC entry, provider will complete a separate patient volume table including, numerator (paid Medicaid encounters only), and denominator). The system will calculate patient volumes (including if a provider practices in an FQHC and/or other locations) and pends applications for DHMH review and approval.

6. Applicants will complete the application and attestation information in eMIPP.

All applications will be “pending” in eMIPP in order for a designated staff member to double-check all eligibility requirements and then allow payments. In most cases, this will just be a “sign off” process, since patient volume has already been checked through a manual MMIS query. Some eligible providers/hospitals may be in the pending status longer than others due to difficulties associated with their attestation. For instance, the State anticipates that out-of-state provider patient volume verification, group patient volumes, and very large MCO-based patient volumes whose 90 day period is less than 6 months old, will require additional time by State staff to verify eligibility. To help mitigate this process, the State will accept patient volume verification by either email, fax, or mail. In Year 2, the eMIPP system was augmented to include an upload documentation feature. The Department also has on our website a tip sheet for acceptable format and data elements for additional documentation.

### PATIENT VOLUME INFORMATION

7. Applicants are asked to select how s/he will calculate their patient volume. Maryland will allow providers to count Fee-for-Service patients and Managed Care patient encounters towards their patient volume. Further, because of Stage 2 changes to patient volume effective for 2013, Maryland includes CHIP patients and “zero-pay” encounters to be considered in patient volume calculations. Maryland verifies patient volume through an encounter and claims query within MMIS.

Further, applicants can choose between calculating their patient volume through either a group methodology or using their own individual volume. Physicians, dentists, certified nurse midwives, nurse practitioners, and physician assistants must meet a 30 percent patient volume, further clarified below.

Pediatricians must meet a 20 percent patient volume (in exchange for 2/3 the amount in incentives). All pediatricians enrolled in Medicaid carry a specialty code of 016 in MMIS.

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While a practicing pediatrician is not aware of this designation, when they enrolled with Maryland Medicaid, they submitted proof of their specialty, including documentation of three years experience, completion of a fellowship or submit proof that they are certified by the American Board of Pediatrics, in order to be enrolled as a pediatrician. If a pediatrician does not carry this identifier on their provider file, it is because they have not submitted this information to MMIS during enrollment. To be considered a pediatrician for the EHR Incentive Program, DHMH will require these providers to submit the required documentation to Provider Enrollment before the Department will review their attestation.

When entering numerator volume, the applicant must report Medicaid in-state volume as well as out-of-state Medicaid volume. DHMH will be able to validate in-state patient volume using Maryland MMIS claim and encounter volume data. Although DHMH will need to manually look up patient volume in MMIS, supporting documentation may be uploaded by the provider. Applicants will be instructed that the encounters discussed below must meet the CMS definition of an encounter in the final rule (Stage 2) in order to be included as part of the patient volume calculation.

- Before the Stage 2 Final Rule, EPs not practicing predominantly in an FQHC or RHC could not include CHIP patients in their Medicaid patient volume calculations. DHMH has a Children's Health Insurance Program (CHIP) Medicaid Expansion program. Children enrolled in this program receive Medicaid services and DHMH receives enhanced match for providing this coverage. Before 2013, DHMH used the CMS-approved formula for removing encounters from these patients from patient volume calculations for EPs not practicing predominantly in an FQHC or RHC. Because providers could not identify CHIP beneficiaries, DHMH had calculated the proportion of encounters reimbursed by CMS at the enhanced CHIP rate, which is described in Appendix E. DHMH used this proportion to make sure that EPs not practicing predominantly in an FQHC or RHC did not qualify using these encounters. Effective in January 2013, EPs attest for program year 2013 and later can include CHIP encounters in their patient volume and are not subject to the exclusion calculation described above. Further, as described above, zero-pay encounters/claims are also valid encounters for the EHR Incentive Program.
- Individual Volume: For an individual applying as an eligible professional (not using group) the calculation will be based on any representative, continuous 90-day period in the preceding calendar year and will be calculated as follows. Medicaid is currently not allowing providers to select their patient volume period from the

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previous 12 months. This is because timely billing and data lags with encounter reporting would make it very difficult for Medicaid to validate patient volume. Further, Medicaid will not allow the use of patient panels because of the difficulty associated with verifying eligibility. For individuals who receive global payments from Medicaid MCOs, Medicaid is working with those practices to list out visits and associate them with global payments in order to ensure provider eligibility. These cases notwithstanding, Medicaid follows the below formula for establishing patient volume:

- $\{[\text{Total (Medicaid managed care) encounters in a 90 day period}] + [\text{Unduplicated (Medicaid) fee for service encounters in the same 90-day period}]/[\text{Total patient encounters}] + [\text{All unduplicated encounters in that same 90-day period}]\} * 100$

If EP practices predominately in a FQHC then their patient volume is based on “needy individuals.” To calculate patient volume using the “needy individual” criteria, please use the definition provided in Step 6 above follow the formula below.

$\{[\text{Total (“needy individual”) patients encounters in any representative continuous 90-day period in the preceding calendar year}] + [\text{Unduplicated (“needy individual”) encounters in the same 90-day period}]/[\text{Total patients in that same 90-day period,}]\} * 100$

**Group volume:** Maryland will allow clinics and group practices to use the practice or clinic Medicaid patient volume (or needy individual patient volume, insofar as it applies) and apply it to all EPs in their practice under three conditions: (1) The clinic or group practice’s patient volume is appropriate as a patient volume methodology calculation for the EP (e.g., it would not be appropriate for EPs who only see Medicare, commercial, or self-pay patients); (2) there is an auditable data source to support the clinic’s patient volume determination; and (3) so long as the practice and EPs decide to use one methodology in each year (i.e., clinics or groups could not have one EP choose to count his or her clinic or group patient volume for his or her individual patient volume, while the others use the group- or clinic-level data).

For pediatrician groups, Medicaid will consider the group a “pediatrician group” if the group is designated as a pediatrician group based on their specialty code and that all physicians within the practice are designated as pediatricians in MMIS. Other eligible providers such as NPs do not need to be “pediatricians” to qualify as participating as a pediatrician in the group proxy setting. Maryland Medicaid is allowing this option because we have no specialization field in our MMIS to designate an NP as a pediatrician or pediatrics-based provider type. We assume

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that participating in a practice that is designated as a pediatrics group and that supervising physicians are pediatricians, that the NP is a pediatrician for purposes of this program.

For an individual applying as an eligible professional using the Group calculation method, the calculation would be the same as the calculations for individuals, but instead doing the calculation for the individual, one would use the group-level data.

