

Improving Care Through Innovation:

The District of Columbia State Medicaid Health IT Plan (2018-2023)







Mission Statement

To improve health outcomes by providing access to comprehensive, cost-effective and quality healthcare services for the residents of the District of Columbia.

GOVERNMENT OF THE DISTRICT OF COLUMBIA Department of Health Care Finance



October 2018

Dear District Residents, Providers and Partners:

I am pleased to present the District of Columbia's State Medicaid Health Information Technology Plan (SMHP) for fiscal years 2018-2023. This report demonstrates our commitment to advancing the use of health information technology (health IT) to improve care for Medicaid beneficiaries and all District residents.

The SMHP is the product of more than one year of engagement with residents, health care providers, District agencies, and payers of health care services. In this dialogue stakeholders expressed that despite advances in technology, they still cannot easily access, exchange, and use health information, resulting in patients who feel disconnected from their care teams and providers who cannot efficiently communicate with one another.

We see a significant opportunity to improve upon the status quo by using technology and health information exchange (HIE). The report identifies opportunities to use health IT and HIE to improve transitions of care; address social determinants of health; arm providers to better manage the health of their patients; and improve the public's health. The Health IT and HIE Roadmap identifies specific projects Medicaid can support to build needed infrastructure in the District.

The successful implementation of this plan relies on many partners inside and outside of government. Collectively, we will work together to ensure that technology is used effectively to improve the health outcomes of the residents we serve, while ensuring the privacy and security of health information. We welcome your continued engagement and collaboration as the District undertakes the goal of this plan to *provide actionable health-related information whenever and wherever it is needed, to support patient-centered care and improve health outcomes.*

Wayne Turnage, M.P.A. Director





Acknowledgements

The District of Columbia (DC) 2018-2023 State Medicaid Health IT Plan (SMHP) was developed by the DC Department of Health Care Finance (DHCF), Health Care Reform and Innovation Administration (HCRIA) in collaboration with the DC Health Information Exchange (HIE) Policy Board and District agency partners, including the DC Department of Health (DC Health) and the DC Department of Behavioral Health.

DHCF acknowledges the tremendous support and feedback from these stakeholders in the development of the SMHP. Between March and November 2017, HCRIA and its consultants conducted 29 stakeholder interviews and engaged 45 participants in focus groups. These participants included Medicaid beneficiaries, District residents, representatives from hospitals and health systems, ambulatory providers, behavioral health providers, long-term care supports and services, community service organizations, managed care organizations, private payers, and DC government agencies. The information gathered as part of these stakeholder outreach efforts was vital to the SMHP's development.

The SMHP is a *living document* and will be updated regularly through 2023. DHCF looks forward to continued collaboration with these stakeholders, and others, as the goal of the SMHP is realized: to design and implement an electronic network that provides actionable health-related information whenever and where it is needed to support patient-centered care and improve health outcomes.

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Executive Summary



Executive Summary

Today, residents in the District of Columbia access health care by navigating a complex system of providers, payers, government agencies, and facilities that are often disconnected from one another. Technology, such as electronic health records (EHRs), has been widely adopted by District providers, but has not always translated to better patient experiences and improved outcomes.

Health information technology (health IT) and Health Information Exchange (HIE) are tools that can connect these stakeholders to each other and facilitate a person-centered approach to care delivery that can improve health outcomes for all District residents. A critical first step is for providers to capture information electronically using certified EHR technology – an arena in which the District has made great progress. As of 2018, 89% of District physicians and every District acute care hospital, Federally Qualified Health Center, and long-term care facility utilize EHRs; yet the use of IT in the District's health system has not been fully realized. Contributors to the health system consistently report they face challenges easily accessing, exchanging, and using health information to provide the best care for their patients.

HIE provides some of the best tools to connect health system partners and give providers the right information at the right time regardless of location, organization, or EHR. HIEs aggregate information from multiple sources and display specific health information for specific purposes to improve individual care, population health management, and the public's health.

The District of Columbia Department of Health Care Finance (DHCF) is the District's State Medicaid Agency (SMA). DHCF also serves as the State Health IT Coordinator and leads health IT and HIE policy for the District. Through collaboration with local, regional, and national partners, there are tremendous opportunities to achieve the District's goal by 2021 to: *design and implement an electronic network that provides actionable health-related information whenever and wherever it is needed, to support person-centered care and improve health outcomes*.

The State Medicaid Health IT Plan (SMHP) Sets the Roadmap for Health IT Policy Based on Feedback from Users and Beneficiaries

The State Medicaid Health Information Technology Plan (SMHP) is a Centers for Medicare & Medicaid Services (CMS) requirement for all SMAs. Updated on a biennial basis, the SMHP is a "living document" intended to:

- » Capture current health IT and HIE implementation and expansion;
- » Evaluate evolving stakeholder needs;
- » Define the District's health IT and HIE goals;
- » Establish a five-year Health IT Roadmap to achieve these goals; and



» Propose metrics to evaluate and monitor health IT and HIE components over time.

Several recently published strategic health documents and District-wide community needs assessments, along with 29 interviews and five focus groups, identified common themes that drive the need for health IT and HIE improvements: a lack of well-coordinated, person-centered care; the impact of social determinants on residents' care; disparities in health outcomes; and gaps in public health information.

As part of this environmental scan, stakeholders identified a concrete set of opportunities to address these challenges through District policies and health IT projects:

- » Standardizing information exchange and promoting interoperability among organizations using different types of EHR systems and platforms;
- » Developing services and tools that respond to high priority use cases identified by providers and residents;
- » Aiding providers who may lag in health IT adoption and use;
- » Standardizing and sharing social determinants of health (SDOH) information; and
- » Allocating time and support between implementation of new or expanded tools to allow providers sufficient time to adapt to new workflows.

To contextualize these opportunities and clarify the ways in which health IT can support key health needs, DHCF developed the following *use cases* to focus the District's efforts:

101	Use Case #1: Transitions of Care for Individuals	Technology that supports transitions of care will help providers facilitate communication across care settings, make timely referrals and exchange summary records, and access available resources.
•	Use Case #2: Social Determinants of Health Data	Collection, exchange, and use of SDOH data will maximize interventions to support individual health, reduce barriers to access, and improve the efficiency of person-centered care.
	Use Case #3: Population Health Management	Health analytics include a broad category of data tools, algorithms, and visualizations that will be designed to facilitate a provider's understanding of their patient population and develop target interventions to better manage population health.
Kes	Use Case #4: Public Health	The District's public health projects will focus on ways the HIE can work with DC Health's existing infrastructure and programs to expand public health HIE connectivity, facilitate public health case reporting, and support public health registries for all providers in the District.

Executive Summary



Implementing the Health IT and HIE Roadmap Achieves District Goals

DHCF, in its role as the District's SMA, may request additional federal funding from CMS through 2021 to support health IT and HIE adoption projects for Medicaid providers. The four use cases and related projects described in *Section 5 – The Health IT and HIE Roadmap* provide an initial set of priorities to guide the District's annual planning and CMS funding request process.

To achieve the District's strategic health IT and HIE goals, DHCF has outlined a timeline to initiate specific HIE projects in federal fiscal years 2018 and 2019. As depicted below, each proposed project will support capabilities, services, and clinical workflows across provider settings.



The District's Health IT and HIE Initiatives, by Fiscal Year

*Denotes the fiscal year in which projects were initiated.



Measuring Progress is Critical to Sustaining Health Information Exchange in the District

DHCF has developed a framework to monitor and evaluate health IT and HIE connectivity. The framework will be applied rigorously to quantify the spread and scale of Health IT and HIE adoption as well as assess the extent to which these programs build District providers' capability using health IT and HIE to improve the health of their patients and support overall improvements in public health.

Health IT and HIE Evaluation Framework to Build District Provider Capability



What's Next for HIE in the District?

The SMHP and the Health IT and HIE Roadmap are designed to guide future health IT and HIE planning and implementation activities consistent with the DC HIE Policy Board's vision that HIE should *advance health and wellness for all persons in the District by providing actionable information whenever and wherever it is needed.*

DHCF welcomes ongoing feedback regarding Health IT and HIE in the District and encourages interested stakeholders to contact the DHCF Health IT program at <u>healthit@dc.gov</u> or visit DHCF's website for more information: <u>https://dhcf.dc.gov/hitroadmap.</u>





Section 1 Overview of the District's State Medicaid Health IT Plan



The District is Enabling Better Care Through Health IT

Health information technology (health IT) can improve care and health outcomes by facilitating communication among patients and providers, improving access to timely treatment, minimizing unnecessary or duplicative care, and reducing medical errors.^{1, 2, 3} The Department of Health Care Finance (DHCF) recognizes and is pleased to support opportunities for health IT to improve health outcomes for District of Columbia residents and enhance access to comprehensive, cost-effective, and high-quality health care services.

What are Health IT and Health Information Exchange?

Health Information Technology (Health IT): The programs, services, technologies and concepts that store, share, and analyze health information in order to improve care.⁴

Health Information Exchange (HIE): The movement of health information electronically across multiple organizations.⁵

DHCF is the District's State Medicaid Agency (SMA). DHCF also leads health IT and health information exchange (HIE) policy for the District and serves as the State Health IT Coordinator. In its capacity as the State Health IT Coordinator, DHCF fulfills several complementary roles:

- » Administers the Medicaid Electronic Health Record Incentive Program (MEIP);
- Facilitates funding to support health IT projects that directly support Medicaid providers while building infrastructure to serve all District residents;
- » Develops health IT strategies for the District that are responsive to the complex health care needs of a diverse population; and
- » Coordinates ongoing, District-wide public input through the DC HIE Policy Board and stakeholder outreach activities.

DHCF receives recommendations on strategies to enable the secure and timely exchange of health information from the DC HIE Policy Board, an independent advisory committee, which has held public quarterly meetings since its establishment by the Mayor in 2012. The 22-member board includes representatives from District-based provider associations, hospitals, health systems, payers, providers, information technologists, and District government agencies.⁶ Working with local, regional, and national partners, DHCF is promoting the use of health IT in the District by implementing targeted strategies designed to improve care and outcomes.



DISTRICT OF COLUMBIA STATE MEDICAID HEALTH IT PLAN (SMHP)

Connecting a Disconnected Health System

The District's health system is complex and consists of numerous stakeholders who must work together to provide person-centered care and address the District's health needs. Today, this system is disconnected. The District is privileged to have a high health insurance coverage rate and a robust range of health care services; however, providers, patients, and caregivers, as well as payers and government agencies struggle to access, exchange, and use health information easily and efficiently. Examples of the challenges stakeholders face due to a disconnected system include:

Residents are Not Connected to Their Own Providers

Many residents do not have user-friendly, secure methods to communicate with their own care providers outside of a patient visit in an exam room. Questions about the correct dose of a prescribed medication or difficulty remembering instructions about how best to manage a health condition often require a phone call – or multiple calls - to the clinic, or a new visit. Residents report they do not have convenient access their own health information, such as medication lists and laboratory results. Residents who receive care from more than one provider must compile their own health information to ensure a complete record of care.

Providers are Not Connected with Each Other

Many of the electronic records systems in use across the District cannot connect with each other to share and combine health information. Providers encounter situations in which they deliver care without access to complete patient information or conduct requests to copy and fax records from multiple providers to compile the needed information.

Clinical Providers are Not Connected to Social Service Providers

The District has a strong commitment to support person-centered care, and providers express the desire to connect with social services providers. However, they lack convenient, secure methods to identify available social services and resources, consult with clinical and social service providers, and efficiently refer patients for services and resources across the District.

Payer and Public Health Systems are Not Connected to Clinical Systems

To access clinical data needed for key quality improvement and public health surveillance activities, DC government agencies and other payors currently operate manual processes, such as chart audits, to conduct quality measurement, benefits determination, and public health monitoring. Access to complete information with clinical insight is paramount for these stakeholders to serve District residents, however, burdensome, manual workflows produce inefficiencies.







Health IT and HIE are tools that can connect these stakeholders to each other, as shown in Figure 1. However, building health IT and HIE systems is not the end goal. Rather, health IT and HIE are necessary components of the infrastructure needed to deliver better care and improve health outcomes.





To illustrate the ways in which health IT and HIE support the District's health goals, we consider the following three levels of care:

- Individual patient care: The clinical care of a single patient delivered by a clinician or care team. Health IT supports patient care by automating manual, time consuming activities, and by giving providers a broad view of the care their patient receives across the system. Health IT can improve patient-provider communication, streamline transitions of care, reduce duplication of services and medications, and facilitate an individualized plan of care.
- » Population health management: The activities that a clinician or care team performs to provide care management for a group of patients for which they are accountable, sometimes referred to as a "patient panel." Health IT assists providers by giving them a highlevel view of defined health trends and needs across the patients in their practice through analytic tools. Specific functions include list creation and health registries that catalogue patients with a condition that requires action, as well as analytics tools that help providers monitor quality of care.
- Public health: Public health activities assess and develop interventions to improve the health of all residents who share a specific geography, condition, or other characteristic. Health IT allows data from providers across the District to be efficiently and electronically shared, analyzed, and acted upon to design timely and effective interventions to improve the health of District residents.



The goal of health IT is to facilitate a person-centered approach to care delivery that can improve health outcomes for all District residents (Figure 2). A strong and widely adopted health IT foundation enables connections across and within the health system. This foundation also supports innovation and has the flexibility to evolve over time to address emerging needs, support system transformation initiatives, and improve health at individual and community levels.

Technology's Role in Transforming Health Care Delivery

The District, like much of the nation, is greatly affected by the prevalence of chronic conditions, inefficiencies in care delivery, and resulting high health care costs. To address these trends, payers are shifting away from fee-for-service reimbursement, which is based solely on volume and quantity of services. Health insurance companies and public payers are now implementing new "value-based purchasing" (VBP) models to reimburse providers based on improving health outcomes and reducing unnecessary services.

National models demonstrate that value is not necessarily easy to achieve, in part because practice transformation requires time and resources. Community stakeholders agree that in order to improve health outcomes, additional infrastructure and investments that leverage health IT and HIE will be required to support workflow redesign and measure performance on VBP benchmarks. For example, care coordination is a vital component of VBP, and care coordinators rely on the health IT infrastructure to access full patient health histories and to identify opportunities clinical interventions that can improve health outcomes.



Figure 2: The District's Conceptual Model of Person-Centered, Data-Driven Care



Practice transformation relies on access to the right information at the right time and requires all stakeholders in the health system – patients, providers, payers, and public health – to work together to promote health by coordinating care, emphasizing prevention, and supporting timely interventions.

Four overarching principles guide DHCF's health system redesign and practice transformation. Grounding the State Medicaid Health IT Plan (SMHP) in system redesign principles underscores the important message that health IT and HIE connect health system stakeholders to drive health access, quality, equity, and value and efficiency across the District.

DHCF's Health System Redesign Principles Underpin the State Medicaid Health IT Plan

Principle 1: Expand Access to Care

» Ensure appropriate and adequate access to services across all eight wards.

Principle 2: Improve Quality

» Promote the measurement and improvement of quality health care.

Principle 3: Promote Health Equity

» Develop programs and services for the District's high-need populations and address social determinants of health.

Principle 4: Enhance Value and Efficiency

» Pay for value, not for volume of health care services.

What is a State Medicaid Health IT Plan?

The SMHP articulates the District's health IT and HIE goals and presents a pathway to achieve these goals based on a timeline of proposed projects and programs. The projects and programs identified in the SMHP are intended to reflect stakeholder feedback and support person-centered care for Medicaid providers and beneficiaries, while building health IT infrastructure to serve all District residents. The Centers for Medicare & Medicaid Services (CMS) requires all states' Medicaid agencies to develop an SMHP.⁷



The SMHP serves as a "living document" with biennial updates and is intended to:

- » Describe health IT and HIE infrastructure implementation and expansion;
- » Evaluate evolving stakeholder needs;
- » Define the District's health IT and HIE goals;
- » Establish a roadmap to achieve these goals; and
- » Propose metrics to evaluate and monitor the impact of health IT and HIE over time.

The District's first SMHP, published in 2011, focused on the processes and plans to invest in health IT adoption in inpatient and ambulatory delivery settings. Subsequent SMHP submissions in 2014 and 2016 described accelerations in health IT adoption. This 2018 update to the SMHP provides a concrete vision that builds on existing infrastructure and expands meaningful use of health IT tools to support practice transformation and care coordination across the District.

DHCF developed the 2018 SMHP through an extensive review of recent strategic health documents and District-wide community needs assessments (*see Appendix A – Resource Guide for Strategic Health Reports*). Key findings from these strategic plans informed stakeholder outreach and engagement with District residents and patients, health system stakeholders, public health, payers, social services providers, and federal government, District government, and community partners. DHCF sought active participation and input from multiple stakeholder groups by conducting one-on-one interviews and focus groups to ensure alignment across the SMHP and stakeholder priorities and strategic directions. A full list of organizations that participated in these interviews are included in *Appendix C – Stakeholder Health IT Needs Assessment and Analysis Methodology*.

Prior to finalizing the SMHP, DHCF posted it for a four-week long public comment review. Feedback received was incorporated into the present document. The stakeholder outreach and public comment processes enabled DHCF to define the District's main health challenges, assess health IT and HIE capabilities, evaluate gaps in health IT implementation, and validate opportunities for future health IT and HIE expansions.

The culmination of this work is a new SMHP designed to communicate the District's health IT and HIE strategy and priorities. The SMHP is intended to serve as the guide for future health IT and HIE planning and implementation activities consistent with the DC HIE Policy Board's vision of HIE to *advance health and wellness for all persons in the District by providing actionable information whenever and wherever it is needed.*



What's Included in the District's State Medicaid Health IT Plan?

The SMHP is divided into seven sections that provide relevant background, summarize stakeholder feedback, and articulate a path to implement the proposed health IT and HIE strategic plan.

Section 1: Overview of the District's State Medicaid Health IT Plan provides a high-level overview of technology's role in health care delivery in the District, the SMHP's purpose, and its document structure.

Section 2: Opportunities to Improve Health Care in the District describes the District's health care system and reviews a set of health challenges within the District that can potentially be improved through the use of health IT.

Section 3: The Current Landscape of Health IT and Exchange in the District provides an overview of current electronic health record (EHR) adoption across the District and profiles operating HIE organizations, current HIE activities, and opportunities to improve connectivity among stakeholders. The District government leads a number of active HIE initiatives that support public health and publicly-insured residents. District-led initiatives by DHCF and DC Health are introduced in this section.

Section 4: District Stakeholders' Perspectives and Priorities for Health IT and HIE summarizes key findings from stakeholder interviews and focus groups with District patients, providers, large payers, hospital and health systems, and relevant District agencies.

Section 5: The District's Health IT and HIE Roadmap describes the path to expand and better utilize health IT and HIE in the District. Section 5 presents an updated set of health IT and HIE goals and an affiliated Roadmap that form the foundation for planning, prioritizing, and implementing initiatives in fiscal years 2018 and 2019. Long-term goals for fiscal years 2020 and 2021 identify potential outcomes to be evaluated in support of DHCF's vision and goals.

Section 6: Evaluating Health IT and HIE Improvements presents a framework for ongoing evaluation and monitoring of the progress to achieve DHCF's HIE vision and goals. Additional information is available in the SMHP References and Appendices.

Section 7: What's Next for Health IT and HIE in the District? presents the next steps for engaging the District health care stakeholder community. Section 7 also calls to action District residents, providers and health IT stakeholders to provide ongoing guidance on DHCF's initiatives to achieve the District's strategic health IT goals.





Section 2

Opportunities to Improve Health Care in the District



Understanding the District's Health Needs

Health IT and HIE tools and programs developed with public resources must be responsive to the current state of health and health care in the District. This section provides an overview of the District's population and highlights key health needs based on several recent, comprehensive assessments developed by DHCF, DC Health, and other community organizations. The State Health Innovation Plan, Community Health Needs Assessments (CHNA), the District Health System's Plan (HSP), DC Healthy People 2020, and DHCF's Access Monitoring Review Plan are key sources for this review. Please refer to *Appendix A – Resource Guide for Strategic Health Reports* for a full listing and links to access all existing District resources utilized in the development of the SMHP.





The District's Population at a Glance

The District of Columbia is home to approximately 700,000 residents living in eight wards⁸ across the city's 61 square miles (Figure 3).

