5/25

State Medicaid Health Information Technology Plan (SMHP)

As Required by:

Centers for Medicare and Medicaid Services

Submitted by:

Texas Health and Human Services Commission

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TEXAS
Health and Human Services

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1 EXECUTIVE SUMMARY

The Texas Health and Human Services Commission (HHSC) final *State Medicaid Health Information Technology Plan* (SMHP) is the Texas state plan to implement Section 4201 of the Health Information Technology for Economic and Clinical Health Act (HITECH) with the American Recovery and Reinvestment Act of 2009. HITECH established the Electronic Health Record (EHR) Incentive Program (since renamed the Promoting Interoperability [PI] Program) for eligible Medicare and Medicaid professionals and hospitals to receive incentive payments for the adoption and meaningful use of EHRs to improve health outcomes, care quality and cost efficiency. Texas' final SMHP is drafted to respond to the requirements set forth in the Centers for Medicare & Medicaid Services (CMS) *Final SMHP Template*. Given that this is the final SMHP update and the PI Program is ending, some sections that were historically included in the SMHP are no longer required or fully applicable, thus requiring a lesser level of detail.

As a result, Texas' final SMHP includes the following sections:

1. **As-Is Medicaid Health Information Technology (Health IT) Landscape** – describing the current state of health IT activities throughout the state
2. **To-Be Health IT Landscape** – describing HHSC's vision for the meaningful use of health IT to improve HHSC's capabilities as a value purchaser and provider of health care services and build health care providers' capabilities to improve the quality of health care, the health of populations and the efficiency of health care systems
3. **Promoting Interoperability Program** – providing a description of the steps HHSC will undertake with its contractors and key stakeholders to successfully wind down the PI Program
4. **Audit Strategy** – outlining the high-level steps for assuring program integrity of the PI Program and the timeline for submission of recent audit strategies and the final audit strategy
5. **Health IT Roadmap** – describing the plans for the post-HITECH pathway for health IT and health information exchange (HIE) in Medicaid

This final SMHP represents a point in time landscape of health IT in Texas, which forms the basis of the health IT roadmap. The plan provides a pathway for the Health and Human Services (HHS) system to continue to collaborate with its key partners – other public and private entities, health care providers and people and their families who receive health care coverage through Texas Medicaid – to improve the quality of health care, the health of populations and the efficiency of health care systems.

1.1 Texas' Final SMHP Update

In this final update to Texas' SMHP, revisions have been made to describe progress and changes in Texas health IT initiatives, including the PI Program and Texas' initiatives to encourage HIE. Texas Medicaid has many ongoing initiatives that use health IT and HIE to improve program administration and patient care.

This SMHP builds on that foundation for continued progress in the next five years, including continuing work through a newly approved Texas Health Information Exchange Implementation Advance Planning Document (HIE IAPD), Medicaid value-based payment and quality improvement initiatives, procurements for Medicaid managed care and the Medicaid Management Information System (MMIS), advancements in telehealth and broadband, leveraging new federal and state requirements regarding interoperability and patient access, and coordination between Medicaid and public health. There also are opportunities to strengthen Medicaid health IT governance and develop use cases to leverage available data for program improvement.

1.2 Medicaid Health IT Planning Approach

For Texas' final SMHP, HHSC and its contractor conducted an environmental scan to capture updated information from publicly available resources, conducted a brief survey of Medicaid managed care organizations (MCOs) to assess their current participation in HIE, and conducted many interviews with the Medicaid/CHIP Services Department staff, other HHS personnel and external stakeholders to gather information about the As-Is landscape and future plans related to Medicaid health IT.

2 THE TEXAS MEDICAID "AS-IS" HEALTH IT LANDSCAPE

2.1 Key State Entities Involved in Health IT, HIE and EHR Adoption

As the single state agency for the State of Texas designated for the Texas Medicaid program and the Children's Health Insurance Program (CHIP), HHSC has undertaken a number of activities to facilitate health information exchange and electronic health record use. HHSC established the Office of e-Health Coordination (OeHC) in January 2010 to coordinate strategic health IT and HIE initiatives across the Texas HHS system. The OeHC was designed to ensure that health IT projects and programs are coordinated within Texas HHS, facilitate coordination between Texas and federal or multi-state projects, and collaborate in providing assistance to local and regional health IT projects. There also are teams within the Medicaid/CHIP Services Department that support the PI Program and HIE-related initiatives in coordination with the Texas Health Services Authority and other partners, including those described below.

2.1.1 Texas Medicaid/CHIP Services Department

The Medicaid/CHIP Services Department within HHSC is the lead business operations area for the Texas *SMHP* and Medicaid PI Program under Title IV of the American Recovery and Reinvestment Act of 2009. Medicaid has a number of units that drive its health IT initiatives. A team within Medicaid Operations manages the PI Program and will oversee the program's close-out activities. Within the Medicaid Technology Modernization area, staff manages the agency's HIE-related initiatives in

coordination with the Texas Health Services Authority and serves as a liaison with HHSC's e-Health Advisory Committee (eHAC). The Medicaid Technology Modernization area also coordinates with HHS IT on improvements to the MMIS.

2.1.2 e-Health Advisory Committee

The eHAC was established in July 2016 to advise the Texas HHS Executive Commissioner and HHS agencies on strategic planning, policy, rules and services related to the use of health IT, HIE systems, telemedicine, telehealth and home telemonitoring services. It replaced two previous committees – the Medicaid Health Information Exchange Advisory Committee and the Telemedicine and Telehealth Advisory Committee. The tasks of the eHAC include:

- Advising on the development, implementation and long-range plans for health IT and HIE, including the use of:
  - Electronic health records;
  - Computerized clinical support systems;
  - HIE systems for the exchange of clinical and other forms of health information; and
  - Other methods of incorporating health IT for the purposes of greater cost-effectiveness and better patient outcomes in health and population health; and
- Advising on the development, use and long-range plans for telemedicine, telehealth and home telemonitoring services; and
- Advising on incentives for increasing health care provider adoption and use of EHRs and HIEs.

The eHAC's most recent report, including recommendations related to interoperability and specifically to behavioral health-related interoperability, was released in February 2021.[1] Further details on that report's recommendations and their status are outlined in Section 3.1.2 of this plan.

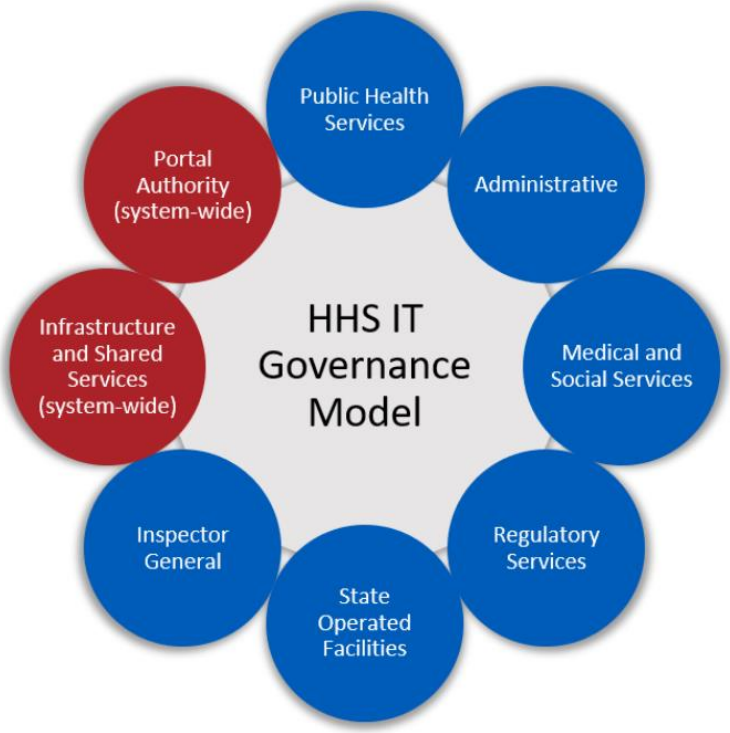
2.1.3 HHS Deputy Executive Commissioner for IT and Chief Information Officer's Office

Another area of HHSC that is integral to facilitate HIE and EHR adoption is HHS IT. HHS IT, under the direction of the HHS Deputy Executive Commissioner for Information Technology and Chief Information Officer (CIO), supports the business operations areas for both HHSC and the Department of State Health Services by

[1] Texas HHS. *Texas Health and Human Services (HHS) e-Health Advisory Committee Report*, February 2021, https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2021/hhs-ehac-report-feb-2021.pdf, Accessed November 30, 2021.

providing oversight and collaborating on systems, technology, and architecture solutions to meet their needs. Areas of focus include MMIS, Medicaid Information Technology Architecture (MITA), IT governance, IT project management, and federal interoperability rule implementation.

HHS IT has oversight authority for all agency IT projects and procurements, centralized information systems, planning authority for system-wide policies and procedures, and a responsive, up-to-date security system. HHS IT coordinates a governance structure with representatives from central parts of the HHS system, including Business, Applications, Infrastructure, Finance and Security, to participate in IT decisions using the IT Governance Intake Process (for more detail on HHS data governance, see Section 2.1.6). The process ensures that DSHS and HHSC program requests for IT services are clearly defined and that IT solutions are approved and prioritized by leadership. This structure also provides a forum for notification of IT policies to facilitate awareness and compliance, which will assist with implementing and sustaining the desired streamlined, standardized and simplified service delivery model for IT services.



Two of the eight business portfolios under the HHS IT Governance model are Medical and Social Services and Public Health. Each portfolio has an executive steering committee, which includes the CIO and other members of executive management. The executive steering committee focuses on prioritization, application and contract lifecycle planning, and data analytics and ensures that

program decisions are aligned with and prioritized to the HHS strategy and goals.[2] HHS IT uses well-defined internal project management processes and employs project management professionals with extensive experience to support the delivery of high-quality projects.

One major upcoming initiative to support the Texas Medicaid delivery system is that HHSC released several solicitations between late fall 2021 and January 2022 to procure the service components for a modernized, modular MMIS.[3] More details on that planned procurement are included in Section 3.2.1 of this plan.

HHS IT also is responsible for ensuring compliance with state and federal mandates, and as such is the lead area for implementing CMS's Interoperability and Patient Access final rule (CMS-9115-F)[4], which specifies that each CMS-regulated payer, including each state's Medicaid/CHIP agency and Medicaid/CHIP managed care plans, should make available through application programming interfaces (APIs) certain data under the payer's control, including patient-specific information, provider directory information and payer-to-payer data exchange.[5] More details on the implementation of the Interoperability and Patient Access final rule are included in Section 2.5.3 of this plan.

2.1.4 Texas Department of State Health Services

As Texas' public health agency, the Department of State Health Services (DSHS) serves an important role in protecting the public's health, including preparing for and responding to disasters and pandemics such as the novel coronavirus (COVID-19) public health emergency (PHE), addressing chronic health care issues, and identifying and serving at-risk populations. Using data is critical in making informed decisions. DSHS uses a variety of information systems that are interoperable with providers and other partners to collect relevant data and transform it into

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[2] Texas HHS. *HHS Information Technology and Data Services Modernization Plan as required by 2020-21 General Appropriations Act, H.B. 1, 86th Legislature, Regular Session (Article II, Health and Human Services Commission, Rider 175)*. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/it-data-services-modernization-plan-oct-2020.pdf. October 2020. Accessed November 30, 2021.

[3] Texas HHS. *Pre-Solicitation Announcement, Medicaid Modernization Services and Support*, May 5, 2021, https://www.hhs.texas.gov/sites/default/files/documents/doing-business-with-hhs/contracting/medicaid-modernization-pre-solicitation-announcement.pdf, Accessed November 30, 2021.

[4] CMS. Interoperability and Patient Access final rule. https://www.federalregister.gov/documents/2020/05/01/2020-05050/medicare-and-medicaid-programs-patient-protection-and-affordable-care-act-interoperability-and, Accessed November 30, 2021.

[5] CMS. State Health Official Letter #20-003 RE: Implementation of the CMS Interoperability and Patient Access final rule and Compliance with the ONC 21st Century Cures Act final rule, August 4, 2020, https://www.medicaid.gov/federal-policy-guidance/downloads/sho20003.pdf, Accessed November 30, 2021.

actionable information for programs, partner providers, agency leaders, policymakers and other stakeholders. Example systems include the state's immunization registry, ImmTrac2; the Texas Syndromic Surveillance System, TxS2; and the Texas Cancer Registry. Additional information on public health-related IT initiatives is in Section 2.6 of this plan.

2.1.5 Texas Health Services Authority

The Texas Health Services Authority (THSA) was formed under the authority of Texas Health and Safety Code, Chapter 182 in 2007 as a public-private partnership for the purpose of promoting, implementing and facilitating the secure electronic exchange of health information in Texas.[6] THSA accomplishes this purpose through its state-level health information network – HIETexas – and privacy and security certification and supporting programs. A 12-member board of directors appointed by the Governor governs THSA. HHSC and DSHS each have an ex-officio member on THSA's board. Additional information on the Texas legislative background on advancing HIE can be found in Appendix A.

THSA also is responsible for implementing the *Texas State HIE Plan*, the third iteration of which was released in 2020. The 2020 *State HIE Plan* aligns with Texas' Healthcare Transformation and Quality Improvement Program 1115 Waiver *Health IT Strategic Plan*, which HHSC submitted in November 2019 and CMS approved March 31, 2020. Consistent with these plans, THSA is contracted with HHSC to implement two of Medicaid's three HIE IAPD strategies – Strategy 2 to build connectivity between the state's local HIEs and THSA and Strategy 3, Emergency Department Encounter Notification (EDEN) system, to promote hospital exchange of admission, discharge and transfer (ADT) messages.[7] Also under the HIE IAPD, in partnership with HHSC and other key stakeholders, THSA coordinates the Patient Unified Lookup System for Emergencies (PULSE) for Texas (HIETexas PULSE). PULSE provides remote and secure access to electronic health information during declared disasters in alternate care sites.[8]

In addition, THSA has a Cooperative Agreement award from the Office of the National Coordinator for Health Information Technology (ONC) to conduct a proof of concept pilot of the Situational Awareness Network for Emergencies (SANER)

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[6] H.B. 1066, 80th Legislature, Regular Session, 2007, https://capitol.texas.gov/BillLookup/Text.aspx?LegSess=80R&Bill=HB1066, Accessed November 30, 2021.

[7] THSA. *Texas State Health Information Exchange Plan 2020*, http://thsa.org/wp-content/uploads/2020/09/2020-Texas-Health-Information-Exchange-Plan.pdf, Accessed November 30, 2021.

[8] THSA. Patient Unified Lookup System for Emergencies (PULSE) webpage. https://thsa.org/pulse/, Accessed November 30, 2021.

system. SANER is designed to use Fast Healthcare Interoperability Resources (FHIR™), a current interoperability standard developed by Health Level Seven International (HL7), to automatically extract critical data such as bed availability from hospitals' EHRs and other information systems and provide it to public health entities, reducing manual efforts to report data. This data is vital for responding to disasters such as the COVID-19 PHE.

2.1.6 HHSC Office of Data, Analytics, and Performance and Data Governance

HHS Transformation efforts led to the establishment, in 2018, of a Chief Regulatory & Policy Officer who oversees the Office of Data, Analytics, and Performance (ODAP). Since its establishment, ODAP has supported, expanded and streamlined the effective use of data, analytics and performance management across the HHS system. In 2021, ODAP re-chartered data governance processes to work in coordination with IT governance and program data use needs. Four workgroups in different areas of data management began operating in state fiscal year (SFY) 2021, and a fifth will be working in SFY 2022 to better align HHS data management processes with the requirements in Senate Bill (S.B.) 475, 87th Legislature, Regular Session, 2021 and the Texas Data Management Framework at the Department of Information Resources (DIR) (see Section 2.1.6.2).

ODAP provides integrated data analytics and measurements necessary to support decisions and identify areas for improvement. ODAP also is charged with the development of a secure, transparent, accessible and reliable performance management and data analytics system. ODAP is divided into five collaborating departments: Business Operations Support; Information and Data Management; Signal Detection, Visualization, and Performance; Performance and Analytics Integration; and Data Dissemination and Reporting.

2.1.6.1 Data Governance and Performance Management Leadership

ODAP provides oversight of data governance processes involving HHS data assets including data quality, master and metadata management, and the strategic use of data and data sharing.

The Data Governance and Performance Management (DGPM) Executive Steering Committee and Council is an executive level structure that was established in August 2019. The purpose of the DGPM Program is to provide executive-level support and guidance to strategically align and direct long-term HHS initiatives, policies and procedures related to data governance, data interoperability, data quality, data analytics, and performance measurement and management.

2.1.6.2 Alignment to Data Management Legislation

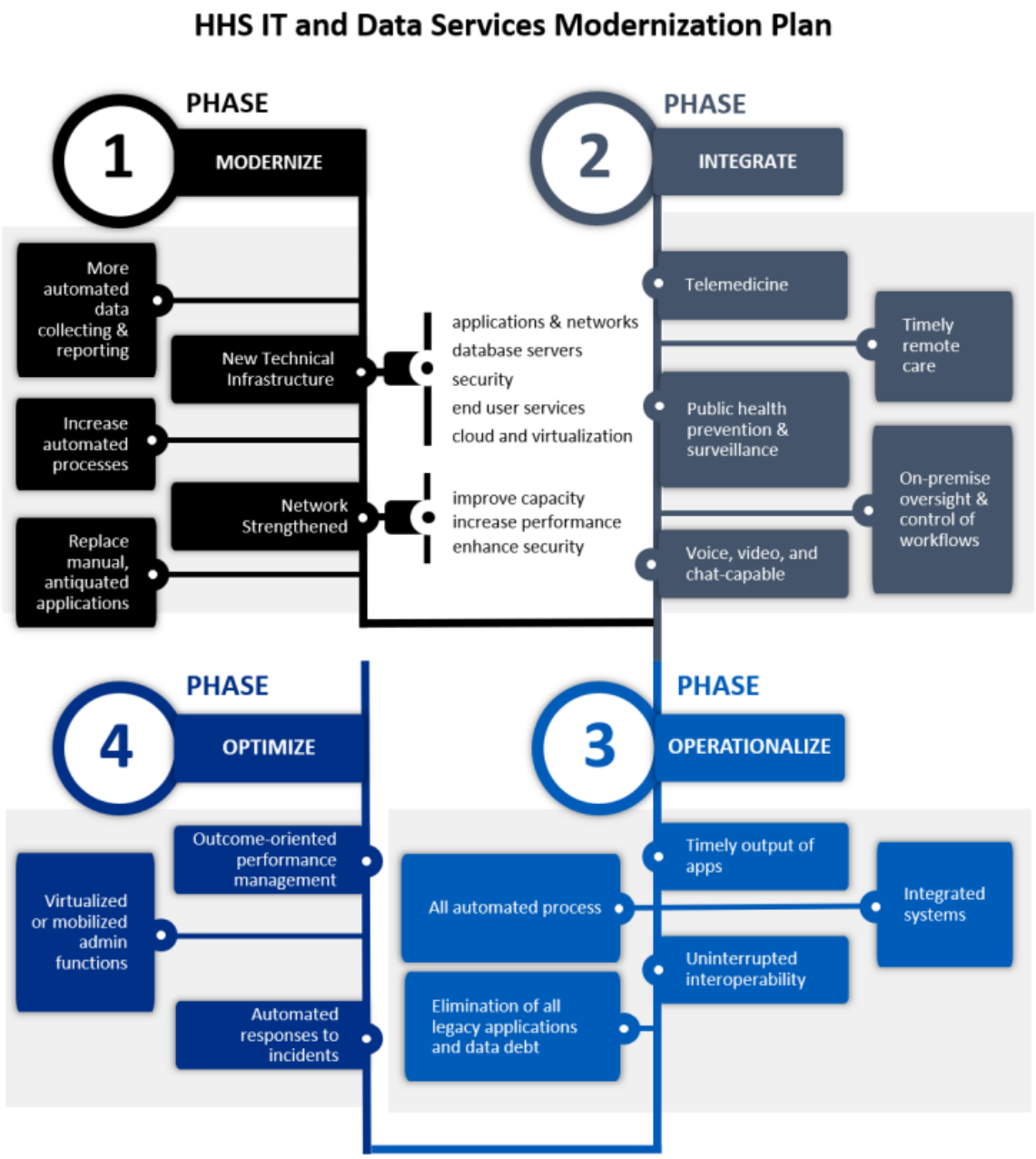
As the agency response to S.B. 475, the HHS Executive Commissioner is the named Data Management Officer who has delegated to specific executives the authority to oversee major functional areas within the Texas Data Management Framework adopted by the State Chief Data Officer at DIR. The DGPM Council also has authorized the creation of a workgroup that will establish lower-level delegation and clearer lines of responsibility for data management processes that are dependent on multiple areas. This cross-functional workgroup will provide revision to data management processes conforming to S.B. 475 and detail executive interactions that will be needed to increase data management process maturity at HHS.