- EP will be asked to enter Group NPI (for verification purposes) that comprises the encounter volume they are entering and all members of the group will need to use the same patient volume methodology. If the group is an FQHC then it will include needy individuals in the total Medicaid encounter volume.
- Applicants will be able to submit documentation to validate patient volume as part of the application process by either email, fax, or mail. Providers are also able and encouraged to upload patient volume information and MU reports. DHMH will use MMIS claims and encounter data to verify patient volumes for fee-for-service and managed care encounters but there are many providers who do not have claims or encounter data history. DHMH will review these providers to make sure patient volume requirements are met. Acceptable documentation includes information from provider billing systems and information submitted as part of Federal grant requirements to the Health Resources and Services Administration by FQHCs.
- The Department will calculate patient volume and payments for all Acute Care Hospitals (including critical access hospitals) using information submitted by applying hospitals and the Health Services Cost Review Commission (HSCRC) Hospital Inpatient Discharge Data and the Disclosure of Hospital Financial and Statistical Information. Acute care hospitals' patient volume is based off of the previous fiscal year. The Medicaid patient volume methodology is shown below and includes only inpatient and emergency room discharges (Places of Service 21 and 23):

$$\text{Medicaid Discharges} / \text{Total discharges} = \% \text{ Medicaid Patient Volume (to qualify must be 10 percent; no threshold for Children's Hospitals)}$$

- Medicaid patient volume calculations are for 90 day periods and all service locations, self-selected by the provider. Again, provider patient volumes are based on the previous calendar year, while hospitals' are based off of the previous fiscal year.

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8. Description and attestation of Adoption, Implementation, or Upgrade phases – applicants must select one phase, then respond to questions to verify that they have, indeed, reached that phase.
- Maryland defines the phases as:
    1. Adopt: acquiring, purchasing or securing access to certified EHR technology;
    2. Implement: installing or commencing utilization of certified EHR technology capable of meeting meaningful use requirements; or
    3. Upgrade: expanding the available functionality of certified EHR technology capable of meeting meaningful use requirements at the practice site, including staffing, maintenance, and training, or upgrade from existing EHR technology to certified EHR technology
  - In the first year, eMIPP did not provide for the uploading and storage of supporting documentation, since then, CSC/CNSI updated the solution to include this feature. In Year 1, providers could email, fax or mail supporting documentation. The Department saved this information and associated it to the provider's or hospital's EHR incentive file. For auditing purposes, DHMH will continue to follow CMS guidance on acceptable documentation to demonstrate AIU but will accept receipts, lease agreements, formal and/or legal documents, vendor contracts, canceled checks, user or license agreements. All EPs will be required to attest to adopt, implement, or upgrade in the first program year.
  - All questions will emphasize that the EHR software purchased with incentive payments must be Federally-certified, as designated by a CMS Certification Number. Providers and hospitals will input their CMS Certification Number during attestation and DHMH will establish and maintain an interface with CHPL to verify applicant information on their software systems through eMIPP.
  - Responses to these questions will be used to direct technical assistance (TA), e.g., reports will be generated and recommendations for TA sent to the REC
9. Only hospitals that are dually eligible for Medicare and Medicaid will be able to attest to meaningful use in payment Year 1 and the first year of the program. Hospitals that meet meaningful use criteria under Medicare will be deemed meaningful users under Medicaid. Maryland's R&A, eMIPP, through an interface with the Federal R&A will

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receive a weekly Medicare Hospital Attestation Reporting Data (C-5) file that will confirm hospital dual eligibility attestation. The State will verify hospital Medicaid eligibility and send the required response file to CMS before payment.

10. Applicant must complete remaining attestation items including:

- Confirmation of voluntarily assigning payment to the entity indicated on the info from the R&A (payee TIN). According to the Final Rule, an eligible professional may reassign their payments to an employer or entity with which the eligible professional has a valid contractual arrangement allowing the entity to bill for the professional's services. The Department safeguards that such reassignment occurs by matching the NPI number of the EP enrolled at the R&A with all other viable payee IDs, including social security numbers. These relationships are established within MMIS through the legacy Medical Assistance number and will be uploaded to eMIPPs nightly via batch file transfer and overwrite. This means that all current NPI-to-payee relationships will be stored and then recreated in eMIPP nightly to allow providers registering for the EHR Incentive Program to choose the most up-to-date payee information on file with the State.
- Confirmation that foregoing information is true, accurate, and complete. The application will reinforce that the applicant is technically the professional or hospital, not the preparer, and the applicant will be held responsible for inaccurate or false information and overpayments.

11. For providers participating in their second year and beyond (Meaningful Use, MU), additional slides are added to the attestation. The MU slides provide for the input and storage of the following information:

### Stage 1

For EPs, there are a total of 22 meaningful use objectives. To qualify for an incentive payment, 18 of these 22 objectives must be met, including:

- 13 required core objectives; and
- 5 menu set objectives that may be chosen from a list of 9 including one of two public health objectives. Beginning in 2014, meeting an exclusion for a menu set objective does not count towards the number of menu set objectives that must be satisfied to meet Meaningful Use.

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For EOs and critical access hospitals (CAHs), there are a total of 22 meaningful use objectives. To qualify for an incentive payment, 17 of these 22 objectives must be met, including:

- 12 required core objectives; and
- 5 menu set objectives that may be chosen from a list of 10. Beginning in 2014, meeting an exclusion for a menu set objective does not count towards the number of menu set objectives that must be satisfied to meet Meaningful Use.

In addition to the Meaningful Use (MU) objectives, providers will also be required to provide Clinical Quality Measure (CQM) data. EOs must report on 6 CQM measures out of 38 while EOs must report on each of 15 CQMs.

### Stage 2

Medicaid is implementing all required changes to Meaningful Use enacted in the Final Rule for Stage 2.

For EOs, there are a total of 23 meaningful use objectives. To qualify for an incentive payment, 20 of these 24 objectives must be met, including:

- 17 required core objectives
- 3 menu set objectives that may be chosen from a list of 6

For EOs and critical access hospitals (CAHs), there are a total of 22 meaningful use objectives. To qualify for an incentive payment, 19 of these 22 objectives must be met, including:

- 16 required core objectives
- 3 menu set objectives that may be chosen from a list of 6
- or a total of 19 core objectives

Beginning in 2014, all providers regardless of their stage of meaningful use will report on CQMs in the same way.

- EOs must report on 9 out of 64 total CQMs.
- EOs and CAHs must report on 16 out of 29 total CQMs.