Demographic patterns grew rapidly over the past 15 years. Between 2000 and 2015, the District's population increased by 15%, or over 100,000 people, and is projected to reach a new peak population above 800,000 residents by 2030.^{9,10} In addition, the size of the population within the District's borders can double during the workday to more than one million individuals commuting from neighboring states.¹¹





of the population speaks a language other than English at home



The District is a diverse city. Approximately 13.5% of residents are foreign-born, and 17.4% of the population speaks a language other than English at home.¹² The District has experienced notable shifts in race and ethnicity, particularly between 2000 and 2015, as the city's Black or African American population declined from 60% to 48.9%, and its White population increased from 30.8% to 42.5%.¹³ Despite the upward aging trend in the nation as a whole, the median age of District residents (33.8) is lower than the national average (37.8).¹⁴

Economic and Social Trends

The District experienced a strong rate of economic growth over the past several years, with 4.49% job growth and nearly 6% growth in median household income between 2014 and 2015.¹⁵ However, these economic opportunities for advancement have not been experienced by all District residents. As of 2016, 18.6% of District residents live below the poverty line. This is the fourth highest rate among states in the nation and is driven mostly by high rates of poverty in several wards within the District.¹⁶ The jobless rate in Wards 7 and 8 is double the rate for the city as a whole.¹⁷



The District also faces challenges with food insecurity and homelessness. One in eight individuals and one in four children face hunger in the District.¹⁸ Between 2007 and 2017, the District experienced a 41% increase in the number of homeless individuals.¹⁹ According to The Community Partnership for the Prevention of Homelessness, there are 6,904 homeless persons in the District on any given night.²⁰ Ending long-term homelessness in the District is a recognized priority for the Mayor.²¹

Studies demonstrate that various social, economic, and environmental factors shape individuals' opportunities to engage in healthy behavior and can impact health outcomes.^{22,23,24} DHCF recognizes that improving health care in the District will require policies and infrastructure mindful of the District's needs, including social determinants of health (SDOH).



The District's Health System

Evaluating the extent to which health IT can assist providers to respond to the District's health needs first requires an understanding of the full range of health care options available to District residents.

First and foremost, the District's high

rate of insurance coverage is a notable example of what can be achieved with a strong commitment to Medicaid expansion. As of 2016, the District has the nation's third highest rate of insurance coverage, at 96.3%.²⁵ The low uninsured rate in the District provides an opportunity to focus on residents' access to high quality, well-coordinated care.

District residents have access to many sources of health care and social supports, as depicted in Figure 4, including 9 acute care hospitals,²⁶ a network of community clinics, and thousands of practicing physicians.²⁷



Figure 4: The District's Health Care Facilities by Ward, 2018

While a range of services and service locations is available across the city, the DC Health's 2017 HSP demonstrated that proximity to services is limited for some parts of the city, notably Ward 7 and Ward 8.²⁸ According to the HSP, many residents reported they spend an hour or more travelling to primary care and other health services.²⁹

The HSP further acknowledges that the "siloed" nature of physical health, behavioral health, and other forms of clinical and non-clinical information can hinder care coordination, service integration, patient engagement, and quality of care. These are significant challenges, yet also present opportunities for the District to leverage technology to improve care coordination and reduce barriers to access care.





The District's Health and Social Supports

Hospitals



Currently, **9** acute care hospitals and **6** non-acute care hospitals are located within the District. However, many of these facilities are concentrated in Ward 2 and Ward 5.³⁰ District residents also seek care at hospitals in neighboring counties in Virginia and Maryland.

Physicians



As of 2016, there are **8,934** physicians (MD, DO^{31}) licensed in the District, of which **2,810** are actively practicing medicine – providing at least 20 hours of clinical care per week in the District. There are **780** actively practicing primary care physicians in the District, 45% of whom work in an office/clinic setting and indicated that their primary practice setting was located in Wards 1, 2, 3, and 5.³²

Federally Qualified Health Centers



In 2016, the District's network of **8** Federally Qualified Health Center (FQHC) grantees collectively served 178,324 patients at **39** clinical sites. Nearly 54% of patients seen in District FQHCs billed Medicaid or the Children's Health Insurance Program (CHIP). FQHC providers included approximately: **115** physicians; **77** nurse practitioners; **21** physician assistants; **15** certified nurse midwives; **30** dentists; **96** licensed mental health providers; and **140** case managers.³³

Behavioral Health



As of 2016, **46** District Mental Health Rehabilitation Services and **57** Substance Use Disorder (SUD) community-based sites provide services for District residents.³⁴ The Department of Behavioral Health (DBH) manages mental health services for Medicaid beneficiaries and coordinates programs with **32** Core Service Agencies.

Long-term Services and Supports (LTSS)



LTSS are provided in the home, community, nursing home, or other facilities. As of 2017, there are **18** skilled nursing facilities (SNFs) that operate in the District. There are **38** home health agencies distributed throughout the District.³⁵ District residents are often transferred to SNFs or home health agencies for care upon discharge from District acute care hospitals.

Community Service Providers (CSPs)



As of 2016, CSPs offered a wide range of services across the District, including medication management support, counseling, and community support to address issues such as health, housing, transportation, food insecurity, education, and employment.³⁶ CSPs include health and social services non-profits (such as food banks), faith-based organizations, and other community organizations.



DISTRICT OF COLUMBIA STATE MEDICAID HEALTH IT PLAN (SMHP)

Health Conditions and Disparities in the District

While the District has one of the highest health insurance coverage rates in the nation, that accomplishment has not translated to broad success in key health outcomes. Rather, the District continues to experience significant disparities in health. Health IT and HIE represent significant opportunities to close gaps in care and improve the conditions described in this section.

Eighty-seven percent of District residents report they are in good or better health,³⁷ however, perception of personal health varies greatly by demographic factors. Seventy-nine percent of Black or African American, non-Hispanics report good or better health compared to 95.8% of White, non-Hispanics.³⁸ Life expectancy is also highly variable across the District, with a 17-year difference in lifespan between residents in Ward 3 (86 years) and Ward 8 (69 years).³⁹

Maternal and infant health trends have improved in the District, but are still are among the poorest in the country and disproportionately affect African American residents. The percentage of live preterm births⁴⁰ decreased from 2006 to 2016 for all wards, but has remained around 10% District-wide since 2009. Wards 7 and 8 experience the highest prematurity rates, at 13.1% and 13.7%, respectively.⁴¹ Nearly one-third of preterm births in the District occur among women who have previously experienced a preterm birth. Infant mortality trends⁴² have declined over the past decade; however, more deaths occurred for non-Hispanic, Black or African American infants (11.3 per 1,000 live births) than for non-Hispanic, White infants (2.3 per 1,000 live births).⁴³ These trends have mobilized interventions and resources in the District to continue decreasing the cases and disparities related to preterm births, maternal mortality, and infant mortality.

According to a national analysis conducted by the Centers for Disease Control and Prevention (CDC) in 2015, chronic and complex disease, such as heart disease, stroke, respiratory diseases, and diabetes, accounted for 70% of deaths reported in the U.S. each year.⁴⁴ City-wide, the District performs better than the nation as a whole on some conditions, however, some District residents face a higher burden of chronic disease and risk factors in other conditions (see Table 1).⁴⁵ For example, while 8% of District adults have been diagnosed with diabetes, this rate was much higher in Ward 7 (13%) and Ward 8 (20%).⁴⁶ In addition to diabetes, there are several common chronic health conditions and risk factors that drive utilization and spending in the District, including asthma, COPD, stroke, hypertension, and obesity.⁴⁷ Chronic health conditions are also prevalent among children in the District; 12.1% of District children had asthma in 2016 (compared to 8.4% nationally).⁴⁸



Compared to US, 2014ObesityAsthmaCOPDStrokeDiabetesCity-wide22%12%6%3%8%

Table 1: Chronic Disease Prevalence Among Adults Aged 18 Years and Older in the District

	Obesity	Astiina	COPD	JUOKE	Diabetes
City-wide	22%	12%	6%	3%	8%
Ward 7	34%	17%	9%	6%	13%
Ward 8	37%	18%	10%	8%	20%
US	30%	9%	7%	3%	10%

Behavioral health conditions, including SUDs, are common comorbidities impacting health and wellness. According to the National Institute of Mental Health, depression, anxiety, and alcohol abuse are directly associated with chronic disease, and a high proportion of those living with these conditions also have a chronic medical condition.⁴⁹ In 2014, the prevalence of depression was approximately 18% of District adults, with the highest prevalence occurring in Ward 8 (30%), Ward 1 (22%), and Ward 7 (18%).⁵⁰ Anxiety and depression are also prevalent among District children and adolescents.⁵¹

HIV has transformed over time from a fatal infection to a persistent chronic disease. Estimated HIV prevalence in the District is approximately 2%, which bypasses the World Health Organization's definition of a generalized epidemic at 1.0%.⁵² Although there has been 51.8% decrease in the number of new cases diagnosed and reported between 2011 and 2016, HIV continues to have a disproportionate impact on African Americans, residents in Wards 2, 5, 7 and 8, and residents over age 40 years.⁵³ African Americans represent the majority of HIV cases diagnosed in the District (73.1% in 2012 and 73.5% in 2016).⁵⁴

Like HIV, Hepatitis C disproportionately affects African American men, residents over age 40, and residents in Wards 5, 7, and 8.⁵⁵ Although Hepatitis C affects a relatively small number of District residents (29,652 cases have been reported since 2009), it factors as the leading contributor to liver disease, which can be very costly if left untreated.⁵⁶

Despite the impact of chronic conditions and infectious diseases in various parts of the District, many of these conditions are preventable or manageable. When unmanaged or not treated following care protocols, many may result in avoidable admissions and hospital readmissions. These occurrences underscore the need to focus on improving connections between sources of care, including disease management, service coordination among health care and community providers, strategies to address SDOH, and public health information sharing for improved surveillance and intervention.



Opportunities for Health IT and HIE to Improve Health in the District

Several complex factors, identified in District strategic health planning documents noted below, drive differences in health care trends and outcomes in various pockets of the city. Themes common to these reports are: a lack of well-coordinated person-centered care; the impact of SDOH on residents' health; disparities in health outcomes, and gaps in public health information. The District has an opportunity to implement health IT and HIE solutions that connect health stakeholders and enable them to provide a coordinated, wide-scale approach to address the health challenges discussed above.

Lack of well-coordinated, person-centered care. Data from DC Health's HSP and DHCF's SHIP indicates that residents and providers navigate care between disconnected clinical and social services. At times, residents with multiple health and social needs may have four or more siloed agencies providing care management.⁵⁷ Without proper coordination, residents are unable to effectively manage their health care. Examples include:

- Inappropriate Use of Acute Care. Roughly 10% of District residents report they delayed medical care due to not being able to get an appointment soon enough, with Ward 1 residents reporting the most challenges at 14%.⁵⁸ These gaps can lead to underutilization of preventive care and care management as well as over-utilization of emergency care and acute care services.
- » Avoidable and Preventable Conditions. The District's hospital Emergency Departments (EDs) have very high rates of ambulatory care sensitive conditions (ACSs), which are generally considered avoidable or preventable with appropriate primary care services. In Wards 7 and 8, roughly 20% of hospital discharges and 21% of ED visits are for ACS conditions.⁵⁹

Recommendations from multiple reports^{60,61,62} call for DHCF to continue the promotion and expansion of HIE to facilitate information sharing, care coordination, and overall population health management between clinical and non-clinical partners, in alignment with the DC Healthy People 2020 Framework.⁶³ The parallel pursuit of health IT and HIE can connect hospital, ambulatory, and community care to ease transitions across specialties and settings, such as fire/emergency services and community-based organizations.

Impact of social determinants on residents' health. Social determinants such as housing, food insecurity, and transportation are cited as the most common root causes impacting the health and wellness of District residents.⁶⁴ Examples include:

» Barriers to Accessing Care. District residents living in Wards 4, 5, 7, and 8 identified transportation issues, including expense and system inefficiency, as impacting not only access to care, but also basic life needs.⁶⁵



» Impediments to Improving Health. Limited access to financial resources and geographic separation from grocery stores contribute to about 50% of District health care stakeholders and residents identifying food access as a factor that detracts from residents' health.⁶⁶

Several District reports^{67,68,69} stress the need to facilitate HIE connections between health and CSPs, implement SDOH screening, or utilize a comprehensive SDOH assessment to inform care planning and establish trust between patients and providers. Health IT and HIE infrastructure can be used to build a better understanding of SDOH by standardizing electronic data collection on SDOH and facilitating exchange of health-related information (e.g. housing issues and food insecurity) to reduce the reporting burden for patients.

Disparities in the health outcomes across the District. Numerous, complex factors that influence disparities in health outcomes across the District. Examples include:

- Outcome Disparities by Ward. Wards 7 and 8 have high rates of diabetes at 13% and 20% respectively, almost twice the national average and three to five times the rates of Wards 2 and 3.⁷⁰ Despite their high prevalence, chronic diseases are largely preventable.
- » Outcome Disparities by Race and Ethnicity. Twenty-six percent of African American residents are smokers compared to 7% of White residents.⁷¹ For every person who dies from tobacco use, 30 more people have at least one serious tobacco-related illness, such as chronic airway obstruction.⁷²
- » Outcome Disparities by Income. Thirty-eight percent of District residents with an annual income of under \$35,000 have high blood pressure compared to 22% of residents who make over \$110,000 per year.⁷³ According to data obtained from the CDC's and Robert Wood Johnson Foundation's 500 Cities Project, residents of lower income communities have higher rates of chronic diseases, including arthritis, diabetes, and asthma.^{74,75}

Gaps in public health information. Successful public health interventions rely on complete, timely data collected and distributed across the health system in a uniform manner. District health agencies and providers must be electronically connected to send and receive clinical, demographic, administrative, and other health-related data. However, the current state of provider connectivity to District health agencies varies and often occurs via multiple interfaces. A lack of timely information can produce inefficiencies in the analysis and monitoring of citywide health trends, intervention design, and resource allocation. Examples include:

Manual Case Reporting Slows Monitoring. According to the latest data available in 2013, the District's liver cancer rate (11.4 per 100,000) outpaced the nation's rate (7.9 per 100,000).⁷⁶ Hepatitis C is the leading cause of liver cancer, but the District's abilities to monitor Hepatitis C infection and treatment are limited by a reliance on lab data that lacks clinical detail on transmission and treatment history. Case reporting is often



performed via fax, which requires substantial time and resources for data aggregation and cleaning by DC Health.

- » Connectivity Gaps Hinder Information Exchange and Timely Intervention. HIV treatment and viral load surveillance is important to reducing HIV transmission. Obtaining data from labs and provider records could assist DC Health's efforts to develop more timely, targeted health interventions to limit HIV transmission and new infections.
- » Lack of Bi-directional Exchange Limits Public Health Data. Bi-directional exchange capabilities would allow providers and government agencies to seamlessly send and receive data, which can help reduce redundant services. For example, providers could receive information about immunizations administered in other settings to avoid vaccine duplication and minimize time spent researching other points of care where a patient may have received a vaccine.

Enabling access to the right information at the right time is critical to effectively support the District's goals to support care coordination, address social determinants, improve health outcomes, and address gaps in public health information. The next section, *Section 3 – The Current Landscape of Health IT and Exchange in the District*, describes the current state of HIE connectivity and adoption in the District, and describes current information sharing initiatives and activities underway.



Section 3 The Current Landscape of Health IT and Exchange in the District



Understanding the District's Health IT Potential to Improve Care

Residents seek care at different settings across the District depending on their location, urgency of condition or insurance coverage. The District's goal for HIE is to ensure all providers in the District have access to the right information about their patients everywhere they provide care.

To achieve this goal,

- » Health-related information must be accessible electronically;
- Providers must actively send and receive (exchange) health information electronically; and
- » Providers must work with patients to appropriately use health information to improve the quality of care delivered, as well as patient outcomes.

This section focuses on ways providers in the District collect and exchange health-related information today.

Certified Health IT

The Office of the National Coordinator for Health IT developed the Permanent Health IT Certification Program in 2011 to certify that EHRs and other health IT solutions can perform specific usage, interoperability, and information exchange functions for providers in the Medicaid and Medicare EHR Incentive Programs.

Certified EHRs exchange health information with other *certified* systems that adhere to the same standards. DHCF's goal is to ensure that every MEIP provider in the District is utilizing a certified EHR and exchanging critical information with other providers using interoperable standards.

District Providers' Adoption and Meaningful Use of EHRs

A critical first step towards achieving the District's goal for HIE is for providers to capture information electronically using certified EHR technology. EHR adoption in the District increased significantly after the passage of the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009.^{77,78} HITECH established the Medicare and Medicaid EHR Incentive Programs (MEIP) for eligible professionals and hospitals to adopt EHRs and achieve usage and quality metrics. DHCF administers the District's MEIP and, since 2013, has distributed over \$31 million in payments to hospitals and providers who have adopted EHRs and serve Medicaid beneficiaries.

While the District's EHR adoption rates are on par with national averages, there are opportunities to improve care transitions in the District by encouraging the use of health IT among behavioral health providers, nursing homes, and smaller ambulatory practices.



Appendix B – EHR Adoption Across the District's Health Care Facilities provides summary tables of EHR systems used by District providers.

The following sections profile the known landscape of health IT adoption and use among different provider types in the District.



Hospitals in the District have championed the adoption of EHRs and made significant strides to implement certified EHRs in recent years. In 2011, only four District hospitals had adopted a basic EHR.⁷⁹ By 2017, all nine District acute care hospitals had adopted, or were installing, a basic EHR. Neighboring states, Virginia, Maryland, and Delaware had similar hospital EHR adoption rates of 95%, 93%, and 67%, respectively, in 2015.⁸⁰

Though close in geographic proximity and alike in the electronic capture of health information, the District's nine acute care hospitals use five different EHR systems (Epic, Cerner, Meditech, Siemens and VistA).⁸¹ In Appendix B - EHR Adoption Across the District's Health Care Facilities, Tables B.1 and B.2 provide a breakdown of EHR systems used at the District's acute and non-acute care hospitals. Eight of nine acute care hospitals are connected to a regional health information exchange named CRISP (Chesapeake Regional Information System for our Patients), which exchanges encounter and clinical information (admissions, discharges, transfers, lab results, radiology reports, and other clinical documents, such as discharge summaries) among hospitals and clinics in the District, Maryland, and West Virginia. CRISP is described in more detail later in this section.

Given the District's small geographic footprint and the extent to which residents are known to access health services in bordering states, there are significant opportunities to enable the regional exchange of health information.



Ambulatory Practices

The National Electronic Health Records Survey⁸² and the 2015 DC Board of Medicine Physician Workforce Capacity Report presented data on District EHR adoption rates for 2014. The National EHR Survey indicates that District providers' 66% adoption rate of EHRs increased across ambulatory clinicians (from 2011 to 2014) but ranked below the national average of 78%.⁸³ The DC Board of Medicine reports that actively practicing physicians (providing care greater than or equal to 20 hours per week) using some type of EHR⁸⁴ rose from 68% in 2010⁸⁵ to 89% in 2014.⁸⁶ Based on experience implementing the Meaningful Use program, DHCF has observed that the



District's EHR adoption rate has steadily increased since 2015. DHCF plans to field an EHR survey in 2018 and 2019 to obtain an updated EHR adoption landscape for District licensed providers.

The eClinicalWorks (eCW) EHR is prevalent among ambulatory providers. *Appendix B – EHR Adoption Across the District's Health Care Facilities, Tables B.3 and B.4* provide a listing of EHR systems used, by site, among health system affiliated large ambulatory practices, as well as health centers. While eCW is used by most of the community health centers and in clinics affiliated with three hospitals serving Medicaid beneficiaries, Allscripts, Epic, and Cerner are implemented in the large, hospital and health-system affiliated ambulatory practices in the District.

Community health clinics, including FQHCs, and hospital-owned clinics have high EHR adoption rates and connectivity to some hospital information. The FQHCs participate in the Capital Partners in Care Health Information Exchange (CPC-HIE). Children's National maintains and uses a regional HIE called the Children's Integrated Quality Network (CIQN). These HIEs are described in more detail later in this section.

The District's experience with EHR adoption in smaller practices is also consistent with national trends. As in other areas of the country, smaller, independent practice providers have been slower to implement EHRs. Despite Medicare payment update penalties and HITECH Meaningful Use financial incentives, solo and independent small practice providers in Wards 7 and 8 expressed resistance to adopting EHRs, due to cost burdens of technology infrastructure such as network connectivity, computer upgrades, and staff computer proficiency training. In addition, some providers in Wards 7 and 8 expressed their intent to retire within five to 10 years and felt the return on their investments would not be realized.