Ultimately, DGPM determines the strategy for analytics as a key business discipline to enhance decision making for improved business outcomes within HHS and is responsible for information strategy, data governance, analytics control, policy development and effective exploitation of data assets. ODAP leaders work with HHS program and IT leadership and senior management to ensure an understanding of the interdependencies and impact points created by standardized and singular data assets on key business processes.

Within ODAP, the Information and Data Management team (via its ongoing IAPD) supports data trustees and owners to identify and train data stewards capable of supporting data management initiatives. The team's direct involvement in DGPM ensures sustaining processes are aligned with the strategic business objectives of HHS. ODAP also supports compliance with system data policies and audit of data for regulatory requirements.

In a required report submitted in October 2020, HHS laid out its 10-year IT and Data Services Modernization Plan.[9] The plan has four phases, as described in the graphic that follows. Achieving this plan will be contingent on funding, which HHS requests through the biennial legislative appropriations process.

[9] HHSC. *HHS Information Technology and Data Services Modernization Plan as required by 2020-21 General Appropriations Act, H.B. 1, 86th Legislature, Regular Session (Article II, Health and Human Services Commission, Rider 175)*. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/it-data-services-modernization-plan-oct-2020.pdf. October 2020. Accessed November 30, 2021.



Phase 1 is currently underway, as HHS seeks to modernize and improve network capacity, performance and security. Network performance is a key component of the technology and data infrastructure that directly impacts all systems, applications and users.

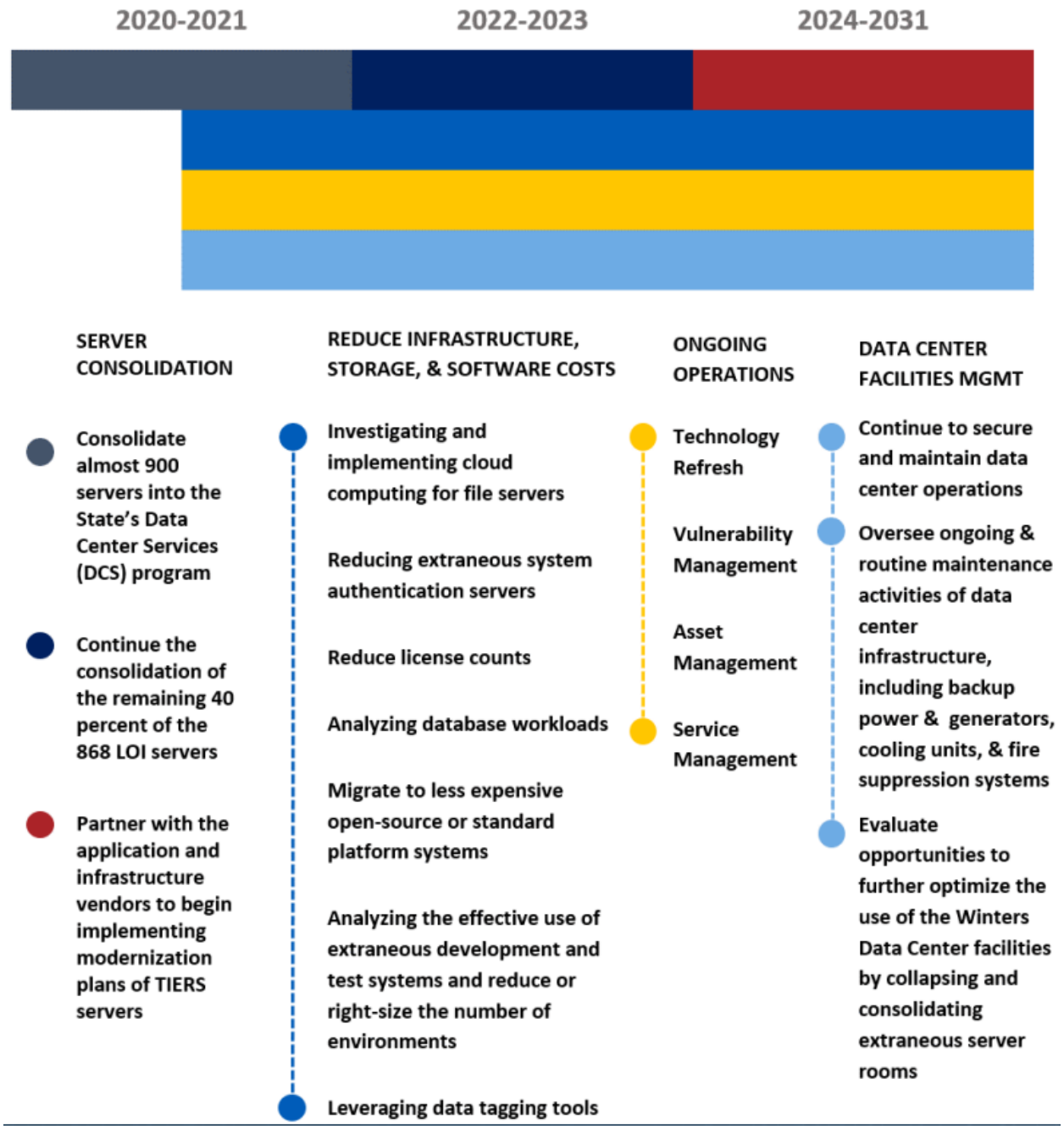
Phase 2 employs a statewide technical infrastructure – inclusive of an increase in network capacity and data storage – that is reliable and highly responsive to HHS needs for remote care, telemedicine, on-premise oversight and control of workflows, and public health prevention and surveillance. This provides the

foundation to connect medical and social services with public health data for timely action and policymaking.

Phase 3 will see HHS free of legacy technology and data debt. Modern computing, storage, network, security and application technology will become operational, with the decision-making flexibility and financing options available that will allow HHS to keep pace with future technological advances.

Phase 4 envisions technology that enables nationwide virtual and/or mobile service delivery and program administration for all clients and stakeholders. These connections will include proactive, wrap-around security where detection, defense and enhancements are automated and transparent. All applications are easily modified, and modifications are only necessary when cost and timing present a clear value proposition. Outcome-oriented performance management is largely automated and transparent to both HHS staff and external stakeholders.

The following timeline describes some of the critical components, milestones and resources planned over each biennium to drive HHS IT's legacy infrastructure modernization efforts.



2.2 Assessing Current Health IT Adoption by Practitioners and Hospitals

The information presented in this section on health IT adoption by practitioners and hospitals represents the most recent and best available information made available via the ONC, Texas Medicaid and provider associations.

2.2.1 Texas Hospital Health IT Adoption

The American Hospital Association (AHA) conducts an Annual Hospital Survey that contains a Health IT Supplement. The ONC has made available select results from the AHA survey of non-federal acute care hospitals through 2017.[10]

For 2017, the AHA survey found that 93 percent of Texas hospitals and 96 percent of hospitals nationally had adopted Certified EHR Technology (CEHRT). In 2015, the AHA survey results for Texas found a higher total certified EHR adoption rate at 96 percent, and the national rate was 96 percent that year as well. In 2015, the survey found a certified EHR adoption rate of 96 percent for Texas' small, rural hospitals and 96 percent for Texas' critical access hospitals.

The meaningful use attestations for Texas hospitals provide insights into the types of EHRs they use. Among the 364 Texas hospitals that participated in the Medicare EHR Incentive Program through 2016, the top five reported vendors of certified health IT and the percent of reporting hospitals that used these five major EHR vendors was:[11]

- Medical Information Technology, Inc. (MEDITECH): 23.08%
- Cerner Corporation: 17.86%
- Epic Systems Corporation: 11.81%
- MEDHOST: 9.89%
- HCA Information Technology & Services, Inc.: 7.69%

The AHA survey results that ONC has made publicly available also shed light on the exchange of patient health information. The ONC considers survey respondents to be engaged in "interoperable exchange" if they can carry out the following four tasks:

- Send patient health information;
- Receive patient health information;
- Find (or query) patient health information; and
- Integrate or incorporate health information into their EHR without manual effort.

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[10] ONC. Non-federal Acute Care Hospital Health IT Adoption and Use webpage. https://www.healthit.gov/data/datasets/non-federal-acute-care-hospital-health-it-adoption-and-use, Accessed November 30, 2021.

[11] ONC. EHR Products Used for Meaningful Use Attestation webpage. https://www.healthit.gov/data/datasets/ehr-products-used-meaningful-use-attestation, Accessed November 30, 2021.

Data from the 2017 AHA hospital survey reflect that 37 percent of Texas hospitals engaged in interoperable exchange compared to 41 percent nationally. Findings on the ability for Texas and U.S. hospitals to engage in the four tasks associated with interoperable exchange are noted in the following table.

Percent of Hospitals with Capability to Perform Tasks Associated with Interoperable Exchange
AHA 2017 Annual Survey, Health IT Supplement

Hospital Location	Find/Query Patient Health Information	Send Patient Health Information	Receive Patient Health Information	Integrate Patient Health Information into EHR	Interoperable Exchange (all four tasks)
Texas	47%	82%	65%	47%	37%
United States	61%	88%	74%	53%	41%

Other key findings from the 2017 AHA survey:

- The percent of hospitals that provided their patients the ability to access their health information using an API in Texas was 30 percent versus 38 percent nationally.
- The percent of hospitals that were able to access state prescription drug monitoring program (PDMP) data within their EHR was 20 percent in Texas versus 26 percent nationally.

2.2.2 Texas Physician Health IT Adoption

The Centers for Disease Control and Prevention's (CDC's) National Center for Health Statistics, with funding assistance from the ONC, conducts a mail survey of a representative sample of office-based physicians called the National Electronic Health Records Survey (NEHRS). According to the 2017 NEHRS, 82 percent of Texas physicians and 80 percent of physicians nationally had adopted certified EHRs. In 2015, the NEHRS results found slightly lower total office-based physician certified EHR adoption rate with a 79 percent rate in Texas and a 78 percent rate nationally. The 2015 NEHRS data showed certified EHR adoption rates for certain subgroups of office-based Texas physicians as follows:

- Primary care physicians: 85%
- Surgical and medical specialty physicians: 74%
- Small practices (ten or fewer physicians at the reporting location): 74%

The meaningful use attestations for eligible Texas health care professionals (primary care physicians, medical and surgical physician specialists, chiropractors, dentists, optometrists, and podiatrists) provide information on the types of EHRs used. Among the 22,659 Texas professionals that participated in the Medicare EHR Incentive Program through 2016, the top five reported vendors of certified EHR technology and the percent of reporting professionals that used these five major EHR vendors was:[12]

- Epic Systems Corporation: 17.62%
- eClinicalWorks, LLC: 11.25%
- athenahealth, Inc.: 7.95%
- NextGen Healthcare: 6.86%
- GE Healthcare: 6.4%

The 2017 NEHRS provided insights into the extent to which Texas physicians are participating in tasks associated with interoperable exchange. In 2017, with regard to patient health information, 58 percent of Texas office-based physicians could find or query, 36 percent could send, 41 percent could receive, and 35 percent could integrate data into their EHR. The following table compares Texas progress on the elements of interoperable exchange with national findings.

Percent of Office-Based Physicians with Capability to Perform Tasks Associated with Interoperable Exchange
NEHRS 2017 Survey, Health IT Supplement

Location	Find/Query Patient Health Information	Send Patient Health Information	Receive Patient Health Information	Integrate Patient Health Information into EHR
Texas	58%	36%	41%	35%
United States	53%	37%	38%	28%

Other findings of interest from the NEHRS involved the information made available to patients. In 2015, 55 percent of Texas office-based physicians had an EHR that enabled their patients to view, download, or transmit health information versus 65 percent nationally. In 2017, 67 percent of Texas office-based physicians could send patients secure messages versus 68 percent nationwide.

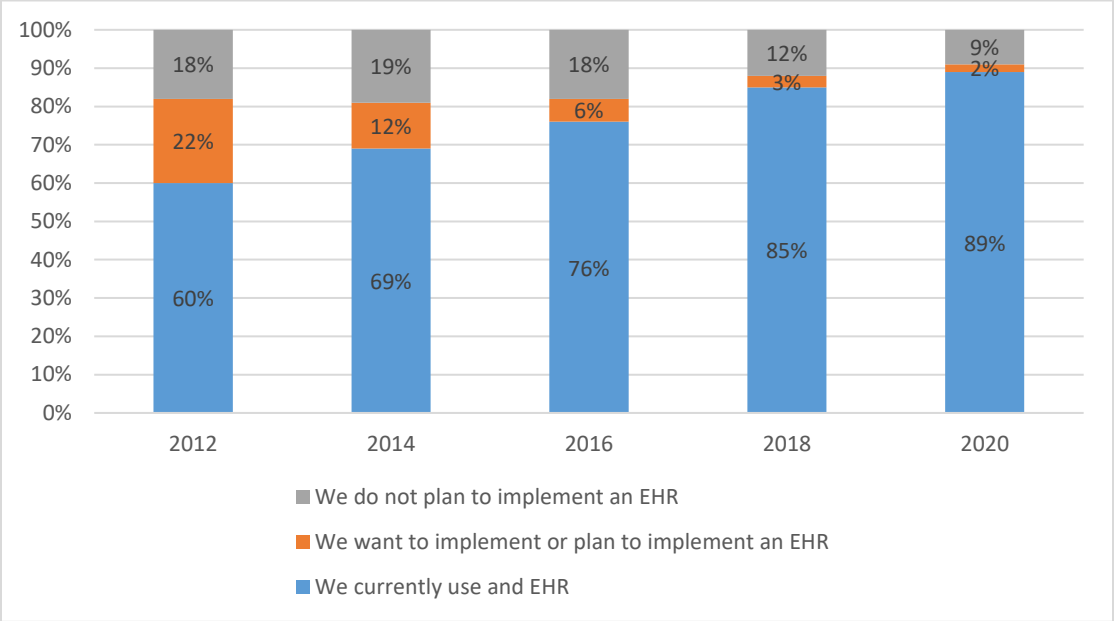
[12] Ibid.

Since 2012, the Texas Medical Association (TMA) has biennially conducted a Survey of Texas Physicians Health Information and Technology. Selected 2020 survey results are available through a report on the TMA website.[13] For the 2020 survey, TMA emailed 36,889 Texas physicians asking about their experience with EHRs, e-prescribing and health information exchanges. Respondents were both TMA members and non-TMA members. The survey was available for completion from August 2020 to January 2021. During this period, TMA received a total of 1,303 responses. TMA shared results considered to be statistically significant at the 90 percent confidence interval. The remainder of this Section 2.2.2 is based on results of the 2020 TMA survey.

Some of the key TMA survey findings included that 89 percent of those surveyed had implemented an EHR. There were 2 percent of respondents that indicated they wanted or planned to implement an EHR while another 9 percent responded they did not intend to implement an EHR. The following table reflects the increasing percentage of Texas physicians using an EHR since 2012. The increase from 60 percent using an EHR in 2012 to 89 percent using an EHR in 2020 corresponds with the timeframe the Promoting Interoperability Program has been in operation (2011 to present).

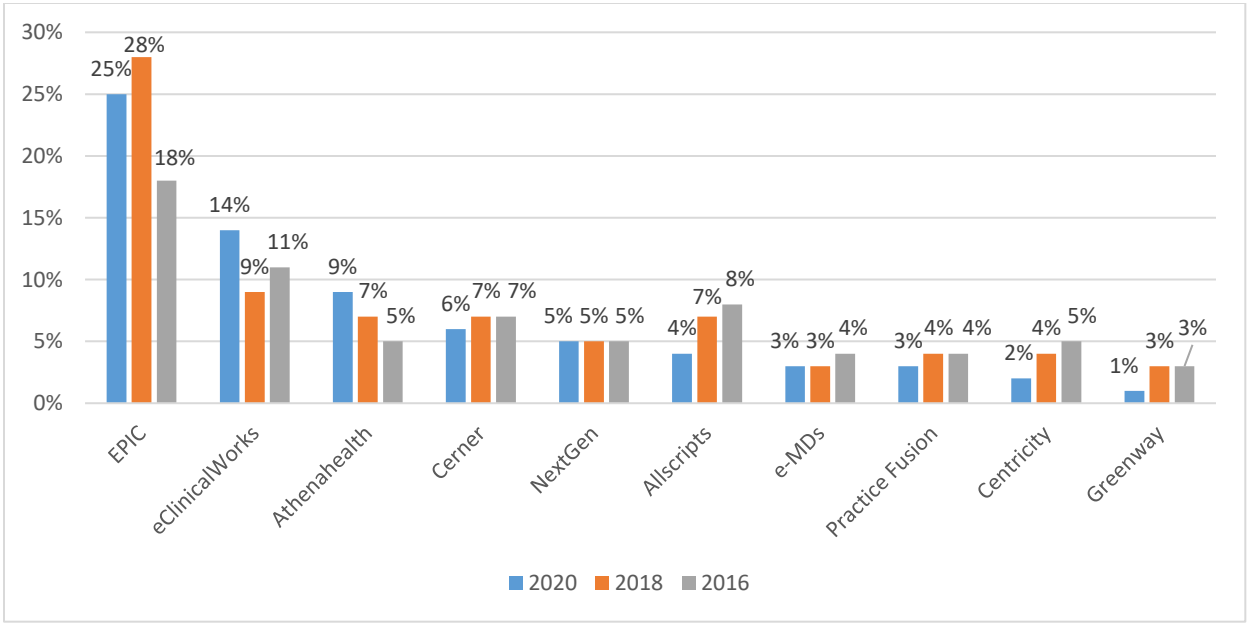
[13] Texas Medical Association. *Survey of Texas Physicians Health Information and Technology: Selected Research Findings.* Survey deployed August 2020. https://www.texmed.org/StateofEHRs2020/, Accessed November 30, 2021.

EHR Status of Texas Physicians



The TMA survey revealed physicians using many of the same EHR systems identified via the Medicare meaningful use attestations. The top five EHRs identified through the TMA survey for 2020 were EPIC (25 percent), eClinicalWorks (14 percent), Athenahealth (9 percent), Cerner (6 percent) and NextGen (5 percent). The top EHRs identified in the 2016, 2018 and 2020 surveys are captured in the chart below.

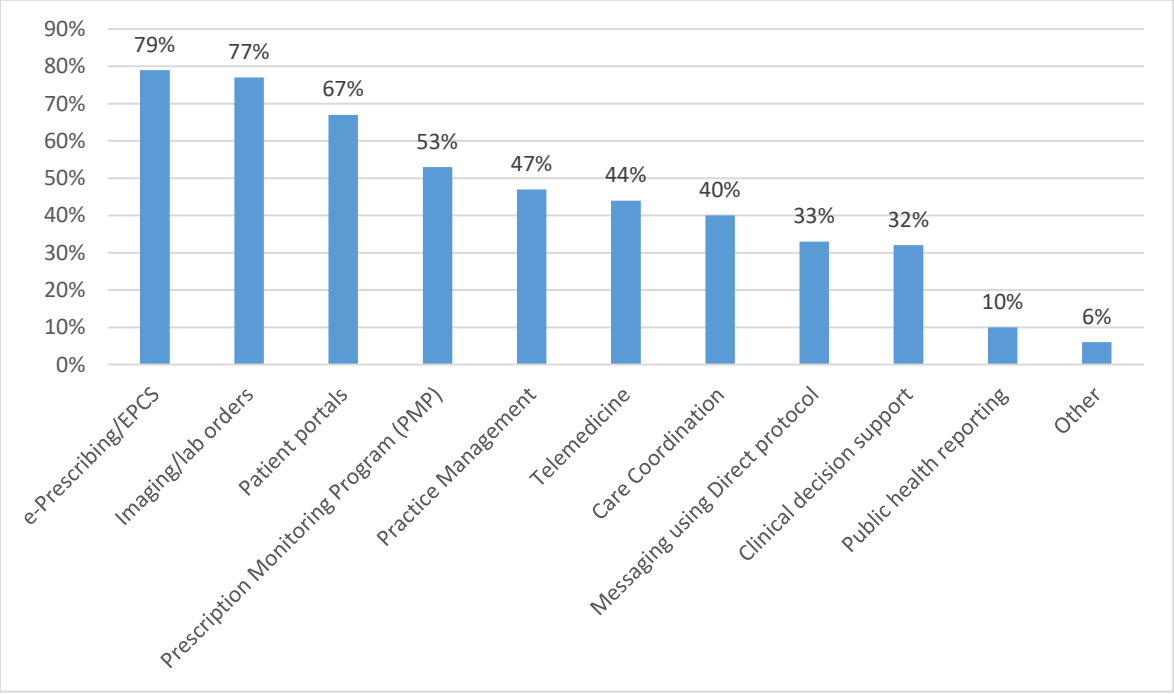
EHR Systems Used by Texas Physicians



The overall percentage of physicians indicating they were very or somewhat satisfied with their EHR was 66 percent. Physicians 40 years old and younger were the most satisfied with their EHRs, at 68 percent, while physicians 61 years and older were the least satisfied, with a satisfaction rate of just 48 percent. The top three reasons for dissatisfaction with an EHR were lack of needed functions (52 percent), the EHR was slow (52 percent) and the EHR lacked interoperability (49 percent).