In addition, all providers must select CQMs from at least 3 of the 6 key health care policy domains recommended by the Department of Health and Human Services' National Quality Strategy:

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1. Patient and Family Engagement
2. Patient Safety
3. Care Coordination
4. Population and Public Health
5. Efficient Use of Healthcare Resources
6. Clinical Processes/Effectiveness

The eMIPP system will list both the core set and menu set objectives for MU. Effective in January 2014, according to the Final Rule, EPs and EHs cannot count exclusions in 5 menu set objectives. The instruction and reviewing rule in the eMIPP will be updated accordingly. Figure C.3 identifies the MU core set and MU menu set screen for provider input. Dual Medicare and Medicaid EHs will provide their MU information at the Medicare level. This information is sent to eMIPP using the same CMS interface as Year 1 dually eligible EHs.

The system will also support an offline process to collect MU information. The system will allow a registered provider to download an MU compliance PDF form. The provider completes the PDF form offline, and then uploads the form through an online screen.

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Figure C.3: eMIPP Meaningful Use Objective Listing Screen for eligible providers

The screenshot shows a web application interface with a blue header bar containing navigation tabs: MU-Overview, MU-Core Set, MU-Menu Set, MU-Clinical Core Quality Set, and MU-Clinical Menu Quality Set. The main content area is divided into four sections:

- Meaningful Use Reporting Period:** Includes input fields for Start Date (01/01/2012) and End Date (03/31/2012). A yellow callout box titled "Reporting Period" explains that the dates will automatically populate a typical ninety-day period in the current payment year (2012).
- Meaningful Use Submission:** Features a "Submission Method" section with radio buttons for "Online" (selected) and "PDF".
- Upload Meaningful Use Reporting Data (Optional):** Includes a "Download Template" section with a PDF icon and instructions to click the image to download, complete information, and then use the "Upload Template" section. The "Upload Template" section has a text input field and a "Browse..." button. A yellow callout box titled "MU Reporting" describes two options: Option #1 (download template, complete, and upload) and Option #2 (manually enter information for each objective on the next page).
- Meaningful Use Reporting Completion:** Contains a "Checklist" section with three checkboxes: "MU Core Measures", "MU Menu Measures", and "MU CQM Measures". A yellow callout box titled "Check" states that when each component is complete, the system will check the corresponding checkbox.

At the bottom of the screen, there are "Save" and "Cancel" buttons.

12. eMIPP will present the entire application to the applicant for final confirmation. At this point, the system will allow changes. If changes are made, then eMIPP will perform edits based on the changes and process the application accordingly. If the application is error free, then a prompt appears for the applicant to FINISH and to indicate that no further changes will be permitted. eMIPP will also allow applicants to download their Meaningful Use report card, displaying all the information they entered into the system. This report card is also automatically uploaded as an attachment to the eMIPP system. Applicants will need to contact DHMH if they wish to make additional changes after the application has been submitted. The application and attestation form will require both the applicant and preparer (if different) to digitally sign the form and the preparer will need to disclose relationship with provider. The Department will require hospital applicants to attest that the applicant understands the program and is authorized to attest to the information.

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### Step 6: DHMH reviews pended provider application and attestation and determines eligibility or addresses reasons for suspension (Response to Questions 22 and 28)

The eMIPP system has a series of system features to help applicants submit a complete and accurate application. These tools supply definitions and guidance on the application questions and warnings will flash for incomplete submissions and responses that will terminate the application process. The eMIPP vendor will modify existing user guides based on Maryland's system to provide additional instructions.

Once the provider has completed the application and attestation, eMIPP provides a state-level approval attestation module that will allow certain DHMH staff members access to provider attestation information. Providers will be able to enter eMIPP to check on the status of their information. Once DHMH staff open an attestation to review, the provider's status changes from "Provider Submission Complete" to "In Review." Based on the level of security clearance afforded to individuals at the State, a provider's application can be reviewed for accuracy, given clearance for payment (resulting in an information exchange with the R&A), or suspended. Further discussion is needed as to the scenarios that can occur, who will address (states versus CMS), and the potential impact on the information exchanged with the R&A. eMIPP will address most of the edits and checks as part of the system logic, so DHMH will initially review patient volume estimates and the pended applications and attestations.

The Department reviews 100 percent of the EP and hospital applications based on information provided in the applications prior to making a payment. Further, the Department will pass and flag for audit any provider who sees Medicaid beneficiaries outside of the State of Maryland and any atypical provider, such as FQHC-based providers, Local Health Department based providers, and Outpatient Mental Health Clinic providers. These atypical providers generally use their group NPI or supervising physician NPI when billing Medicaid, so a query of the MMIS system will show no or a low number of claims for these providers. The Department will review all applications through an MMIS query to verify patient volume requirements. For those providers whose patient volumes are close to the participation threshold, or differ from MMIS data by more than ten percent, or report 100 percent Medicaid patients, their file will be flag for future post-payment audits. Further, because eMIPP maintains a directory of provider information, DHMH will periodically review this information to assure data integrity.

The system will allow DHMH to sort by, and/or generate reports, on provider type, adoption, implementation, upgrade, or meaningful use, patient volume, and other information fields submitted in eMIPP so that DHMH can prioritize reviews. The Department will review the application and attestation form for any information that has caused the application to suspend

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and follow up with the applicant as necessary. eMIPP is designed to be interactive, so that Department staff can update eMIPP with their determinations after reviewing the application and enter notes.

Before going live, DHMH developed a review process/workflow that identifies staffing and follows recent guidance provided by CMS on auditing elements (pre versus post), and how approval will be communicated to providers. The auditing requirements are specified as part of the agreement with the Division of Policy and Compliance within the Office of Health Services which will perform these functions. DHMH worked with OHS on the audit strategy to finalize how and when applications are reviewed. DHMH relies on guidance provided by CMS through the monitoring guide and the auditing Community of Practice. The Department follows up with providers when they require clarification, but eMIPP has been designed to reduce the need for this manual intervention, since it allows DHMH to assure that all fields are completed with acceptable values before the application/attestation form is finalized.

Once DHMH has reviewed the application and gathered additional information, the provider will either receive notification that his/her application has been approved and proceed to step 10 or move to step 7 in the case of a denial.

### **Step 7: DHMH denies provider's application (Response to Questions #1, 20, 22)**

Once the review is complete, DHMH will send email correspondence to providers who do not appear to be eligible for the Medicaid EHR Incentive Program indicating a "preliminary finding" of not eligible. This message will describe the reason why the provider does not seem eligible and will then request additional information. Providers will have up to two weeks to respond to this preliminary finding. If a provider does not respond to this letter or is otherwise determined not eligible, then DHMH will reject the application. This triggers the release of a system-generated final determination letter and information about the appeal process. The Department will also inform CMS of the denial and provide a reason code for each denial.

The Department's goal is to review applications and any additional information, and make a decision about the applicant's eligibility within six weeks of receiving an application. However, the process of working with providers on suspended applications may take longer than six weeks. And, as the number of participating providers grows, DHMH may need to re-assess staffing needs to reduce the lag-time for providers to receive timely appeals response. Providers have the option to appeal a "not eligible" determination. Due to the initial volume of attestations, DHMH has increased its staffing model, which is described in the IAPD.