Behavioral Health Providers

As of 2016, the District's DBH had 32 community-based Core Service Agencies that offered primary behavioral health services to Medicaid beneficiaries. The majority of DBH contracted providers utilize their own behavioral health EHRs for clinical documentation. These providers also use a DBH-provided system named iCAMS (Integrated Care Applications Management System, behavioral health patient tracking and billing software by the vendor Credible), which is not certified by the Office of the National Coordinator (ONC) Health IT Certification Program to exchange health information.

The DBH provider community sees a significant opportunity to improve care through use of EHRs and HIE and through the exchange of behavioral and physical health information with other non-DBH providers – particularly diagnoses, medications, and allergy information from their patients' primary care providers. However, the ability to electronically exchange information is limited because many behavioral health providers are not using certified EHRs or



are not using EHRs that include the capability to exchange clinical information using industry standards. The District has a major opportunity to positively impact acute and chronic disease management by sharing health information between behavioral health and primary care.

In addition to their own EHRs and iCAMS, DBH providers utilize another system, the District Automated Treatment Accounting System Web Infrastructure Technology System (DATA WITS), for tracking, management, and billing of SUD services. Substance use information is subject to regulations that require patient consent prior to disclosure of information to HIE.⁸⁷



In 2014, 41% of all hospital discharges in the District were to SNFs.⁸⁸ The District's 18 SNFs use six different EHRs. *Appendix B – EHR Adoption Across the District's Health Care Facilities, Table B.5,* provides a listing of EHR systems used, by SNF site. More than half of District SNF providers use PointClickCare, an EHR that supports clinical documentation. Additional interfaces and integration are required for PointClickCare to exchange information with certified EHRs and connect to HIE.

Variance in EHR adoption and use across these facilities has slowed uniform, electronic communication of discharge information via HIE to support effective care transitions. For example, one long-term care (LTC) provider in the District is currently participating with CRISP, though several other nursing facilities have expressed strong interest in HIE connectivity.

HIE is a Growing Presence in the District

Capturing information electronically before, during, or after a patient encounter is a critical step to achieving better health outcomes. An equally vital step is the ability to share that information with providers treating the same patient.

Health information exchanges, or HIEs, are managed by organizations that specialize in the aggregation and transmission of electronic health-related information. HIEs aggregate information from multiple sources and display specific health information for specific purposes. HIE users access information (either through their own EHR or a web portal) to improve care, population health management, and public health. To preserve the privacy and security of health information, health professionals may *only* access information from HIEs for patients with whom they have an active treatment relationship.



Health Information Exchange Data Sources

There are a number of diverse data sources that HIEs use to support patient care and population health management. District stakeholders see the following data types as most promising to support system transformation:

ADT data

ADT (admission, discharge, transfer) data provides administrative information on hospital "admissions, discharges, and transfers." ADT data can alert treating providers if their patient has been admitted to the hospital, enabling timely follow-up.

Clinical data

Clinical data is most commonly exchanged in HIEs via Continuity of Care Documents (CCDs), which provide a common, structured format to share clinical data from the EHR. Elements of a CCD include structured information on vitals (e.g. BMI or blood pressure), lab test results, and medications.

Claims data

Claims data is the most prevalent source for structured health data. Paid claims can help providers understand which services were rendered in a specific care setting. Claims may also reduce duplication of services.

Program eligibility and participation data

This data provides information on eligibility and participation in programs that support individual health and wellness (e.g. case management, supportive housing, food assistance, and transportation).

Self-reported data

Self-reported data includes information, such as health status, collected directly from individuals. This data has proven highly reliable and can be predictive of key health outcomes.

At present, stakeholders in the District primarily have access to ADT data and claims information, with limited clinical information. DHCF anticipates that other sources of data will be integrated as HIE matures in the District.

The District's Recent Efforts to Implement HIE

States launched HIE initiatives with federal funding across the nation in the early 2000s. These initiatives served as demonstration projects and provided valuable input to the nascent marketplace. Findings and lessons learned, including the importance of stakeholder engagement, community trust, financial and operational value, and long-term sustainability, persist to the current day.⁸⁹



HIE initiatives in the District date back to 2007, when the DC RHIO (District of Columbia Regional Health Information Organization) was funded via two three-year grants from the District to focus on hospitals and safety net providers. With one of these grants, eCW was implemented in six safety net clinics. A second grant funded the implementation of an HIE infrastructure, using the Microsoft Amalga platform, to connect the six clinics with District hospitals. As the grant funding concluded and the DC RHIO closed, the District focused on supporting providers' ability to demonstrate meaningful use of EHRs.

To align with the District's emerging initiatives for value-based care, pay-for-performance, and alternative payment models – and to take advantage of the availability of HITECH funds – the District shifted its HIE strategy to a market-based approach that leverages existing community health IT and HIE infrastructure. In 2014, ONC State HIE funding was used to expand the District's public health infrastructure to connect EHRs to public health registries, connect hospitals to an operating regional HIE (CRISP), and pilot a solution for provider-to-provider messaging.

In 2017, DHCF awarded a competitive grant to CRISP to develop enhanced HIE tools and expand the HIE technology foundation. The purpose was to build an infrastructure that enabled District providers to participate in value-based payment programs and quality initiatives, such as MEIP and My Health GPS. In 2017, DHCF also initiated strategic planning activities for health IT and HIE in the District as part of the development of this SMHP to establish the District's direction for fiscal year 2018 through fiscal year 2021.

Key milestones in the District's historical HIE program timeline are provided in Figure 5 below.





The District is An Active Marketplace for HIE

Today, three health information exchange entities (HIE entities) provide exchange services in the District. Each of the HIE entities is described below, with side-by-side information presented in Table 2, which DHCF developed, as provided by each HIE entity.

Chesapeake Regional Information for Our Patients (CRISP)



CRISP began as Maryland's state-designated HIE since its incorporation in 2009 and has expanded to be a regional HIE covering the District, West Virginia and Maryland. CRISP has partnerships with HIEs in Virginia and Delaware to exchange hospital encounter information. In 2013, DHCF awarded grants to six District hospitals to connect their EHRs to a state-designated HIE within 40 miles of the District.⁹⁰

In 2014, the District's six participating hospitals connected to CRISP and began sending encounter information that is shared with other providers and care managers in the region via the Encounter Notification Service (ENS). As of 2018, eight of nine acute care hospitals in the District, one rehabilitation hospital, and 103 practice sites are connected to CRISP's ENS (of these, 63 ambulatory clinic sites connect to CRISP's ENS service through the Capital Partners in Care - Community Health Information Exchange (CPC-HIE)).

CRISP currently provides the following five services to the District:

- » ENS: CRISP delivers inpatient, emergency, outpatient, and LTC encounter notifications to its network of providers in the District based on matching of ADT (admission, discharge, transfer) messages against subscriber lists developed by providers and health plans. This information is matched at the centralized CRISP repository, and alerts are delivered to providers. A practice can customize the ENS to provide information relevant to its providers or care management programs.
- » *Reporting services:* CRISP provides reports to hospitals on usage trends, inter- and intrahospital readmission patterns, and total cost of care across multiple independent facilities.
- » Clinical query portal: Providers perform demographics-based searches to view patient health information from hospital feeds, including lab results, current medications, transcribed notes, and clinical documents submitted by hospitals, ambulatory practices, and other providers.
- » CRISP in the Workflow: Access to critical information about a patient are culled from the CRISP repositories and provided to providers in the context of their existing EMR workflows. Available information includes the patient's recent visits, care team, and care management information.


» Unified Landing Page (ULP): Secure user log-in portal that unifies all CRISP applications and tools that are available for a given user. The applications and tools are shown as tabs at the top of the screen and the ULP defaults to the patient search window.

Partnership Between DHCF and CRISP Expanded in 2017

ERISP

Today, HIE services in the District enable information exchange. In 2017, CRISP was competitively awarded DHCF grant funding to develop and implement enhanced HIE tools to serve the District's providers, who are using them now to exchange information.

At the end of 2017, the Patient Care Snapshot, eClinical Quality Measure (eCQM) tool and Analytical Population Dashboard went live for My Health GPS providers in the District. A description of all tools follows:

- » Patient Care Snapshot: An 'on-demand' web-based service to display an aggregation of both clinical and non-clinical data for a selected patient. In the future, the Patient Care Snapshot may include additional data sets on a patient's SDOH, such as housing and food insecurity.
- » *eCQM Tool and Dashboard:* A tool that aggregates and analyzes data captured through Continuity of Care Documents (CCDs) submitted by providers as well as Medicaid Claims data to calculate their performance against quality measures for their empaneled patient population.
- » Obstetrics/Prenatal Specialized Registry: An electronic form within a District-specified electronic health record (EHR) environment, along with a separate web-based form that is accessible outside of that EHR system. These forms will enable providers to directly enter and submit data associated with prenatal screenings and assessments and facilitate data collection in a District-wide OB/Prenatal Specialized Registry.
- » Ambulatory Connectivity and Support: Engaging providers and supporting their connection to the DC HIE, including technical assistance aimed at the advanced use of HIE services.
- » *Population Health Analytics:* A population-level dashboard accessible by providers and other relevant stakeholders for patient panel management.

The new HIE services are now available to District providers via a CRISP Unified Landing Page (ULP). To access the new HIE tools, providers must sign a participation agreement and attest that they have implemented privacy and security practices to safeguard personal health information, however, the ULP does not require providers to have an active connection to CRISP to begin using these care coordination and population health management services. As of Summer 2018, CRISP provides HIE services for the providers of over 500,000 District patients, including approximately 240,000 Medicaid beneficiaries.



Capital Partners in Care Health Information Exchange (CPC-HIE)



In collaboration with the Capital Clinic Integrated Network (CCIN),

the DC Primary Care Association (DCPCA) launched Capital Partners in Care - Community Health Information Exchange (CPC-HIE) in 2015. CPC-HIE connects eCW EHR information from 11 community health centers, Providence Hospital's ambulatory clinics, laboratory results, and imaging services, and United Medical Center's (UMC) ambulatory practices.

CPC-HIE uses the eCW Electronic Health eXchange (eEHX) hub to share progress notes and provide access to consolidated encounter information across the members' ambulatory EHRs (health centers, FQHCs, Providence, and UMC ambulatory practices). CPC-HIE is connected to CRISP, enabling access to the District's enhanced HIE tools via single sign-on (SSO), which allows users to stay within their eCW application to access the tools, rather than having to sign in to a new system. Looking to the future, the CPC-HIE's priorities are to improve integration with the other HIEs by:

- » Enabling the download of hospital documents and encounter records from CRISP to the patient's EHR record;
- » Retrieving and sending patient care plan updates from the EHR to CRISP as part of the CCD (Continuity of Care Document); and
- » Facilitating electronic receipt and distribution of CRISP ENS alerts within the EHR to designated providers and patient care team members.

Children's Integrated Quality Network (CIQN)

Launched in Maryland in 2008, CIQN is dedicated to exchanging information and improving care for pediatric patients and is affiliated with Children's National Health System. The regional network, CIQN,



utilizes an eCW eEHX hub to enable participating providers on eCW and other EHR systems to share patient information, such as patient demographics; office visits; problems; medications; allergies; medical, surgical and hospitalization histories; family and social history; laboratory results; radiology reports; procedures; and immunization histories.



Table 2: District of Columbia HIE Summary

		CPC-HIE		
	Partic	ipants and Connections		
Total Patients ⁹¹	17,926,955	605,004	1,850,000	
Acute Care Hospitals	DC : 8 DE: 6 MD: 48 VA: 20 WV: 39	DC: 1	DC: 1	
Ambulatory Clinics	DC: 75 (across 103 sites) MD: 509 WV: 67 ⁹²	DC: 11 Community Health Centers across 56 locations; and 2 Hospital-affiliated clinics across 7 locations	Regional: 60 Clinics across 75 locations	
Other Facilities	DC: 1 Rehabilitation MD: 153 LTC	None	DC: 1 Rehabilitation - Pediatrics	
Radiology and Laboratory	MD: 15 Radiology centers Regional: 2 Laboratories with provider authorization	DC: 1 Hospital-based radiology DC: 1 Hospital-based laboratory	DC: 1 Hospital-based radiology DC: 1 Hospital-based laboratory	
HIE Data				
Focus	Regional: Participating hospitals and ambulatory providers	DC: Participating safety-net providers	Regional: Participating pediatric hospital and ambulatory providers	
Available Data	Hospital admission and discharge data; Ambulatory encounter summaries (PDF of CCDs)	Hospital admission and discharge data; Ambulatory encounter data (progress notes, medications, laboratory results, radiology reports, CCDs)	Hospital admission and discharge data; Ambulatory encounter data (progress notes, medications, laboratory results, radiology reports, CCDs)	
Annual District Encounters	2,100,000 visits ⁹³	968,006 visits	1,000,000 visits	
		Core Services		
	 » ENS » Clinical query portal » Secure Text » CRISP in the Workflow » Direct messaging » eCQM reporting » Patient Care Snapshot (CRISP and claims data) 	 » SSO to CRISP HIE tools » Cross-facility clinical query » Transmission of final CCDs to CRISP 	 » SSO for Epic and Cerner hospitals to CIQN » Cross-facility clinical query 	
		Data Source		
	2017 data from CRISP	2017 data from CPE-HIE	2015 data from CIQN	



Leveraging HIE to Support Public Health

HIE can enhance public health activities, such as conducting disease surveillance, analyzing health trends within a defined geography, and designing targeted interventions.

District-wide HIE interfaces for public sector systems, such as the Public Health Laboratory, the immunization registry, electronic laboratory, and cancer registry use enhanced HIE technology developed with financial support from ONC and CDC. DC Health currently integrates clinical data from EHR products into Orion Health's Rhapsody platform, an interface engine that facilitates data exchange across systems to support and enhance mandatory reporting. This platform can support achievement of meaningful use public health objectives, including submitting electronic data to public health registries for immunizations, syndromic surveillance and reportable lab results.

As of 2018, DC Health supports syndromic surveillance, electronic laboratory, and cancer registry reporting. As part of developing the HIE, DC Health expanded functionality with a system architecture that uses the Rhapsody integration engine to provide a single connection point to exchange health information with provider EHRs. DC Health is in the process of migrating remaining legacy EHR registry connections to these registries to the Rhapsody platform to support a single-entry point between DC Health systems and EHRs. In addition to the District hospitals that provide data to these registries, electronic laboratory reporting includes connections with LabCorp, Quest, BioReference and Bostwick laboratories. The Rhapsody platform also supports cancer case reporting from CPC-HIE participants.

District Medicaid providers who have certified EHR systems and internet access can submit immunization data through Rhapsody to the DC Immunization Registry, which currently comprises over 900,000 immunization records and 10 million immunization dates.⁹⁴ Providers and schools are able to access the DC Immunization Registry through direct login to the registry to access immunization histories. However, providers are not able to query the DC Immunization Registry using their EHRs at this time. DC Health plans to implement bi-directional exchange of immunization information with EHRs. DC Health has performed technical testing of bi-directional immunization information exchange with EHRs and is currently addressing connectivity policies and procedures. In addition, DC Health previously participated in ONC-supported inter-state immunization exchange testing efforts and anticipates coordinating inter-state exchange efforts with Maryland and Virginia in the future.



Current Activities to Advance Health IT and HIE in the District

DHCF undertakes a range of activities to advance the use of health IT and HIE in the District. The agency is committed to ensuring that all District providers have electronic access to the right digital information at the right time to serve their patients.

Since 2016, DHCF has offered reimbursement of select health services delivered via telemedicine. Services delivered through this modality of care include primary care, behavioral health, and speech therapy services. In 2018, DHCF competitively awarded four grants to launch telehealth services from providers to residents in Wards 7 and 8, and two grants for providers to deliver telehealth services in homeless shelters and public housing. These services connect providers, who operate from their physical office setting, with residents in their homes or public shelter settings to address residents' health needs. This endeavor reflects a commitment to using health IT tools to promote person-centered care, as shown in Figure 2 in *Section 1*.

Linking Health IT and VBP: My Health GPS

Launched in July 2017, My Health GPS is a new Medicaid care coordination program available to more than 30,000 District adults and children with three or more chronic conditions. In order to help these individuals "get and stay healthy," the My Health GPS program matches beneficiaries with an approved team of primary care providers who help coordinate all aspects of their care.



My Health GPS is one type of value based care program, in which providers are offered incentives to improve patient's care experience and improve health outcomes, such as:

- » Lowering rates of avoidable ED use;
- » Reducing preventable hospital admissions and re-admissions; and
- » Reducing health care costs.

To successfully manage quality and patient outcomes across in the District, providers see the need for health technology to help manage population health, support care management, and enable reporting of program performance measures.

The District's new HIE tools such as the Patient Care Snapshot, the analytical patient population dashboard, and an electronic quality measurement tool called CAliPR, help providers see patterns of care and coordinate most effectively. As of December 2017, My Health GPS providers are pioneering the use of these tools, which will inform the broader use of HIE tools in the District going forward.



In 2017 DHCF contracted with DCPCA, Zane Networks, and Clinovations Government + Health – known collectively as the eHealthDC team – for technical assistance support for District Medicaid providers. The eHealthDC team helps eligible Medicaid providers adopt EHRs, use EHRs meaningfully, attest to the MEIP, and connect to HIEs. Outreach efforts support stakeholder engagement and health IT and HIE planning.

Using claims information to identify providers who frequently serve Medicaid beneficiaries, DHCF developed a data-driven strategy to guide its 2017 and 2018 technical assistance efforts. DHCF targets organizations in Wards 7 and 8 and independent providers, such as physicians, dentists, nurse midwives, and nurse practitioners, who delayed the implementation of an EHR due to cost. Additional information regarding DHCF Medicaid provider outreach and technical assistance, including on-the-ground coaching for clinical workflow and strategies to standardize clinical quality measure collection and reporting, is provided in *Appendix D – Health IT and HIE Provider Outreach*.

The District is addressing its health IT and HIE needs (see *Section 4 – District Stakeholders' Perspectives and Priorities for Health IT and HIE*) on multiple fronts by targeting tools and strategies that further DHCF's guiding principles of expanding access to care, improving quality of care, promoting health equity, and enhancing value and efficiency. Table 3 lists active health IT and HIE efforts, consisting of both projects and tools that are described in *Section 5 – The District's Health IT and HIE Roadmap*.

Expanding Access to Care	 Advancing EHR use in care settings, including physical and behavioral health Optimizing the efficiency of EHR-enabled workflows Implementing ENS HIE functionality among safety-net providers and MCOs Promoting the inclusion of screenings for SDOH in EHRs
Improving Quality of Care	 Increasing the amount of health information in EHRs and HIE captured using national standards Increasing the capture and reporting of eClinical Quality Measures (eCQMs) Expanding tools and dashboards for eCQM reporting (CAliPR) Expanding provider views of claims data to supplement clinical history Disseminating tools to support comprehensive views of patient care for highest risk and vulnerable populations
Promoting Health Equity	 Supporting EHR adoption among all Medicaid providers, including those enrolled in MEIP, to promote care coordination, improve person-centered care, and reduce disparities in health outcomes Using provider-specific health information tools for interventions, such as My Health GPS, to reduce disparities in health outcomes⁹⁵ Making SDOH screenings available in EHRs
Enhancing Value and Efficiency	 Providing technical assistance and education to providers, including workflow redesign and integration of enhanced HIE tools into workflow Expanding the use of HIE tools to enable team-based care Eliminating silos across care providers, government agencies and systems, including DHCF, Department of Human Services (DHS), DC Health, and others

Table 3: Active Efforts to Advance Meaningful Use of Health IT and HIE in the District



Defining the Future and Sustainability of the DC Health Information Exchange

To create a defined marketplace for HIE services that can be regulated and build the public's trust in health information exchange, the District's HIE Policy Board has proposed the following definition for the DC HIE:

The HIE Policy Board defines the District of Columbia Health Information Exchange (the DC HIE) as a *statewide, interoperable system of registered and designated HIE Entities that facilitate person-centered care through the secure electronic exchange of health-related information among participating organizations in support of District-wide health data infrastructure.*

The HIE Policy Board has also voted to establish standardized formal definitions for terms related to health information exchange:

- » *HIE (verb): The secure, electronic mobilization of health-related information across organizations in a region, community, or health system.*
- » HIE (noun): An entity that creates or maintains an infrastructure that provides organizational and technical capabilities in an interoperable system for the secure electronic exchange of health-related information among participating organizations.
- » Participating Organization: An entity that enters into an agreement with an HIE that governs the terms and conditions under which its authorized users may use, access, or disclose protected health information through the HIE.