The top three EHR functions identified as being used by Texas physicians were e-prescribing/e-prescribing of controlled substances (EPCS) (79 percent), imaging/lab orders (77 percent) and patient portals (67 percent). The least commonly used functions were public health reporting (10 percent), clinical decision support (32 percent) and messaging using Direct protocol (33 percent). Direct is a technical standard for exchanging health information between health care entities (e.g., primary care physicians, specialists, hospitals, clinical labs) in a trusted network. The lower utilization rates of these functions may be influenced by the lack of availability of functions in certain EHRs as well as the need to conduct certain activities, depending on specialty. The following chart reflects the percent of respondents indicating they used certain functions within the EHR.

EHR Functions Used by Texas Physicians



As noted, e-prescribing was the top EHR function used by physicians. In terms of geographic location, Bexar County used e-prescribing the least, at 68 percent, while rural providers used e-prescribing the most, at 84 percent. In terms of provider type,

90 percent of primary care physicians used e-prescribing compared with 74 percent among surgical specialties.

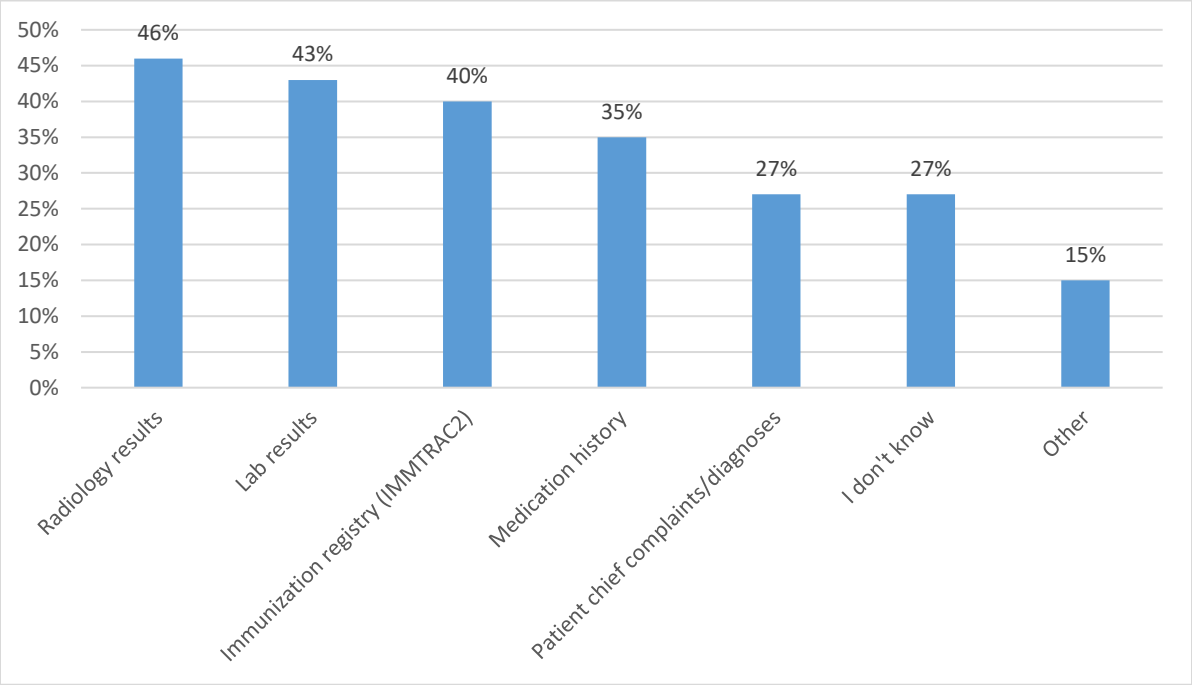
About 46 percent of physicians indicated their EHR seamlessly interfaces with the state Prescription Monitoring Program. E-prescribing of controlled substances became a requirement of state law, with some exceptions and waivers, on January 1, 2021. Compliance with a federal EPCS requirement was delayed to 2022. About 52 percent of physicians said they used EPCS, 28 percent said they did not and 20 percent said EPCS was not applicable to them. By geographic location, physicians in Travis County and in rural areas indicated 60 percent use of EPCS, while Bexar County had the lowest EPCS use at 36 percent. Primary care providers (PCPs) (72 percent) were the most likely provider type to use EPCS.

About 36 percent of physicians indicated they have challenges with e-prescribing. The most common issues with e-prescribing were challenges finding the desired drug, formulation, or dose (57 percent); too many unhelpful alerts (54 percent); comments not going through to the pharmacy (48 percent); and technical problems (47 percent).

Patient portals were the third most common function physicians used in EHRs, and 79 percent of physicians reported problems with patient portals. The most common issues physicians reported with patient portals were challenges with patient engagement through portals (53 percent), patients with lack of internet access (41 percent) and patients who found the portal difficult to use (32 percent).

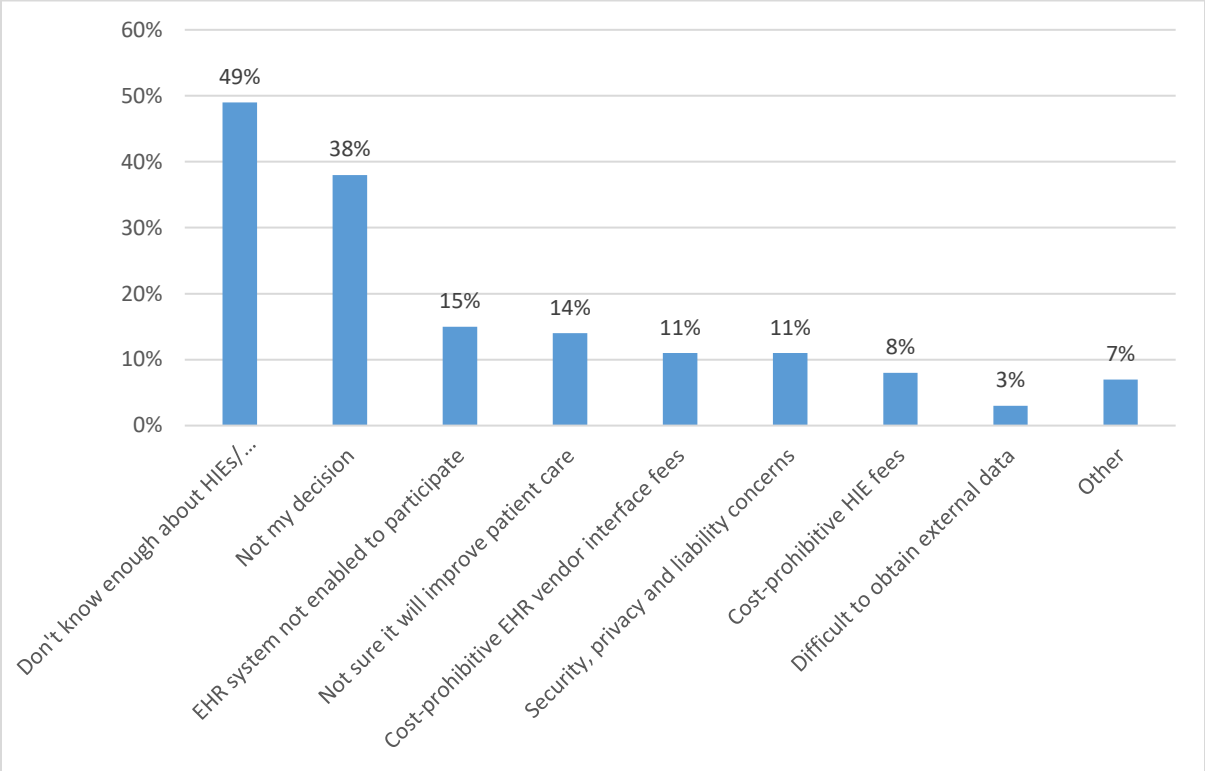
TMA asked physicians who had an EHR to indicate if they could access all necessary data through an HIE while treating patients. Among those who said they could not, the top responses for missing data were radiology results (46 percent), lab results (43 percent) and immunization registry information (40 percent). A summary of the responses to this question is shown in the following chart.

Data Texas Physicians Indicate is Missing from HIEs



Of the physicians who indicated they had an EHR, 35 percent said they do not participate in an HIE. Of those who do not participate in an HIE, nearly half (49 percent) said they did not know enough about HIEs or did not know an HIE was an option. Over one third (38 percent) said it was not their decision whether or not to join an HIE. Other most cited reasons for physicians not participating in an HIE are noted in the following chart.

Reasons Texas Physicians Are Not Participating in a Texas Public/Regional HIE



2.3 Health Information Exchange in Texas

In March 2010, HHSC was awarded $28.8 million in federal funds over four years by the ONC for funding the State HIE Cooperative Agreement Program to support Texas developing its strategic and operational plans and statewide HIE capacity. HHSC contracted with THSA to manage a collaborative stakeholder process and develop the strategic and operational plans required under the cooperative agreement. In late 2010, HHSC and THSA received approval for the initial *State Health Information Exchange Plan* that guided THSA in developing Texas' HIE infrastructure from 2010 until the Cooperative Agreement Program's end in March 2014. THSA published an updated 2014 HIE Plan in June 2014 and a 2020 HIE Plan in September 2020 that was based on Texas' Healthcare Transformation and Quality Improvement Program 1115 Waiver *Health IT Strategic Plan*.[14]

In December 2010, Texas established a Local HIE Grant Program to catalyze the growth of health information exchange using ONC funds. The grant program aligned with Texas' plan to implement HIE statewide through a market-based and community-driven approach. Of

[14] THSA. *State Health Information Exchange Plan 2020*. https://thsa.org/wp-content/uploads/2020/09/2020-Texas-Health-Information-Exchange-Plan.pdf, Accessed November 30, 2021.

the 16 initially funded local HIEs, five remain after the others shut down or merged. The remaining local HIEs are:

- Greater Houston Healthconnect (GHH) – has participants in 75 Southeast Texas counties and 40 Louisiana parishes.
- HASA (formerly Healthcare Access San Antonio) – This HIE initially had participants in 22 counties surrounding San Antonio and Bexar County. In late 2015, entities in North, South and West Texas began to participate in HASA.
- Rio Grande Valley HIE (RGV HIE) – established to serve eight counties in the Rio Grande Valley.
- PHIX (formerly Paso del Norte Health Information Exchange) – has participants in El Paso County and surrounding communities.
- Integrated Care Collaboration (ICC) – has participants in Central Texas.

All of the local HIEs participate in at least one HIETexas program, which is the state-level health information network operated by THSA. HIETexas enables HIE-to-HIE connectivity, connectivity to MCOs and access to shared services, such as the EDEN system and HIETexas PULSE. EDEN and HIETexas PULSE are discussed in further detail in Sections 2.5.2.3 and 2.5.2.4 as part of the Texas HIE IAPD discussion.

The current Texas health information exchange environment is characterized by an increasing share of providers participating directly with national exchange entities, including eHealth Exchange, CommonWell, Carequality and Surescripts®. Some providers also participate in health information exchange via shared EHR products. In a notable example, many of North Texas' hospitals and provider groups participate in Epic Care Everywhere.

According to an analysis performed by THSA staff in April 2021, a total of 445 hospitals in Texas are in health information exchanges. This represents 59.5 percent of the 750 hospitals in Texas. Among those participating in an HIE, 100 participate only in a local HIE, 202 are in national HIEs (Carequality, CommonWell and eHealth Exchange) but not in a local HIE, and 144 are in both a local and national HIE.

2.4 Broadband Internet in Texas

Broadband internet access provides a higher speed of data transmission than dial-up service, which is important for telemedicine/telehealth and health information exchange. At the federal and state level, broadband is defined as internet service capable of providing a download speed of at least 25 megabits per second (Mbps) and an upload speed of at least 3 Mbps (25/3 Mbps).

In 2009, Governor Perry charged the Texas Department of Agriculture (TDA) with guiding efforts to make broadband services available across the state and to pursue federal grants to improve access to broadband service in rural communities. TDA established the Texas Broadband Task Force, which commissioned Connected Texas to work with all broadband

providers in Texas to create detailed maps of broadband coverage that accurately pinpoint remaining gaps in broadband availability. Connected Texas is a partnership between TDA and the national nonprofit Connected Nation.[15] Connected Texas monitors the status of broadband availability in Texas and publishes and updates statewide broadband maps on its website.[16]

House Bill (H.B.) 1960, 86th Legislature, Regular Session, 2019 established the Governor's Broadband Development Council.[17] The duties of the Council include:

- Research the progress of broadband development in unserved areas;
- Identify barriers to residential and commercial broadband deployment in unserved areas;
- Study technology-neutral solutions to overcome barriers identified; and
- Analyze how statewide access to broadband would benefit:
  - Economic development;
  - The delivery of educational opportunities in higher education and public education;
  - State and local law enforcement;
  - State emergency preparedness; and
  - The delivery of health care services, including telemedicine and telehealth.

H.B. 1960 requires an annual report, the first of which was due on November 1, 2020. The initial report outlined the challenges of broadband internet access in Texas, summarized as follows:[18]

"There are many challenges to broadband connectivity in rural and unserved areas of the state, and currently Texas is one of six states that does not have a statewide broadband plan. In 2020, the COVID-19 PHE highlighted issues regarding broadband internet in many ways, and now more than ever it is apparent that broadband connectivity is a critical issue for the rural and unserved areas of our state."

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[15] Connected Nation Texas. https://connectednation.org/texas/. Accessed November 16, 2021.

[16] Connected Nation Texas. https://connectednation.org/texas/mapping-analysis/**.** Accessed November 30, 2021.

[17] H.B. 1960, 86th Legislature, Regular Session, 2019. https://capitol.texas.gov/tlodocs/86R/billtext/pdf/HB01960F.pdf, Accessed November 30, 2021.

[18] Office of the Governor, Economic Development & Tourism. *2020 Texas Report, Governor's Broadband Development Council*. https://gov.texas.gov/uploads/files/press/2020_Texas_Report_-_Governors_Broadband_Development_Council.pdf, Accessed November 30, 2021.

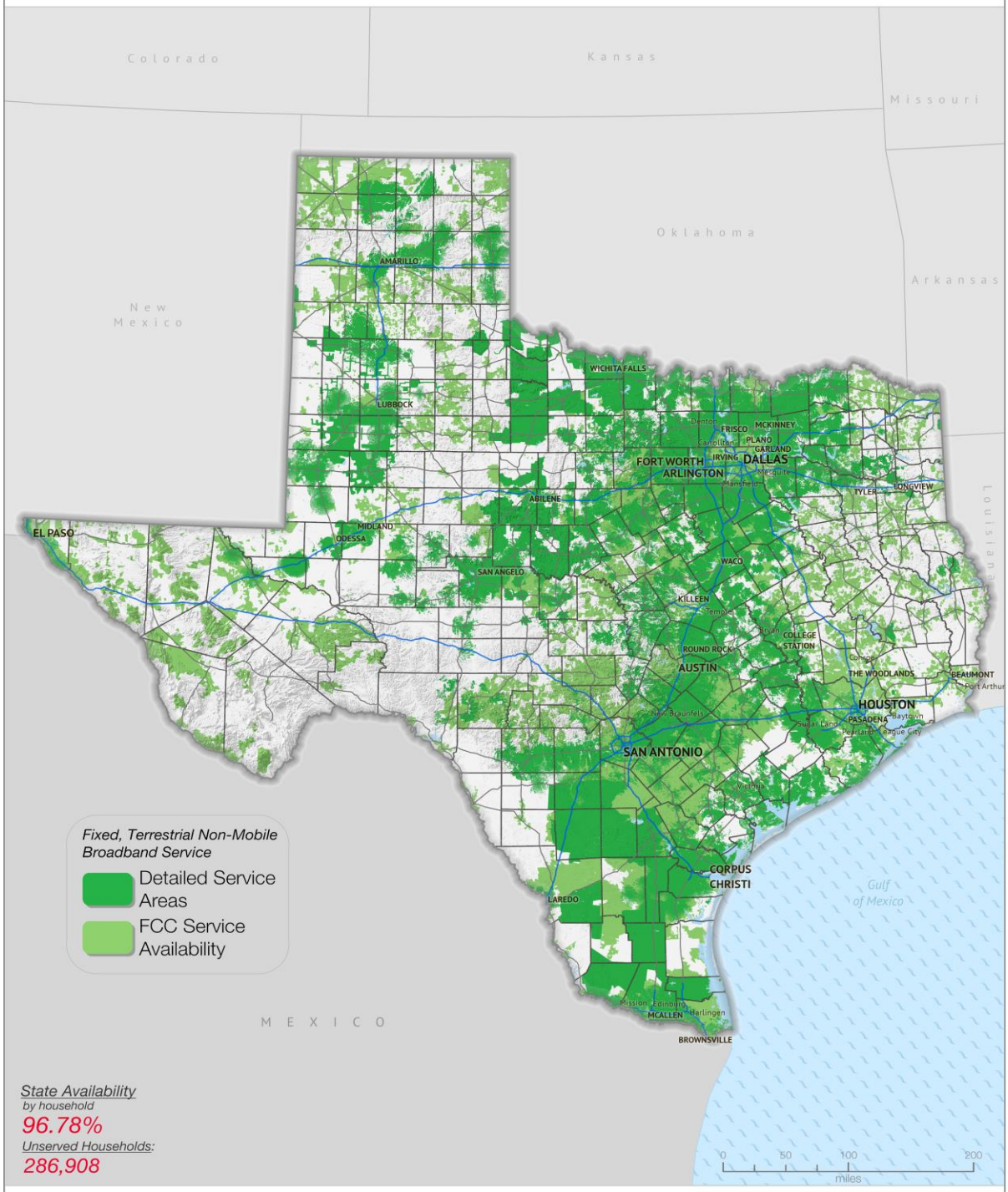
The *Governor's Broadband Development Council 2021 Report*[19] has been released, which updates the findings and recommendations of the Council. The 2021 report cites the Connected Nation Texas July 2021 Statewide Broadband Availability Estimates to illustrate that barriers to broadband access remain and are particularly prevalent in rural areas. The Connected Nation Texas analysis found that 96.78 percent of households in Texas have access to broadband speeds at 25/3 Mbps; however, an estimated 286,908 Texans do not have access to broadband at home. Texas' rural population represents approximately 246,997 of those households without broadband access.[20] The following map represents Texans' access to broadband speeds of 25/3 Mbps as of July 2021.

[19] Office of the Governor, Economic Development & Tourism. *Governor's Broadband Development Council, 2021 Report*. https://gov.texas.gov/uploads/files/business/2021_GBDC_Report_(Final_-_9-17-21).pdf**,** Accessed November 30, 2021.

[20] Connected Nation Texas. Statewide and Rural Broadband Availability Estimates by Speed Tier. https://connectednation.org/texas/planning/, Accessed November 30, 2021.

Broadband Service with Speeds of at Least 25 Mbps Download/3 Mbps Upload

CONNECTED NATION Texas



State Availability
by household
96.78%
Unserved Households:
286,908

Broadband data displayed on this map are developed from a combination of direct provider outreach and data collection, FCC Form 477 broadband deployment filings, and independent research conducted by Connected Nation Texas. If a broadband provider was unwilling or unable to supply granular data and a detailed service area could not be developed, the provider's service availability is represented by FCC Form 477 data, a format which tends to be overstated.

This map is not a guarantee of internet service availability. Mobile and satellite services may also be available.

Published
July 31, 2021

The current FCC definition of broadband is a minimum speed of 25 Mbps (Megabits per second) download and 3 Mbps upload.

Please submit feedback regarding any possible mapping inaccuracies at https://connectednation.org/texas/feedback. Updates to this map will occur in December 2021.

Connected Nation Texas is a statewide initiative funded through the Texas Rural Funders to support all Texans in leveraging broadband.

Among its key recommendations, the *Governor's Broadband Development Council 2021 Report*[21] states that Texas should plan for and invest in preparation for speeds greater than 25/3 Mbps to fully support the growing reliance on activities such as virtual school attendance, online doctor visits and remote work. The report identifies target speeds of 100/20 Mbps by 2024, 100/100 Mbps by 2026 and 500/100 Mbps by 2028. Similarly, at a federal level, a program that provides vouchers to lower-income Americans in the Infrastructure Investment and Jobs Act will rely on mapping that identifies those that have access to less than 100/20 Mbps as "underserved."[22]

The *Governor's Broadband Development Council 2021 Report* also states that even where broadband is available, there remains a substantial portion of Texans who have not adopted or subscribed to broadband in their homes.[23] The term "digital divide" is commonly used to describe economic and social disparities between those who do and do not have access to information technology.