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The Department will handle such appeals the same way that DHMH currently addresses provider appeals on other matters as defined in COMAR 10.01.03.

### Overview of Appeals Process

According to COMAR 10.01.03, an individual may request an appeal hearing by giving a clear statement, in writing, to any financial agent of the Division of Reimbursements of the Department of Health and Mental Hygiene that he/she desires an opportunity to present for review their grievance. For the EHR Incentive Program, providers or their representatives will be able to submit this letter after the Department has notified them of its official stance on an eligibility or attestation determination. The request for an appeal must be made within 30 days following the conclusion of the action or inaction which is the subject of the appeal. This statement shall be forwarded immediately to the Chief of Reimbursements. When the Division receives a request for a hearing, it shall assist the appellant in submitting and processing the request. DHMH will follow the pre-trial hearing and hearing procedures outline in COMAR 10.01.03, and, in the event the provider or hospital appeals the administrative law judge's decision, they may appeal to the Board of Review as provided by law in Health-General Article, §2-207, Annotated Code of Maryland.

### Step 8: Provider application clears eMIPP system edits and eMIPP generates approval email with program information to provider (Response to Question #4)

eMIPP will display the entire completed application confirmed at the R&A. The system will display instructions for printing the summary information along with a "Contact Us" button that allows an email to be sent to DHMH for inquiries, and information about how to track the status of the application. The system will also generate correspondence to the provider indicating that the application is complete and pending final review with the R&A, the provider will be notified of the payment status.

### Step 9: eMIPP interfaces list of providers who pass edits to R&A for final confirmation (Response to Question #1)

Payments cannot be made until the application is error free and submitted to the R&A for final duplicate and sanction/exclusion editing. The Department's proposed approach assumes that when the state informs the R&A that a payment is ready to be made and the R&A has approved payment, the R&A will "lock" the record so that the provider cannot switch programs or States until after the provider receives the payment from the State that is identified in the R&A as being ready to make a payment. The Department will submit required information from interface D-16.

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### **Step 10: The Department sends approval email to provider with program and payment information (Response to Question #4)**

DHMH will send correspondence to the provider applicant notifying the provider that the application has been approved, and an EHR incentive payment will be issued to the provider or assignee. In Year 3, Maryland will review the approval letter to consider including additional information such as information on meaningful use, information on oversight mechanisms and tax implications of the incentive.

### **Step 11: MMIS issues payment and eMIPP submits payment information to the R&A (Response to Questions #24, 25)**

DHMH will issue a remittance advice and make the incentive payment using a gross adjustment. A unique gross adjustment reason code will be generated and payments will be processed with the weekly Medicaid Financial Cycle. The payment method (paper, electronic funds transfer (EFT)) will be driven by the information used for claims payment on the provider enrollment file. A remittance advice will provide information on the incentive payment that has been made. Upon completion of the payment cycle, the MMIS will return payment data to eMIPP for financial management. eMIPP will generate a payment transaction including pay information to the R&A on a monthly payment file. The provider applicant/payee (to whom the payment is assigned) combination must be valid in the MMIS in order to make payment. MCO providers will receive incentive payments like fee-for-service providers to reduce complexity.

The Department established a schedule for making payments.

- For eligible professionals, payments are spaced out over six payment years (not necessarily consecutive years). EPs will receive \$21,250 for the first year of participation, followed by an annual payment of \$8,500 for each subsequent year of participation. Pediatricians will receive a different payment schedule: pediatricians that have at least 20% Medicaid patient volume will receive \$14,167 for the first year of participation followed by payments of \$5,667 for subsequent years of participation. Payments will be made over six years and the amount may be reduced by other sources of funding for EHR investment. eMIPP will request information on other sources of funding as part of the application process.
- For eligible hospitals, payments will be made over four years: 50 percent in the first year, 30 percent in the second year, and 10 percent in the third and fourth years. Payments are again based on the calculations described in the CMS regulations and will

## Section C: Maryland's Implementation Plan

be made over four years. Appendix F is an Excel spreadsheet that demonstrates how DHMH will calculate hospital payments. The hospital payments may take longer since all hospital payments will suspend for pre-payment review. DHMH intends to pre-qualify and pre-calculate hospitals for the Medicaid EHR Incentive Program. The initial hospital attestation and payment process may take longer as the Department and each hospital come to an agreement about incentive calculations based on data submitted by the hospital to the Health Service Cost Review Commission (HSCRC) required under Maryland's all-payer waiver. See the attached hospital calculator for a description of how we will calculate hospital payments.

Using the eMIPP system in combination with establishing processes for reviewing suspended applications and attestations and generating reports/worklists showing the status of a given application, will allow DHMH to make timely provider incentive payments. In the best case scenario (no missing, incomplete, or inaccurate information) DHMH anticipates making payments to EPs within 10-14 days of their application completion date and within three weeks of the application completion date for hospitals. This broad time frame is in Figure C.2.

### **Step 12: Post-payment oversight and outreach activities (Response to Question #3, 6 – 8, 26)**

As described in the above steps, the eMIPP system contains numerous checks and edits that will help DHMH to conduct payment oversight at the point of application and attestation. Section D describes DHMH's proposed post-payment oversight activities in detail, but, in short, DHMH will focus on three areas: provider eligibility, reviewing attestations and payment reviews.

DHMH will identify areas of risk in the eligibility determination and payment processes to design studies and reviews that will mitigate the risk of overlooking an improper payment. For example, DHMH intends to use a tiered approach, based on fraud risk and a random sample to audit information submitted in attestation forms and from other areas, e.g., meaningful use information, patient volume, out of state providers, OMHC and FQHC predominantly practice attestations, and assignment of payments. DHMH understands the programmatic risks of improper payments and will develop measures and studies to mitigate these risks.

### **Step 13: Ongoing technical assistance for adoption, implementation, upgrade and meaningful use of EHR (Response to Questions #8, 9)**

DHMH is aware that having the incentive payments may motivate providers to begin the adoption process but the incentive payments alone will not be sufficient for successful

## Section C: Maryland's Implementation Plan

adoption, implementation, and meaningful use. Using the same communications strategy as described in Step 1, DHMH will collaborate with the REC, HealthChoice MCOs, DentaQuest, and vendors who provide technical assistance and other resources to educate providers about the incentive program and also to provide technical assistance and information on EHR adoption, implementation, upgrade, and meaningful use of EHRs.