Establishing a regulated marketplace for HIE services relies on the concept of partnership with *registered* HIE entities and a *designated* HIE. Through rulemaking, DHCF will set the floor for information exchange in the District and DHCF will ask *Registered* HIE entities to attest to meeting certain privacy, security, and access requirements. DHCF will also select one *Registered* HIE entity to serve as a *Designated* HIE to provide core exchange services to District providers.

DHCF designed the proposed designation model based on recommendations by the HIE Designation subcommittee of the HIE Policy Board. This group of key stakeholders met regularly in 2017 to develop a designation rule for the District based on existing models in Maryland, New York, Minnesota, Pennsylvania, and Texas. In this model, the DC HIE is composed of providers sharing information through registered and designated HIE entities as shown in Figure 6.

Participation as an HIE entity under this rule would be voluntary, and HIE entities that do not apply would still be able to operate in the District. As envisioned, only entities that are

registered or designated by DHCF will receive the explicit endorsement of DHCF and may be eligible to access DHCF claims data. The District's registration and designation process will be formalized via DHCF rulemaking in 2018, at which time interested HIEs will be invited to apply in an open and transparent process.

Figure 6: Visual Depiction of Future Health Information Exchange Between the Designated and Registered Entities Participating in the DC HIE



The registration and designation process was designed to align with national connectivity and sustainability initiatives, such as the ONC Trusted Exchange Framework and Common Agreement (TEFCA).⁹⁶ This alignment will support stakeholder interaction with the DC HIE and the ability in the future to connect across disparate HIEs nationally. Most importantly, the presence of strong and dedicated partners within the DC HIE network will ensure its ongoing operations. Figure 7 depicts the envisioned DC HIE network, including a diverse set of participants – senders and receivers of health information – who must work together to support person-centered care.

The District is moving forward to build this network by identifying and promoting relevant HIE services; supporting ongoing technical assistance and education; and coordinating the appropriate resources and collaborators. To ensure stakeholder priorities created the foundation for forward movement, DHCF convened a stakeholder engagement process to inform its strategic roadmap. These stakeholder findings are presented in the next section, *Section 4 – District Stakeholders' Perspectives and Priorities for Health IT and HIE.*



Figure 7: Planned DC HIE Ecosystem







Section 4 District Stakeholders' Perspectives and Priorities for Health IT and HIE



Engaging Stakeholders to Inform Health IT and HIE Initiatives

In 2017, DHCF conducted a comprehensive assessment of District stakeholders' health IT needs. DHCF developed an outreach and engagement strategy, informed by the DC HIE Policy Board's Sustainability Subcommittee, whose 11 members represent multiple perspectives from academia, federal and state government, professional organizations and associations, and payers.

DHCF's outreach and engagement strategy included clinical stakeholders across the spectrum of care: physical health, behavioral health, and LTSS providers, and non-clinical care partners, such as community organizations providing services that support residents' ability to stay healthy. Stakeholder outreach and engagement efforts from March through November 2017 provided perspectives and insight gathered from over 29 stakeholder interviews and 45 focus group participants. A full list of organizations that participated in these interviews are included in *Appendix C - Stakeholder Health IT Needs Assessment and Analysis Methodology*.

DHCF designed these conversations to assess stakeholder perspectives on the current role of health IT within stakeholder organizations, and the potential role health IT and HIE can play in meeting their missions and goals. Together these assessments helped define the District's HIE priorities, key partners and constituents who must be engaged, and areas in which technical assistance will be needed to implement new health IT and HIE tools.

Stakeholder categories for interviews and focus groups included

- » Residents and Patients
- » MEIP Eligible Providers (e.g. hospitals and ambulatory providers)
- » Payers
- » Non-MEIP Eligible Providers
 - » Behavioral Health
 - » LTSS (Nursing and Rehabilitation Facilities, Home Health)
- » CSPs (e.g. Food service, Faith-based, and Community Organizations)
- » District Government Agencies (e.g. Fire/Emergency Medical Services, DC Health, Department of Behavioral Health)

The outreach questions in Table 4 seek perspectives on the current state of HIE and stakeholder priorities for HIE services. The HIE Policy Board Sustainability Subcommittee recommended an initial set of outreach questions, which DHCF used as a foundation to develop a guide for SMHP stakeholder interviews (see *Appendix C.3*). An interview team, including a primary interviewer and note-taker, conducted the majority of the SMHP interviews in person.



Table 4: Health IT and HIE Stakeholder Outreach Assessment Topics and Objectives

Current State of HIE	Ideal Future State of HIE	Immediate Needs
What are your organization's current strategic goals and priorities?	What are the District's health system priorities for the next 5 years?	What health information do you want to see today?
What are existing data exchange activities and partners?	How will access to new information help you address current challenges in your organization?	What IT infrastructure needs to be in place to meet your future goals?
What are examples of where HIE has added value and enhanced person-centered care?	What are the greatest opportunities for HIE to help your organization?	What technical assistance do you need to be successful?
What are the common barriers to adopting health IT and engaging in HIE?	What barriers do you anticipate to expanding HIE or implementing new technology in your organization?	

Given DHCF's focus on building a sustainable HIE infrastructure that connects clinical and nonclinical organizations, the focus groups sought to identify accelerators and challenges for exchanging health information. Once DHCF completed interviews and focus groups, a qualitative analysis was conducted to code interview findings. *Appendix C - Stakeholder Health IT Needs Assessment and Analysis Methodology* provides additional detail regarding the stakeholder engagement and outreach process; interview guides; participants; qualitative analysis methodology; and challenges and opportunities to:

- » Exchange patient data;
- » Improve health IT and HIE data capture and usability; and
- » Understand the District's SDOH data needs and how providers and residents feel about its exchange.

The following section summarizes feedback by key stakeholder groups, including District residents and patients, MEIP-eligible care providers, payers, and care coordination partners.



Stakeholders See Common Challenges and Priorities for Health IT and HIE

Residents and Patients

In Patients' Own Words

"If you have multiple docs, your primary doc should get all the information from the other docs."

"Any computer at a hospital should have all your information."

"If I'm using the portal, I can get information (such as medication instructions) which is good - but I want to tell the doctor what to know about me too."

"We want the doctors to prescribe us medications that are covered by Medicaid. I couldn't afford the other meds. I didn't tell my doctor I couldn't take certain meds he prescribed me. I just didn't take those."

PERSPECTIVES

- » Health information should be exchanged regularly between multiple providers.
- » Patients do not want to recount their health and social information at every visit.
- » Providers should receive electronic notification through HIE if their patients are hospitalized, but patients want the opportunity to "tell their own version" of their hospital visit.
- » Patients strongly advocated for exchange of medication and procedure information.
- Provider collection of SDOH information via health IT was not a significant concern, because patients felt their primary care providers already know their SDOH (e.g. financial resources, housing) based on their history and relationship; however, sharing SDOH information through HIE generated a mix of positive responses and concern for appropriate privacy and security.

ADOPTION AND USE

- » Use of mobile technology, smart phones, and internet was prevalent among focus group participants in underserved communities.
- » There is enthusiasm among residents in underserved communities to access health information on a portal or mobile device. Focus group participants voluntarily and actively demonstrated how to access patient portals on their phones for the benefit of other participants.
- » Very few patients opt out of HIE.

NEEDS AND OPPORTUNITIES

- » Many focus group participants acknowledged that social determinants affect their health, but felt concerned that some data (e.g. income, insurance coverage) could lead to bias by providers and potentially negatively affect their care.
- » Residents want access to organized and routinely updated information on available community services.
- » Residents want providers to leverage telehealth and remote monitoring to address transportation issues.



MEIP-Eligible Care Providers (Hospitals, Ambulatory Practices)

In Providers' Own Words

"We use encounter alerts every day. We have seen the course of clinical care altered due to access to information within CRISP."

"The HIE is helping us generate revenue and provide patient information to act on within a 14-day window for provider reimbursement opportunities."

"We would like to see EHRs used to manage referrals and close the loop post-consultation."

"The next step for HIE is to focus on data integrity and to filter the most important data so it is actionable for prevention and treatment, so it doesn't become clutter or noise."

"We will use HIE data to support participation and eCQM reporting for pay-for-performance programs like My Health GPS and to risk stratify patients."

PERSPECTIVES

- » Providers and care partners expressed a strong need for accurate, timely, and actionable health information that accommodates their clinical and electronic workflow.
- » Providers requested clarity around the tools and scope of the "DC HIE." Providers were familiar with CRISP, CPC-HIE, and CIQN, but asked if the "DC HIE" represented additional services.
- » Providers do not want to manage connections and agreements with multiple HIEs, if possible. Providers seek streamlined processes and integrated systems.
- » Providers view HIE information across care settings as critical infrastructure to enable participation in pay-for-performance, value-based care, and payer-based quality programs.
- » Professional organizations (e.g. provider associations) seek data to support their analytical needs and reporting related to their member hospitals.

ADOPTION AND USE

- » Eight of nine District acute care hospitals utilize certified EHR technology and connect to CRISP for sharing of admission and discharge data through HIE.
- » EHR adoption and use of ENS is high among hospital-affiliated and larger practices.
- » Small providers in low-income communities, including some near retirement, are resistant to adopt EHRs due to infrastructure costs, limited IT skills, and current staff capabilities.
- » Providers expressed interest in having access to the visit note, CCD, and discharge summary from encounters outside their practice setting.
- » Providers seek improved medication history information to manage compliance that includes prescribing history, fill/dispensing information, and pharmacy contact information.
- » Providers need HIE tools such as CAliPR for advanced eCQM reporting for participation in pay-forperformance programs, such as My Health GPS.

NEEDS AND OPPORTUNITIES

- » Providers seek EHR-integrated, real-time access to data, through single sign-on.
- » Providers requested support in developing EHR workflows to process the information received from hospitals and to configure notifications for specific or highest-risk patients.
- » Primary care providers requested access to a bi-directional immunization interface within the EHR to determine gaps and due dates.
- » Providers seek support to achieve Meaningful Use Transitions of Care (TOC) measures.
- » Currently, adoption of Direct secure messaging within certified EHRs is limited.

DISTRICT OF COLUMBIA STATE MEDICAID HEALTH IT PLAN (SMHP)

Payers and Managed Care Organizations (MCOs)

In Payers' And MCOs' Own Words

"We need more accurate inpatient clinical information to help us with HEDIS measures."

"We spend time chasing medical records to obtain data such as vitals and BMI that could be easily supported via HIE."

"There is a perception that HIPAA is restricting sharing of information. People are interpreting the laws too stringently. We need HIE and information sharing policies across the District, so the exchange options are clear."

"We are planning and building our own analytics infrastructure to support new payment models and are interested in where we can leverage HIE instead of building our own."

PERSPECTIVES

- » Payers are enthusiastic about the opportunity for HIE to support care management of high-risk patients.
- » Payers are seeking a way to filter the most important information to receive via HIE, especially for dense, text-heavy ADTs exchanged.
- » Payers are manually entering health information and performing reporting within their own systems that could be accomplished electronically via HIE.

ADOPTION AND USE

- » Payers receive and use ENS messages from CRISP and stated that the near-real time notifications are valuable for care management and coordination. Some payers are working to customize or manually manipulate the information received.
- » Some payers have direct online access to lab and pharmacy portals to obtain member information.

NEEDS AND OPPORTUNITIES

- » Regulation guidance is needed to clarify the patient data that may and may not be shared, which would reduce hesitancy to exchange information and increase information flow.
- » ADT information can support earlier identification of members who need support. Payers are interested in the information that triggers Care Manager follow-up.
- » Payers see opportunities to use HIE and clinical information to support communication with providers regarding patient follow-up and targeting (e.g. if there are 20 patients scheduled in a day, who are the top five most-challenging, based on complexity of health conditions?)
- » Chart audits are a significant burden that could be alleviated via HIE. Utilization Review nurses currently use a combination of e-fax, secure email, and telephone to get the medical record to document medical necessity.
- » Access to clinical information via HIE can support payers in obtaining data needed for HEDIS (Healthcare Effectiveness Data and Information Set) reporting and measures.
- » Use of HIE can support medication reconciliation of post-discharge medication data within the CCD with plan-dispensed medications from pharmacy claims.



Non-MEIP Eligible Providers and District Government Agencies: Behavioral Health, Fire/EMS (FEMS), Long-Term Care (LTC), and Community Services

In Partner Agencies' Own Words

"Behavioral health providers want data from PCPs. For young individuals we want access to their last physical. We would like to see immunizations, lab work, and other information within the CCD such as referrals, hospitalizations, and the name of the provider treating the patient."

"As part of our (LTC) program we have to make sure that services our patients need are in place. So, we coordinate with community groups and exchange a lot of information. Our Social Workers coordinate care management. HIE could be helpful to support this manual exchange of information via fax and phone."

> "We (FEMS) want to know where do the homeless usually go for care? Who is their doctor? HIE can facilitate access to this information."

PERSPECTIVES

- » Behavioral health providers serving the Medicaid population seek access to comprehensive clinical information across medical and behavioral health care.
- » Community providers articulated a strong need for bi-directional exchange with clinical providers.
- » Providers expressed the need for information on available community services.
- » FEMS expressed interest in utilizing HIE tools, such as the patient care profile and population dashboard, to better facilitate urgent or emergent care in the District. DC FEMS is implementing a nurse triage line and is interested in using these HIE tools.
- » FEMS seeks health information to support care in emergency transport and to understand health outcomes of patients treated by FEMS.

ADOPTION AND USE

- » DBH-contracted providers use an EHR to document the behavioral health encounter. Most providers use their own version of iCAMS (private), some use the DBH-provided iCAMS, and others use their own EHR.
- » DBH providers expressed interest in CRISP and HIE connectivity. Some organizations had already initiated onboarding processes with CRISP for ENS and access to the CRISP patient profile tool.
- » LTC facilities are either using EHRs or are in the process of implementing EHRs.

NEEDS AND OPPORTUNITIES

- » LTC providers are critical care partners and require access to and exchange of data across the continuum of care, including hospital information for transfers into LTC and information to support care management for patients discharged to home.
- » LTC providers are receiving fax referrals from most hospitals.

DISTRICT OF COLUMBIA STATE MEDICAID HEALTH IT PLAN (SMHP)

Stakeholder Feedback Conveys Key Opportunities for the Health IT and HIE Roadmap

Stakeholder feedback confirmed the key findings from other District health assessments and affirmed the state of health and health IT discussed in *Section 2 – Opportunities to Improve Health Care in the District*. Stakeholder feedback also provided additional insight into ways HIE tools are currently used in the District's health care system and have the potential to improve care and outcomes.

Understanding Common Challenges and Opportunities to Improve Data Exchange

Stakeholders highlighted several health IT and HIE challenges, which were also considered by many to represent opportunities for significant improvements in person-centered care:

Integrating systems and interfaces. Different health IT systems and interfaces across the District have resulted in information silos, with providers struggling to access lab results and patient summary data from hospitals and other health care facilities. Exchange tools that integrate HIE access within providers' health IT systems will encourage information sharing. Furthermore, advancing data integration between DHCF and its partner agencies can help ensure high quality care and better serve the unique health care needs of District residents, including children.

Promoting behavioral health exchange. Similar to the systems and interface challenges mentioned above, current behavioral health data exchange occurs manually, often via fax. Data storage across various systems, including iCAMS, SADO, DataWITS, and others that store similar information, results in redundancy. However, providers in the District recognize the importance of exchanging behavioral health data to improve care coordination and communication.

Increasing cross-border data exchange. Some District residents receive care in neighboring states (Maryland and Virginia) but many District providers may not be aware of those occurrences without HIE access and use. Increased access to HIE can fill information gaps for providers caring for these individuals.

Sustaining health IT and simplifying data exchange policy. Providers report difficulty understanding the data exchange laws and regulations for behavioral health, mental health, and SDOH data. Education and outreach for common exchange scenarios can help clarify requirements and increase exchange of this data.

Enabling provider and care partner communication. Providers and community service organizations want to exchange information to provide better care for District residents. HIE



access will create communication mechanisms for referrals and other information sharing. While several providers have access to secure email protocols to exchange messages with other providers, exchange can be increased by expanding the number of providers using provider-toprovider secure messaging within their EHRs and by providing a way to locate care team contact information.

Building a Solid Foundation for HIE is Imperative

While health IT and HIE offer many new and exciting analytic possibilities, stakeholders are pragmatic and prioritized the need for robust infrastructure with high-quality data. Providers and care partners cited the need for improvements to current HIE tools and additional HIE data or services such as:

Real-time alerts. Providers with large patient populations often receive thousands of ENS notifications per month and stated that streamlined reporting via single alert and filtering capabilities would increase the value of HIE access.

Claims and clinical data integration. Providers, care partners, and payers value claims data for its analytical uses. Integrating claims and clinical data, enabling data segmentation capabilities, and improving claims' timeliness and completeness will expand its utility. Providers and care partners expressed strong interest in technical assistance to rapidly realize the benefit of claims data integration.

Workflow support. In anticipation of expanded HIE capabilities and tools, stakeholders expressed a desire for technical assistance to effectively send, receive, and use HIE data, as well as embed access to HIE data into their workflows.

Data quality improvement. Providers and payers see the value of HIE data they currently use, but reported challenges with accuracy, consistency, and timeliness. Defining a system-wide workflow and information exchange standards will create confidence in the data exchanged. Specifically, decision trees, policies, and procedures for sending and incorporating external data will enhance HIE's value to stakeholders.

Transitions of care. Providers are eager to use a HIE infrastructure to facilitate transitions of care and increase the sharing of inpatient consultations and visit notes. While some behavioral health and LTC providers were early adopters, most do not use certified EHR systems and seek technical assistance to participate in HIE.



Understanding and Addressing Social Determinants of Health Data

The District's residents and providers see SDOH information as an emerging, critical source of data to facilitate comprehensive understanding of health and wellness.

Incorporating SDOH data. Providers know social determinants affect their patients' health, but documenting and using the SDOH data is difficult because it is often stored as unstructured data in an EHR that cannot be easily searched and exported. Certain SDOH data, such as housing status, can change frequently, which makes it unreliable without frequent screening. Some SDOH data exchange occurs through fax or phone with housing and CSPs and has the opportunity to accelerate through HIE.

Resident perspectives on SDOH. Residents want their providers to incorporate knowledge of their SDOH information into care decisions; however, they have mixed views on documentation methods and fundamentally want to "own" their story. Involving residents and community organizations in the development of SDOH exchange policies and procedures, and including their voices on an ongoing basis, will establish a critical baseline of trust and willingness to have their data shared between providers.

Provider perspectives on SDOH. Providers want to incorporate SDOH into their daily workflow through best practices for uniform capture and exchange. Establishing broad-scale consensus through existing local organizations, such as the DC PACT (DC Positive, Accountable Community Transformation), on which SDOH data elements to prioritize for specific patient care processes, such as discharge planning, will assist implementation. Building SDOH capture and exchange into existing health IT systems, such as referral and portal technologies (rather than introducing new technology), will increase likelihood of use.

Stakeholder Feedback Translates to the Health IT and HIE Roadmap

Stakeholder feedback, collected to inform the SMHP, reflects the significant progress the District has made to increase health IT and HIE adoption among District providers and hospitals. Stakeholders remain optimistic, vested partners in building health IT and HIE capacity in the District. They expressed a strong desire to remain engaged and participate in future needs assessments and other strategic efforts to set priorities and implement solutions.

To ensure the District's investments in health IT and HIE realize the full potential of these systems, stakeholders articulate a concrete set of challenges and opportunities for the District to address:



- » Standardizing information exchange and promoting interoperability among organizations using different types of EHR systems and platforms;
- » Developing services and tools that respond to high priority use cases identified by providers and patients;
- » Offering assistance to providers who may lag in health IT adoption and use; and
- » Allocating time and support between implementation of new or expanded tools to allow providers sufficient time to adapt to new workflows.

In the following section, stakeholder priorities are addressed as part of the District's Health IT and HIE Roadmap. The Health IT and HIE Roadmap outlines top goals, use cases, and a proposed timeline for moving the District's strategy into action.