While some portions of the population do not see the value in broadband and do not subscribe, others struggle with digital literacy or have issues affording a broadband subscription. A Pew Research Center survey of adults found that as of February 2021, 57 percent of those with annual household incomes less than $30,000 had a broadband connection at home versus 92 percent among adults with annual household incomes of $75,000 or more.[24]

The COVID-19 PHE further revealed discrepancies in broadband availability and accessibility. Broadband expansion was gaining political momentum prior to the COVID-19 PHE. However, the pandemic immediately boosted demand for broadband-enabled services, and Governor Greg Abbott prioritized it as one of his five emergency items for the 2021 Texas legislative session in his State of the State address on February 1, 2021. The upheaval caused by the pandemic has increased the importance of widespread high-speed internet

[21] Office of the Governor, Economic Development & Tourism. *Governor's Broadband Development Council, 2021 Report*. https://gov.texas.gov/uploads/files/business/2021_GBDC_Report_(Final_-_9-17-21).pdf, Accessed November 30, 2021.

[22] Infrastructure Investment and Jobs Act. H.R. 3684, 117th Congress (2021-2022), https://www.congress.gov/bill/117th-congress/house-bill/3684, Accessed November 30, 2021.

[23] Office of the Governor, Economic Development & Tourism. *Governor's Broadband Development Council, 2021 Report*. https://gov.texas.gov/uploads/files/business/2021_GBDC_Report_(Final_-_9-17-21).pdf, Accessed November 30, 2021.

[24] Pew Research Center. https://www.pewresearch.org/internet/fact-sheet/internet-broadband/, Accessed November 30, 2021.

access, particularly for purposes such as distance education, telehealth and telemedicine services, and e-commerce.[25]

H.B. 5, 87th Legislature, Regular Session, 2021 established a Broadband Development Office within the State Comptroller's office. The office must develop a State Broadband Plan "that establishes long-term goals for greater access to and adoption, affordability, and use of broadband service in this state."

The Broadband Development Office functions are:

- Serve as a resource for information regarding broadband service and digital connectivity in Texas;
- Engage in outreach to communities regarding the expansion, adoption, affordability, and use of broadband service and the programs administered by the office; and
- Serve as an information clearinghouse in relation to:
    - Federal programs providing assistance to local entities with respect to broadband service and
    - Addressing barriers to digital connectivity.

The Broadband Development Office also is required to establish a program to award grants, low-interest loans and other financial incentives to applicants for the purpose of expanding access to and adoption of broadband service in designated eligible areas of the state.

The office is required to establish and publish criteria for making awards, including, but not limited to:

- Take into consideration grants and other financial incentives awarded by the federal government for the deployment of broadband service in a designated area;
- Prioritize the applications of applicants that will expand access to and adoption of broadband service in eligible areas in which the lowest percentage of addresses have access to broadband service; and
- Prioritize the applications of applicants that will expand access to broadband service in public and private primary and secondary schools and institutions of higher education.[26]

In the 2017 *SMHP*, information was included on Texas organizations that had been successful in securing federal broadband grants from the Federal Communications Commission, Department of Commerce and Department of Agriculture to fund broadband

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[25] Texas Comptroller of Public Accounts. Spencer Grubbs and Shannon Halbrook. "Broadband Expansion in Texas, Bring Fast Internet to More Texans" *Fiscal Notes*, February 2021, https://comptroller.texas.gov/economy/fiscal-notes/2021/feb/broadband.php, Accessed November 30, 2021.

[26] H.B. 5, 87th Legislature, Regular Session, 2021. https://capitol.texas.gov/tlodocs/87R/billtext/pdf/HB00005F.pdf, Accessed November 30, 2021.

access projects that benefit health care providers across the state. At that time, the grants totaled $79,442,192 in federal funding.[27]

The broadband infrastructure expansion continues through both private sector efforts and government funding and grants. For example, there are funds available through the American Rescue Plan Act of 2021 (ARPA).[28] ARPA's broadband-related provisions include establishing a fund to provide payment assistance for qualified expenses for broadband internet service and for investments in broadband infrastructure. In Texas, S.B. 8, 87th Legislature, 3rd Called Session, 2021 appropriates $500.5 million from the Coronavirus Capital Projects Fund to the Comptroller of Public Accounts for broadband infrastructure.

Additional information is in Section 3.1.3.5 of this plan.

2.5 Status of Select Medicaid EHR, HIE and Other Health IT Activities

2.5.1 EHR Incentive/Promoting Interoperability Program

The Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted as part of the American Recovery and Reinvestment Act of 2009, promoted the adoption and meaningful use of health information technology. Under the provisions of the HITECH Act, Texas Medicaid established the Electronic Health Record Incentive Program in 2011. In 2018, it was renamed the Promoting Interoperability (PI) Program by CMS.

The PI Program is ending and issued final incentive payments for program year 2021 by December 31, 2021, except in cases of audit or appeal. Administrative tasks and decommissioning of the state level repository will occur by September 30, 2023. For more details on activities to close out the PI Program and the PI program audit strategy, see Sections 4 and 5 of this plan.

Through the PI Program, incentive payments were provided to health care professionals and hospitals meeting specific eligibility requirements when they adopted, implemented and meaningfully used certified EHR technology. Provider types that were eligible to participate in Texas are as follows:

- Physicians (M.D. or D.O.)
- Physician assistants
- Nurse practitioners

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[27] HHSC. *2017 State Medicaid Health IT Plan*. https://healthit.hhsc.texas.gov/sites/healthit/files/documents/about-us/texas_smhp_update_2017.pdf, Accessed November 30, 2021.

[28] H.R. 1319, 117th Congress (2021-2022), https://www.congress.gov/bill/117th-congress/house-bill/1319/text, Accessed November 30, 2021.

- Dentists
- Certified nurse midwives
- Optometrists

The PI Program required providers to meet minimum Medicaid patient volume thresholds as well as successfully meet federally-established program metrics and quality measures. No new enrollees were allowed into the program after 2016. As of September 2021, the PI Program has enabled HHSC to deliver payments of nearly $867 million in federal EHR incentive funding through Medicaid to nearly 10,700 providers and hospitals since the inception of the program in 2011.[29] The following table provides additional detail on eligible provider counts, meaningful use (MU) achievement and incentive payments.

	# of Participating Eligible Providers (EPs)	# of EPs Achieving at Least 1 Year MU	% of EPs Achieving at Least 1 Year MU	# of EPs Completing 6 Years of Program	% of EPs Completing Program	Incentives Paid
Eligible Professional	10,349	5,158	49.8%	1,098	10.6%	$335,612,755
Eligible Hospital	343	313	91.3%	N/A		$531,115,824
Total Incentives Paid						$866,728,579

In 2018, when the name of the program changed to the PI Program, CMS released new regulations revising the Medicaid program for both hospitals and ambulatory providers to place greater emphasis on interoperability between health care providers and in providing patients electronic access to their health information. CMS also changed the name of one of the program's objectives providers are required to meet, updating it from "Public Health and Clinical Data Reporting," to "Public Health and Clinical Data Exchange," recognizing the importance of support for bi-directional exchange of information that can meet the needs of providers caring for individual patients as well as to address population health risks. The updated regulations support the use of APIs as a method for real-time interoperability between systems.

Although CMS has not announced a follow-on program for the Medicaid provider community, there are other ways CMS continues to promote EHR system

[29] Information provided by HHSC.

interoperability and data exchange between providers and patients. Other ways include through ongoing quality programs for Medicare and Medicaid, such as the Merit-based Incentive Payment System (MIPS) and Advanced Alternative Payment Models (APMs).[30] Regulations developed under the authority of the 21st Century Cures Act (H.R. 34, 114th Congress, 2016) continue to promote interoperability and the ongoing development of standards to support information exchange.

In Texas, a recent example of the importance of health information exchange is reflected in S.B. 640, 87th Legislature, Regular Session, 2021, which is focused on behavioral health providers. The federal EHR Incentive/PI Program did not include behavioral health provider types. S.B. 640 requires a study on the interoperability needs and technology readiness of behavioral health service providers in Texas. HHSC is required to submit a report based on the results of the study to the legislature, lieutenant governor and governor that includes a state plan, with a proposed timeline, for aligning the interoperability and technological capabilities in the provision of behavioral health services with applicable law.[31]

2.5.2 Texas Health Information Exchange Implementation Advance Planning Document

CMS first approved the Texas Medicaid HIE Connectivity Project through approval of Texas' HIE IAPD using HITECH funding and later through the Federal Fiscal Year (FFY) 2022-2023 HIE IAPD using MMIS funding. The HIE IAPDs define three strategies to increase HIE adoption and use by Medicaid providers, create new HIE capacity in Texas and bring clinical information into the Texas Medicaid program through HIE. The HIE IAPD also includes the HIETexas PULSE initiative.

2.5.2.1 Strategy 1: Medicaid Provider HIE Connectivity

Strategy 1 assists local HIEs with connecting the Medicaid ambulatory providers and hospitals in their respective areas. This strategy was designed to build the critical mass of connected providers needed to create meaningful exchange of clinical data across Texas.

Currently, three local HIEs have contracted with HHSC to onboard and connect Medicaid providers and hospitals. These connections will facilitate electronic

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[30] Texas HHS. *Interoperability for Texas: Powering Health 2020 As Required by H.B. 2641, 84th Legislature, Regular Session, 2015*. December 2020, Revised February 26, 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/hb-2641-interoperability-texas-powering-health-2020.pdf, Accessed November 30, 2021.

[31] S.B. 640, 87th Legislature, Regular Session, 2021. https://capitol.texas.gov/tlodocs/87R/billtext/pdf/SB00640F.pdf, Accessed November 30, 2021.

reporting and data exchange between providers, hospitals, MCOs and Texas Medicaid.

Funds are targeted toward offsetting the cost local HIEs incur when establishing new connectivity for providers. Funding allocated to local HIEs through the connection process is a deliverable-based model, with the deliverables demonstrating connections resulting in active transfer of CDA-based[32] or ADT-based clinical data to Medicaid via HIETexas and between Medicaid providers.

The FFY 2020/2021 goal for Strategy 1 was 200 Medicaid providers (including hospitals and ambulatory providers) connected to local HIEs. As of September 2021, 342 providers from 40 hospitals and 75 ambulatory practices had been onboarded to local HIEs through this project. THSA also is making direct connections with hospitals. As of the end of September 2021, THSA had made 42 direct connections.

2.5.2.2 Strategy 2: Texas Health Information Exchange (HIE) Infrastructure

Strategy 2 enhances Texas' HIE infrastructure to support connectivity with Texas Medicaid and assists local HIEs in connecting to HIETexas, which is the state-level shared services platform managed by THSA.

This strategy teams HHSC and THSA to develop and implement projects that make HIE services available statewide and continue to enhance state-level shared services. Projects include, but are not limited to:

- Implementation of an HL7 integration engine;
- Implementation of a master patient index related to HIE;
- Implementation of an audit and logging system to monitor all data flow pertaining to Medicaid's HIE IAPD Strategies 1 and 3, regarding provider connectivity and EDEN;
- Implementation of an Administrative User Interface and statistical dashboard for Medicaid to monitor data flows pertaining to Medicaid's HIE IAPD Strategies 1 and 3;
- Configuration of implemented systems supporting Medicaid's HIE IAPD Strategies 1 and 3;
- Maintenance of systems implemented in support of Medicaid's HIE IAPD Strategies 1 and 3, for the term of this IAPD;

[32] "CDA-based clinical record" is defined as the Consolidated Clinical Document Architecture (C-CDA) Transition of Care document referenced in Promoting Interoperability and 2015 EHR Certification final rule published by CMS, conforming to the requirements and standards referenced at 45 CFR §170.315(b)(1)(iii).

- Integration required with local HIEs to assist them in connecting to HIETexas in support of Medicaid's HIE IAPD Strategies 1 and 3; and
- Integration work necessary to deliver data to Medicaid.

This project supports fundamental, statewide infrastructure necessary for exchange of HL7 v2 and C-CDA-based documents. This functionality promotes the following Promoting Interoperability measures:

- Lab results;
- Transitions of care;
- Immunization registry reporting;
- Electronic lab reporting to public health;
- Syndromic surveillance; and
- Reporting to specialized registries.

The FFY 2020/2021 IAPD goals for this strategy were the implementation of a master patient index and the connection of eight local HIEs to HIETexas. The original goal of eight HIEs connected to HIETexas has since been revised, as only five local HIEs that participated in the State HIE Cooperative Agreement Program still operate in Texas and three of those have contracted with HHSC. All three local HIEs contracted through this project are connected to HIETexas.

2.5.2.3 Strategy 3: Emergency Department Encounter Notification (EDEN) System

EDEN is the first step in Texas Medicaid's use of clinical data to facilitate care coordination. This strategy provides near real-time emergency department Admission, Discharge, Transfer (ADT) notifications as part of the HIETexas state-level shared services.

Acute and post-acute care facilities across Texas send real-time ADT messages, and EDEN compares them to patient lists provided by subscribing health care organizations. When a listed patient receives care at a participating facility, subscribers receive an alert containing details about that patient's health encounter. If there is a PCP identified in the ADT feed with a DIRECT address, then the PCP also receives alerts in the form of a direct message.

EDEN is implemented using push technology, which is recognized as the preferred method for sending electronic notifications. Push technology is a recently added exchange modality in the Trusted Exchange Framework and Common Agreement (TEFCA) developed by the ONC.

With the ADT data transmitted to Texas Medicaid, subscribing MCOs and providers can enhance care for patients in a number of ways. ADT data assists

care teams in smoothing care transitions. Diagnosis and admissions data are valuable for care coordination and allow MCOs to automate prior authorizations, which is a key benefit for both MCOs and hospitals. The ADT data also supports Texas Medicaid's efforts to reduce inappropriate emergency department (ED) use by enabling care teams to identify clients in need of education on non-emergent ED alternatives and improves follow-up care.

The FFY 2020/2021 goal for this strategy was for eight local HIEs (which has been reduced to five as explained in Section 2.5.2.2) to contribute hospital ED ADT data via HIETexas as an outcome of this project. Currently, the three local HIEs contracted through Strategy 1 are successfully transferring inpatient ADT data in near real-time. Two of these local HIEs are sending ED ADT data.

HITECH funding is no longer available, as of the end of FFY 2021, to support the continuation of the HIE Connectivity Project strategies and PULSE. Therefore, HHSC submitted an MMIS IAPD for FFY 2022 and FFY 2023, which CMS approved in September 2021. MMIS will now fund maintenance and operations as well as implementation activities for Strategies 2, 3 and PULSE. Strategy 1 will be supported by a combination of CMS and state funds outside of the MMIS IAPD.

2.5.2.4 Patient Unified Look-up System for Emergencies (PULSE)

PULSE is a nationwide health IT disaster response platform that can be deployed at the city, county or state level to authenticate and assist health care workers in disaster response. It was first developed as a non-proprietary, open-source software solution using ONC grant funding. HHS agencies are working with THSA to implement the initiative (HIETexas PULSE) as a cloud-based system for first responders in Texas during declared disasters.

PULSE allows verified and onboarded emergency responders to query and view read-only patient documents from all providers connected through health care exchanges, including the local HIEs and national networks (e.g., Surescripts®, eHealth Exchange, CommonWell and Carequality). These connections enable access to clinical data for over 205 million people and medication history for 324 million people. Available patient data may include medical histories, medications, allergies, diagnoses and lab results.

The FFY 2020/2021 goals for this initiative were to develop a plan and the PULSE application, test and launch the application, and implement the program. In August 2020, THSA began development of the HIETexas PULSE system in partnership with Audacious Inquiry. The PULSE COVID system was in operation throughout the 2020 hurricane season. The system has since been upgraded to the PULSE Enterprise Edition (PULSE EE). PULSE EE provides other capabilities, including additional user capacity, improved operational reporting and

integration with push data sources to support integrated family reunification. PULSE EE was not deployed in Texas during the 2021 hurricane season; however, it was activated and enrolled users in Louisiana after Hurricane Ida. The Louisiana experience will inform processes for broader deployment of PULSE EE, including activation in Texas.

DSHS is collaborating with THSA and the DSHS contractor responsible for operating Texas' emergency medical shelters to provide access to PULSE for qualified first responders in emergency shelters. PULSE is expected to provide important information for coordinating care for these at-risk patient populations.

DSHS also is exploring, in conjunction with THSA, the use of PULSE to support disease and chronic condition investigations and data gathering. The technology that can be used in emergency situations at the community or state level can be used on a smaller, individual scale to assist in collecting information necessary for monitoring cases of significant, highly infectious disease. Additionally, it can be used to collect data relevant to DSHS' birth defects registry, which relies on a look-back of issues impacting infants in their first year of life.

2.5.3 Implementation of Interoperability and Patient Access Rule and Other Federal Requirements

Recent federal rules from CMS and ONC seek to improve interoperability and health information access for patients, providers and payers while reducing the burden of certain administrative processes.[33] CMS and ONC published final rules on May 1, 2020 – the CMS Interoperability and Patient Access final rule[34] and the ONC 21st Century Cures Act final rule.[35]

The CMS regulations include policies that require or encourage payers to implement APIs to improve the electronic exchange of health care data – sharing information with patients or exchanging information between a payer and provider or between two payers. Specifically, the rule requires certain CMS-regulated payers

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[33] CMS. Policies and Technology for Interoperability and Burden Reduction webpage. https://www.cms.gov/Regulations-and-Guidance/Guidance/Interoperability/index, Accessed November 30, 2021.

[34] CMS. Interoperability and Patient Access final rule. https://www.federalregister.gov/documents/2020/05/01/2020-05050/medicare-and-medicaid-programs-patient-protection-and-affordable-care-act-interoperability-and. Accessed November 30, 2021.

[35] ONC. 21st Century Cures Act final rule. https://www.federalregister.gov/documents/2020/05/01/2020-07419/21st-century-cures-act-interoperability-information-blocking-and-the-onc-health-it-certification. Accessed November 30, 2021.

to establish patient access and provider directory APIs and requires payer-to-payer data exchange, which is encouraged through the use of a FHIR-based API. APIs can connect to mobile apps or to a provider EHR or practice management system to enable a more seamless method of exchanging information.

CMS provided guidance to state Medicaid and CHIP programs on these new federal requirements in a State Health Official letter dated August 14, 2020 (SHO # 20-003)[36] titled "Implementation of the CMS Interoperability and Patient Access final rule and Compliance with the ONC 21st Century Cures Act final rule." The letter provides guidance to state Medicaid agencies, Medicaid managed care plans, CHIP agencies and CHIP managed care entities on implementation in a manner consistent with existing guidance and the final rules published in the *Federal Register* on May 1, 2020.

The letter specifies the new requirements in the CMS Interoperability and Patient Access final rule that apply to Medicaid and CHIP agencies and managed care plans, including:

- Patient Access API – Implement and maintain a standards-based Patient Access API to enable beneficiaries to have access to health data (specified claims and encounter data, certain clinical information, and information about covered outpatient drugs) on internet-enabled devices such as smartphones. (Effective July 1, 2021)
- Payer-to-Payer Data Exchange – Coordinate care between payers by exchanging, at a minimum, the information contained in the United States Core Data for Interoperability (USCDI) so that if a patient transfers from one managed care plan to another, the patient may request that certain data be transferred to the new plan (e.g., letters of medical necessity, prior authorization requests). (Effective January 1, 2022. CMS will not take action to enforce compliance with these specific provisions until future rulemaking is finalized.[37])
- Provider Directory API – Make standardized information about provider networks available via a FHIR-based Provider Directory API to facilitate public access to accurate information about in-network providers. (Effective July 1, 2021)

[36] CMS. State Health Official Letter #20-003 RE: Implementation of the CMS Interoperability and Patient Access final rule and Compliance with the ONC 21st Century Cures Act final rule, August 4, 2020, https://www.medicaid.gov/federal-policy-guidance/downloads/sho20003.pdf, Accessed November 30, 2021.

[37] CMS 9115-F FAQs. https://www.cms.gov/about-cms/health-informatics-and-interoperability-group/faqs, Accessed November 30, 2021.

- Dual Eligible Experience – Improve the Dual-Eligible Experience by state Medicaid agencies exchanging certain data on dual eligible beneficiaries with CMS daily. (Effective April 1, 2022)

HHSC and its contracted health plans are working to comply with these requirements.[38] HHSC has added a requirement to the *Uniform Managed Care Manual* that effective January 1, 2022, each MCO must comply with a person's request to have the person's health data transferred from payer to payer.[39] The rule finalizes the requirements in 42 C.F.R. § 438.62(b)(1)(vi) and (vii) for the creation of a process for the electronic exchange of, at a minimum, the data classes and elements included in the USCDI content standard adopted at 45 C.F.R. § 170.213.