In addition to reviewing providers who return for additional payments, DHMH, with help from the REC, will generate reports of providers who do not apply for Year 2 and beyond incentive payments and target these providers for technical assistance through the REC or other means. Encouraging providers to return for future payments and thus become meaningful users is an important goal for DHMH and will be included as a program evaluation metric in Section E.

In Year 3, we also plan to periodically monitor NLR records and pay special attention to providers have registered but not yet completed the attestations with eMIPP. With assistance from the MHCC, we will start outreach to this population and provide technical assistance in completing the attestation process.

This is a new program and new administrative process for DHMH. As the program evolves and DHMH begins to understand how providers will fare with adoption and meaningful use, DHMH's strategies will also evolve to continue to help providers to achieve meaningful use. This may include the addition of dedicated staff, or an increase in contractor scope for technical assistance and auditing.

As reflected in the I-APD, DHMH anticipates using contract staff to help with public health reporting, outreach, administration, and attestations.

### **Step 14: Notification of meaningful use requirements for Year 2 and beyond (Response to Questions #10 - 12)**

The Department is not proposing any changes to the proposed meaningful use rule criteria at this time. Using the same communications strategy as described above in Step 1, DHMH will collaborate with the HealthChoice MCOs, DentaQuest, and the RECs to the extent possible to educate providers about the meaningful use requirements in their second payment year and also to provide technical assistance about meaningful use of EHRs in Year 2 and Year 3. The Department also anticipates that there will be provider education materials available through the CMS and ONC communications and outreach activities. As the program evolves and DHMH is able to assess a provider's ability to meet the meaningful use requirements, DHMH's strategies will also evolve to continue to help providers to achieve meaningful use.

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### Step 15: Meaningful use payment request or renewal (Response to Questions #9, 12, 13, 30)

DHMH will accept hospitals deemed as meaningful users by CMS in their second payment year and beyond. The Department is in the process of negotiating with our current vendor to update eMIPP, create new eligibility screens, and establish a review process during which it will validate the continued eligibility of each participating provider and that meaningful use requirements are met. The renewal process will incorporate oversight reviews of continuing provider eligibility (e.g., patient volume); check against new information in the R&A, meaningful use criteria, and a review to ensure that provider information such as practice sites has not changed.

During the lifetime of the incentive program, DHMH anticipates that eMIPP will be sufficient to collect and store the information needed to process eligibility and make payments. Our vendor will provide secure, off-site storage during the lifetime of the program. The Department's decision to host information off-site will benefit us greatly in the future, as we prepare for the MMIS system in the coming years.

As eMIPP and the State's MMIS develop, DHMH looks forward to leveraging the ongoing success of the statewide HIE to facilitate live data reporting and other features helpful to providers to fulfill Meaningful Use. Some of these items will be explained in Appendix D of the IAPD. The statewide HIE will enable critical information to be shared among providers of different organizations and different regions in real-time; support the use of evidence-based medicine; contribute to public health initiatives in bio-surveillance and disease tracking; and prepare for emergency preparedness efforts that will positively impact health care outcomes by providing greater access to secure and accurate health information. The architecture of the statewide HIE is a distributed model where data remains at the source and the statewide HIE acts as the conduit for the secure transmission of this data from one provider or organization to another.

Efforts to connect providers to the statewide HIE have centered on hospitals, since they are considered large suppliers of data, and will then proceed to connect ambulatory care practices. Achievements to this end are described in Section A.

In the future, certain meaningful use measures as defined by CMS are set to be core measures for the State's Patient-Centered Medical Home (PCMH) pilot project. By wrapping these measures into the incentive payments for the practices participating in PCMH, Maryland encourages their use and makes it easier for providers who participate in PCMH to also benefit from the EHR incentive payments.

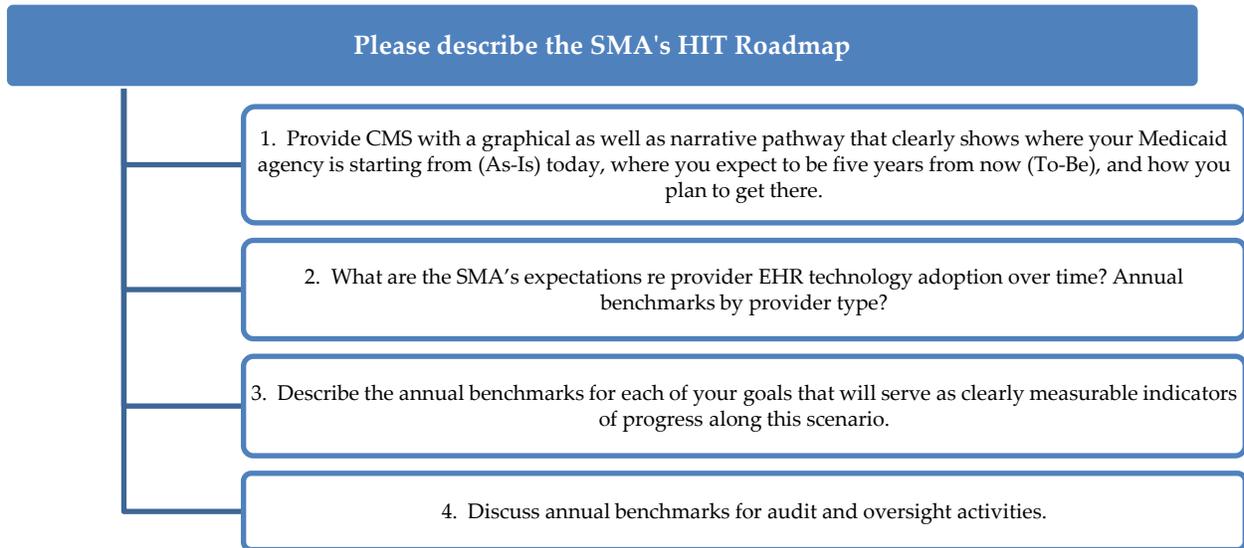
**Section D: Maryland's Audit Strategy**

**Section D: Maryland's Audit Strategy**

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## Section E: Maryland's HIT Roadmap