Section 5 The District's Health IT and HIE Roadmap



The District's Goals to Improve Health Using Health IT and HIE

Previous sections of the SMHP provided an overview of stakeholder need, in light of the District's trends in health, health care delivery, and health IT adoption. This section presents the Health IT and HIE Roadmap, DHCF's strategic plan to connect the District's health system through the continued spread of health IT and HIE. The Roadmap presents a set of strategic goals for the use of health IT and HIE, a series of foundational steps to construct the necessary environment for DC HIE projects and programs, use cases with projects that respond to stakeholder needs, and an implementation timeline.

A robust health IT and HIE infrastructure in the District will enable providers to use tools, processes, and clinical workflows that deliver quality, coordinated, evidence-based care to residents. A well-defined set of strategic goals for the use of health IT and HIE is the first step to develop the District's Health IT and HIE Roadmap.

Based on a review of national frameworks,⁹⁷ DHCF developed a Maturity Model for Health IT and HIE (see Figure 8), consisting of four components – Access, Exchange, Use, and Improve – to guide the District's goal setting for health IT and HIE. The model demonstrates a progressive spectrum of sophistication for providers' use of health IT and HIE. This spectrum is mirrored in the Health IT and Evaluation Framework in *Section 6 - Evaluating Health IT and HIE improvements*.

Figure 8: Maturity Model for Health IT and HIE



Using this model and guidance from the HIE Policy Board, among other key stakeholders, DHCF identified 10 strategic goals for health IT and HIE in the District. Table 5 below presents these strategic goals and denotes which aspect of the Maturity Model each goal is intended to support. These strategic goals establish a vision of health IT and HIE enabling health system connections and improved outcomes as a result of their widespread adoption and consistent use.



Table 5: The District's 10 Strategic Goals for Health IT and HIE

Access	Exchange	Use	Improve	District's 10 Strategic Goals for Health IT and HIE
Ø				 Increase provider adoption of EHRs and HIE to expand virtual networks of providers in the District who are capable of delivering high-quality care by leveraging technology.
Ø	Ø			2. Electronically identify providers and provider networks serving District residents.
Ø	V			3. Increase the number of virtual care teams that are electronically connected to support integrated, high-quality care.
	V			4. Consistently collect and use SDOH information to improve transitions of care, support policy and planning, and evaluate efforts to maintain and improve health equity.
		Ø		5. Ensure high-quality electronic documentation of health- related data.
		Ø		 Increase the number of patients who engage with their care teams using technology.
		V	Ø	7. Improve the value and efficiency of team-based care by integrating information across care settings (clinical, behavioral, community, public health, and payers).
			Ø	8. Improve care coordination and transitions of care by improving access to information collected across settings of care.
				 Track quality performance while also reducing reporting burden though use of health IT and HIE tools.
			Ø	10. Support interventions to reduce disparities in health outcomes for identified priority populations and conditions in the District via access to health IT and HIE.



How Health IT and HIE Goals Impact District Residents

The Health IT and HIE Roadmap presents a plan to create a connected network of providers. The purpose of this approach is to support providers' capabilities to care for District residents and achieve improved health outcomes.

While the Health IT and HIE goals relate largely to provider interaction with health IT and HIE, District residents benefit in several ways, including:

- » Knowledge that their providers and care teams are connected and can communicate with each other;
- Confidence that providers and care teams know their health histories, life circumstances, and encounter circumstances, even when the information exists across disparate parts of the health system;
- » Assurance that their health and SDOH information is stored and shared following established best practices for privacy and security;
- » Ability to electronically communicate with their providers and care teams to resolve questions and reduce travel to inconvenient care settings;
- » Certainty that individual and population-level health trends are monitored and responded to; and
- » Awareness that providers and care teams are focused on providing quality, prevention-oriented care that is grounded in clinical evidence to keep them healthy.

The Health IT and HIE Roadmap is intended to improve District residents' experience with the health system. Further, the Roadmap emphasizes health disparities reduction and an increase in providers' awareness of patients' life circumstances that affect care decisions.

Foundational Steps for DC HIE

In order to successfully achieve the goals outlined in the SMHP, the DC HIE will require a strong foundation of collaboration among HIE entities, providers, payers, government agencies, and District residents. While technology development plays an important role in achieving the vision set forth in this section, DHCF recognizes that HIE relies upon the following core capabilities and resources:



Data Connectivity and Participation. Facilitate broad provider participation in HIE across care settings, clinical specialties, and non-clinical entities. With widespread and routine data sharing (sending and receiving), DC HIE will be a robust clinical data environment where connected users have access to complete, relevant, and timely information.

High Quality Data. Recognizing that high-quality data is key to establishing provider trust and driving HIE participation, pursue stakeholder consensus and rules for 1) following national standards, 2) measuring quality of data, 3) sharing data in a timely manner, and 4) using best practices to validate the data source before HIE data is incorporated into the receiving provider's EHR or used for clinical decision-making.

Continuous Stakeholder Engagement. Establish processes and forums to receive widereaching, ongoing stakeholder feedback to ensure DC HIE policies reflect stakeholder needs and respond appropriately to emerging priorities. To solicit and act upon stakeholder feedback, DHCF will continue to coordinate with District stakeholders and the DC HIE Policy Board – an entity designed to reflect the diversity and composition of District's health system – to implement DC HIE policies that respond to complex and evolving stakeholder health IT and HIE needs.

Alignment with District Payment Policies. Explore policies and continue funding health IT and HIE tools that create a supportive environment for providers and Managed Care Organizations (MCOs) to advance the District's trajectory toward value-based care.

Technical Assistance. Fund technical assistance to support District providers. Implementing new technology in a health care setting is challenging and time-consuming. DHCF currently funds DCPCA to deliver technical assistance to alleviate and resolve connectivity challenges for late adopters and providers without health IT (including HIE connectivity). Technical assistance should continue while enhanced federal funding is available to support the District's Medicaid providers in meeting Meaningful Use requirements and to support My Health GPS providers embed HIE tools into their routine practice.

Sustainability Planning. Generate stakeholder collaboration and widespread participation for the long-term success of DC HIE. Sustainability planning will be an integral component of every project, program, grant or agreement implemented to achieve this Roadmap. The DC HIE's sustainability is also dependent on its alignment with national frameworks – such as the TEFCA – that establish key tenets for providers to interact with each other and for the DC HIE to connect with other regional and state networks.

Policy Governance. Work with the HIE Policy Board and other relevant stakeholders to set requirements through the HIE entity designation and registration process. These policies



and processes will be critical to define the privacy, security, data access, and user rights needed to effectively govern the public-private partnership model of the DC HIE. The DC HIE, as described in *Section 3 – The Current Landscape of Health IT and Exchange in the District*, relies on HIE entities exchanging information in a manner that protects personal information and maintains the public's trust. Additional governance issues are explored more next.

DC HIE Governance

HIE governance encompasses the processes, policies, and rules that apply to interactions with HIE services, programs, and health-related information. A transparent governance process is critical to ensure that HIE participants and stakeholders can clearly identify and understand: 1) the basic rules and functions of HIE; 2) the entities with oversight and accountability for specific HIE functions; and 3) how to change or modify HIE policies and rules.

HIE governance efforts, led by DHCF, will directly influence the operation of HIE entities. The HIE entities will remain autonomous and manage their own day-to-day operations and business. One primary governance strategy DHCF will oversee is the implementation of voluntary regulations to define and maintain the DC HIE in collaboration with government and non-governmental stakeholders. In this governance model, the DC HIE is a statewide, interoperable system of registered and designated HIE entities that facilitate person-centered care through the secure electronic exchange of health-related information among participating organizations in support of District-wide health data infrastructure.

One of the reasons that HIE governance is so important is that HIE entities must define the parameters for participation and sharing information. An HIE's technology infrastructure ensures that specific health-related information is only provided to specific people for specific reasons related to treatment, payment, or health care operations. For example:

- » An individual providers' ability to see only the health data for the patients with whom they have an active care relationship;
- » A clinical practice's use of HIE tools to identify a list of patients who have visited the hospital ED for preventable conditions, which can inform clinical interventions to reduce over-reliance on the ED; or
- » District health agencies' use of HIE to monitor the prevalence of specific cancer diagnoses for reporting purposes and design of community-level interventions.

These individual roles, responsibilities, and permitted uses of data must be defined through HIE governance decisions and processes that determine how HIE participants may interact with



health-related data and HIE services. In addition to serving the District as a health services payer, regulator, claims steward, stakeholder convener, and health initiatives funder, DHCF will work with providers, community members, and District agency partners to establish the rules and regulations that govern the DC HIE in order to foster public trust in health data exchange.

Currently, DHCF is working to launch the DC HIE designation and registration process described in *Section 3 – The Current Landscape of Health IT and Exchange in the District*. Additional areas where DHCF and its partners plan to establish expectations for implementation by registered and designated HIEs are described below.

- » Privacy and security. DHCF governance will support transparent policies that align with privacy and security best practices and undergo review on an ongoing basis. Governance will also guide HIE entities to ensure providers and residents clearly understand their privacy and security rights and responsibilities and are educated about safeguards to protect their information.
- » Data access. DHCF governance will clearly articulate the data access scenarios, permissions, and monitoring processes for DC HIE participants – including residents, care givers, providers, CSP personnel, and District government employees – who interact with health-related data.
- » Data quality. DHCF governance will promote national standards for data capture, advance best practices for timely data sharing, and – in accordance with emerging standards – facilitate the incorporation of HIE data (including data source validation) into EHRs.
- » Permitted data use. DHCF governance will specify the scenarios whereby HIE data may be used for research, public health, and other secondary purposes, and will ensure these scenarios are conveyed for all HIE users in clear, understandable consent forms.

DHCF recognizes the importance of stakeholder input and agreement on the areas outlined above. In addition, DHCF anticipates future engagement with stakeholders as HIE evolves. Emerging issues for the future include how best to exchange appropriate information with social service organizations who may not be covered entities; appropriate strategies to facilitate community-level notice of HIE practices or changes in service; and approaches to involve residents in the use and stewardship of their own health-related information. DHCF is committed to maintaining a robust governance process and ongoing dialogue with stakeholders to enable the successful implementation of projects and tools described later in the Roadmap, as well as to establish a foundation for new and innovative HIE services.



Four Use Cases Drive Improved Patient Care

To contextualize the District's Health IT and HIE Goals, DHCF and the HIE Policy Board developed four use cases to guide the design, development, and implementation of health IT and HIE. The use cases represent key functions of the District health IT and HIE infrastructure that stakeholders identified as essential for delivery of care to residents and patients. Each use case is briefly described below.

	Use Case	Objective
1000 M	Transitions of Care for Individuals	Technology that supports transitions of care will help health providers and CSPs facilitate communication across care settings, make timely referrals and exchange summary records, and access available resources.
	Social Determinants of Health Data	Collection, exchange, and use of SDOH data will maximize interventions to support individual health, reduce barriers to access, and improve the efficiency of person-centered services.
	Population Health Management	Health analytics include a broad category of data tools, algorithms, and visualizations that will be designed to facilitate a provider's understanding of their patient population and develop targeted interventions to better manage population health.
\$ B	Public Health	The District's public health projects will focus on ways HIE can work with DC Health's existing infrastructure and programs to expand public health HIE connectivity, facilitate public health case reporting, and support public health registries for all providers in the District.

The subsequent tables describe each use case and the proposed projects that support each use case. Through ongoing planning, funding, and stakeholder coordination, the projects will produce tools and programs for District stakeholders to help them improve: 1) individual patient care; 2) population health management; and 3) public health. The use cases deliberately address these three levels of care, in recognition of health IT and HIE's potential to support all components of the health system in achieving improved health outcomes in the District. The project descriptions associated with each use case are followed by a detailed "future story" which would be achieved through successful implementation of the proposed projects.



Use Case #1: Transitions of Care for Individual

electronically.



Technology that supports transitions of care will help health providers and CSPs facilitate communication across care settings, make timely referrals and exchange summary records, and access available resources.

PROPOSED PROJECTS - TRANSITION OF CARE

1. Expand HIE Encounter Summary Information	 Current Challenge Many providers rely on patients for notification of encounters with other providers. Access to the information from those encounters is either not requested or is obtained through manual outreach (e.g. fax without automatic incorporation into the provider's EHR).
	 Project Description Web tools display patient encounter summary information from an HIE within a patient population dashboard or unified landing page that is accessible from provider EHRs.
	 Future State Providers know when their patients receive care from other providers and can coordinate care with the most current and accurate health information.
2. Develop Provider Directory	 Current Challenge » Providers do not have integrated systems to electronically communicate health information (e.g. provider referral, consult note) to the next provider of care, if known.
	 Project Description » A provider directory serves as a trusted, master index of providers by managing participating individuals' identification (including electronic address, credentials, specialty, and employment or affiliated organizations).
	 Future State Providers can access a trusted source for identifying other providers to make electronic referrals and share information with them, thereby easing transitions

of care for patients. Providers do not need to collect and maintain their own individual set of contact information for communicating health information



	PROPOSED PROJECTS - TRANSITION OF CARE
3. Improve Single Sign- On (SSO) and EHR	 Current Challenge Navigation between EHRs and separate HIE applications is burdensome and presents risk to patient safety when information is split across disparate applications.
Integration	 Project Description » SSO technology connects provider EHRs to HIEs to display HIE data within provider EHRs without separate log-ins and passwords to access HIE information.
	 Future State » SSO will minimize workflow disruptions, increase use of HIE tools, and promote patient safety.
4. Improve HIE Data Quality	 Current Challenge Providers frequently do not trust health information from an HIE when the length, format, and vocabulary may differ from that to which they are accustomed and when the source of the data is unknown.
	 Project Description » High-quality data results from the use of standardized terminology documented in the same format (e.g. CCD) and exchanged with similar levels of frequency and granularity.
	 Future State Providers access and use clean, trusted, complete, and useful HIE data in a standardized format when needed.
5. Improve Health IT and HIE Connectivity for Low	 Current Challenge » Due to limited financial and organizational resources, several providers have not implemented records systems capable of exchanging health information with certified EHRs and connecting to HIEs. As a result, these providers do not participate in HIE and have access to complete patient health information.
Adopters	 Project Description Technical assistance to providers with low EHR and HIE adoption enables HIE connectivity and participation via low-cost or low-barrier health IT and HIE tools, such as web-enabled access to a patient population dashboard or unified landing page from an internet browser.

DISTRICT OF COLUMBIA STATE MEDICAID HEALTH IT PLAN (SMHP)

PROPOSED PROJECTS - TRANSITION OF CARE

5. Improve Futu Health IT » Futu and HIE i Connectivity i for Low Adopters (continued)

Future State

 Providers gain access to communication methods and complete patient information (e.g. patient encounter history and encounter summary information).

6. Improve Health IT and HIE Connectivity for Providers with Non- Certified EHR Technology	 Current Challenge Providers who deliver behavioral health, LTC, emergency, and community services have low rates of certified EHR technology adoption, which hinders their ability to participate in HIE. 			
	 Project Description » Direct capabilities for push-based exchange to providers without certified EHRs deliver encounter notifications to these providers and keep them informed when their patients are hospitalized. » Direct capabilities, or other integration between IT systems used in care settings without certified health IT, exchange both structured and unstructured information between providers. 			
	 Future State Providers with non-certified EHRs receive encounter notifications via HIE, in a manner that fits their records systems, to take an initial step toward HIE participation and connectivity. HIE capture of unstructured electronic health information (e.g. PDF) reduces provider dependence on fax as a primary method for exchanging referrals, visit notes, and encounter summary information. 			
7. Enable Medication Reconciliation	Current Challenge » Providers can electronically transmit medication orders to a pharmacy, but they are not aware of whether the patient filled or re-filled the medication to facilitate medication reconciliation. Project Description » Technical assistance to providers helps them implement workflows to view and access medication history within EHRs and HIE			

» Pharmacies connect to HIEs to permit participating providers to access prescriptions and dispensing data.



PROPOSED PROJECTS - TRANSITION OF CARE

7. Enable Medication Reconciliation (continued)

Future State

Providers gain knowledge of whether a patient has obtained his/her prescriptions from the pharmacy, as an indication of medication use and adherence

TRANSITIONS OF CARE IN THE FUTURE

HIE eliminates the current process of sending paper-based copies of clinical information when nursing home residents are transferred the hospital.

In the future, HIE connects nursing homes with hospitals to manage residents' transitions of care between settings. Nursing home staff coordinate the transfer of a resident to the emergency department (ED) to stabilize a new condition. Staff electronically note a resident's change in status in their EHR before the resident's transition to a hospital. Upon arrival at the hospital, the ED staff access the resident's health history through their EHR's HIE services. Through quick, intuitive clicks, they understand the reason the resident was transferred and obtain information such as current medications and past medical history.

Because nursing homes and hospitals have undertaken a consensus-driven process to identify the critical information hospital staff need to care for residents, providers on each side of the transfer trust the information sent and received via HIE. Most importantly, the resident who is transferred can trust that accurate clinical information is shared in a secure, timely manner to enable the best care.

Use Case #2: Social Determinants of Health Data



Collection, exchange, and use of SDOH data will maximize interventions to support individual health, reduce barriers to access, and improve the efficiency of person-centered services.

PROPOSED PROJECTS – SOCIAL DETERMINANTS OF HEALTH

1. Capture Standardized SDOH Information via Health IT and HIE

Current Challenge

Providers articulate the importance of using SDOH and social needs data to inform care decisions, however, consensus on the right data definition and elements, the use of standardized screening processes, and the appropriate workflows to capture this data are in nascent stages of agreement, technical validation, and adoption.



DISTRICT OF COLUMBIA STATE MEDICAID HEALTH IT PLAN (SMHP)

PROPOSED PROJECTS – SOCIAL DETERMINANTS OF HEALTH

1. Capture Standardized SDOH Information via Health IT and HIE (continued)

and Use

SDOH

Across

Project Description

Consensus building efforts through local organization and provider input into screening question compatibility with EHRs in the District, assist efforts to incorporate standardized tools into EHRs for routine provider documentation.

- Technical assistance for the design and implementation of best-practice workflows to collect and exchange of SDOH information reduces the burden related to additional data collection.
- Processes that create resident trust for District-wide SDOH information capture using EHRs help providers begin new documentation and patient interaction practices.

Future State

- Residents engage with a data gathering experience that prioritizes trust and addresses potential concerns about SDOH data collection.
- Providers receive assistance for new workflows in the transition to make care decisions informed by patient SDOH data.

2. Exchange, **Current** Challenge

Providers articulate a desire to send and receive SDOH data, but consensus on data exchange practices with social and clinical providers is not yet established Information and implemented across the District.

Stakeholders **Project Description**

- Bi-directional interfaces connect provider EHRs to third-party data sources, such as the Homeless Management Information System (HMIS) and other CSPs, to support effective communication, referrals, and tracking via HIE.
- Technical assistance for building consensus-driven workflows encourages » providers and their office staff to electronically exchange and use information on residents' SDOH and social needs during encounters.
- Integrating systems and resources reduces the amount of patient forms and streamlines outreach.

Future State

- Residents routinely interact with care providers who are trusted to use and exchange data about the life circumstances that impact their health.
- Across the District, a baseline of SDOH and social needs data collection emerges to better deliver individual care, population health management, and public health efforts based on residents' needs.



SOCIAL DETERMINANTS OF HEALTH IN THE FUTURE

Providers screen and refer patients to community resource partners to address unmet social needs and share that information with other care team members.

In the future, practice staff utilize standardized screening processes that have been adopted across the District to engage patients in a conversation about their non-clinical, social needs and the environmental factors that influence their health and general well-being. Responses are documented in the EHR.

Based on a diabetic patient's response to a question about food insecurity and lack of a nearby grocery store in his neighborhood, a provider uses her EHR to look up a food bank that services the patient's neighborhood, and she documents a "food prescription" that is electronically sent to a community service provider (CSP) that offers food access services. The CSP receives the provider's electronic communication, using their push-based connectivity that allows them to receive HIE messages. Staff at the CSP follow-up with the patient, use the referral to tailor the food order to his diabetes needs, and begin routine deliveries of food to help him manage his diabetes.

Use Case #3: Population Health Management



Health analytics include a broad category of data tools, algorithms, and visualizations that will be designed to facilitate a provider's understanding of their patient population and develop targeted interventions to better manage population health.