SHO # 20-003 also outlines that the ONC 21st Century Cures Act final rule has potential implications for Medicaid agencies, CHIP agencies, Medicaid managed care plans and CHIP managed care entities. Of particular importance are the definition of health information network or HIE and the information blocking exceptions. Medicaid and CHIP entities also should review existing contractual and financial relationships, particularly related to API usage and access, to ensure compliance with the 21st Century Cures Act final rule.[40]

Two of the policies from the May 2020 CMS Interoperability and Patient Access final rule went into effect on July 1, 2021. On April 30, 2021, the requirements for hospitals with certain EHR capabilities to send ADT notifications to other providers went into effect. And, on July 1, 2021, CMS began to enforce requirements for certain payers to support Patient Access and Provider Directory APIs.[41]

For the hospital ADT requirement, each hospital, including a psychiatric hospital or critical access hospital that uses certified EHR technology, must demonstrate that it has made a reasonable effort to ensure that its system sends required ADT notifications to all post-acute care services providers and suppliers, as well as to any of the following practitioners and entities, which need to receive notification of the patient's status for treatment, care coordination or quality improvement purposes:

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[38] HHSC requires compliance with these provisions in *Uniform Managed Care Contract*, Section 8.1.30 (patient APIs) and Section 8.1.30.1 (payer-to-payer data exchange).

[39] *Uniform Managed Care Manual*, 8.1.30.1 Payer-to-Payer Data Exchange

[40] CMS. State Health Official Letter #20-003 RE: Implementation of the CMS Interoperability and Patient Access final rule and Compliance with the ONC 21st Century Cures Act final rule, August 4, 2020, https://www.medicaid.gov/federal-policy-guidance/downloads/sho20003.pdf, Accessed November 30, 2021.

[41] CMS. Policies and Technology for Interoperability and Burden Reduction webpage. https://www.cms.gov/Regulations-and-Guidance/Guidance/Interoperability/index, Accessed November 30, 2021.

- The patient's established primary care practitioner; or
- The patient's established primary care practice group or entity; or
- Other practitioner, or other practice group or entity, identified by the patient as the practitioner, or practice group or entity, primarily responsible for his or her care.

Texas hospitals may be meeting this requirement by sharing ADT data directly or via a local HIE, THSA and/or a national/EHR-specific network. As discussed elsewhere in this report, widespread, timely sharing of ADT notifications is a fundamental step to improving care coordination and patient outcomes.

2.5.4 Medicaid Management Information System

The MMIS is the primary information technology system and technological "backbone" of the Texas Medicaid program, which services over 4.3 million Texans annually. This is one in seven Texans and accounts for 27 percent of the state fiscal year 2019 budget.[42] The MMIS is operated by a fiscal agent under contract with HHSC. The MMIS is an eco-system composed of multiple applications, modules and subsystems grouped into seven functional areas: recipient, provider, reference files, third party liability, claims and encounter processing, surveillance and utilization review, and management and administration reporting.

The MMIS manages enrollees, manages providers, and provides operations management for payment criteria, medical and dental policy, benefit rules edits and audits, claims adjudication, and collection of other third party liability coverage. The MMIS also collects and edits encounter data from Medicaid managed care organization payment systems for purposes of data capture and reporting. While essential to the efforts related to Medicaid HIE and EHR activities, the normalized data within the MMIS is used to compile, report, and prevent fraud, waste, and abuse through the surveillance and utilization review functionality. The MMIS also includes the Claims and Encounters Data Warehouse that serves as a storage, archive and a Decision Support System platform for all Medicaid claim and encounter data and all CHIP encounter data. The major components of the existing MMIS system include, but are not limited to, those described in Appendix B.

HHSC is facilitating current work-in-progress for the existing MMIS, leading towards advancement along the MITA continuum and the HHSC vision for the new MMIS. Each strategic project identified in the MMIS Modernization Plan serves to improve

[42] Texas HHS. *Texas Medicaid and CHIP Reference Guide, Thirteenth Edition, 2020*. https://www.hhs.texas.gov/reports/2020/12/texas-medicaid-chip-reference-guide-thirteenth-edition-pink-book, Accessed November 30, 2021.

the overall maturity of MITA business processes, which include efforts to achieve greater consistency in data.

HHSC contracts for the management of Pharmacy Claims and Rebate Administration (PCRA). The contract includes the processing of pharmacy claims, collection of associated data and management of rebates. The PCRA system, along with systems for drug prior authorization and utilization review, will be replaced as part of MMIS modernization efforts. The current PCRA system includes an interface to a national e-prescribing network. This connection allows prescribers with a certified EHR to access medication history for Medicaid clients and Medicaid formulary and pharmacy benefit information during the e-prescribing process.

As further described in the To-Be section of this plan, HHSC released several solicitations between late fall 2021 and January 2022 to procure the service components for a modernized, modular MMIS. It is expected that HHSC's new service model will require minimal customization and will support HHSC's transition to national standard code sets.

2.5.5 Implementation of MITA State Self-Assessment Findings

The MITA 3.0 state self-assessment (SS-A) completed in 2020 noted that although each of the Texas HHS operating agencies has sound internal processes and systems, Texas HHS needs to continue increasing MITA maturity. The assessment identified this could be accomplished by focusing on sharing data, aligning common processes and actively managing the satisfaction level of providers, members and other entities that interact with the enterprise.

Part of the rationale of MITA is to review an organization's business processes across Medicaid and help identify capabilities and plan to improve the maturity levels of these processes across the Medicaid system. This requires executive decision-making and guidance as to what level of integration and standardization will be developed across Medicaid.

As the 2020 MITA 3.0 SS-A stated, "Data shared across agencies represents the highest priority opportunity for service development across HHS." The goal of any Enterprise Architecture, like MITA, is to reduce barriers to effectively working together, reduce processes and information flows since they make more work for providers who serve clients with multiple needs, and eliminate duplicative technology design, development, and implementation costs.

Texas HHS completed the most recent MITA 3.0 SS-A in 2020.[43] The process is a self-reporting of the current As-Is and future To-Be maturity levels based on questions and descriptions provided in the MITA framework.

The MITA 3.0 SS-A found that the business areas that were the largest contributors to MITA maturity improvement as of 2020 were:

- Business Relationship Management;
- Financial Management;
- Operations Management;
- Performance Management; and
- Provider Management.

As described in the Texas 2020 MITA 3.0 SS-A, factors that led to this improvement were:

- The implementation of the System of Contract Operations and Reporting (SCOR) contract management system and the Centralized Accounting and Payroll/Personnel System (CAPPS) Financial system led to Business Relationship Management improvements associated with information accessibility, efficiency, cost-effectiveness of the process and accuracy of the information.
- The implementation of the Premiums Payable System and reported improvements in stakeholder satisfaction with IRS form 1099 processing improved Financial Management maturity scores.
- Enhancements to the Prior Authorization on the Portal application and improved Transformed Medicaid Statistical Information System (T-MSIS) processing led to higher Operations Management maturity scores.
- Greater availability of federal data and improved stakeholder satisfaction led to an increased level of MITA maturity for Performance Management.
- The MITA maturity for Provider Management improved due to increased standardization, automation, timeliness and efficiency of these processes from the implementation of the Provider Enrollment on the Portal application and the availability of federal data exchange information.

In addition, the MITA business areas that were identified in the 2020 MITA 3.0 SS-A with the largest expected (To-Be) maturity improvements over five years included:

- Eligibility and Enrollment Management;
- Contractor Management;
- Operations Management;
- Performance Management;

[43] Information on Texas MITA SS-A in 2020 provided by HHS staff.

- Plan Management; and
- Provider Management

The factors that led to these business areas having the largest expected (To-Be) maturity improvements, per the 2020 MITA 3.0 SS-A, were:

- Expected improvements in Enrollment Broker data analytics and automatic enrollment of Medicaid clients into managed care were expected to improve the To-Be maturity scores for Eligibility and Enrollment Management.
- The implementation of the TexConnect application was expected to improve data accuracy and accessibility leading to higher To-Be maturity scores for Contractor Management.
- The planned replacement of the current claims processing system with a managed claims services arrangement was expected to improve the To-Be maturity scores for Operations Management.
- The planned replacement of the Medicaid Fraud and Abuse Detection System (MFADS) and improved accessibility to federal data, such as the nationwide provider exclusion list, was expected to improve To-Be maturity scores for Performance Management.
- The implementation of the Provider Management and Enrollment System was expected to improve the To-Be maturity scores for the Eligibility and Enrollment Management, Operations Management, Performance Management and Provider Management MITA business areas.

It is important to note that the Care Management business area had the lowest As-Is and To-Be MITA maturity compared with the other eight MITA business areas: "…there has been almost no improvement in the As-Is maturity from the 2015 to the 2020 assessment, and there is very limited improvement in the 2020 To-Be scores that are reflective of the lack of expected activity in Care Management over the next five years."

Care Management covers programs over a wide range of services such as home-based personal care services, early childhood through youth services, and mental health and substance use disorder services. The MITA SS-A noted that there are over 15 applications associated with Care Management programs, with some applications, such as Compass21, MAX-eb, TexMedCentral and TIERS widely used throughout Medicaid processing. However, there are also applications, such as the Client Assignment and Registration System (CARE), that are very complex systems running on older mainframe technology that serve both Medicaid and non-Medicaid patients and providers. These systems do not easily fit the MMIS category of "mechanized claims processing and information retrieval systems," so MMIS funding for enhancements and/or replacements for these systems is not available. The current need for enhancements and/or replacement of these systems, as

appropriate, significantly impacts Texas' MITA maturity and the ability to more effectively manage these programs. Future maturity increases in the Care Management area will be based on program prioritization and funding availability.

In the 2020 MITA 3.0 SS-A, recommendations to improve MITA maturity were as follows:

- Many business processes had lower maturity levels based on timeliness. A review of these business processes and rules/legislation that requires specific timeframes (e.g., appeals) could improve these maturity levels.
- Staff recommended a review of current complex business processes including the development of process flow diagrams to help improve maturity scores associated with efficiency and cost-effectiveness.
- MITA requires a survey, questionnaire or equivalent method to measure stakeholder satisfaction. Program areas could devise a survey or other feedback to measure satisfaction and thus improve MITA maturity. Stakeholder feedback could be included in the agency's performance management measures.
- Ensuring business processes are reviewed and optimized when implementing modernized MMIS systems would improve the timeliness and efficiency of business processes.
- Implementation of modernized MMIS systems would reduce manual tasks, foster the use of national standards, and improve the accuracy and accessibility of information.

2.5.6 Interoperability Center of Excellence

DSHS, in collaboration with HHSC, has been developing the Interoperability Center of Excellence (iCoE), formerly known as Integration and Data Exchange Center of Excellence. iCoE is a technology platform that is intended as a service, supporting data exchange between HHS agencies and health care providers, MCOs and other trading partners. This service incorporates a commercial-off-the-shelf software tool to receive, transform and route messages to the appropriate system, supporting both incoming and outgoing messages. The iCoE currently supports the exchange of select public health data, such as syndromic surveillance, and will evolve to support the exchange of data for a broad range of HHSC and DSHS programs, including EDEN data, data from the state's local mental health authorities and data from private health care providers.

The iCoE is intended to be flexible, enabling the exchange of data either through leveraging HIEs' connections to providers or directly between health care providers and state agencies. State staff can route messages to the appropriate receiving system(s), transform messages into the appropriate formats, and support real-time FHIR-based connections. The iCoE has the capability to transform messages between

transmission formats, and conduct validity and format checking. A primary connection point for the iCoE is THSA, supporting HHSC's receipt of statewide clinical data from Medicaid providers linked to local HIEs that are connected to HIETexas. HHSC then may leverage the capabilities of the iCoE for anticipated large volumes of clinical data transmitted from Medicaid providers, including standardized ADT data related to EDEN, other clinical data and lab reports for Medicaid clients. DSHS has made a commitment to transform its information systems to use the iCoE. For each DSHS system that relies on data exchange with external systems, as these systems are replaced or undergo a major overhaul, the use of the iCoE is reviewed as part of the IT governance process. There are challenges to this process, including funding and the time required to modify other commercial-off-the-shelf systems to use its capabilities. In addition, some commercial systems are not modular; therefore, it may be complicated to integrate them with the iCoE.

2.5.7 Healthcare Transformation and Quality Improvement Program 1115 Waiver

The Texas Healthcare Transformation and Quality Improvement Program 1115 waiver (1115 Waiver), initially approved by CMS in December 2011, enabled the expansion of the managed care delivery model statewide for Medicaid in Texas. The initial 1115 Waiver also included two supplemental funding pools, the Delivery System Reform Incentive Payment (DSRIP) program and the Uncompensated Care (UC) program. The non-federal share of these programs was approved by CMS to use funds from local governmental entities.[44]

The UC program helps offset the costs of uncompensated care by hospitals and other providers. The DSRIP program provides incentives to performing providers to implement programs, strategies and investments to improve health outcomes. Performing providers include hospitals, community mental health centers, physician groups primarily associated with academic health science centers and local health departments.[45]

2.5.7.1 Delivery System Reform Incentive Payment Program Transition

Texas received approval from CMS for a renewal of the 1115 Waiver in December 2017, which authorized DSRIP through September 30, 2021 with a waiver end date of September 30, 2022.

DSRIP has enabled groundbreaking work, including increased regional and cross-regional collaboration among diverse health care providers and stakeholders,

[44] Texas HHS. Waiver Overview & Background Resources webpage. https://hhs.texas.gov/laws-regulations/policies-rules/waivers/waiver-overview-background-resources, Accessed November 30, 2021.

[45] Ibid.

investments in infrastructure, and innovation to improve systems of care. Texas' DSRIP program has resulted in increased access to primary and preventive care, ED diversion, and enhanced services for people with behavioral health needs.

DSRIP was not intended as an ongoing program. In the December 2017 Waiver renewal Special Terms and Conditions (STCs), Texas was required to submit a transition plan to CMS. The DSRIP Transition Plan approved by CMS in August 2020 contains specific goals for next steps in delivery system transformation. Milestones are categorized by the following broad goals:

- APMs that target specific quality improvements.
- Support further delivery system reform that builds on the successes of the Waiver and includes current priorities in health care.
- Explore innovative financing models.
- Develop cross-focus areas such as social drivers of health that use the latest national data and analysis to continue to innovate in Texas.
- Strengthen supporting infrastructure for increased access to health care and improved health for Texans.[46]

2.5.7.2 Health IT Strategic Plan

The 1115 Waiver renewal in December 2017 (STC #39) required HHSC to develop a Health Information Technology Strategic Plan related to activities in the demonstration that will "link services and core providers across the continuum of care to the greatest extent possible" using health IT initiatives and strategies. This plan aligns with the SMHP. The state is expected to achieve minimum standards in foundational areas of health IT and to develop its own goals for the transformational areas of health IT use.[47]

The Health IT Strategic Plan includes milestones relating to health IT adoption by Medicaid service providers, plans for the exchange of clinical health information related to Medicaid clients statewide and advances the use of standards identified in the "Interoperability Standards Advisory—Best Available Standards and Implementation Specifications" (ISA). These efforts align with critical initiatives advanced by the 21st Century Cures Act to enhance interoperability,

[46] HHSC. Draft DSRIP Transition Plan. September 30, 2019. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/Waivers/medicaid-1115-waiver/1115-medicaid-waiver-tools-guidelines-regional-healthcare-partnership-participants/draft-revised-dsrip-transition-plan.pdf, Accessed September 16, 2021.

[47] CMS. Texas 1115 Waiver extension approval, December 21, 2017. https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/tx/Healthcare-Transformation-and-Quality-Improvement-Program/tx-healthcare-transformation-demo-ext-12212017.pdf, Accessed September 16, 2021.

prohibit information blocking and provide patients with easier access to their electronic health data.[48]

STC #39 also requires that through semi-annual reporting, Texas explain how it has, or intends to, meet the goals outlined in the Health IT Strategic Plan. In its most recent semi-annual report for the Waiver submitted March 1, 2021, HHSC provided this update.[49] The milestones outlined in the 1115 Waiver *Health IT Strategic Plan* relate to Texas' IAPD for HIE Connectivity, which is described in detail in Section 2.5.2 of this plan.

2.5.7.3 Directed Payment Programs

The DSRIP Transition Plan includes 10 milestones to continue health care transformation in Texas in the next waiver cycle.

Milestone 3 – "Support Further Delivery System Reform" – includes new programs that were proposed to begin September 1, 2021.

Four of these programs shift from the DSRIP program pool funding to advancing delivery system reform and supporting providers through Medicaid managed care Directed Payment Programs (DPPs):

- Texas Incentives for Physician and Professional Services (TIPPS);
- Comprehensive Hospital Increased Reimbursement Program (CHIRP);
- Directed Payment Program for Behavioral Health Services (DPP BHS); and
- Rural Access to Primary and Preventive Services (RAPPS).

HHSC submitted proposals for these programs as well as the ongoing Quality Incentive Payment Program (QIPP) for nursing facilities to CMS in early 2021. As of March 25, 2022, HHSC has received approval from CMS of the DPPs. Each program includes specific reporting requirements that could support the use of electronic clinical records and/or health information exchange.

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[48] HHSC. *Health Information Technology (Health IT) Strategic Plan*, November 2019. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/1115-waiver/waiver-renewal/attachment-n-health-it-strategic-plan.pdf, Accessed November 30, 2021.

[49] HHSC. *1115 Waiver Monitoring Report*, Submitted March 1, 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/1115-waiver/waiver-renewal/2020-q4-1115-report-draft.pdf, Accessed November 30, 2021.

Health IT/HIE Related Structure Measures in HHSC's Proposed Directed Payment Programs*[50]

Program	Measure	Description
CHIRP (Hospitals)	Written transition procedures that include formal MCO relationship or EDEN notification/ADT feed for psychiatric patients	Reporting on status of developing and implementing policies and procedures for providing a member's managed care plan with expedient notification of hospitalization for psychiatric illness.
CHIRP (Hospitals)	Written transition procedures that include formal MCO relationship or EDEN notification/ADT feed for non-psychiatric patients	Reporting on status of developing and implementing policies and procedures for providing a member's managed care plan with expedient notification of hospitalization.
CHIRP (Hospitals)	HIE Participation	Reporting on status with enrollment in a public HIE, including submission of ADT and C-CDA data
TIPPS (Physician Practice Groups)	HIE Participation	Reporting on status with enrollment in a public HIE
DPP BHS (Community Mental Health Centers)	Participate in electronic exchange of clinical data with other health care providers/entities	Reporting on participation in electronic exchange of clinical data with other health care providers/entities
RAPPS (Rural Health Clinics)	Use of Electronic Health Record (EHR)	Reporting on use of EHR

*TIPPS, DPP BHS and RAPPS also have telehealth related measures.

In particular, the CHIRP proposal includes a reporting requirement on a hospital's progress in sharing ADT data to support care coordination. CHIRP has two components: Uniform Hospital Rate Increase Program (UHRIP) and Average Commercial Incentive Award (ACIA). Hospitals apply for participation in CHIRP and can opt into the ACIA component. For the ACIA component, the following measures are included that focus on ADT data:

[50] HHSC. Medicaid & CHIP Directed Payment Programs webpage. https://www.hhs.texas.gov/services/health/medicaid-chip/provider-information/medicaid-chip-directed-payment-programs, Accessed November 30, 2021.

- Written transition procedures that include formal MCO relationship or EDEN notification/ADT Feed for psychiatric patients; and
- Written transition procedures that include formal MCO relationship or EDEN notification/ADT Feed for non-psychiatric patients.

As a condition of participation in the program, a hospital must report data for all measures for which it is eligible. Both of the measures above are structure measures. For a structure measure, a provider must submit responses to qualitative reporting questions that summarize a hospital's progress towards implementing the measure. While they must submit qualitative reporting, hospitals are not required to implement structure measures as a condition of reporting or program participation.[51]

2.5.8 Medicaid Managed Care, Value-Based Care and Data-Sharing Requirements

Almost all Texas Medicaid clients receive services through risk-bearing managed care organizations that coordinate care and reimburse providers for health services provided to members enrolled in their plan. Since the 1990s, Texas has gradually expanded managed care to different populations and geographic areas of the state. As of the development of this report, there are 17 MCOs and three Dental Contractors (DCs) serving more than 95 percent of Texas' over 4 million Medicaid clients and all CHIP clients. Texas' Medicaid and CHIP managed care programs are as follows:

- State of Texas Access Reform (STAR) mainly covers pregnant women and children.
- STAR+PLUS is for adults who have a disability or who are 65 and older. It also covers people who are enrolled in both Medicaid and Medicare.
- STAR Kids serves youth and children with disabilities.
- STAR Health serves children in the conservatorship of the Department of Family and Protective Services and some young adults previously in foster care.
- CHIP covers lower income children and youth who do not otherwise qualify for Medicaid, typically because their family income is just above Medicaid limits.[52]

One of the goals of transitioning from fee-for-service (FFS) to managed care is to provide value-based care. In managed care, care coordination is provided by the

[51] HHSC. CHIRP Requirements. https://www.hhs.texas.gov/sites/default/files/documents/services/health/medicaid-chip/provider-information/dpp/chirp-requirements.pdf, Accessed November 30, 2021.