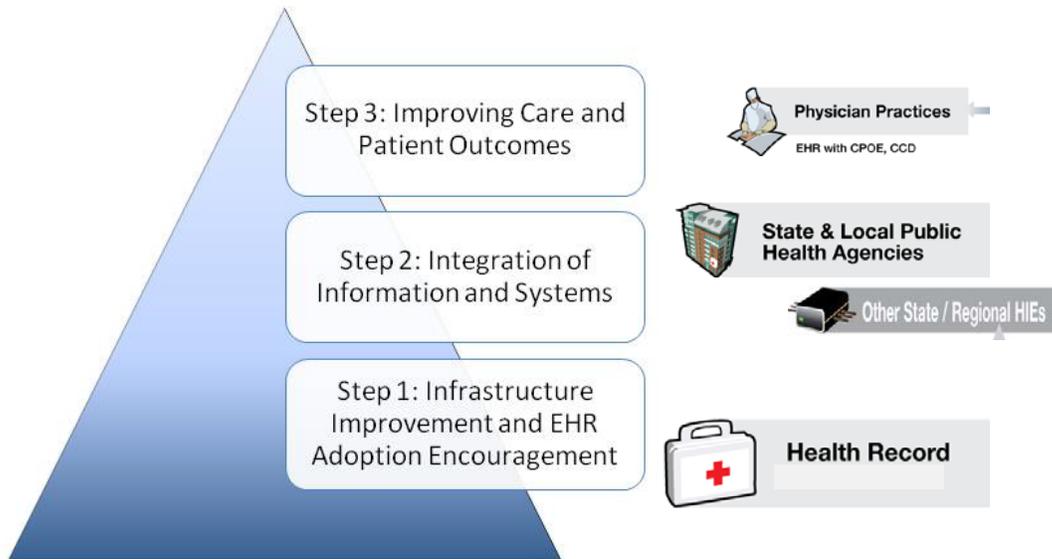
Figure E.1: Section E Questions from the CMS State Medicaid HIT Plan (SMHP) Template



## Section E: Maryland's HIT Roadmap

**E.1 Provide CMS with a graphical as well as narrative pathway that clearly shows where your Medicaid agency is starting from today, where you expect to be five years from now, and how you plan to get there (Question 1).**

**Figure E.2: Graphical Pathway of the State's HIT Roadmap**



DHMH's Roadmap is meant to describe the overall journey to achieving the To Be vision and EHR Incentive payments – with the appropriate milestones for achievement.

### *Year 1: Baseline Starting Point for the HIT Roadmap*

Medicaid initiated the EHR Incentive Program in Fall 2011. At this time, Medicaid used a legacy system for benefit administration and claims processing (MMIS Baseline System). This Baseline System has been in place since 1992. This system is a direct descendant of the original MMIS applications based upon the Federal Blue Book specification and technical architecture of the 1970s. Over the years, Medicaid has become increasingly complex, with service changes, eligibility changes, and new regulations. The rate of change in Medicaid is among the greatest of any major program serving the public, whether government or privately operated. New program needs are difficult to address with the existing system. Labor-intensive workarounds are used to address these changes in the short-term, but do not represent a long-term solution.

Outside of the MMIS Baseline System, Maryland has a relatively robust public health reporting system with a developing Health Information Exchange (see Section A).

## Section E: Maryland's HIT Roadmap

### *Year 1: Baseline Medicaid Five-Year "To-Be" Environment*

At baseline, Medicaid anticipated within five years to have replaced its existing MMIS system with a product that supports off the shelf solutions, a call center, document management, customer support management, and connectivity to the statewide HIE. The MMIS system of the future will support Service Oriented Architecture infrastructure that integrates improved data sharing; automates claims and eligibility processing, allowing the development of waiver, long term care and state run program eligibility solutions to directly address the inefficient eligibility determination process and eliminate silo systems; and improve care and customer management. Medicaid expects to use the MITA 2.0 framework as the basis of the new MMIS infrastructure and plans to use the MITA transition planning process as a basis for future MMIS improvements, along with adopting best practices in information technology investments.

### *Year 1: Baseline Pathway to the State's To-Be Environment*

In order to move from the current legacy MMIS system, relatively low EHR adoption among Medicaid providers, and a developing HIE, to a fully enabled infrastructure supporting bi-directional, real-time interfaces within the State's Client Automated Resources Eligibility System connected to the HIE and EHRs, Medicaid will make take the following steps. These steps are depicted in Figure E.2 above.

#### *Step 1: Infrastructure Improvement and EHR Adoption Encouragement*

**MMIS Upgrade:** Medicaid issued an RFP to identify a vendor to replace the existing MMIS legacy system in May 2010. Responses to the RFP were due in August, and Medicaid awarded a contract to CSC in late 2011. The new Medicaid system will include imaging and workflow management and a robust business rules engine to aid in creating and managing flexible benefit plans.

**HIE Collaboration and Connectivity:** Medicaid is an active participant in the statewide HIE efforts and is a member on the Policy Board. The Policy Board has general oversight of the statewide HIE, including the authority to evaluate and recommend to the MHCC the policies that will govern the exchange. Medicaid expects to connect with the statewide HIE as part of the implementation process of the new MMIS. CSC is required to collaborate with the statewide HIE and the Health Insurance Exchange (HIX) to build the interface as part of the implementation process.

**Encouraging the Adoption of EHRs:** Through participation in the Medicaid EHR Incentive Program, Medicaid has begun the process of encouraging EHR adoption among providers. As providers begin to adopt certified EHRs, Medicaid will use the developing HIE to leverage data sharing and submission by encouraging providers to connect. To strengthen the connection

## Section E: Maryland's HIT Roadmap

between the HIE and Medicaid, Medicaid will partner with the REC -- which is also the state-designated HIE -- to aid in outreach activities and to facilitate HIE connectivity as the infrastructure advances.

### *Step 2: Integration of Information and Systems*

**Clinical Quality Measures:** In Year 2 of the EHR Incentive Program, Medicaid will begin to receive clinical quality measures. Medicaid hopes to integrate this data into the new MMIS and use it to better understand the Medicaid population and to facilitate decision making.

**HIE Cross-Border Interfacing:** Medicaid will also work closely with the HIE as connections are established between border states in order to facilitate patient-level data access for providers across borders in a secure and safe manner.

### *Step 3: Improving Care and Patient Outcomes*

Data gathered by EHRs and facilitated by the HIE will aid Medicaid in making decisions that improve patient care and outcomes.

### *Year 1: Progress and Accomplishments Towards Meeting Baseline Five-Year "To Be" Environment*

**MMIS Upgrade:** On March 1, 2012, DHMH began working with CSC on implementing a new MMIS. The new MMIS will advance MITA maturity in every area. As of September 2012, Medicaid has moved to the Design and Development Phase. The new system will be able to interact with the HIE and the State's developing Health Insurance Exchange (HIX). The timeline for completion of the MMIS is October 2014. Additional information on the State's new MMIS is available in Section A.

**HIE Collaboration and Connectivity:** As detailed in Section A, Maryland's HIE, CRISP, has successfully connected with all hospitals in the State. Data exchange among these entities is occurring, with increased features planned for the future. Because of the State's unique All-Payer Waiver, Maryland is able to use portions of hospital assessments and HIE fees to support some activities. However, Medicaid hopes to leverage available 90/10 funding to reach the tipping point of connectivity and available health data in the HIE to support sustainability.