PR	OPOSED PROJECTS – POPULATION HEALTH MANAGEMENT		
1. Expand Basic Analytics and Reporting	 Current Challenge » Generally, providers do not have access to tools that use HIE data to deliver reports on health metrics for the patients in their practice, as well as reports that monitor their own individual performance against incentive program metrics. 		
	Project Description		
	» Analytics tools deliver data through "dashboard"-type reports that easily and intuitively identify the patients who meet the criteria for action to improve patient health.		
	Future State		
	» Providers gain access to analytic reports that augment their care practices and track their progress in quality reporting and incentive programs.		



 2. Implement Advanced Analytics Tools Current Challenge Generally, providers do not have access to analytics tools that aggregate HIE data to support analyses that can be tailored to identify specific solutions to complex, evolving care challenges. Project Description Advanced analytics tools, based on claims and clinical data, deliver actionable intelligence to support clinical interventions for individual patient care, population health management, and public health. Visualization tools strengthen communication across clinical and non- clinical settings. Patient-facing reports engage individuals in care decisions (for example, opportunities to improve medication adherence, promote clinical follow-up, or enhance program participation). 	PR	OPOSED PROJECTS – POPULATION HEALTH MANAGEMENT
 Project Description Advanced analytics tools, based on claims and clinical data, deliver actionable intelligence to support clinical interventions for individual patient care, population health management, and public health. Visualization tools strengthen communication across clinical and non- clinical settings. Patient-facing reports engage individuals in care decisions (for example, opportunities to improve medication adherence, promote clinical follow-up, or enhance program participation). 	2. Implement Advanced Analytics Tools	 Current Challenge » Generally, providers do not have access to analytics tools that aggregate HIE data to support analyses that can be tailored to identify specific solutions to complex, evolving care challenges.
Future State Providers gain access to advanced analytics tools, based on aggregated data 		 Project Description Advanced analytics tools, based on claims and clinical data, deliver actionable intelligence to support clinical interventions for individual patient care, population health management, and public health. Visualization tools strengthen communication across clinical and non- clinical settings. Patient-facing reports engage individuals in care decisions (for example, opportunities to improve medication adherence, promote clinical follow-up, or enhance program participation). Future State Providers gain access to advanced analytics tools, based on aggregated data

POPULATION HEALTH MANAGEMENT IN THE FUTURE

for their patients.

Providers will regularly use analytic tools to understand health trends for the patients they treat, develop practice-level interventions, and monitor their practice's performance on incentive-based programs.

In the future, a pediatrician reviews a report that identifies emergency department (ED) encounters occurring among her patients. Many of these patients presented to the ED with difficulty breathing. The pediatrician recognizes that this trend occurred mostly among her asthmatic patients. Subsequently, the practice contacts the identified patients and schedules follow up appointments, including medication therapy management. The pediatrician also develops new educational materials and decides to offer classes at her practice to teach parents of children with asthma how to recognize signs of an attack and treat them before they become emergent. The class also covers strategies to recognize and minimize environmental and household triggers, and discussion about strategies to ensure prescribed medication is taken on a regular basis. Subsequent to implementing this new program, the pediatrician continues to review the ED encounter report, which shows a reduction in avoidable visits for many of her asthmatic patients. Reduction of avoidable ED visits is a key measure for an incentive-based Medicaid program, resulting in bonus payments for the pediatrician's practice.





Use Case #4: Public Health



The District's public health projects focus on ways the HIE can work with DC Health's existing infrastructure and programs to expand public health HIE connectivity, facilitate public health case reporting, and support public health registries for all providers in the District.

PROPOSED PROJECTS – PUBLIC HEALTH

1. Enhance	Current Challenge
Public Health Electronic Case Reporting & Surveillance	» Providers manually complete case reporting forms for submission to DC Health. Forms and case information are not populated and reported in a consistent manner, creating a burden for DC Health to clean and aggregate the data for surveillance purposes.
	Project Description
	 Automatic electronic case reporting allows coded data from provider EHRs to auto-populate forms sent to DC Health in a vocabulary and transmission format that allows DC Health to streamline surveillance and health trend monitoring. Investigating opportunities for electronic submission of coded EHR data – for specific data that align with provider and DC Health priorities – will ease reporting and surveillance burdens.
	Future State
	 Providers gain access to technology for efficient public health reporting. DC Health can shift resources from data cleaning to prioritize active surveillance and intervention.
2. Improve	Current Challenge
Development and Provider Connectivity to Public Health	» There is significant variability in providers' readiness, technology, and priorities for public health reporting, which has created multiple disparate registries that do not consistently align with priorities for providers and DC Health.
Registries	Project Description
	 Public health registries combine data from HIE and public health systems to create up-to-date, complete, and bi-directional repositories of information on conditions affecting District residents. Technical assistance enables exchange of public health information to meet Meaningful Use requirements and facilitate public health registry

connectivity.


PROPOSED PROJECTS – PUBLIC HEALTH

2. Improve Future State	
Development and Provider Connectivity to Public Health Registries (continued) Providers and public health workers can easily data on priority public health trends and spec improve care for individuals and the public's h Residents receive targeted interventions to al improve outcomes.	v access and leverage complete ific populations in the District to health. leviate health disparities and

PUBLIC HEALTH IN THE FUTURE

District health agencies and providers send, receive, and use timely, clinically rich data to improve public health and individual care.

In the future, through electronic case reporting, EHRs will automatically send required information mandated by the District to DC Health after a Hepatitis C diagnosis. DC Health monitors trends and creates community interventions in specific locations to slow the spread of the disease and cure those already diagnosed.

Rich clinical data is a significant improvement over the previous system reliant upon labs sending limited data and allows DC Health to perform near real-time case monitoring and develop timely interventions to stop Hepatitis C transmission.



Implementing the District's Health IT and HIE Roadmap

To achieve the District's strategic health IT and HIE goals, DHCF has outlined a timeline to initiate a subset of specific HIE projects and tools in federal fiscal years 2018 and 2019. The DC HIE Policy Board prioritized these projects as critical "building blocks" of the District's health IT and HIE infrastructure. Providers are already using some of the HIE project tools to deliver person-centered care and improve health outcomes.

DHCF will launch the projects between 2018 and 2021, continuing to work collaboratively with key stakeholders to increase the likelihood of successful adoption. Each of the proposed projects will deliver tools, processes, and clinical workflows across provider settings. By 2021, the overarching goal is to establish an electronic network of providers that makes District residents' health-related information available whenever and wherever it is needed, supports person-centered care, and improves health outcomes.

In September 2017, the DC HIE Policy Board reviewed and voted on the proposed projects through live polling. The Board considered four factors to prioritize projects: 1) value and impact to stakeholders; 2) a project's level of effort for exchanging data; 3) the costs and resources associated with each project; and 4) project sustainability. These factors and elements considered by the Board are described in Table 6.

Table 6: HIE Policy Board Proposed Prioritization Factors

	Stakeholder value compared to resources invested
Value and	Procurement process to select technology
	Timeline to implement technology and optimize workflow
	New and ongoing requirements for information senders
Level of Enort	New and ongoing requirements for information receivers
Costo and	Stakeholder resources to absorb HIE and health IT costs
Resources	Funding and stakeholder contributions to health IT and HIE costs
	Alignment with VBP and quality programs
Sustainability	Administrative and operational value
	Potential for future funding and ongoing sustainability

The top priorities that emerged were proposed projects supporting the following use cases: 1) transitions of care and 2) public health connectivity. Areas for longer-term consideration included SDOH and population health management. Figure 9 shows a timeline of recently initiated, planned, and potential future health IT and HIE projects, based on the Board's input and the four prioritized use cases: transitions of care for individuals; SDOH; population health management; and public health.

Figure 9: District Health IT and HIE Initiatives by Fiscal Year*





*Denotes the fiscal year in which projects were initiated.

Low Adopters, Behavioral Health, LTC, FEMS • Expand HIE Tools Adoption

The Health IT and HIE Roadmap will continue to evolve and guide the prioritization of health IT and HIE efforts for the District. As the health IT and HIE projects and tools are released, DHCF will evaluate progress against its established use cases and stated goals, as discussed in *Section* 6 – Evaluating Health IT and HIE Improvements.

HIEs





Section 6 Evaluating Health IT and HIE Improvements



Evaluating the Maturity of the District's Health IT and HIE Infrastructure

The previous section discussed the District's Health IT and HIE Roadmap's origins in the context of District stakeholders' needs and priorities. The Roadmap presented a plan to equip those stakeholders with the health IT and HIE tools and processes to enhance person-centered care and improve health outcomes.

DHCF has developed a framework to monitor and evaluate health IT and HIE adoption and use activities based on several national frameworks and best practices. DHCF designed the evaluation and monitoring process to provide an ongoing method to determine the extent to which District residents' health-related information is available whenever and wherever needed. The District's Health IT and HIE Evaluation Framework is based on the Health IT and HIE Maturity Model (Figure 8) described in *Section 5 – The District's Health IT and HIE Roadmap.* The Framework sets the foundation to support the tracking of established goals, targets, benchmarks, and progress, and inform future needs and processes.

DHCF plans to continually monitor and report on four components of health IT and HIE transformation (see Figure 10).

Figure 10: Health IT and HIE Evaluation Framework





The information below describes each of the evaluation components in further detail.

Access Are stakeholders capturing or accessing health information electronically using established standards?



Access assesses whether health information is accessible electronically within a provider's workflow for care delivery and decision-making and is available to patients, including:

- » Information from other providers, inside and outside a provider's practice setting;
- » Information submitted by patients;
- » Information from prior visits and across visits; and
- » SDOH, administrative, and clinical data.

Exchange Are stakeholders able to send, receive, and exchange high-quality health information electronically?



Exchange determines whether users – including providers and patients – can easily send and receive health information through secure mechanisms using standardized message formats, documents, and transport protocols. For example:

- » Portals, secure email, and e-fax instead of paper and fax;
- » Streamlined processes to eliminate information requests from multiple sources and methods; and
- » Bi-directional communication with trusted, easily identified care team partners across care and community settings.

Use Are stakeholders using available electronic health information to support care?



Use assesses whether electronic health information is present at the point of care, aids decisionmaking, and supports analytics and quality measurement. For example, the extent to which health information:

- » Is accessible, clean, accurate, and standardized;
- » Helps end-users make decisions, create reports, develop analytics, and report quality measures; and
- » Helps to identify patients' journeys across health care and community settings, particularly for transitions of care and care management.

Improve Are stakeholders using data to improve health care delivery?

Improvement considers the extent to which health IT and HIE generate positive, measurable changes in health outcomes, care delivery, efficiency, and user satisfaction. This step incorporates efforts to continuously measure and assess performance improvement. Examples include:

- » Care services that depend on more timely and complete health information and SDOH data;
- » Timely follow-up after hospital discharge to reduce likelihood of readmission; and
- » Analytics, decision support, and care management tools that identify possible risk factors and facilitate interventions where needed.





New Measures to Assess the Evolution of Health IT and HIE in the District

The District's Health IT and HIE Evaluation Framework provides an approach to assess progress against the District's 10 strategic health IT and HIE goals. Health IT and HIE adoption and use involve complex human and technological changes that often proceed at an incremental pace. Defining benchmarks and a timeline for routine data collection and reporting can help reveal impact and progress.

Tables 7 and 8 list 21 measures, organized by the Health IT and HIE Evaluation Framework categories – Access, Exchange, Use, and Improve.

For the measures to produce meaningful information about health IT and HIE adoption, DHCF will undertake an iterative development process to define each measure's components (for example, a denominator, numerator, and calculation method), compare them to existing, similar HIE measures, and validate annual benchmarks and baseline data collection strategies.

Table 7 lists the evaluation measures that DHCF will prioritize for near-term initiation. Table 8 lists the measures DHCF intends to pursue in the future, which will require collaboration with other organizations to collect additional data. DHCF's intent is to identify a parsimonious set of meaningful, non-burdensome measures to evaluate health IT and HIE over the long-term.

Access	Exchange	Use	Improve	Measure	Data Source to Evaluate Measure	Annual Benchmarks
Ø				Of the targeted District organizations and providers, how many were contacted for Technical Assistance?	DHCF Technical Assistance database	100% of MEIP eligible professionals
Ŋ				Of the organizations and providers enrolled in eHealthDC's Technical Assistance, how many met Technical Assistance objectives (for example, successful completion in the MEIP or connection to HIE)?	DHCF Technical Assistance database	85% of organizations and providers enrolled in Technical Assistance
	V			Of the number of Health IT survey respondents, how many expressed satisfaction with the quality of HIE data and perceived value in exchanged data?	Provider Health IT survey	Collect data and establish baseline and target in 2018

Table 7: Near-Term Health IT and HIE Evaluation Framework Measures



Access	Exchange	Use	Improve	Measure	Data Source to Evaluate Measure	Annual Benchmarks
V	V	V		Of the number of Health IT survey respondents, how many electronically collected SDOH data?	Provider Health IT survey	25% annual increase between survey years
		V	V	Of the number of ED visits by Medicaid beneficiaries, how many were low-acuity, non-emergent ED visits?	DHCF claims	Dependent on targets defined in each DHCF VBP program
V		V		Of the number of hospital admissions by Medicaid beneficiaries, how many were followed by readmission? ⁹⁸	DHCF claims	Dependent on targets defined in each DHCF VBP program
V		V	V	Of the number of hospital admissions for Medicaid beneficiaries, how many were potentially preventable? ⁹⁹	DHCF claims	Dependent on targets defined in each DHCF VBP program
V		V	V	Of the number of MCOs participating in capitated payment arrangements, how many received their full capitated payment?	DHCF	Dependent on targets defined in each DHCF VBP program
	V	V		How many stakeholder engagement events did DHCF conduct to collect feedback on health IT and HIE progress?	DHCF	Collect data and establish baseline and target in 2018
	V	V		Based on measures submitted by MEIP participating providers, how many patients viewed, downloaded, or transmitted their health information?	DC MEIP attestation data	25% annual increase between MEIP Program Years
	V	V		Based on measures submitted by MEIP participating providers, how many patients sent a secure message to their provider?	DC MEIP attestation data	25% annual increase between MEIP Program Years
		V		Based on measures submitted by MEIP participating providers, what were the eCQM reporting rates and values?	DC MEIP attestation data	25% annual increase between MEIP Program Years

Access	Exchange	Use	Improve	Potential Measure	Data Source to Evaluate Measure
Ŋ				Of the number of providers and organizations connected to a registered HIE, how many sent data?	Registered HIE(s)
V				Of the number of providers and organizations connected to a registered HIE, how many received data?	Registered HIE(s)
Ø				Of the number of My Health GPS providers, how many used CAliPR for eCQM reporting?	CAlipr
				Of the number of providers that serve Medicaid enrollees, how many were using certified health IT?	Provider Health IT survey and DHCF claims data
V				How many Medicaid enrollees were served by providers that use certified health IT?	Provider Health IT survey and DHCF claims data
V	Ø			What is the HIE tools usage volume by care setting, provider, and payer?	Registered HIE(s)
V	Ø	V	Ø	By ward, what were the health outcomes for residents with chronic disease and behavioral health conditions, including asthma, COPD, stroke, diabetes, and depression?	Community Health Needs Assessments
V		V	V	Of the number of FQHCs, how many achieved quality requirements and received P4P bonus payments?	DHCF and CAliPR
V		V	V	Of the number of My Health GPS providers, how many achieved quality requirements and received bonus payments?	DHCF and CAliPR

Table 8: Potential Future Health IT and HIE Evaluation Framework Measures

Implementing the District's Health IT and HIE Evaluation Framework

In 2018, DHCF plans to measure baseline activities against its evaluation framework and reassess the proposed measures in Tables 7 and 8. Pursuant to the proposed HIE designation rule, DHCF will implement reporting requirements to understand the spread, scale, and sustainability of registered and designated HIEs in the District. In addition, DHCF will work closely with the DC HIE Policy Board to develop measure specifications as well as to assess challenges and opportunities that may slow or accelerate progress on key projects. DHCF's intent is to identify a parsimonious set of meaningful, non-burdensome measures to evaluate health IT and HIE over the long-term.



Some of the health IT and HIE activities discussed in the Health IT and HIE Roadmap started in fiscal year 2017, and others will launch in fiscal year 2018. These activities will evolve and expand through fiscal year 2019. In fiscal year 2020, DHCF will establish performance targets based on the previous years' data and annually conduct an evaluation process that considers the previous year's accomplishments to set the following year's goals and benchmarks.



Section 7 What's Next for Health IT and HIE in the District?



What's Next for HIE in the District?

The SMHP describes DHCF's plans to connect a complex District health system and its stakeholders through health IT and HIE. The Health IT and HIE Roadmap establish the priorities, processes, and timeline to connect stakeholders who deliver individual patient care, manage population health, and promote the public's health. Health IT and HIE are not the end-goals; rather, they equip health system stakeholders with data and tools to improve health outcomes.

The Roadmap permits realistic evolution and updates in future versions, based on stakeholder needs, value, impact, level of effort, costs, resources, and sustainability outlook. DHCF will implement the projects that are described in the Health IT and HIE Roadmap, while remaining cognizant of the District's changing health care landscape. The Roadmap will evolve and DHCF will re-assess priorities, adding or modifying projects and tools as necessary to respond to emerging or receding goals.

DHCF appreciates the importance of involving District residents in the District's health IT and HIE strategy. While the agency's primary charge is to support Medicaid beneficiaries and providers through HITECH funds, there is no question that health IT and HIE investments supporting the Medicaid community must build infrastructure that serves the needs of all District residents. This dual purpose is foundational to DHCF's strategy development – and is essential to establishing sustainable HIE infrastructure across the District.

In parallel to the timeline for monitoring performance and operation metrics, DHCF will plan and conduct stakeholder engagement activities to ensure the DC HIE responsive is to both the Medicaid program and the District's needs as a whole. To remain grounded in stakeholders' priorities, DHCF will develop a structured process to engage residents, payers, District providers, and government leaders to provide regular input to the DC HIE. This process will be designed to elicit users' and partners' changing data and programmatic needs, and to hold DHCF accountable for continuous development and timely implementation of projects that enable access to District residents' health-related information whenever and wherever it is needed.

Stakeholder Participation is Vital to the DC HIE

DHCF seeks input from District stakeholders to provide ongoing guidance on DHCF's health IT and HIE initiatives in order to advance health system transformation.

DHCF identified specific areas in which ongoing feedback from key stakeholder groups, such as residents, providers, payers, and agency partners, will be helpful to guide the District's approach to building health IT and HIE services.





Opportunities for District Residents and Patients

- » Contact DHCF with ideas about the kind of health IT tools and programs that could help you and your community pursue a healthy life, improve the quality of care you receive, and help you receive safe, effective, and timely care.
- » Communicate your expectations regarding secure, routine, and convenient exchange of health information with the hospitals, clinics, and doctor's office where you receive care. Ask any questions you may have about health information exchange.
- » Tell your providers if you would like to use and access your own health information. Let them know which format the information should be provided (e.g. via secure website, etc.) so that you can best manage your own health.
- » Attend and participate in quarterly HIE Policy Board meetings. Learn more at <u>https://dhcf.dc.gov/page/hie-policy-board</u>.

Opportunities for Providers and Care Partners

- » Identify HIEs you can connect to and contact HIE entities to access, exchange, or use health information.
- » Access the DC HIE webpage (https://dhcf.dc.gov/page/health-informationexchange) for information about the initiatives to adopt and use health IT and HIE tools, qualify for and earn EHR adoption incentives, report eCQMs, and assist your patients.
- » Follow and provide input to DHCF and the DC HIE Policy Board about the tools and assistance you need to thrive in a value-based care environment. Participate in public meetings and public comment processes. Learn more at <u>https://dhcf.dc.gov/page/hie-policy-board</u>.
- » Attend DC HIE provider outreach events and meetings to learn more and provide input. Share, communicate, and encourage your team, peers, and patients to participate.



Opportunities for Payer, Association, and Government Leaders

 Consult this SMHP and Roadmap to identify common VBP, health IT and HIE priorities, and engage with DHCF to identify collaboration opportunities.





- » Participate in DC HIE stakeholder outreach events or organize a forum to engage your peers and constituents. Invite DHCF to your convening to hear your perspective.
- » Contact DHCF to participate in DC HIE or to learn about available programs and tools (https://dhcf.dc.gov/page/health-information-exchange).
- » Assist DHCF in identifying the quality measures, reporting metrics, and information-sharing policies that could be supported via DC HIE. Provide feedback on what is working well and what may need improvement.
- » Follow and provide input to DHCF and the DC HIE Policy Board about the tools and assistance you need to thrive in a value-based care environment. Participate in public meetings and public comment processes. Learn more at <u>https://dhcf.dc.gov/page/hie-policy-board</u>.