[52] HHSC. *Alternative Payment Models in Medicaid* (Submitted for Texas DSRIP Transition Plan), March 2021. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/Waivers/medicaid-1115-waiver/alternative-payment-models-texas-medicaid.pdf, Accessed November 30, 2021.

MCO, which serves to establish a medical home for members, improve access to care and ensure quality, cost-effective services.[53] Timely access to clinical and claims data is needed for coordination of care. Data sharing, whether by an MCO, DC or provider, is essential for managed care providers with APM contracts that need regular information from MCOs on their patients' health to pursue agreed upon quality metrics.[54]

2.5.8.1 Texas 1115 Waiver *Health IT Strategic Plan* Health IT Goals

Texas' 1115 Waiver *Health IT Strategic Plan* discusses how Medicaid managed care can be leveraged to inform the transition to value-based care as a growing proportion of MCO contracts with providers include APMs. As Medicaid MCO payment models change, health information sharing across the state's health IT ecosystem becomes more relevant. Texas Medicaid also has several managed care oversight initiatives underway that relate to information sharing, such as a focus on continuous organizational improvement and increasing transparency between providers and members.

In the strategic plan, Texas Medicaid included the following health IT goals specific to the 1115 Waiver:

(1) Incorporate health IT as a foundational component for the Medicaid managed care delivery model, procurement and HHSC contract oversight efforts.

(2) Support the development and maintenance of a coordinated care delivery system by facilitating the timely exchange of clinical, health risk and other data among Texas Medicaid stakeholders.

(3) Support transition to value-based models across managed care and providers by:

   a. Expanding the use of metrics that integrate administrative, clinical, relevant health risk and other data.

   b. Improving the timely availability of actionable information for decision making by patients, providers and payers.

   c. Translating health IT best practices from the DSRIP program into managed care programs.

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[53] HHSC. *Thirteenth Edition Texas Medicaid and CHIP Reference Guide*. 2020. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/medicaid-chip-perspective-13th-edition/13th-edition-complete.pdf, Accessed November 30, 2021.

[54] HHSC. Alternative Payment Models in Medicaid (Submitted for Texas DSRIP Transition Plan), March 2021. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/Waivers/medicaid-1115-waiver/alternative-payment-models-texas-medicaid.pdf, Accessed November 30, 2021.

(4) Promote MCOs' use of health IT to manage member health care and related needs, with an emphasis on prevention.

(5) Promote Medicaid provider connectivity to the overall Texas health IT ecosystem.

2.5.8.2 Advancing the Use of Health IT to Support Quality Measurement

The ability of the Texas Medicaid managed care program to transition to value-based payment and pursue meaningful health care quality improvement goals depends crucially on the availability of performance metrics that can reliably and consistently measure progress across all aspects of the program. These measures should leverage established data standards and consensus specifications to advance the aims endorsed by the National Academy of Medicine (formerly the Institutes of Medicine) in *Crossing the Quality Chasm*[55] that care should be safe, effective, patient-centered, timely, efficient and equitable. Within the Texas Medicaid managed care program, all major initiatives focused on improving quality and building value begin with data and center on measurement (see Appendix C for a description of Texas Medicaid Value-Based Initiatives).

Despite this commitment to data driven decision-making, Texas Medicaid, like nearly all health care organizations, has opportunity for improvement. A recent report by the state's Value-Based Payment and Quality Improvement Advisory Committee, a multi-disciplinary panel of experts and health care industry leaders established by the Executive Commissioner of HHSC to help shape the direction of APMs and other value-based initiatives in Medicaid, found that a significant amount of data is potentially available to support health care quality. This panel, however, found "that doesn't mean that HHSC, its contracted health plans and their network providers always have the information necessary to provide high-value, coordinated care. HHSC must have informative data – both clinical and administrative – to guide the program, and health plans and providers must have access to timely, trusted information as a foundation for engaging in value-based payment arrangements."[56] Ultimately, according to the advisory committee, to fully implement effective value-based and quality improvement initiatives, Texas HHS and Medicaid will need an informatics strategy that enables near real-time learning and incorporates both clinical and administrative data into robust

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[55] *Crossing the Quality Chasm: A New Health System for the 21st Century*. Institute of Medicine (US) Committee on Quality of Health Care in America. Washington (DC): National Academies Press (US); 2001.

[56] Texas Value Based Payment and Quality Improvement Advisory Committee (2018). *Recommendations to the 86th Texas Legislature: Opportunities to Advance Value-Based Payment in Texas.* https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2019/value-based-payment-qual-improvement-recommendations-nov-2018.pdf, Accessed November 30, 2021.

measures of performance. These next generation informatics tools increasingly should guide decisions at every level, from state policymaker to clinician to individual patient.

To support this emerging emphasis on analytics, best practice and patient empowerment, Texas HHS is working to bring analytics that include both clinical and administrative data to the forefront of health care quality measurement and improvement. Clinical data refers to the information derived from the medical interaction between a provider and a patient, including: medications, allergies, problem list, physical examination findings, laboratory results and results from other diagnostic testing. Integrating, linking and analyzing this data with existing administrative or claims data submitted to document health care reimbursements promises to broaden the possibilities for successful value-based payment and quality improvement initiatives. At the same time, care must be taken to ensure that providers are encouraged to provide services to patients with complex needs and when health improvements may not be readily achievable.

Over the past two decades, analyses of administrative data have evolved to more reliably measure fidelity to recommended processes of care, i.e., whether a patient received appropriate services. However, in a value-based environment, measures used for decision making, quality improvement and payment must look beyond process to consider outcomes, prevention and control of disease, and environmental and behavioral risks for poor health.

For example, as value-based payment and quality improvement systems become more advanced, indicators recommended by experts through organizations such as the National Quality Forum to identify high achievement in a field such as diabetes care generally look something like the following:

- A patient's most recent HbA1C in the measurement period has a value < 8.0;
- The most recent blood pressure in the measurement period has a systolic value of < 140 and a diastolic value <90; and
- The patient is currently a nonsmoker.

While claims are suitable for identifying a population of people with diabetes and some basic measures of quality, clinical and health risk data, such as blood pressure control and tobacco use, are needed to truly understand and improve the effectiveness of care delivery. Moreover, the near real-time availability of electronically exchanged clinical data will significantly accelerate the time horizon for clinical and evaluative decision-making, expanding the possibilities for rapid-cycle improvement approaches.

Ultimately, individual patients and the public will benefit from the timely computation, analysis and reporting of enhanced quality indicators based on combined clinical and administrative data, because it paves the way to a more accountable, learning healthcare system.

2.5.8.3 Alternative Payment Methodology Contract Targets with Providers

HHSC began assessing payment methodologies between MCOs and providers beginning in 2012. These early reviews indicated that while MCOs received capitated premiums from HHSC and generally operated in a value-based environment, they still predominantly reimbursed providers using a fee-for-service approach, thus maintaining incentives for volume over value in the payment model.

To help promote transformation to a Medicaid system that rewards the achievement of good patient outcomes at lower cost, HHSC created contractual targets for MCOs to link a portion of provider payments to value using APMs starting in calendar year 2018. APMs are value-based contracting models where providers assume increased accountability for quality and may also assume responsibility for total cost of care. The term is often used synonymously with value-based payment (VBP) but may also refer to a more systematic approach to VBP in which APMs exist along a continuum with progressively greater emphasis on the management of a population (e.g. shared savings, bundled payments and capitation). MCOs must meet targets both for overall value-based payment and for risk-based APMs. If an MCO fails to meet the APM targets or certain allowed exceptions for high performing plans, the MCO must submit a corrective action plan and HHSC may impose contractual remedies, including liquidated damages.

Within its managed care APM program, HHSC requires that MCOs implement processes to share data and performance reports with providers on a regular basis.[57] MCOs must dedicate sufficient resources for provider outreach and negotiation, assistance with data and/or report interpretation, and other activities to support a provider's improvement. To the extent possible, HHSC encourages MCOs within managed care service delivery areas to collaborate on development of standardized formats for the provider performance reports and data requested from providers. However, to date, there is little evidence of such collaboration.

[57] HHSC Uniform Managed Care Manual, 8.1.7.8.2 MCO Alternative Payment Models with Providers

Year	Overall Target	Risk Based Target
2018	25% of medical expense in a VBP model for MCOs and dental contractors (DCs)	10% of medical expense in a risk based VBP model for MCOs; 2% for DCs
2021	50% of medical expense in a VBP model for MCOs and DCs	25% of medical expense in a risk based VBP model for MCOs; 10% for DCs

The APM initiative, which aligns with the nationally recognized framework established by the Health Care Payment Learning and Action Network,[58] has already seen some initial progress at aligning payment with value. As of the beginning of 2018, even before the effective date of initial contractual targets, about 40 percent of MCO payments to providers for medical services has migrated to a value-based model.

Electronic clinical quality measures (eCQMs) help to measure and track the quality of health care services, based on data generated by a provider's EHR. The availability of clinical metrics will strengthen opportunities for MCOs and providers to adopt more powerful APMs that move closer to population-based payment. The state also sees potential for these measures to help reduce administrative complexity associated with the changing payment model.

Administrative complexity lowers provider productivity and satisfaction and diverts energy and resources that otherwise could go toward improving patient care. The Value-Based Payment and Quality Improvement Advisory Committee plans to devote a significant portion of its upcoming work on ideas to harmonize VBP approaches, including by recommending common outcome measures for use in APMs. Standardized eCQMs will be considered as part of these deliberations and should support administrative simplification related to the APM initiative.

Federal and state law for Medicaid managed care require ongoing reporting on MCO performance as well as continuous quality improvement. The electronic exchange of data and availability of robust clinical quality measures will invigorate these current efforts. The state's External Quality Review Organization (EQRO) routinely assesses quality, timeliness and access to health care for Texas

[58] Health Care Payment Learning & Action Network. *Alternative Payment Models (APM) Framework*. July 11, 2017. https://hcp-lan.org/apm-refresh-white-paper/, Accessed November 30, 2021.

Medicaid and CHIP recipients.[59] Metrics reported by the EQRO are used for several critical purposes to promote quality improvement and value, including the development of report card ratings for individual health plans. In addition, the EQRO plays a central role in facilitating MCO Performance Improvement Projects (PIPs). Each health plan is required to conduct two, two-year PIPs per Medicaid program they are contracted to operate.

At least one of these projects must be collaborative, involving another MCO, DSRIP providers and/or community-based organizations. PIPs typically follow a recognizable quality improvement (QI) cycle encompassing root cause analysis, baseline measurement, intervention, remeasurement and assessment.

Recent projects have covered priority QI topics such as improving control of asthma and high blood pressure and reducing potentially preventable hospital and emergency department admissions, all areas that intersect with eCQMs.

Appendix C provides additional information on Texas Value-Based Initiatives.

2.5.8.4 Care Coordination under the Managed Care Delivery System

To address their care needs comprehensively, patients often require multiple touchpoints within a single provider's care team or must be seen by multiple provider types across the spectrum of physical health, behavioral health, and home- and community-based services providers. Further, as the complexity of a patient's needs increases, so does the potential for medical errors, duplication of services and unnecessary or duplicative tests. To compound this complexity, the ability of a patient to achieve optimal health outcomes may be intertwined with medically relevant non-clinical factors, such as access to adequate housing, transportation and social supports.

One of the promises of Medicaid managed care both in Texas and across the nation is to optimize care coordination. The long-term pathway to the most effective care coordination would include providers using certified EHR technology to integrate all relevant patient care information and distribute or enable access to that information effectively among authorized partners and providers providing care for the patient.[60]

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[59] Institute for Child Health Policy (2018). *Summary of Activities and Value-Added Services State Fiscal Year 2018: Quality, Timeliness, and Access to Health Care for Texas Medicaid and CHIP Recipients*. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2019/eqro-summary-of-activites-report-contract-yr-2018.pdf, Accessed November 30, 2021.

[60] ONC. Improve Care Coordination webpage. https://www.healthit.gov/topic/health-it-basics/improve-care-coordination, Accessed November 30, 2021.

MCOs, as Medicaid payers charged with facilitating care coordination for their members, work directly with hospitals and providers to provide funding and technical assistance for connectivity between providers and HIEs and EHR interoperability related to health data exchange.

Findings of a study directed by the 2018-2019 Texas General Appropriations Act,[61] which required that HHSC conduct a review of the agency's contract management and oversight for Medicaid managed care contracts, further supports the role of health IT in care coordination. The Rider 61 report acknowledged that the HIE Connectivity Project was introduced with "the primary objectives of advancing care coordination through increased HIE adoption and use by Texas Medicaid providers and creating additional capacity in Texas that can support that use and adoption."[62]

Consistent with Rider 61, HHSC developed several focused initiatives for improving Medicaid managed care oversight, including an initiative to make improvements related to service and care coordination within managed care. HHSC's Managed Care Oversight Improvement Initiative related to care coordination and service management intends to:

- Analyze other state Medicaid programs to assess best practices for care coordination within Texas' managed care programs;
- Address any state-level barriers that hinder MCO delivery of care coordination services;
- Simplify terminology and clarify definitions of service coordination and service management activities across product lines; and
- Identify possible improvements to ensure service coordination and service management is consistent within HHSC contract requirements.

Within these initiatives is the opportunity to assess how health IT and HIE can overcome barriers to care coordination and service management and identify opportunities for improvement in the contract requirements within Texas' Medicaid managed care models. For example, there could be an assessment of the clinical information exchanged between HHSC, DSHS, MCOs and Medicaid providers and requirements for how information is conveyed from MCOs to their staff who serve care coordination functions.

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[61] S.B. 1, 85th Legislature, Regular Session, Article II, HHSC, Rider 61(b)

[62] HHSC. *Rider 61 (b): Evaluation of Medicaid and CHIP Managed Care Review of Managed Care Contract Review and Oversight Function, Summary of Findings,* August 3, 2018. https://www.hhs.texas.gov/sites/default/files/documents/about-hhs/process-improvement/managed-care-oversite/rider-61b-evaluation-medicaid-chip-managed-care.pdf, Accessed November 30, 2021.

2.5.8.5 Medicaid MCO Participation in Health Information Exchange

To effectively coordinate member care and engage in more advanced APMs with providers, Medicaid MCOs have an incentive to engage with state and local HIEs within Texas and also national information networks to obtain clinical and utilization data for their members, such as hospital ADT data. For this plan, HHSC polled the Medicaid MCOs and dental contractors about their engagement with regional and national HIEs. Eight of the 17 MCOs and 1 of 3 DCs responded. Based on the survey responses:

- 5 of the 8 MCO respondents receive inpatient and emergency department ADT data on their members from one or more of the regional HIEs in Texas;
- Some of these 5 also receive the following additional data: medication history, lab results, imaging results and immunization history;
- 4 MCOs receive data regarding their members from one or more national/other HIEs/registries (including HIE vendors and Texas' ImmTrac2 system for immunizations);
- 4 MCOs share some HIE data with either the patient's PCP or other providers for care coordination; and
- None of the 8 MCO respondents indicated they provide data to an HIE.

Based on a review of the five Texas local HIEs' websites, it appears at least two additional Medicaid MCOs are participating in some way with one more local HIEs. Multiple MCOs have also begun the process to onboard to HIETexas to obtain ADT notifications on a statewide basis, with plans to go live in early 2022.

While the responding MCOs indicated they need discharge summary information and other meaningful clinical information to better coordinate care, they cited the following obstacles to data exchange:

- Existence of multiple and overlapping access points for data/electronic connectivity; fragmentation of local HIEs;
- Not all large hospital systems participate in data exchange; consistency of provider participation; lack of behavioral health information;
- Inconsistency of provider reporting;
- Doctor/provider office workflows and health plan workflows to actually use the data that is available;
- Incorporating HIE and EMR-driven data into various EHR (provider office) and care management and other platforms (MCO) – technological integration, data accessibility;
- Cost variation for connectivity;
- Accessibility; and
- Timing of data exchange between providers and HIEs.

2.5.8.6 Medicaid Managed Care Organization and Dental Contractor Portals

MCO and DC portals present the opportunity to empower providers with information to effectively coordinate member care and provide members with the information to understand their health and better advocate for their needs.

In August 2016, HHSC polled the 19 Medicaid health care MCOs and two Medicaid dental contractors about their portal capacity. MCOs were asked about the data that network providers could access as well as the types of data that MCO members could access. More MCOs made health data about members available to network providers than to the MCO members themselves. Only 8 of the 19 MCOs made data about the primary categories of health data about which the MCOs were polled (claims-based data, prescription history and clinical data) available to MCO members. These portal poll results follow:

Information Accessible to MCO Network Providers about their Clients via MCO Portal Response			
Yes	84%	32%	32%
No	16%	68%	68%

Information Accessible to MCO Members about their Health Data via MCO Portal Response			
Yes	11%	42%	16%
No	32%	0%	26%
N/A	58%	58%	58%

Both DCs had a portal that enabled network providers to see their clients' claims-based data, but not prescription history or clinical data. Also, neither of the DCs had a member portal that shared health data as of August 2016, though one of

the DCs indicated they were about to launch their member portal that would enable members to view their claims, including which procedures they received.

Advances in the sophistication of MCO and DC portals has occurred since 2016, presenting an opportunity to reassess current portal capabilities and identify if any improvements could be made to portal-related managed care contract requirements.

2.5.9 Texas Healthcare Learning Collaborative Portal

Texas HHS is working to strengthen public reporting and increase transparency and accountability of services and health care provided in Texas Medicaid and CHIP. The goal is to encourage discussion and collaboration among internal and external stakeholders to improve quality of care and cost effectiveness of the Texas Medicaid system.[63]

At this time, the analysis and dissemination of quality data is primarily conducted using MCO-generated data and reports, and EQRO data analysis and summary reports. The Texas Healthcare Learning Collaborative (THLC) Portal (https://thlcportal.com/home) represents a primary way quality data are made available publicly, including to policymakers.[64]

The THLC Portal is a public reporting platform, contract oversight tool, and a tool for Medicaid and CHIP MCO quality improvement efforts. The THLC Portal is used by HHSC, MCOs, providers and the public to obtain up-to-date MCO and hospital performance data on key quality of care measures, including potentially preventable events, Healthcare Effectiveness Data and Information Set (HEDIS®), and other quality of care information. These data are typically reported at a granular level for region, health plan, and, in some cases, member demographics and can be important tools for providers to engage MCOs on value-based contracting.[65]

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[63] HHSC. Medicaid CHIP Quality & Efficiency Improvement Data & Reports webpage. https://www.hhs.texas.gov/about-hhs/process-improvement/improving-services-texans/medicaid-chip-quality-efficiency-improvement/medicaid-chip-quality-efficiency-improvement-data-reports, Accessed November 30, 2021.

[64] HHSC. *2021 Texas Managed Care Quality Strategy*. March 2021. https://www.hhs.texas.gov/sites/default/files/documents/about-hhs/process-improvement/quality-efficiency-improvement/tx-managed-care-quality-strategy-march-2021.pdf, Accessed November 30, 2021.

[65] HHSC. Value-Based Care webpage. https://www.hhs.texas.gov/about-hhs/process-improvement/improving-services-texans/medicaid-chip-quality-efficiency-improvement/value-based-care, Accessed November 30, 2021.

This is extensive, searchable data on Texas MCO performance that is available publicly. However, while the dashboard provides transparency, it relies on data from health care claims payments that are not available in near real-time.[66]

2.5.10 Telemedicine, Telehealth and Telemonitoring

The 1115 Waiver *Health IT Strategic Plan* includes strategies for HIE related to telemedicine, telehealth and telemonitoring. The focus is on "increasing the adoption of certified EHR systems, particularly among providers not included in previous federal incentive programs; connecting Texas providers to local HIEs and leveraging clinical and non-clinical data, data analytics, telemedicine and telehealth to facilitate improved outcomes and care coordination." Telemedicine and telehealth are part of the larger Texas strategy to deliver services in a more efficient, innovative way and can enhance network adequacy, including in rural areas.[67]

S.B. 789, 77th Legislature, Regular Session, 2001 requires a biennial report detailing the current state of telemedicine, telehealth and home tele-monitoring services in the Texas Medicaid program. The most recent report was submitted in December 2020.

Telemedicine services are defined in Texas law as a health care service delivered by a physician licensed in Texas or a health professional acting under the delegation and supervision of a physician licensed in Texas and acting within the scope of the physician's or health professional's license to a patient at a different physical location than the physician or health professional using telecommunications or information technology.

Telehealth services are defined as a health service, other than a telemedicine medical service, delivered by a health professional licensed, certified, or otherwise entitled to practice in Texas and acting within the scope of the health professional's license, certification, or entitlement to a patient at a different physical location than the health professional using telecommunications or information technology.

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[66] HHSC. *Value Based Payment Roadmap* (DSRIP Transition Plan deliverable). March 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/Waivers/medicaid-1115-waiver/value-based-payment-roadmap.pdf, Accessed November 30, 2021.