**Encouragement and Adoption of EHRs:** Medicaid has paid over 633 providers and 16 hospitals for participation in Year 1 of the EHR Incentive Program. As shown below, we well exceeded our goals for Year 1 provider participation, and almost reached our goal for hospitals.

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### *Year 2: Progress and Accomplishments Towards Meeting Baseline Five-Year "To Be" Environment*

**MMIS Upgrade:** Medicaid continues in the Design and Development phase of the new MMIS. The new MMIS will interface with Maryland's Health Benefits Exchange (Health Information Exchange). The State also plans to have the MMIS interact with the Health Information Exchange via a Decision Support System and Data Warehouse (DSS/DW). MMIS go-live is estimated to take place in June of 2015, while the DSS/DW is still in the planning phase.

**HIE Collaboration and Connectivity:** The HIE has successfully connected to all hospitals in Maryland. Because of EHR Incentive Program IAPD funding, the HIE has become more robust and is actively building out functionality, including connectivity between hospitals and the State's public health data repositories. More information is available in Section A.

**Encouragement and Adoption of EHRs:** As explained in Section A, Medicaid has increased staffing levels to meet projected levels in our IAPD-U. The increased staff has allowed us to process attestations quicker, update our EHR Incentive Program webpage, and improve monitoring, outreach, and education relationships with the REC. In Year 3, Medicaid hopes to develop a strategy with the REC and MHCC to tailor our outreach and education towards practice workflow modifications to realize the full benefits of EHRs and the HIE. See Section A for more details.

### *Updated Pathway to Meeting our "To-Be" Goals*

Medicaid will continue down Step 1 as we move towards implementing our new MMIS, increase collaboration and connectivity to the HIE, and encourage EHR adoption. By focusing on these three core areas in Step 1, we will be able to meet our To-Be HIT goals.

Medicaid has begun discussions with the HIE to move towards Clinical Quality Measurement (CQM) reporting under Meaningful Use. At this time, we do not believe we will be able to initiate this process in Year 2. We have planned to begin work on this HIE feature in Phase 2 of our HIE build out, described in our IAPD Update.

In Year 3, Medicaid will begin working on Step 2: Integration of Information and Systems. In 2015, eMIPP will offer the capabilities to receive structured CQM data either directly or through the HIE. Medicaid has initiated discussions with the HIE to explore the feasibility of receiving data via the HIE. Also in Year 3, the HIE is expected to create the necessary HL7 interface to allow hospitals to submit public health data to the State.

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Also in Year 3, Medicaid expects to create a plan to align and integrate information systems for the purposes of paying for outcomes. These plans will include the collaboration of many stakeholders, including MHCC, the HIE, MCOs, and others.

### **E.2 What are the SMA's expectations regarding provider EHR technology adoption over time? Annual benchmarks by provider type? (Question 2)**

Implementing the EHR Incentive Program is a major undertaking, systems have to be designed, built and tested; Medicaid staff and the provider community have to be informed and educated; new policies, procedures and audit plans have to be developed, tested and implemented. [Section B.1](#) covers the EHR incentive administrative goals and outcomes including benchmarks for adoption on an annual basis. Medicaid does not have annual benchmarks for provider types at this time. With funding specified in the most recent IAPD Update, Medicaid will be doing a more detailed environmental scan at the provider type level to use as new benchmark data.

In addition to numeric adoption goals, Maryland is also interested to tracking adoption rates in order to compare them to national estimates. Adoption rates among the Medicaid and general provider population will likely be impacted by both the EHR Incentive Program and Maryland's State Regulated Payer EHR Adoption Incentive Program (see Section A, Overview). As we described in Section B, hospital and professional adoption rates match up closely with national adoption trends. Therefore, Maryland will tie its EHR adoption goals to the national adoption goals.

Based on 2013's environmental scan, we have updated Maryland's EHR adoption rates for both EPs and EHs. See Table E.1 below for these rates. Comparing to the national estimates for EPs, Maryland shows 5 to 10 percent higher adoption rates for year 2012 and 2013. As mentioned in Section A, the adoption rates can be overestimated because the EHR users were more likely to fill out the surveys. Overall Maryland's estimates match up with national trends.

According to the 2013 Health IT Assessment conducted by MHCC, in 2012, roughly 44 percent of acute care hospitals nationally have adopted a basic EHR, compared to about 83 percent of Maryland hospitals that have a basic EHR. Maryland has continued exceeding the national estimates by 40 percent. However, the data for hospitals' future adoption was not collected in the 2013's report. We will track and make updates to this timeline in alternating years in future releases of the SMHP.

Table E.1: Maryland's EHR Adoption Rate Goals

| Year            | National EHR Adoption Targets (ONC) | Maryland Medicaid Physician Adoption Rate | Maryland Hospital Adoption Rate |
|-----------------|-------------------------------------|---|---------------------------------|
| Baseline (year) | Less than 20%                       | Approximately 19% (2009)                  | 55% (2010)                      |
| 2011*           | 20%                                 | 20%                                       | 60%                             |
| 2012            | 40%                                 | 50%                                       | 83%                             |
| 2013            | 60%                                 | 65%                                       | 85%                             |
| 2014            | 80%                                 | 80%                                       | 85%                             |

*\*Maryland did not conduct an environmental scan to estimate EHR adoption rates after Year 1. We will be doing such analysis every two years. Adoption rates do not move enough from year to year to justify the cost for yearly scans.*

### E.3 Describe the annual benchmarks for each of your goals that will serve as clearly measurable indicators of progress along this scenario (Question 3)

Generally, Medicaid's three goals are listed in our baseline pathway (E.1): MMIS Upgrade, HIE Collaboration and Connectivity, and Encouragement and Adoption of EHR. The specifics of these goals for Year 2 and the benchmarks are listed below.

#### *Goal 1: Meet Expectations of MMIS Upgrade Timeline as Described in the MITA Transition Plan*

In order to reach our long-term goal of payment reform, Medicaid needs to upgrade our current MMIS and integrate it with the HIE. Medicaid will measure progress towards meeting this goal through the timeline established between Medicaid and our MMIS contractor, CSC. Medicaid participates in weekly meetings with CSC to update the timeline and schedule to assure that we have an operational MMIS by the agreed upon date: September 2014.

Maryland's MMIS rebuild project is now expected to go-live on July of 2015. The reasons for delay include: major changes to the healthcare environment due to health care reform that resulted in new MMIS system requirements and design and longer than expected design sessions.

#### *Goal 2: Meet Benchmark Goals of the HIE HITECH Funding Request Described in the IAPD-U*

In part to help improve interoperability among providers, Medicaid is requesting 90/10 funding for HIE-related activities in our IAPD-Update. Medicaid will adopt the benchmarks listed in the IAPD when evaluating the effectiveness of our proposed activities.