All stakeholders are invited to help shape the District's future health IT and HIE landscape by contacting the DHCF Health IT program at <u>healthit@dc.gov</u> or visiting <u>https://dhcf.dc.gov/hitroadmap</u>.





Appendices



Appendix A: Resource Guide for Strategic Health Reports

Several existing resources that provide a comprehensive, detailed analysis of the District's health needs and indicators, by ward, informed the development of the SMHP. DHCF performed an extensive review of these recent reports and used their key findings to conduct stakeholder outreach and engagement health system stakeholders, including residents and patients, public health, payers, social services providers, as well as federal, District, and community partners. Full citations are available under endnotes.

Reports and Publications (hyperlinked)	Date	Publisher	Description
District of Columbia Health Systems Plan 2017	2017	DC Health	The Health Systems Plan details a trajectory for a high quality, cost-effective health system in the District and presents an analysis of health system services and utilization. Recommendations discuss how to strengthen health services, systems, and community health.
District of Columbia Community Health Needs Assessment	2016	DC Healthy Communities Collaborative	This CHNA identifies four priority needs based on interviews and data gathering across health system stakeholders, including residents, mental health, placed-based care, care coordination, and health literacy.
District of Columbia Community Health Needs Assessment	2014	DC Health	This CHNA undertook a comprehensive population health status analysis for all District residents, evaluating trends over time and uncovering persistent disparate outcomes. Recommendations include a focus on addressing SDOH and improving the District's access to data.
DC Healthy People 2020	2016	DC Health	To advance and evaluate progress on population health in the District, this framework establishes 150 objectives and targets for 2020 and provides 85 evidence-based strategies.
DC Healthy People Annual Report and Action Plan	2018	DC Health	This report updates key health data for the DC Healthy People 2020 Framework and highlights ongoing community work to improve health outcomes
Big Cities Coalition		National Association of County and City Health Officials	The BCHC represents 2,800 local government health departments across the nation's largest metropolitan areas exchange strategies for improving health. The Big Cities Health Inventory Data Platform produced data from the largest 28 cities, including Washington, DC.



Reports and Publications (hyperlinked)	Date	Publisher	Description
District of Columbia Fee-For-Service Medicaid: Access Monitoring Review Plan	2016	DC Department of Health Care Finance	This report evaluates health services access and utilization among District residents enrolled in DHCF's Fee-For-Service Medicaid program.
Physician and Physician Assistant Workforce Capacity Report 3.0	2015	DC Board of Medicine	This biennial report summarizes the demographics and practice characteristics from the physician and physician assistant 2014 workforce survey for actively licensed providers in the District.
Physician and Physician Assistant Workforce Capacity Report 2.0	2013	DC Board of Medicine	This biennial report summarizes the demographics and practice characteristics from the physician and physician assistant 2012 workforce survey for actively licensed providers in the District of Columbia.
Behavioral Risk Factor Surveillance System (BRFSS) 2014 Annual Health Report	2016	DC Health	The BRFSS is a CDC-sponsored health risk survey, which collects data for all 50 states including the District of Columbia. This report presents data segmented by ward to highlight health risks among the District's population.
District of Columbia State Health Innovation Plan (SHIP)	2016	Government of the District of Columbia	This report details the District's strategy for improving the health outcomes in the District with a person-centered and value-based care delivery model. The Centers for Medicare & Medicaid Services awarded a State Innovation Model Design grant to the District to support these strategic efforts.



Appendix B: EHR Adoption Across the District's Health Care Facilities

B.1 Acute Care Hospitals

Facility Name	Ward	# Beds	EHR
Children's National Medical Center	5	313	Cerner
George Washington University Hospital	2	365	Cerner
MedStar Georgetown University Hospital	2	395	Cerner
MedStar Washington Hospital Center	5	742	Cerner
Johns Hopkins Sibley Memorial Hospital	3	235	Epic
Providence Health Services ¹⁰⁰	5	467	MEDITECH
United Medical Center	8	210	MEDITECH
Howard University Hospital	1	190	Siemens
Washington DC VA Medical Center	5	175	VistA

Source: eHealthDC Landscape Analysis, 2017

B.2 Non-Acute Care Hospitals

Facility Name	Ward	# Beds	EHR
BridgePoint Hospital Capitol Hill	5	177	CPSI
BridgePoint Hospital National Harbor	8	144	CPSI
HSC Pediatric Center	5	130	MEDHOST
Psychiatric Institute of Washington	3	130	None
St. Elizabeth's Hospital	8	300	NetSmart
MedStar National Rehabilitation Hospital	1	137	MedConnect

Source: eHealthDC Landscape Analysis, 2017

B.3 Health System-Affiliated Large Ambulatory Groups

Facility Name	Ward	# Providers	EHR
Children's National Medical Center	5	877	eClinicalWorks
George Washington University Medical Faculty Associates	2	750	Allscripts
MedStar Georgetown University Hospital (transitioning from GE Centricity)	2	700	Cerner
MedStar Washington Hospital Center (transitioning from GE Centricity)	5	3,448	Cerner
Johns Hopkins Community Physicians	3	281	Epic
Kaiser Permanente (Washington, DC only)	2, 5	77	Epic







Facility Name	Ward	# Providers	EHR
Providence Health Services	5	478	eClinicalWorks
United Medical Center	8	147	eClinicalWorks
Howard University Hospital Faculty Physicians	1	119	Allscripts

Source: eHealthDC Landscape Analysis, 2017

B.4 Health Centers and Federally Qualified Health Centers (FQHCs)

Currently 13 safety net ambulatory providers operate in the District, eight of which are FQHCs.

Facility Name	Ward	Unique Patients	EHR
Bread for the City (FQHC)	6, 8	2,632*	eClinicalWorks
Children's Health Project of the District of Columbia	1, 5, 8	4,000**	eClinicalWorks
Community of Hope (FQHC)	1, 5, 8	9,790*	eClinicalWorks
Elaine Ellis Center of Health (FQHC)	7	1,375*	Athena
Family and Medical Counseling Service, Inc. (FQHC)	8	3,188*	eClinicalWorks
La Clinica del Pueblo (FQHC)	1	3,895*	eClinicalWorks
Mary's Center (FQHC)	1, 4, 5	41,004*	eClinicalWorks
MetroHealth	2	2,600**	eClinicalWorks
Planned Parenthood of Metropolitan Washington	6	Unknown	NextGen
So Others Might Eat (SOME)	5	Unknown	eClinicalWorks
Spanish Catholic Center	1	Unknown	eClinicalWorks
Unity Health Care (FQHC)	1-3, 5-8	106,853*	eClinicalWorks
Whitman-Walker Health (FQHC)	8	9,587*	eClinicalWorks

*Source for unique patients: Health Resources & Services Administration 2016 Data: District of Columbia.

**Source for unique patients: eHealthDC 2017 Landscape Analysis.

B.5 Long-term Care Facilities

Facility Name	Ward	# Beds	EHR	Install Date
Bridgepoint Subacute and Rehabilitation - National Harbor	8	62	PointClickCare	2017
BridgePoint Subacute and Rehabilitation at Capitol Hill	6	117	PointClickCare	2016
Brinton Woods Health & Rehabilitation Center at Dupont Circle	2	180	PointClickCare	2014
Brinton Woods Health & Rehabilitation Center of Washington DC	8	183	PointClickCare	2014
Carroll Manor Nursing and Rehabilitation Center	5	252	Optimus	2011
Deanwood Rehabilitation and Wellness Center	7	296	PointClickCare	2010
Forest Hills of DC	3	50	PointClickCare	2016
Health & Rehab at Thomas Circle	2	27	PointClickCare	2015
Ingleside Presbyterian Retirement Home	3	60	MatrixCare	2014
Jeanne Jugan Residence	5	40	PointClickCare	2012
Knollwood HSC	6	73	CueShift	Unknown
Lisner Louise Home	3	60	PointClickCare	2017
Sibley Memorial Hospital - The Renaissance Unit	3	45	Epic	2013
Stoddard Baptist Nursing Home	1	164	MatrixCare	2014
Transitions Healthcare Capitol City	8	360	PointClick Care	2015
Unique Residential Care Center	2	230	MatrixCare	2013
United Medical Nursing Center	8	120	Meditech	2007
Washington Center for Aging Services	5	259	MatrixCare	2017

Source: eHealthDC Landscape Analysis (2017)



Appendix C: Stakeholder Health IT Needs Assessment and Analysis Methodology

C.1 Methodology

DHCF and the eHealthDC team merged concurrent stakeholder outreach efforts of the HIE Policy Board's Sustainability Subcommittee (SSC) and SMHP development. The 11 SSC members brought perspectives from varying sectors including academia, federal, state, professional organizations and associations, and payers. The SSC developed outreach questions to understand current health IT and HIE uses and future needs for the District's health system. These questions served as the foundation for all stakeholder interviews conducted to inform the SMHP. An interview team, including a primary interviewer and note-taker, conducted most of the interviews in person in partnership with the SSC.

The team completed a total of 29 interviews and five focus groups with health system stakeholders. The qualitative analysis was conducted using the Nvivo Qualitative Data Analysis Software to code and categorize interview findings. Figure C.1 provides a listing of the 60 discrete codes used to tag the relevant information, and the eight categories used to group the codes and summarize the findings.

60 discrete codes applied to qualitative analysis									
ADT/EN6	ENS CIQN+HE Data Data Mining Accessibility and Mapping		Direct	Hile Outside DC Infrastructure		Participation Service Agreements	Reporting	Strategic Goals and Priorities	
Behavioral and Mental Health	OPC-Hile	Data Analytics	Data Validation	DOH	Health IT Readiness	Impact of Data Exchange	Partnerships	Kesource Availability	Telem edicine
Care Coordination	OR IS P-Hile	Data Capture, Exchange	Data Sharing Partners	EHR Vendors and Adoption	Health IT Sustainability	Interoperability	Patient Matching	School System Information	Transitions of Care
Case Management	Data Accessibility	Data Completeness	Data Types	Funding	Hill: Value Case and Business Case	Laws, Policies, and Regulations	Privacy and Security	Social Determinants of Health	Use Case
Claims Data	Challenges and Barriers	Data Integrity	Data Warehouse	Governance	Hospital Connectivity	Meaningful Use	Public Health	Stakeholder Engagement	Value Based Purchasing
Casts	Culture	Data Integration	DeH	Health Disparities	Impact of Data Exchange	Opportunities for Expanded Hile	Quality and Health Outcomes	Standards	Workflow

Figure C.1 Quantitative Analysis Methodology



C.2 Stakeholder Interview Participants

- » AmeriHealth Caritas District of Columbia
- » BridgePoint Hospital National Harbor
- » Capital Area Food Bank
- » CareFirst
- » Children's IQ Network (CIQN)
- » Community Connections
- » Capital Partners in Care Health Information Exchange (CPC-HIE)
- » D.C. Board of Medicine
- » D.C. Department of Behavioral Health
- » D.C. Health
- » D.C. Hospital Association
- » D.C. Interagency Council on Homelessness
- » D.C. Nursing Association
- » D.C. Primary Care Association
- » District of Columbia Public Schools, Student Wellness
- » Fire and Emergency Medical Services
- » George Washington University, Milken Institute School of Public Health
- » Gerald Family Care
- » George Washington Medical Faculty Associates (MFA)
- » Health and Human Services Public Health/Office of the National Coordinator for Health IT
- » HMI Home Health
- » Kaiser Permanente MidAtlantic States
- » MedStar Health
- » MedStar Total Elder Care
- » Providence Hospital
- » Transitions Healthcare Capitol City
- » Trusted Health Plan
- » United Medical Center
- » Unity Healthcare

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C.3 Stakeholder Interview Guide

Interview Guide

Current State

1a. What are your organization's current strategic goals and priorities that can only be achieved through the effective use of data capture and exchange?

1b. Where do health data exchange and analytics fit into your organization's strategy?

2a. How would you characterize the current state of HIE within the District of Columbia?

2b. What types of data are you sharing and/or receiving?

2c. Which organizational partners and/or service providers have been part of your data sharing/receiving efforts?

3. Can you discuss 2 to 3 current examples of value generated by HIE and data sharing efforts to your organization?

4a. Which, if any, social determinants of health data does your organization collect?

4b. How do you capture this information?

4c. How is it used?

5. [for District governmental agencies only] How does information exchange impact your agency's strategic goals, reporting and management requirements, and ability to perform services for the District residents you serve?

6. What are the barriers to information exchange within your organization and across the District

Future State

1a. What are your priorities for information exchange in the next 5 years?

1b. What infrastructure do you need to support these goals?

1c. What are you planning to implement within your own organization?

1d. Where and how could District-level HIE support your organization's strategic and information exchange goals?

1e. What are the barriers to information exchange within your organization and across the District?

2a. Where would additional data exchange help you to solve current and/or anticipated challenges?2b. What are your current pain points that could potentially be remediated through better data sharing?2c. In the last few years, given recent reform initiatives, how, if at all, do you see your health information exchange needs evolving?

3a. Where do you see the greatest opportunities for expanded health information exchange within the District of Columbia?

3b. For example: behavioral health; mental health and substance use; care coordination for high-risk patients and patients with multiple chronic conditions; quality measurement; patient engagement; coordination with Fire & EMS

4. What do you anticipate as barriers to information exchange within your organization and across the District?

Conclusion

5. Are there any topics you wish to discuss that have not been raised in this discussion?

6. Is there anyone else you recommend we speak with about current and future health information exchange needs within your organization?

C

Appendix

C.4 District Resident Focus Group Participants, Objectives, and Questions

District Resident Focus Group Information and Participants

Trusted Health Member Advisory Committee

On July 6, 2017, Trusted Health hosted a District resident focus group at their facility and members from their Member Advisory Committee participated. Trusted Health's Member Services team facilitated the discussion. Details, including the focus group questions and participants, are provided below.

AmeriHealth SHIRE Circle Group

On July 29, 2017, AmeriHealth hosted a D.C resident focus group at a local church and members from their SHIRE Circle Group participated. AmeriHealth facilitated the discussion. Details, including the focus group questions and participants, are provided below.

Unity Health Care

On September 21, 2017, Unity Health Care hosted a D.C resident focus group at their Minnesota Avenue Health Center location in Ward 7 and their patients participated. The discussion was facilitated by Ms. Donna Cryer from the Global Liver Institute. Details, including the focus group questions and participants, are provided below.

District Resident Focus Group Objectives

	District Resident Focus Group Objectives
1.	Identify what health and wellness goals matter most to District residents.
2.	Identify what challenges may hinder the achievement of those health and wellness goals.
3.	Identify what factors make a difference to District residents' health and wellness goals.
4.	Identify how can physicians and hospitals support District residents' health and wellness goals.
5.	Identify what information District residents want (and not want) to be documented and electronically shared between doctors and hospitals.

District Resident Focus Group Questionnaire Guide

District Resident Focus Group Questions

First Set of Questions: What health and wellness goals matter most to you? to your family? to your neighborhood?



District Resident Focus Group Questions

What factors make a difference those goals? What factors stand in their way?

For the challenges we just talked about, which ones could be most easily fixed? Which ones are hard to fix? Why?

Second Set of Questions:

What do you expect your doctor to know about you when you arrive at the doctor's office?

What kind of information about your life and your neighborhood do you want your doctor to know and have written down in your electronic health record?

For the information we just talked about, what information do you think is OK for doctors and hospitals to share with other doctors and hospitals?

Do you have any questions about the information we just talked about?

C.5 Safety Net Provider Focus Group Participants, Objectives, and Questions

Safety Net Provider Focus Group Information and Participants

On July 24, 2017, DHCF hosted a safety net provider focus group. The discussion was facilitated by the eHealthDC team. Focus group participants include:

- » AmeriHealth
- » Bread for the City
- » D.C. Health
- » D.C. Greens
- » D.C. Primary Care Association
- » D.C. Residents
- » Institute for Public Health Innovation
- » Leadership Council for Health Communities
- » Mary's Center
- » Neighborhood Health
- » Trusted Health
- » Unity Health Care
- » Whitman Walker Health



Safety Net Provider Focus Group Objectives

District Safety Net Focus Group Objectives					
1.	Identify what practice transformation initiatives and goals matter most to safety net providers and community service organizations and the residents they serve.				
2.	Identify what social determinants of health (SDOH) information is actionable for District provider and community organizations.				
3.	Identify what SDOH and clinical data is important to electronically exchange inside and outside the District.				

Safety Net Provider Focus Group Questionnaire Guide

Interview Guide

First Set of Questions:

What practice transformation initiatives and goals matter most to your organization, now and in the next five years?

What role does health IT play in supporting your organization's initiatives and goals?

How could HIE support your organization's goals and initiatives?

Second Set of Questions:

Are there any social determinants of health (SDOH) information that is missing from this list that you currently collect? [list provided for focus group participants]?

[in reference to the DHCF compilation of SDOH] What information is actionable and makes a difference to patient care processes and patient health outcomes?

Do you share (or do you want to share) SDOH and clinical information with other organizations inside or outside the District?

How could an HIE infrastructure in the District support electronic exchange of SDOH and clinical information?

Are there any other topics related to SDOH and HIE that we have not yet addressed in this forum?

What should we ask your patients?



C.6 Behavioral Health Provider Focus Group Participants, Objectives, and Questions

Behavioral Health Provider Focus Group Information and Participants

On September 28, 2017, D.C. Department of Behavioral Health hosted a mental health provider focus group at their facility. The discussion was facilitated by the eHealthDC team. Focus group participants included:

- » McClendon Center
- » PSI Family Services
- » Catholic Charities
- » Washington Hospital Center/Behavioral Health Service
- » Contemporary Family Services
- » Latin American Youth Center
- » Family Wellness
- » Neighbors Consejo
- » Volunteers of America Chesapeake
- » MBI

Behavioral Health Provider Focus Group Objectives

	District Behavioral Health Provider Focus Group Objectives						
1.	Identify clinical information needs of behavioral health provider organizations and with whom they need to exchange this information for optimal patient care.						
2.	Identify and learn about provider perspectives on sharing Behavioral Health (BH) information.						
3.	Identify what HIE infrastructure needs to be in place to enhance clinical workflow and to coordinate care for BH residents in the District.						

Behavioral Health Provider Focus Group Questionnaire Guide

Interview Guide

First Set of Questions:

What clinical workflow barriers do you encounter now when coordinating care for your patients?

What role does (or could) health IT play in supporting your organization's initiatives and goals?

How can (could) HIE help you as a BH provider?

Second Set of Questions:

What is your understanding and thoughts about patient consent and the exchange of BH information?

What Social Determinants of Health (SDOH) information do you currently collect on your patients that you feel is important to the BH care coordination process?

Interview Guide

How could an HIE infrastructure in the District support electronic exchange of BH information?

What are your patients views about HIE?

C.7 Consolidated Stakeholder Feedback on Challenges and Opportunities

Section 4: District Stakeholders' Perspectives and Priorities for Health IT and HIE highlighted the stakeholder feedback, key takeaways and summary of findings. This appendix details that feedback in more detail.

What challenges and opportunities exist to exchange patient data?

Category	Challenges and Opportunities					
Multiple Systems and Interfaces	 Providers are unable to access lab results and patient summary data from hospitals and other health care facilities due to differing systems and interfaces. Providers seek integrated tools within their EHR to access HIE and exchange information with care partners. 					
Behavioral Health Providers	 » Data exchange is largely conducted manually through fax. » Data is siloed across various systems, including iCAMS, SADO, DataWits, and others that store similar information. 					
Cross-Border Data Exchange	» Cross-border care occurs in neighboring states of Maryland and Virginia, further complicating health data exchange within and outside of the District.					
Social Determinants of Health	 » SDOH information is often not collected. When collected, it is often stored as unstructured data within the EHR. » Certain SDOH data, such as housing status, is difficult for providers to capture and rely on because it changes frequently. » Most data exchange occurs via fax or phone with housing or community service providers. 					
Health IT and Data Policy	 Providers and patients find consent exchange policies related to behavioral health, mental health, and social determinants confusing and difficult to interpret. Clarity around mental/behavioral health data sharing policies is needed. There is a need to establish data governance to eliminate redundant systems and limit the addition of new systems. Stakeholders observed that HIPAA is often interpreted too strictly and differently, thereby unintentionally restricting the exchange of health information. 					
Provider and Care Partner Communication	 Community service providers lack the ability to directly communicate with providers. Referrals from providers to community services are not widely available. Provider organizations are required to report quality measures to payers, including managed care organizations. HIE eCQM tools could be used to alleviate provider burden, streamline reporting to MCOs, and enable participation in pay-for-performance programs such as My Health GPS. 					