[67] HHSC. *Health Information Technology (Health IT) Strategic Plan*, November 2019. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/1115-waiver/waiver-renewal/attachment-n-health-it-strategic-plan.pdf, Accessed November 30, 2021.

Home telemonitoring is defined as a health service that requires scheduled remote monitoring of data related to a patient's health and transmission of the data to a licensed home and community support services agency or a hospital.[68]

The number of Texas Medicaid providers and clients using telemedicine, telehealth and home telemonitoring is growing. From fiscal year 2018 to fiscal year 2019, the number of providers rendering teleservices increased by 19 percent and the number of clients using teleservices increased by 21 percent. Telemedicine, telehealth and home telemonitoring services accounted for $31.7 million in Texas Medicaid spending in SFY 2018 and $39.9 million in SFY 2019. The increase is attributable to greater telemedicine and telehealth service utilization among Medicaid clients. Behavioral health services represent the largest share of telemedicine and telehealth services rendered by Texas Medicaid providers, with the most frequently billed telemedicine and telehealth procedure codes as psychiatric diagnostic evaluations and psychotherapy.[69]

After the onset of the COVID-19 PHE, there was a 3,410 percent increase in the total number of teleservices provided to Texas Medicaid clients. This was an increase in all types of teleservices across a wide variety of provider types. The time period measured was the percentage increase from the “pre-COVID-19 period” of September 1, 2019 through February 29, 2020 to the “during COVID-19 period” of March 1, 2020 through August 31, 2020. The service counts are based on distinct procedure codes.

During this time period, teleservice utilization did not increase equally for all. In Texas Medicaid, rural enrollees’ utilization did not increase as much as utilization by clients in urban and suburban areas. Lack of broadband access in certain rural areas of the state may play a part. Interestingly, telephone (audio-only) services appeared to play a more important role in maintaining rural Medicaid clients’ access to services during the COVID-19 PHE, particularly behavioral health services.[70] At the state level, to ensure safety and continuity of care during the public health emergency, HHSC authorized Texas Medicaid providers to submit claims for

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[68] HHSC. Telehealth, Telemedicine, and Telemonitoring Services in Texas Medicaid, As Required by S.B. 789, 77th Legislature, Regular Session, 2001. December 2020. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/sb-789-telemedicine-telehealth-hts-medicaid-dec-2020.pdf, Accessed November 30, 2021.

[69] Ibid.

[70] HHSC. *Assessment of Texas Medicaid Rural Teleservices* (DSRIP Transition Plan deliverable), June 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/Waivers/medicaid-1115-waiver/assessment-texas-medicaid-rural-teleservices.pdf, Accessed November 30, 2021.

reimbursement of the following services, as long as the services were provided appropriately and in accordance with the health care provider's licensure:

- Audio-only behavioral health services;
- Audio-only medical (physician delivered) evaluation and management services;
- Audio-only Early Childhood Intervention (ECI) specialized skills training;
- Audio-only nutritional counseling services;
- Telemedicine and telehealth School Health and Related Services (SHARS);
- Telehealth occupational therapy, physical therapy, and speech therapy;
- Telemedicine delivery of certain components of Texas Health Steps checkups;
- Rural Health Center reimbursement for telemedicine and telehealth services; and
- FQHC reimbursement for telemedicine and telehealth services.

HHSC also conducted analyses of Medicaid FFS and MCO telemedicine, telehealth and home telemonitoring services claims data for January 2020 through May 2020 to assess the client service utilization and expenditure trends resulting from the COVID-19 PHE, as well as the most commonly billed procedure codes.[71] This data will be updated and also used for implementing new requirements in H.B. 4, 87th Legislature, Regular Session, 2021 to analyze cost effectiveness of potentially continuing many of these Medicaid teleservices policies after the public health emergency has ended.

In a state as vast as Texas, telemedicine, telehealth and telemonitoring are also useful for meeting network adequacy standards. State and federal laws require that MCOs meet travel time and distance standards. Access to care is measured on a quarterly basis for 35 provider types in all 254 counties in the state. In addition to expanding Medicaid teleservices availability, H.B. 4 requires HHSC to include the availability of telehealth services and telemedicine medical services when assessing the network adequacy of a Medicaid MCO. One challenge is that many rural areas in Texas have no or limited broadband availability, limiting the use of bandwidth-intensive services such as high definition video services.

In addition to network adequacy, strategies to address rural health care shortages include telemedicine. Telemedicine programs can enhance primary and preventive care and enhance the viability of rural hospitals through the provision of specialized

[71] HHSC. *Telehealth, Telemedicine, and Telemonitoring Services in Texas Medicaid*, As Required by S.B. 789, 77th Legislature, Regular Session, 2001. December 2020. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/sb-789-telemedicine-telehealth-hts-medicaid-dec-2020.pdf, Accessed November 30, 2021.

medical services.

Texas had laid the groundwork over the course of several legislative sessions to expand the options for Texas providers to engage in telemedicine. For example, in 2017, the Texas Legislature created a new pediatric tele-connectivity grant program to provide funding to non-urban health care facilities to obtain telemedicine services from pediatric specialist physicians (H.B. 1697, 85th Legislature, Regular Session, 2017). In 2019, the Texas Legislature passed legislation enabling satisfaction of physician requirements for Level IV trauma facility designation in counties with populations less than 30,000 using telemedicine (H.B. 871, 86th Legislature, Regular Session, 2019). Also, in 2019, the Texas Legislature passed a bill to further clarify the array of Medicaid services available for telemedicine reimbursement under Medicaid managed care (S.B. 670, 86th Legislature, Regular Session, 2019).[74]

H.B. 4, 87th Legislature, Regular Session, 2021, is a major next step for telemedicine and telehealth services in Medicaid and other health programs administered by HHSC. It was informed by Texas' experience during the COVID-19 PHE and will improve access to care under the Medicaid program by encouraging the continued use of telehealth and telemedicine services, home telemonitoring services, and other telecommunications or information technology under the program.[75] H.B. 4 makes permanent many teleservices flexibilities provided by Texas Medicaid and other health and human services programs during the public health emergency. Telemedicine and telehealth offer significant potential to support value-based care and access to care, particularly in rural areas. Advances in health IT and HIE assist in

[74] HHSC. Health Information Technology (Health IT) Strategic Plan, November 2019. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/1115-waiver/waiver-renewal/attachment-n-health-it-strategic-plan.pdf, Accessed November 30, 2021.

[75] H.B. 4, 87th Legislature, Regular Session, 2021. https://capitol.texas.gov/tlodocs/87R/billtext/pdf/HB00004F.pdf, Accessed November 30, 2021.

this area of further development for quality and access to care for Medicaid enrollees.

2.5.11 Foster Care Health Passport

STAR Health is the statewide managed care program for children in foster care in Texas. In SFY 2020, over 33,000 children were served through STAR Health.[76] S.B. 6, 79th Legislature, Regular Session, 2005 called for the development of a uniform, comprehensive medical services delivery model for children in foster care through a single managed care entity, including the development of an electronic health information system for the program—the Health Passport.

The Health Passport is a secure web application that provides online access to a child's health information for authorized users. The Health Passport was created to make sure medical information follows each child in DFPS conservatorship and travels with each child, even when the child moves. The Health Passport is a web-based system that has health data about children in the STAR Health program and can also be used from a mobile device. The Health Passport has information on diagnoses, gaps in care, doctor and dentist visits, hospital stays, prescriptions and vaccine records; however, it is not a full medical record.[77]

When a person leaves foster care, the Health Passport is available in printed format to a child's legal guardian, managing conservator, or parent or to the person leaving foster care, if he or she is at least 18 years of age or an emancipated minor.[78]

2.5.12 Clinical Management for Behavioral Health Services

Clinical Management for Behavioral Health Services (CMBHS), implemented in December 2009, is used by HHS and HHS-contracted substance use and mental health treatment service providers and other qualified providers. CMBHS is an important data collection tool for HHSC, providing data to guide policy development and fulfill responsibilities for state and federal data reporting, contract oversight, compliance monitoring, and clinical quality improvement.

Some providers use CMBHS as their organization's EHR and claims payment system. Others use the system mainly to submit data to the state to fulfill contract

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[76] HHSC. Healthcare Statistics webpage. https://www.hhs.texas.gov/about-hhs/records-statistics/data-statistics/healthcare-statistics, Accessed November 30, 2021.

[77] Texas Department of Family and Protective Services. Health Passport webpage. https://www.dfps.state.tx.us/Child_Protection/Medical_Services/Health_Passport.asp, Accessed November 30, 2021.

[78] HHSC. Healthcare Statistics webpage. https://www.hhs.texas.gov/about-hhs/records-statistics/data-statistics/healthcare-statistics, Accessed November 30, 2021.

requirements, using local information systems to manage people's care. The CMBHS system includes clinical tools that standardize the assessment, diagnosis, and level-of-care determination and treatment processes. Providers can also use it to document the services provided and submit claims directly to the HHS program that processes and pays that claim type.

CMBHS supports data exchange between:

- HHSC and local mental health authorities;
- HHSC and contracted substance abuse treatment providers;
- Contracted substance abuse and mental health service providers (with client consent as required by law); and
- HHSC and other state agencies to coordinate care and help with oversight of services and claim payments.

The main users of CMBHS are service providers that have contracts with Texas HHS to deliver mental health services or substance use disorder (SUD) services. Other providers can be Medicaid managed care providers of mental health targeted case management or mental health rehabilitative services that need access to complete assessments. The data are required to be submitted to HHSC or other state agencies serving the same populations for coordination of care.[79]

For SUD services, CMBHS captures clinical documentation at a detailed level, such as client profile, screening, assessment, priority population determination, service type, treatment, progress notes, lab results, medication administration and service authorization. CMBHS also supports the submitting of claims to Texas Medicaid & Healthcare Partnership (TMHP) for block-grant-funded SUD services and for a limited set of Medicaid-funded SUD services. With CMBHS, entering data for SUD services is currently only supported through a web-based interface in which providers directly enter the data. SUD providers that use their own EHR have the option of exporting their data, so it may be imported into their local systems. For mental health services, the primary uses of CMBHS are for data reporting, capturing client profile, diagnosis, assessment, service authorization and supporting submitting claims to TMHP for certain Medicaid mental health programs. Local Mental Health Authorities (LMHAs) and by other Medicaid providers of mental health case management and mental health rehabilitation services are the primary users of CMBHS. Data for mental health services can be entered directly through the

[79] HHSC. Clinical Management for Behavioral Health Services webpage. https://www.hhs.texas.gov/doing-business-hhs/provider-portals/behavioral-health-services-providers/behavioral-health-provider-resources/clinical-management-behavioral-health-services, Accessed November 30, 2021.

web interface, but LMHAs with their own EHRs also may submit information through an electronic data exchange.[80]

2.5.13 Electronic Medical Records in State Hospital System

The 11 state-operated psychiatric hospitals use a modified commercial-off-the-shelf electronic medical record system, NetSmart Avatar™, to support quality care for patients. The system provides significant clinical functionality and is augmented by an electronic medication administration system and a pharmacy management system.

State hospital commitment data also is transmitted to the legacy mental health system, known as Client Admission and Registration System (CARE). Current plans are to migrate remaining CARE functions to CMBHS when funding becomes available.

HHSC is nearing completion of updates to clinical data exchange to support continuity of care between inpatient services provided by the state hospitals and community-based mental health services providers. This functionality supports the state hospital system's vision to partner with consumers, family members, volunteers, service providers and policymakers to provide quality services responsive to each patient's needs and preferences.

2.6 Status of Public Health and Health IT Activities

A MITA roadmap goal from Texas' 2020 state self-assessment[81] emphasizes the importance of Medicaid coordination with public health:

Coordinate with public health and other partners to integrate health outcomes within the Medicaid community.

Included in the MITA roadmap are State Medicaid Agency business and IT goals.

Relevant business goals include:

- Meet Federal Requirements;
- Coordination / Integration of Services; and
- Enhanced Customer Service.

Relevant IT goals include:

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[80] HHSC. *Health Information Technology (Health IT) Strategic Plan*, November 2019. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/1115-waiver/waiver-renewal/attachment-n-health-it-strategic-plan.pdf, Accessed November 30, 2021.

[81] Information on Texas MITA SS-A in 2020 provided by HHS staff.

- Use federal and industry standards for data exchange.
- Provide tools for incorporating clinical data in management reporting.
- Use federal and industry standards for data privacy and security.
- Establish IT governance groups across multiple stakeholders.

Public health has always used the collection and analysis of data. Computer technology and interoperability have increased the ability of public health professionals to rapidly collect, analyze and use a broad range of health data to plan, implement, manage and evaluate public health services.

In Texas, DSHS has been working to leverage technology changes to improve data quality and the timeliness of data availability while reducing burdens on health care providers. A significant focus for the department has been on transforming raw data into actionable information that can be used by decision-makers, including health care providers, policymakers, people for whom data has been collected and others to manage individual health care, understand and respond to current population health issues, and inform planning for future needs. Advancements in data availability and analysis support essential public health services,[82] including:

- Assessment and monitoring of population health concerns, factors that influence health, and community needs and assets;
- Investigation, diagnosing and addressing of health problems and hazards affecting the population;
- Communicating effectively with various audiences to inform and educate people about health, factors that influence health and how to improve it;
- Strengthening, supporting and mobilization of communities and partnerships to improve health;
- The creation, promotion and implementation of policies, plans and laws that impact health, under the direction of state leadership;
- Utilization of leadership-approved actions designed to improve and protect the public's health;
- Establishment of a system that enables equitable access to services and care needed to be healthy; and
- Improvement of public health functions and services through ongoing evaluation, research and continuous quality improvement.

DSHS works in conjunction with local health departments (LHDs) across Texas to provide public health services to the Texas population. DSHS works in collaboration with LHDs to

[82] Based upon essential public health services listed by the Centers for Disease Control and Prevention. https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html, Accessed November 30, 2021.

collect data. DSHS often receives data electronically at the state level and makes it available to LHDs and other stakeholders through a variety of mechanisms, including fully interoperable systems such as ImmTrac2, the state's immunization registry, regular reports and updates for vital statistics data, and on-demand reporting for other data sources, consistent with applicable law. DSHS works with LHDs, Medicaid and other providers to develop efficient approaches to data collection and data sharing that increase data quality, reduce delays in data availability, and reduce administrative burdens on both providers and public health staff.

At the state level, DSHS works extensively with the state's Medicaid program and other agencies, including the Texas Division for Emergency Management, the Texas Department of Insurance and state universities. Within HHS, DSHS coordinates efforts with HHSC through the OeHC, a centralized entity charged with coordinating programs and facilitating connectivity with trading partners such as HIEs.

The COVID-19 PHE provides a key example of the importance of public health and the value of data collected through public health activities for the state and communities. Health IT plays a crucial role in the collection and reporting of COVID-19 data and using that data for both person-level care and addressing population health concerns. Electronic health information exchange can facilitate effective strategies to combat COVID-19, including:

- Surveillance;
- Public health reporting of laboratory results;
- Laboratory testing;
- Clinical data collection;
- Case investigation and management;
- Reporting outcomes; and
- Workforce safety and health.[83]

The following are specific health IT initiatives involving DSHS.

2.6.1 State Immunization Registry – ImmTrac2

ImmTrac2 is the state's immunization information system (IIS). ImmTrac2 is a secure, confidential service provided at no cost to health care providers or to people whose data is stored within the system. Texas law mandates that the IIS is operated as an "opt-in" service with the requirement that people, or their legal guardians, consent to have their information included in the system. Any ImmTrac2 participant, or their guardian, may withdraw consent at any time. Should this occur, DSHS is statutorily required to remove any previously reported data and not retain any future-reported

[83] ONC. COVID-19 Response webpage. https://www.healthit.gov/coronavirus, Accessed November 30, 2021.

data regarding that person. Similarly, DSHS is not authorized to retain any data for a person for whom DSHS has not previously received consent. Currently, people do not have direct electronic access to records within ImmTrac2 but may request their records from their health care provider.

ImmTrac2 receives consent and vaccination information from private and public health care providers, LHDs, health plans, Medicaid, and other information sources.

The immunization registry allows authorized users to add people to the registry, access participating people's immunization history and add new immunization information to people's registry records. ImmTrac2 also includes immunizations received by emergency responders and their family members. There are special provisions, including modified consent, for immunizations and anti-viral or other medications provided in response to, or in preparation for, a disaster, such as COVID-19.[84] Because COVID-19 vaccines are considered disaster-related, there has been a significant increase in the use of the system since COVID-19 vaccines were released. Vaccinations for children, regardless of whether they are administered in response to a pandemic, must be reported.

ImmTrac2 is interoperable with a variety of other systems. There also is a web-based interface for providers who do not have the capability to exchange messages with ImmTrac2. As part of its response to the public health emergency, DSHS has developed an interface with its Vaccination Event Registration System (VERS) to streamline workflow between state-hosted COVID-19 vaccine events and ImmTrac2. DSHS also established an interface between ImmTrac2 and its COVID-19 vaccine allocation system to reconcile the use of vaccines by Texas providers.

ImmTrac2 supports standards-based messaging using nationally-specified HL7 message and transmission formats. Challenges have emerged during the COVID-19 PHE that have impacted providers' ability to use ImmTrac2's interoperability functions. As part of the general response to COVID-19, there are many new ImmTrac2 users that do not have certified EHR technology, an understanding of HL7 messages (or Integrating the Healthcare Enterprise profiles), and are not natively capable of generating HL7 messages formatted to required specifications. Providers can still use the web interface and submit data manually, which has some issues, such as replicating data entry, a delay in data submission and possible data errors. One advantage of manual entry is that there are improvements in reporting race/ethnicity information as the field is required when manually entering data but is optional when electronically submitting information.

[84] Ibid.

ImmTrac2 has completed technical implementation for bi-directional exchange of information, providing both forecasts and histories via messaging to authorized providers. Providers utilizing bi-directional capabilities can retrieve data from ImmTrac2 directly from within their EHR and retain information. Additionally, a vaccine forecast is provided based on the patient's vaccination history and demographic characteristics. Providers may use this information in administering vaccines.

H.B. 2641, 84th Legislature, Regular Session, 2015 enables HIEs, at providers' request and with their authorization, to assist providers in routing patients' information to ImmTrac2.

The review from the most recent MITA assessment reports that the Texas immunization registry has increased As-Is maturity from level 2 in the 2015 assessment to level 4 for the question regarding collaboration with other agencies and entities. The registry has become part of a consortium of users of the Wisconsin Immunization Registry platform. As part of this consortium, ImmTrac2 has the ability to collaborate with other agencies to develop and share reusable processes. The registry has also moved from As-Is maturity level 1 to level 2 for timeliness due to improvement resulting from the implementation of the new registry and from joining the Wisconsin consortium.

2.6.2 Texas Syndromic Surveillance System

DSHS has developed a statewide approach to syndromic surveillance consisting of three components:

- The North Texas Syndromic Surveillance System (NTXSS) hosted by Tarrant County Public Health covering Texas Public Health Region 2/3;
- Syndromic Surveillance Consortium of Southeast Texas (SSCSeT) hosted by Houston Health Department covering Texas Public Health Region 6/5S; and
- The Texas Syndromic Surveillance (TxS2) system, operated by DSHS, which directly collects data from the remainder of the state as well as receiving a feed of data from regional partners, providing a single source for a comprehensive statewide view.

Syndromic surveillance data are reported by hospitals and urgent care centers using nationally-specified data and transmission standards identified in the federal Promoting Interoperability programs.[85] Data is collected from over 80 percent of

[85] Ibid.

hospital emergency departments (EDs). In all, over 50 percent of all eligible facilities connect to a syndromic system.[86]

The purpose of syndromic surveillance is for early detection of abnormal health patterns that could result in high morbidity and mortality. Information is reportable prior to the availability of laboratory-based diagnoses. Follow up messages can be used to update patients' status. Syndromic surveillance can protect the community's health through public health interventions based on enhanced surveillance of emerging public health conditions and consolidation of health-related data statewide. The Texas statewide implementation of syndromic surveillance, TxS2, is hosted at DSHS and is used by DSHS public health regions, DSHS' central office, LHDs and data providers (hospitals with EDs, free standing emergency centers and urgent care centers). TxS2 data is analyzed by public health staff at the institutional, local, regional and state levels to help detect the early emergence of health threats to the community, including respiratory issues stemming from chemical releases as well as conditions, such as COVID-19. Data collected through syndromic surveillance has also been used to gain additional insights into substance use in the community as well as to understand the impact and risks of accidents associated with scooters and other untethered wheeled devices.

Currently, more than 300 hospitals across Texas are participating in TxS2. DSHS expects that additional hospitals will participate as a result of changes in the Interoperability and Patient Access final rule[87] published by CMS in 2020. General benefits of syndromic surveillance include providing hospitals with awareness of current health risks by providing analysis tools that enable them to report on their own data, including receiving alerts based on state, regional and hospital-established criteria.