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In Year 2, Medicaid successfully requested HITECH funding for HIE-related services under the IAPD. Due to contractual and legal issues with solidifying an agreement with the HIE, Maryland could not begin these activities until late FFY2013. However, since solidifying an agreement with the HIE (and receiving CMS approval for the same), the HIE has made strides towards meeting milestones, some of which are described in Section A.

### *Goal 3: Provide Incentives for 600 Medicaid Providers and 25 Hospitals*

To reach this goal, Medicaid will encourage EHR Adoption by continuing to partner with the REC to perform outreach functions on behalf of the State. We will assist the REC in performing the outreach activities listed in Table E.2 and then track our progress towards enrollment in the EHR Incentive Program. The activities listed below will be tailored to meet the needs of providers as we progress through the year, but each will be evaluated quarterly.

**Table E.2 – Goal 3: Indicators of Progress**

| Activity                                | Q1  | Q2  | Q3  | Q4  |
|---|-----|-----|-----|-----|
| Live Event                              | 5   | 6   | 10  | 3   |
| Fax Blast                               | 5   | 4   | 8   | 2   |
| E-Newsletter                            | 2   | 4   | 3   | 3   |
| Update Website with Current Information | 1   | 1   | 1   | 1   |
| Participation                           |     |     |     |     |
| EPs                                     | 150 | 150 | 150 | 150 |
| Hospitals                               | 6   | 6   | 6   | 6   |

#### E.4 Discuss annual benchmarks for audit oversight activities (Question 4)

Based on current experience with auditing, Medicaid has decided to contract additional staff to conduct desk review and on-site audits of Year 1 AIU payments (see IAPD Update). Medicaid intends to write and release a Request for Proposal (RFP) for Meaningful Use post payment auditing for all Meaningful Use payments. Our benchmarks coincide with the process for hiring, training, and conducting audits for AIU and for creating, posting, and hiring an Audit Contractor for Meaningful Use post-payment audits.

In Year 2, Medicaid is on schedule to meet the benchmarks outlined in Table E.3.

**Table E.3 – Annual Benchmarks for EHR Auditing**

| Item                       | Description                              | FFY 2012                     |                        | FFY 2013 |                |    |    |    |
|----------------------------|--|------------------------------|------------------------|----------|----------------|----|----|----|
|                            |  | Q3                           | Q4                     | Q1       |                | Q2 | Q3 | Q4 |
| Contractual Auditing Staff | OHS to hire two contractual positions to | Write MS-22 Contract Process | Post/ Interview / Hire | Train    | Begin Auditing |    |    |    |

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|                        |   |             |  |               |  |  |  |             |
|------------------------|---|-------------|--|---------------|--|--|--|-------------|
|                        | conduct post-payment AIU audits.                                    |             |  |               |  |  |  |             |
| Auditing Protocol      | Following SMHP outline and CMS guidance, select providers for audit |             |  | Test Protocol |  |  |  |             |
| MU Auditing Contractor | Contract for expertise on MU post-payment auditing                  | Develop RFP |  |               |  |  |  | Release RFP |

|                |            |             |
|----------------|------------|-------------|
| Administration | Transition | Operational |
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## Glossary of Terms and Acronyms

### Glossary of Terms and Acronyms

The matrix below provides a glossary of terms and acronyms that are frequently used in discussions about DHMH of Health and Mental Hygiene’s HIT initiative.

| Term                                 | Acronym | Definition  |
|--------------------------------------|---------|---|
| <b>Technology</b>                    |         |   |
| <b>Health Information Technology</b> | HIT     | <ul style="list-style-type: none"> <li>• Allows comprehensive management of medical information and its secure exchange between health care consumers and providers</li> <li>• Application of information processing involving both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data and knowledge for communication and decision-making</li> </ul>   |
| <b>Electronic Medical Record</b>     | EMR     | <ul style="list-style-type: none"> <li>• The legal record created in hospitals and ambulatory environments that is the source of data for an electronic health record (EHR)</li> <li>• A record of clinical services for patient encounters in a single provider organization; does not include encounter information from other provider organizations</li> <li>• Created, gathered, managed and consulted by licensed clinicians and staff from a single provider organization who are involved in the individual’s health and care</li> <li>• Owned by the provider organization</li> <li>• May allow patient access to some results information through a portal, but is not interactive</li> </ul>   |
| <b>Electronic Health Record</b>      | EHR     | <ul style="list-style-type: none"> <li>• A subset of information from multiple provider organizations where a patient has had encounters</li> <li>• An aggregate electronic record of health-related information for an individual that is created and gathered cumulatively across multiple health care organizations, and is managed and consulted by licensed clinicians and staff involved in the individual’s health and care</li> <li>• Connected by a Health Information Exchange (HIE)</li> <li>• Can be established only if the EMRs of multiple provider organizations have evolved to a level that can create and support a robust exchange of information</li> <li>• Owned by patient</li> <li>• Provides interactive patient access and ability for the patient to append information</li> </ul> |

## Glossary of Terms and Acronyms

| Term   | Acronym | Definition   |
|--|---------|--|
| <b>Personal Health Record</b>  | PHR     | <ul style="list-style-type: none"> <li>• Electronic, cumulative record of health-related information for an individual in a private, secure and confidential manner</li> <li>• Drawn from multiple sources</li> <li>• Created, gathered, and managed by the individual</li> <li>• Integrity of the data and control of access are the responsibility of the individual</li> </ul>  |
| <b>Health Information Exchange</b>   | HIE     | <ul style="list-style-type: none"> <li>• The sharing of clinical and administrative data across the boundaries of health care institutions and providers</li> <li>• The mobilization of healthcare information electronically across organizations within a region, community or hospital system</li> <li>• Provides capability to electronically move clinical information among disparate health care information systems while maintaining the meaning of the information being exchanged</li> <li>• Goal is to facilitate access to and retrieval of clinical data to provide safer, more timely, efficient, effective, equitable patient-centered care</li> </ul> |
| <b>Chesapeake Regional Information System for Our Patients</b>                         | CRISP   | <ul style="list-style-type: none"> <li>• A statewide health information exchange funded under the Office of the National Coordinator for HIT's Statewide HIE Collaborative Agreement program that will connect regional HIE's and integrated health systems</li> </ul>   |
| <b>Medicare and Medicaid EHR Incentive Program Registration and Attestation System</b> | R&A     | <ul style="list-style-type: none"> <li>• A repository that will be available to states to help avoid duplication of payments to providers participating in the EHR Incentive Program</li> <li>• Information the repository is proposed to store includes provider registration information, meaningful use attestations and incentive payment information</li> </ul>   |