DISTRICT OF COLUMBIA STATE MEDICAID HEALTH IT PLAN (SMHP)

Category	Challenges and Opportunities				
	 » Information exchange between providers and community groups for coordination of services is very important. » Several providers have access to Direct, but it is either not enabled for other providers or providers are not sure what other providers are connected to Direct. 				

What activities should DHCF support to improve health IT and HIE data capture and usability?

Category	Challenges and Opportunities
Ability to Filter Relevant Real- Time Alerts	 Providers with large patient populations often receive thousands of ENS notifications per month and expressed the need to filter for desired data or streamline reporting through single alerts. Access to HIE tools to conduct analytics is important for care management. Providers and care partners recognize that HIE, in its current state, is mostly moving information in a point-to-point manner, but have expressed interest in enabling data to be used for analytical purposes.
Integrate Claims and Clinical Data	 Providers, care partners, and payers value claims data for analytical use, but know that it is often delayed, incomplete or insufficient to inform quality care independent of clinical care. Nevertheless, providers want to integrate this data in order to better understand their patient panels. Enable data segmentation capabilities. Providers and care partners demonstrated strong interest in receiving technical assistance for claims and clinical data integration.
Workflow Support	» Stakeholders want to learn how to effectively send, receive, and use HIE data and embed it into their workflows.
Data Quality Improvement	 » Define workflow and information exchange standards. » Develop decision trees, policies, procedures, and standard practices for using external data flowing into the EHR.
Transitions of Care Needs	 There is no HIE infrastructure to support care transition, such as the exchange of inpatient consultation and visit notes. Providers are eager to use HIE to facilitate transitions of care. Long-term care providers consist of some EHR early adopters; however, most are not on certified EHR systems with many seeking technical assistance to connect to HIE.

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What are the District's social determinants of health data feeds and how do providers and residents feel about it?

Category	Challenges and Opportunities
Resident Feedback	 » Residents had mixed view on SDOH capture. » Not all willing to share SDOH information.
Provider Feedback	 Best practices for capturing SDOH information needs to be identified and applied to clinical workflows. Establish a process to uniformly capture and exchange SDOH. Establish a consensus on capturing SDOH so that it can be used in patient care processes, such as discharge planning. Build SDOH into existing HIE and health IT systems, such as referral and portal message technology. Opportunity for the District to include additional data elements as standard components in care plans. Consolidate and coordinate efforts to maintain electronic referrals and communications to community services. Providers have also expressed a desire for SDOH data to better inform their care plans.

C.8 Addressing Social Determinants of Health and Populations with Unique Needs

What is it?		Who uses it?			How is it used?	
	PRAPARE (Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences) ¹⁰¹					
» »	Tool used to collect SDOH information Consists of a set of 16 core measures as well as a set of 4 optional measures for social determinants Templates of tool are available to integrate with leading EHR systems including Epic, eClinicalWorks, NextGen and GE Centricity	»	Federally Qualified Health Centers (FQHCs) have implemented PRAPARE, including Unity Health, Whitman Walker Health, and Bread for the City, where PRAPARE templates are integrated into eCW	»» »	 Focus group participants described the information yielded by PRAPARE as critical to managing patients beyond the care visit and reinforcing a culture of care planning Pilots at Unity Health are exploring how to use PRAPARE to capture SDOH data by non- physicians Currently the tool is unable to show changes in SDOH indicators for a patient across multiple visits 	
	Aunt Bertha					
»	Web-based search and referrals program used nationwide to coordinate electronic referrals to	»	Capital Area Food Bank (CAFB) is the license holder for the Aunt Bertha Platform since May 2015	» »	Connects residents to free or reduced cost social services, through zip code searches Several FQHCs use Aunt Bertha to coordinate	





What is it?	Who uses it?	How is it used?
community service providers ¹⁰² » SSO capabilities and APIs allow for EHR integrations. Currently integrated with Epic and Cerner	 In the Greater DC Area, ¹⁰³ 5,162 individuals utilized Aunt Bertha in 2015 to conduct over 29,000 searches Other groups who pay for Aunt Bertha in the District include, MedStar Health System, Amerigroup, and AmeriHealth Caritas; Trusted Health Plan is in active conversations with Aunt Bertha 	electronic referrals using the survey information obtained from PRAPARE



Appendix D: Health IT and HIE Provider Outreach

Appendix D provides detailed information on DHCF's efforts to advance EHR adoption and HIE, including the provider outreach process; current and planned activities for adoption; outreach goals and objectives; outreach campaign results; and an overview of technical assistance services.

Technical Assistance and Outreach to Promote Health IT Adoption in the District

DHCF is engaged in several efforts to promote health IT adoption among Medicaid providers in the District, including:

- » Collaborating and leveraging experiences of the "Early Adopter" program;¹⁰⁴
- » Using the DHCF website, the Medicaid provider portal and Medicaid payment remittances to inform providers about the District's MEIP;
- » Developing additional outreach materials and defining opportunities to inform stakeholders about the District's MEIP;
- » Leveraging connections with providers and stakeholders involved in HIE development;
- » Developing relationships and meeting with hospital CIOs; and
- » Collaborating with Regional Extension Centers (RECs), including eHealthDC.

DHCF understands that providers require financial and technical assistance resources beyond EHR incentive payments alone. To address this concern, DHCF implemented a comprehensive outreach and technical assistance effort in 2017. On March 15, 2017, DHCF awarded DCPCA a contract for Health IT-HIE Outreach and Technical Assistance support, with the option to renew for four years. The contract tasked DCPCA's eHealthDC team with developing a comprehensive program of outreach and technical assistance activities to raise awareness and help District eligible professionals meet the national Meaningful Use goals for use of Certified Electronic Health Record Technology through this contract. The subcontractors for this outreach effort include ZaneNet and Clinovations Government + Health.

In addition to helping providers achieve MU across the District, DHCF also offers three streams of technical assistance to support the District's My Health GPS providers. Health Management Associates (HMA) is tasked with delivering comprehensive practice transformation technical assistance. HMA provides My Health GPS care teams with on-the-ground coaching for using CRISP's HIE tools to enhance person-centered care, manage population health, and improve practice operations. CRISP also provides HIE connectivity support to My Health GPS providers with HIE onboarding and CCD data quality improvement. The eHealthDC team helps eligible



Appendix D

District Medicaid providers at My Health GPS entities meet Meaningful Use (MU) requirements, including HIE utilization, secure communications, and clinical quality measure collection and reporting.

eHealthDC Technical Assistance and Outreach Contract Base Year 2017 Results

The last opportunity for eligible Medicaid providers to enroll and attest for the District's MEIP to claim their first-year incentive dollars through the District's State Level Registry (SLR) was on August 31, 2017. Between the execution of its contract with DHCF and the end of August, the eHealthDC team's primary goal for Technical Assistance and Outreach was to contact and enroll as many providers as possible.

The eHealthDC TA team recruited additional MU outreach specialists, established a call center, developed a one-page educational flyer for provider outreach, implemented a Customer Relationship Management (CRM) System for lead tracking, and coordinated with DHCF staff to conduct an outreach campaign with the following primary activities:

- » Initial phone calls to targeted providers to establish interest level
- » Conduct mailing of AIU program information to Medicaid providers
- » Faxing flyer to targeted providers
- » Emailing targeted providers from list-serves within DCPCA and DHCF
- » Attending local health profession association meetings (i.e. D.C. Medical Society)
- » Scheduling in-person meetings for interested providers

Using a phone, email, fax, canvassing, direct mail, local provider chapter meeting presentations, establishment of an outbound call center, and in-person practice visits, the eHealthDC team conducted outreach to a total of 803 potentially MEIP-eligible providers, including 597 Physicians, 119 Dentists, 86 Nurse Practitioners, and a Certified Nurse Midwife. In partnership with DHCF and Conduent, eHealthDC contacted over 1,600 providers, who submit District Medicaid claims, via direct mail.

eHealthDC prioritized and focused its efforts to reach 800+ providers who had high Medicaid claims volumes, assuming these providers were most likely eligible for MEIP attestation. eHealthDC provided technical assistance to adopt certified EHR technology and to optimize their practice's use of certified EHR technology. Figure D.1 illustrates the process flow from provider agreement to attestation, with TA services customized to each practice's needs.



Figure D.1 - TA Provider Agreement Process Flow



The team successfully enrolled 144 providers for eHealthDC's Technical Assistance (TA) program, of whom 119 providers were identified as new or previously registered MEIP participants deemed eligible for Meaningful Use attestation. The eHealthDC team assisted 66 providers representing 29 different organizations, to submit first year attestations for Adopting, Implementing or Upgrading (AIU) of certified electronic health record technology through the District's SLR for MEIP.

eHealth DC delivered technical assistance services to several small practices across an array of specialties caring for the underserved. Figure D.2 depicts a breakdown, by Ward, of providers who successfully attested through the SLR for the first time with eHealthDC's support. Each of these 66 newly enrolled MEIP providers received a total incentive of \$21,250 as a reward for successful program participation, which translated into roughly \$1.4 million in MEIP incentive payments awarded by DHCF.



Figure D.2 - eHealthDC Outreach 2017 - Organizations and Wards





Technical Assistance and Outreach Activities for 2018

In 2018, TA and outreach activities will focus on assisting enrolled providers with achieving Meaningful Use and promoting the adoption and use of expanded HIE tools. These TA activities also include initiating and supporting HIE readiness. The eHealthDC team is targeting 99 District practices for TA.

In 2018, TA Services will continue to be customized for each practice's unique Health IT needs and may include the following:

- » Meaningful Use Readiness Assessment
- » Workflow and Gap Analysis
- » Meaningful Use (MU) Action Plan
- » Medicaid Incentive Eligibility Assessment
- » Web and Telephone Office Hours for Consultation with EHR and MU Subject Matter Experts
- » Access to eHealthDC Best Practices, Educational Tools and Resources
- » EHR Vendor Selection and Contracting Resources
- » Project Monitoring and Management
- » EHR Implementation Support
- » EHR Utilization and Workflow Expertise
- » Privacy and Security Assessment Tools and Guidance
- » DC Medicaid Incentive Registration and Attestation Assistance
- » Health Information Exchange Connectivity Assistance

The eHealthDC team will also expand the scope of services to be delivered for outreach and education activities. Key tasks will include the following:

- » Develop educational content to support/augment direct TA;
- » Host and engage in outreach events and presentations;
- » Engage stakeholders through events, focus groups, and interviews;
- » Conduct webinars for the District provider community;
- » Develop a website with MU resources; and
- » Serve as a Meaningful Use Clearinghouse;

The team will also conduct outreach at events targeting independent ambulatory providers and small practice providers, with a specific focus on the providers/organizations that serve Wards 7 and 8. Examples of direct outreach and support include:

» Focus groups and interviews;



- » Physician engagement through the Medical Society of DC (MSDC) and other area organizations linked to community physicians;
- » Nurse Practitioner/Physician Assistant/Dentist engagement through local chapters of professional organizations; and
- » Peer-to-peer physician outreach via designated physician champions.


Appendix E: Health IT and HIE Funding Strategy Through 2021

The Centers for Medicare & Medicaid Services (CMS) provides financial support for health IT and HIE programs to State Medicaid Agencies (SMAs). DHCF, in its role as the District's State Medicaid Agency (SMA), can request funding from CMS through 2021 to support health IT and HIE adoption projects for Medicaid providers, as discussed above.

Where Does 90/10 Funding Come From?

» The 2009 American Recovery and Reinvestment Act (ARRA) and the Health Information Technology for Economic and Clinical Health (HITECH) Act authorize CMS funds

CMS 90/10 Funding Guidelines

- » Funding to support HIE and interoperability only, not EHR adoption
- » Only covers implementation costs, not operational costs
- » Funds necessitate District stakeholders support "fair share of costs"
- » Providers or systems supported must connect to Medicaid Eligible Professionals

Interested in Learning More about 90/10 Funding for Health IT and HIE?

- » Public Health Informatics Institute (PHII) Information Sheet on the 90-10 Funding Program
- » CMS State Medicaid Director Letter #16-003

The expenses related to these projects qualify for 90% funding from CMS with a 10% match of non-federal dollars contributed by the SMA. This funding approach is referred to as CMS "90/10 funding" or the CMS "90-10 match." The 10% match can be provided by the District or any other stakeholder, as long as the source of funding is not a federal resource. Other CMS funding, such as the MEIP incentive payments that go directly to Medicaid eligible professionals and eligible hospitals, is 100% federally-funded.

To secure 90/10 funding for eligible activities that promote success of health IT and HIE adoption among Medicaid providers, DHCF submits HIE Implementation Advanced Planning Documents (IAPDs) to CMS on a regular cycle for eligible activities that promote the success of health IT and HIE adoption among Medicaid providers. As noted in Figure E.1, the process of



working with CMS and local stakeholders to process these resources requires a year-long planning cycle.

The four use cases and related projects described earlier in this section provide an initial set of priorities to guide the District's IAPD planning process. DHCF prioritized these efforts to strike a balance between the needs of District Medicaid providers and beneficiaries (e.g. implementation of the District's MEIP and meaningful use) with efforts to build robust and scalable health IT and HIE infrastructure.



Figure E.1: District IAPD Annual Planning Cycle



Glossary of Terms

Click on the term for the source and additional information.

<u>Accountable Care Organization</u>: A network of doctors and hospitals who share financial and medical responsibility for providing care to their patients.

Admission-Discharge-Transfer (ADT): The Health Level 7 (HL7) message containing patient information and trigger events such as patient admit, discharge or transfer. ADT messages have a standard format to define the trigger event to include the message header, event type, patient identification, additional demographics, and patient visit information (diagnosis, procedure, etc.).

<u>Community Service Provider (CSP)</u>: A provider who offers a range of services including medication management support, counseling, and community support to address issues such as health, housing, transportation, food insecurity, education, and employment.

<u>Continuity of Care Document (CCD)</u>: A harmonized format and interoperable standard for exchanging clinical information (including patient demographics, medications and allergies) among providers to improve patient care, enhance patient safety and increase efficiency.

eClinical Quality Measure (eCQM): A standard for quality measures from electronic health records (EHR) and/or health information technology systems to measure health care quality. The Centers for Medicare & Medicaid Services (CMS) use eCQMs in a variety of quality reporting and incentive programs. eCQMs are an improvement over traditional quality measures because if the EHRs are not used, the work to gather the data from medical charts, e.g. "chart-abstracted data," is very resource intensive and subject to human error.

Eligible Professional (EP): Medicaid providers who meet eligibility requirements to participate in the EHR Incentive Programs. Eligible provider types include: Physician, Dentist, Certified nurse-midwife, Nurse Practitioner and a (Physician Assistant practicing in a Federally Qualified Health Center or a Rural Health Center led by a Physician Assistant). Eligibility requirements dictate that at least 30% of patient volume is Medicaid (20% for pediatricians) and you adopt, implement or upgrade to certified EHR technology to demonstrate meaningful use.

<u>Health Information Exchange (HIE)</u>: The movement of health information electronically across multiple organizations.

<u>Health Information Technology (Health IT)</u>: The programs, services, technologies and concepts that store, share, and analyze health information in order to improve care.

Implementation Advance Planning Document (IAPD): Three primary purposes of these advance planning documents are to (1) describe the state's plan for managing the design, development, implementation and operation of a system, (2) establish goals and cost benefit analysis, and (3) secure federal financial participation for the state in order to secure 90% federal matching funds.

Long-Term Acute Care: Specialized acute care hospitals that provide care to patients with an average length of stay greater than 25 days. These hospitals are known as Long-Term Acute Care Hospitals (LTACH) and provide care beyond that of inpatient rehabilitation or skilled nursing facilities.

Long-Term Care: The medical and social services care a chronically ill person receives to help them with activities of daily living (ADL). Long-term care providers include home care agencies, nursing homes, assisted living facilities.

Long-Term Services and Supports: Include, but are not limited to, nursing facility care, adult daycare programs, home health aide services, personal care services, transportation, and supported employment as well as assistance provided by a family caregiver.

<u>Managed Care Organization (MCO)</u>: A health care delivery system organized to manage cost, utilization, quality, and contracts with insurers or self-insured employers. It uses a specific provider network, services and products to deliver managed health care.

<u>Medicaid EHR Incentive Program (MEIP)</u>: A program that provides incentive payments to Medicaid eligible professionals and hospitals as they adopt, implement, upgrade or demonstrate meaningful use with certified EHR technology.

Medicare Access and CHIP Reauthorization Act (MACRA): A law signed on April 16, 2015 to create the Quality Payment Program that repeals the sustainable growth rate formula, changes the way Medicare rewards clinicians for value, streamlines multiple quality programs under MIPS, and provides bonus payments in alternative payment models.

<u>Merit-Based Incentive Payment System (MIPS)</u>: One of two payment tracks in Medicare's Quality Payment Program that was effective in 2017 as a provision of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA).

<u>Pay for Performance (P4P)</u>: Incentive programs that reward health care providers for achieving service delivery goals, according to established health quality or efficiency-standards.

<u>Single Sign-On (SSO)</u>: The functionality that allows a user to sign on to multiple related, yet independent software systems with a single user identification and password.



<u>State-Level Registry (SLR)</u>: Refers to the District's Medicaid EHR Incentive Program's home page where eligible professionals register and attest for Meaningful Use.

<u>Value-Based Purchasing (also Value-Based Payment)</u>: Incentive programs that link providers' payments to improved performance, holding health care providers accountable for delivering cost effective and quality care. Typically, the highest performing providers are the most highly compensated.</u>



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⁹⁴ The District of Columbia Immunization Information System (DOCIIS) is a web-based system that receives and stores childhood and adult immunization records. DOCIIS was founded in 1992. Since then, it has evolved to become a central data resource that is available to users across the District of Columbia.

⁹⁵ 54% of My Health GPS-eligible District Medicaid beneficiaries live in Wards 5, 7 and 8. HIE tools can be used to manage care among these patients who suffer from multiple chronic conditions.

⁹⁶ ONC developed the Trusted Exchange Framework and Common Agreement (TEFCA) to design principles for exchange based on trust between health information senders and receivers. Read more at: https://www.healthit.gov/topic/interoperability/trusted-exchange-framework-and-common-agreement.

⁹⁷ Office of the National Coordinator for Health Information Technology. Connecting Health and Care for the Nation: A Shared Nationwide Interoperability *Roadmap*. Retrieved from: https://www.healthit.gov/sites/default/files/hie-interoperability/nationwide-interoperability-roadmap-final-version-1.0.pdf.

⁹⁸ National Committee for Quality Assurance. (2017). *Plan All-Cause Readmissions*. Retrieved from: http://www.ncqa.org/report-cards/health-plans/state-of-health-care-quality/2017-table-of-contents/plan-readmissions.

⁹⁹ AHRQ Quality Indicators. (2017). *Prevention Quality Chronic Composite: Prevention Quality Indicator 92*. Retrieved from: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V70/TechSpecs/PQI_92_Prevention_Quality_Chronic_Com posite.pdf.

¹⁰⁰ In July 2018, Providence Hospital announced a plan to close its inpatient services by the end of the year and to open ambulatory services in the current hospital's location.



¹⁰¹ PRAPARE is developed by the National Association of Community Health Centers (NACHC), Association of Asian Pacific Community Health Organizations, the Oregon Primary Care Association, the Institute for Alternative Futures, and health centers and health networks in the states of Hawaii, Iowa, New York and Oregon. http://www.nachc.org/research-and-data/prapare/.

¹⁰² Aunt Bertha. https://about.auntbertha.com/.

¹⁰³ The Greater DC area includes the following counties: District of Columbia; Montgomery County, MD; Prince George's County, MD; Fairfax County, VA; Prince William County, VA; Arlington County, VA; & Alexandria City, VA.

¹⁰⁴ In 2006, DCPCA received a \$5 million grant from DC Health for the Early Adopter program which helped to facilitate the implementation of EHR systems at six safety net community health centers – Bread for the City, Family and Medical Counseling Service, La Clínica del Pueblo, Mary's Center, So Others Might Eat and Whitman-Walker Clinic – which are known as our "early adopters." The grant provided funding for DCPCA to manage the selection and implementation of EHR technology at these six health centers – an effort that was completed in October 2008.