Uses of syndromic surveillance data by providers:

- Integration into existing ED tracking or infection control procedures;
- Forewarning about health trends affecting neighboring regions;
- Analysis of data;
- Collaboration with public health while protecting hospital/patient confidentiality;
- Monitoring population health of catchment area;

[86] DSHS. Texas Syndromic Surveillance (TxS2) Use Cases and Success Stories webpage. https://www.dshs.texas.gov/txs2/Use-Cases-and-Success-Stories.aspx. Accessed November 30, 2021.

[87] CMS. Interoperability and Patient Access final rule. https://www.federalregister.gov/documents/2020/05/01/2020-05050/medicare-and-medicaid-programs-patient-protection-and-affordable-care-act-interoperability-and. Accessed November 30, 2021.

- Tracking post-surgical infections; and
- Participation in the Promoting Interoperability Program.

Uses of syndromic surveillance data by public health officials:

- Querying data for symptoms or syndromes of concern;
- Situational awareness, especially with rapidly spreading gastrointestinal or respiratory illness;
- Mapping of clusters;
- Early event detection;
- Outbreak identification;
- Assessing health impacts of natural disasters or severe weather;
- Exposure source investigation; and
- National disease trend monitoring.[88]

COVID-19 provides an example of the use case for syndromic surveillance. When a patient visits a medical facility with COVID-19-like symptoms but does not receive a diagnosis for a similar disease, such as the flu, they are counted in the COVID-19-Like Illness query. There were 326,928 visits that matched this query from March 4, 2020 to March 4, 2021. Research is occurring to determine if syndromic surveillance can predict outbreaks of COVID-19. Local and regional epidemiologists are able to use this data to watch for outbreaks in their area. By looking for trends they can react faster to new or worsening outbreaks.[89]

2.6.3 National Electronic Disease Surveillance System

The National Electronic Disease Surveillance System (NEDSS) is used to track and respond to disease outbreaks. The system supports communicable disease investigations conducted by DSHS and LHDs across Texas. The CDC provides NEDSS software and funding and technical support for NEDSS operations. All fifty states use NEDSS or a NEDSS-compatible system.[90] In 2020, DSHS updated the version of NEDSS it uses and installed the new version in a secure, cloud-based environment. While this transition had been planned, it was accelerated due to COVID-19. The new system helps address a number of issues, including decreased risk of power

[88] DSHS. Texas Syndromic Surveillance (TxS2) webpage. https://dshs.texas.gov/txs2/default.aspx, Accessed November 30, 2021.

[89] DSHS. Texas Syndromic Surveillance (TxS2) Use Cases and Success Stories webpage. https://www.dshs.texas.gov/txs2/Use-Cases-and-Success-Stories.aspx, Accessed November 30, 2021.

[90] CDC. Integrated Surveillance Information Systems/NEDSS website. https://www.cdc.gov/nndss/about/nedss.html, Accessed November 30, 2021.

failure and the ability to adjust capacity rapidly for increased data storage and additional users.

NEDSS data include case report information submitted by providers across the state to LHDs and DSHS regional offices through fax, drop-off and phone reports. Information in NEDSS includes disease diagnosis, relevant dates, risk factors, lab confirmation reports and patient demographic information. Lab confirmations can be received through multiple submission processes including Electronic Laboratory Reporting (ELR). ELR uses nationally-identified HL7 and CSV standards (for COVID-19) to support the electronic, automated submission of laboratory results information, patient identifiers and demographic information, and disease-specific information. NEDSS supports the transfer of reports and investigations between LHDs as well as between NEDSS installations using standardized messaging.

DSHS, like other state health departments, is working to enable electronic case reporting (eCR). Similar to an ELR, an eCR is the electronic, standards-based submission of a suspected and/or confirmed case of a notifiable condition. Instead of a provider needing to know what is reportable in each jurisdiction, eCR leverages the provider's EHR and a national platform, the Association of Public Health Laboratories Informatics Messaging Service (AIMS). The provider's EHR first queries the AIMS platform to identify what is reportable and what information needs to be reported for that particular condition. When a patient is diagnosed with a reportable condition, the EHR automatically generates a report and forwards it through the AIMS platform to the appropriate public health department based on the patient's and provider's address information. This report is routed into the NEDSS system and forms the core data around which an investigation and full report may be developed. The subsequent submission of a lab result can be matched against the eCR submission and linked by patient identifiers. This automation substantially reduces administrative time for both provider and public health staff.

NEDSS either matches submitted lab results with a previously-submitted case report or uses data from the ELR to establish a new case. Epidemiologists using NEDSS can provide supplemental information.

Epidemiologists can incorporate relevant data from ImmTrac2, the state's immunization registry, into NEDSS records. Other client information can be attached or entered manually by epidemiologists at DSHS or at LHDs. At the conclusion of a case investigation, the case is considered closed. At the end of a reporting period, Texas-wide, de-identified data is provided to the CDC.

Significant differences between syndromic surveillance (TxS2) and NEDSS include:

- Syndromic surveillance data is deidentified; NEDSS data is highly identified.

- Participation in syndromic surveillance is voluntary; reporting notifiable conditions is required by state law.
- Syndromic surveillance is focused first on the population; NEDSS is focused first on the person.
- Syndromic surveillance addresses more than notifiable, infectious disease; NEDSS is focused on infectious disease.
- Entities submitting data to syndromic surveillance can see their data in the system; NEDSS does not provide access to health care providers.

2.6.4 Health Registries

DSHS operates multiple health registries, including the Texas Electronic Vital Events Registrar (TxEVER), Texas Cancer Registry (TCR), Texas Birth Defects Registry, both adult and child blood lead surveillance, and additional registries as outlined below.

Texas Electronic Vital Events Registrar (TxEVER)

TxEVER is Texas' comprehensive vital events system. DSHS implemented TxEVER using a modified commercial-off-the shelf software system. The system enables registration and data collection for birth, death, fetal death, marriage and divorce and supports all DSHS vital events operations, including registration, amendments of birth and death records, and reporting.[91]

At the time TxEVER was in development, there was limited ability for health care providers to exchange data between their EHRs and TxEVER using nationally-identified standards. Standards have since matured and interoperability may be revisited as resources permit. TxEVER can ingest and produce messages in HL7.

Texas Cancer Registry (TCR)

The TCR collects, maintains and disseminates timely, complete and accurate cancer data that contributes to cancer prevention and control, resulting in improved diagnosis, treatment, survival and quality of life for cancer patients. TCR data is the foundation for measuring the cancer burden in Texas, comprehensive cancer control efforts, health disparities, and progress in prevention, diagnosis, treatment and survivorship.

[91] Texas HHS. *Interoperability for Texas: Powering Health 2020, As Required by H.B. 2641, 84th Legislature, Regular Session, 2015. December 2020, Revised February 26, 2021*. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/hb-2641-interoperability-texas-powering-health-2020.pdf, Accessed November 30, 2021.

Health care providers have two formats they can use to submit data: an XML format developed by the North American Association of Central Cancer Registries (NAACCR) or an HL7 standard consistent with the PI Program requirements.[92]

The software used for TCR is provided by the CDC. There are several modules included in the system, each designed to work with the others to provide a wide range of services including data intake, records management and reporting. The current version of the software supplied by the CDC does not support providers querying for a specific person's records. TCR staff are available to assist physicians who are actively engaged in treating people by manually retrieving records from the registry and enabling the secure transmission of them to the requesting provider.

Texas Birth Defects Epidemiology and Surveillance (BDES)

The BDES Branch at DSHS encompasses two major components: the Texas Birth Defects Registry and the Texas Center for Birth Defects Research and Prevention. BDES represents one of the nation's leaders of birth defects tracking and research. The branch conducts cluster investigations, responds to inquiries from the public and performs selected education and outreach activities with affected families. The BDES mission is "To identify and describe the patterns and outcomes of children with birth defects in Texas and to collaborate with others in research, prevention, and family outreach services."[93] Unlike other data collection at DSHS, the BDES branch uses active surveillance to collect necessary information for registry development. DSHS staff actively request potential case data through remote access or in-person visits and review the data to confirm the children's diagnoses. In the future, DSHS may consider using automated data collection techniques such as those being developed through the HL7 MedMORPH project to reduce administrative activities while still maintaining high data standards.

Blood Lead Surveillance

The Blood Lead Surveillance Branch is made up of two programs that operate the blood lead registries, one for children and one for adults. The Texas Childhood Lead Poisoning Prevention Program (TXCLPPP) maintains the surveillance system of blood lead results on children younger than 15 years of age. Texas law requires reporting of blood lead tests, elevated and non-elevated, for children younger than 15 years of age. Physicians, laboratories, hospitals, clinics and other health care facilities are required to report all blood lead tests to the Texas Child Lead Registry.

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[92] Ibid.

[93] DSHS. Texas Birth Defects Epidemiology & Surveillance webpage. https://www.dshs.texas.gov/birthdefects/default.shtm, Accessed November 30, 2021.

Data may be received directly from providers using on-site test equipment. Some records may be received electronically through ELR processes. Test results are routed from ELR to the appropriate blood lead registry. Electronic submission also is available directly through the Blood Lead Surveillance System (BLSS).

The Adult Blood Lead Epidemiology and Surveillance Program (ABLES) maintains the surveillance system of blood lead test results for people 15 years of age and older. The Texas Reportable Occupational Conditions Act requires all laboratories and physicians to report all blood lead levels.[94]

Additional Registries

DSHS maintains trauma registries that incorporate data submitted by emergency medical providers and vehicle runs across the state. DSHS also documents events such as drownings, vehicular accidents and other similar occurrences. The trauma registries are used to inform preventative actions, identify resource needs and other purposes. Data are provided to the state's Trauma Service Areas for use in developing regional plans.[95]

DSHS collects information regarding hearing tests that are statutorily required to be administered to newborns. The goal of the program is to facilitate early intervention and connect families impacted with hearing loss to appropriate resources.[96]

DSHS receives the state's poison center network[97] data in near real-time, which includes information from six regional call centers. The goal is to better understand and prevent poisonings as well as understand how the medical community responds to poisoning incidents. This information is forwarded to the syndromic surveillance system to help understand and respond to both poisoning and overdose situations. DSHS also collects information relating to controlled substance overdoses (penalty group-1 drugs)[98] with a web-based electronic reporting system.

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[94] DSHS. Blood Lead Surveillance Branch webpage. https://dshs.texas.gov/lead/, Accessed November 30, 2021.

[95] DSHS. Texas EMS Trauma Registry - Frequently Asked Questions (FAQs). https://www.dshs.texas.gov/injury/registry/faq.aspx, Accessed November 30, 2021.

[96] DSHS. Texas Early Hearing Detection and Intervention. https://www.dshs.texas.gov/tehdi/default.aspx**.** Accessed November 30, 2021.

[97] DSHS. Poison Epidemiology. https://www.dshs.state.tx.us/estb/poison/default.aspx, Accessed November 30, 2021.

[98] A controlled substances overdose repository is required under Texas Health and Safety Code, Sec. 161.044. Penalty group-1 drugs are defined under Texas Health and Safety Code, Sec. 481.102

DSHS also collects information about reportable occupational conditions,[99] including exposures to pesticides, silicosis, asbestosis and lead.[100] DSHS generates reports and tableau dashboards that are posted on the DSHS website for public consumption. Additional data are made available to researchers and policymakers upon request.

2.6.5 Texas Health Care Information Collection

Texas Health Care Information Collection (THCIC), which is within the Center for Health Statistics at DSHS, collects data and produces reports regarding the quality performance of hospitals and health maintenance organizations (HMOs) operating in Texas. The data and reports can be used by the general public, researchers, consultants and health care facilities to make informed health care decisions and impact the cost and quality of health care in Texas.[101]

THCIC collects patient claim data from hospitals, ambulatory surgery centers, freestanding emergency care facilities and HMOs as authorized under Health and Safety Code, Ch. 108. Data include patient-level diagnoses, procedures and charges. The data and reports provide facility-level identifiers and characteristics about those facilities. DSHS and HHSC programs can use the data to produce reports or assist their programs as authorized by law. DSHS publishes research files containing de-identified records for general use. These general files, as well as customized research files, are available through DSHS' Center for Health Statistics. THCIC transfers this data to the Office of Public Insurance Counsel, which is the entity that produces the reports for the public.

H.B. 2641, 84th Legislature, Regular Session, 2015 required the modification of the data collection system used for reporting include the K3 segment, as specified in the American National Standard Institute (ANSI)-approved claim file format (data standard).[102]

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[99] DSHS. Occupational Health Surveillance website. https://www.dshs.texas.gov/estb/OHS/**,** Accessed November 30, 2021.

[100] All four conditions are reportable under Texas Health and Safety Code, Ch. 84, Reportable Occupational Conditions Act.

[101] DSHS. About THCIC webpage. https://dshs.texas.gov/thcic/About-THCIC/, Accessed November 30, 2021.

[102] Texas HHS. *Interoperability for Texas: Powering Health 2020, As Required by H.B. 2641, 84th Legislature, Regular Session, 2015*. December 2020, Revised February 26, 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/hb-2641-interoperability-texas-powering-health-2020.pdf, November 30, 2021.

2.6.6 Public Health Laboratory Services

DSHS operates one of the largest public health laboratories in the world, providing a wide range of services from environmental testing to newborn screening. The DSHS laboratory is continuing to improve its interoperability, including working to implement standards-based Electronic Test Ordering and Results capabilities to improve the processes for health care providers to submit test orders and retrieve results. These types of services are available for both general health care and newborn screening. DSHS has used IAPD funds to engage with providers to exchange newborn screening test data and results.

2.6.7 DSHS' use of an EHR System and Telemedicine

Medical records at the Texas Center for Infectious Disease (TCID), DSHS' special-purpose hospital focused on inpatient care of tuberculosis and other hard-to-manage or rare, highly-infectious diseases, are captured in the same Avatar EHR system used by the state psychiatric hospitals. Workflow processes and forms have been developed specifically for use by TCID. Patient data and user accounts are segregated, preventing inappropriate access. Data and systems are remotely accessible, supporting services such as radiology.

DSHS staff use telemedicine services in the field to monitor patients' adherence to medication schedules required to address high-consequence and highly-contagious diseases, such as tuberculosis. The use of telemedicine, such as video-based directly-observed therapy, saves considerable travel time for DSHS staff and minimizes the impact on affected people while ensuring public health goals are achieved.

3 THE STATE'S "TO-BE" HEALTH IT LANDSCAPE

Texas' Vision for the To-Be Landscape—Leverage Health IT to Improve Care and Health

There is significant momentum across the country, including in the Texas Medicaid program, to use health IT to improve the quality of services and achieve positive health outcomes. Health IT is a major tool to facilitate improved care coordination and service integration between Medicaid providers, including physical health, behavioral health and home- and community-based services providers. Beyond coordinating delivery of traditional health care services, health IT can facilitate engagement of community-based organizations that deliver services addressing the social drivers of health, such as food insecurity, housing and transportation issues. Obtaining measurable, actionable data is at the heart of value-based care models. Quantitative and qualitative data analysis to assess performance against meaningful outcome measures identifies where the health system can deliver value. Further, tools such as telehealth and telemedicine are critical in supporting health system goals, such as achieving provider network adequacy in Texas' vast rural regions.

As Texas Medicaid plans its next steps for health IT, it will build on national and state efforts over the past 10 years with a focus on leveraging health IT to enable high quality, cost effective care and ultimately better health for Medicaid enrollees.

HHSC is one of the largest state agencies in Texas. Texas HHS accounts for about one-third of the state's budget and for the health care of about 4.3 million Texans through Medicaid.[103] As of SFY 2019, about 94 percent of Medicaid services were administered through MCOs. The remaining Medicaid client population is served under a FFS arrangement. Texas' final SMHP provides an opportunity to analyze and plan for how health IT can be used to enhance quality and health care outcomes and reduce overall health care costs**.**

3.1 Health IT Goals and Objectives

3.1.1 The Texas Healthcare Transformation and Quality Improvement Program 1115 Waiver Health IT Strategic Plan

In 2019, HHSC submitted to CMS a *Health IT Strategic Plan* related to activities in the Texas Healthcare Transformation and Quality Improvement Program 1115 Waiver (1115 Waiver) to "link services and core providers across the continuum of care to the greatest extent possible" using health IT initiatives and strategies. Since 94 percent of Texas Medicaid enrollees are served through managed care, which is included in the waiver, the *Health IT Strategic Plan* is HHSC's most recent plan for how to improve Medicaid through health IT. The *Health IT Strategic Plan* was aligned with Texas' 2017 SMHP, and also aligns with THSA's 2020 *Texas Health Information Exchange Plan* and this final SMHP.

In the strategic plan, Texas Medicaid articulated the following health IT goals:

(1) Incorporate health IT as a foundational component for the Medicaid managed care delivery model, procurement and HHSC contract oversight efforts.

(2) Support the development and maintenance of a coordinated care delivery system by facilitating the timely exchange of clinical, health risk and other data among Texas Medicaid stakeholders.

(3) Support transition to value-based models across managed care and providers by:

   a. Expanding the use of metrics that integrate administrative, clinical, relevant health risk and other data.

   b. Improving the timely availability of actionable information for decision making by patients, providers and payers.

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[103] HHSC. *Thirteenth Edition Texas Medicaid and CHIP Reference Guide*. 2020. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/medicaid-chip-perspective-13th-edition/13th-edition-complete.pdf, Accessed November 30, 2021.

c. Translating health IT best practices from the DSRIP program into managed care programs.

(4) Promote MCOs' use of health IT to manage member health care and related needs, with an emphasis on prevention.

(5) Promote Medicaid provider connectivity to the overall Texas health IT ecosystem.

The 1115 Waiver *Health IT Strategic Plan* includes milestones relating to health IT adoption by Medicaid service providers, plans for the exchange of clinical health information related to Medicaid clients statewide and advances the standards identified in the "Interoperability Standards Advisory—Best Available Standards and Implementation Specifications" (ISA). These efforts align with critical initiatives advanced by the 21st Century Cures Act to enhance interoperability, prohibit information blocking and provide patients with easier access to their electronic health data.[104]

3.1.2 Recommendations of the e-Health Advisory Committee related to EHRs and HIE and Implementation Status

HHSC's eHAC makes recommendations that will help shape the future of health IT in Texas and Texas Medicaid. The first task of eHAC is to advise HHS agencies on the development, implementation and long-range plans for health IT and HIE, including use of (1) EHRs, computerized clinical support systems and health information exchange systems for exchanging clinical and other types of health information, and (2) other methods of incorporating health IT in pursuit of greater cost-effectiveness and better patient outcomes in health care and population health. A second task is to advise HHS agencies on incentives for increasing health care provider adoption and usage of an EHR and health information exchange systems.

The following table outlines eHAC's recommendations to HHSC and the Texas Legislature related to these two tasks along with associated status as reported in its February 2021 report.[105]

[104] HHSC. *Health Information Technology (Health IT) Strategic Plan*, November 2019. https://hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/1115-waiver/waiver-renewal/attachment-n-health-it-strategic-plan.pdf, Accessed September 16, 2021.

[105] HHSC. *Texas Health and Human Services (HHS) e-Health Advisory Committee report*, February 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2021/hhs-ehac-report-feb-2021.pdf, Accessed November 30, 2021.

Committee Recommendation	Status	Action Needed
National data standards work for Texas and state health agencies should not create or recommend standards that deviate from national standards. State health agencies comply with H.B. 2641 (84th Legislature, Regular Session, 2015), which directs the use of standards.	Complete, with use of standards ongoing	State health agencies comply with H.B. 2641 (84th Legislature, Regular Session, 2015), which directs the use of standards.
HHS agencies should use HIETexas, when appropriate, to exchange messages with trading partners and collaborate with the state's health information exchanges to increase participation by health care providers.	Complete, with operations of the HIE Connectivity Project ongoing	HHSC signed a contract with THSA to incorporate HIETexas into the HIE Connectivity Project. This project will be implemented over the next several years.
Change requirement for Immunization from opt-in to opt-out.	Incomplete	Current state law specifies that the state immunization registry operates on an opt-in basis. Legislative action is required to change the registry to an opt-out system.
Encourage data sharing of behavioral health data from Local Mental Health Authorities (LMHAs) through HIEs across the state as needed within legal constraints.	Ongoing*	A subcommittee focused on behavioral health care has been established. An assessment and gap analysis of HIEs' capacity to support access to behavioral health information should be conducted.* This may be coordinated with appropriate HHSC offices.
Review all data streams from providers into the HHS system in order to identify opportunities for consolidated reporting and administrative simplification process platforms (MCOs, public health, etc.).	Ongoing	The connections established between providers and HHS through the current HIE IAPD will allow for the consolidation of the number of connections required by health care providers. The Emergency Department Encounter Notification (EDEN) system, also included in the

Committee Recommendation	Status	Action Needed
		IAPD, will enable the exchange of ADT messages that may be used by Texas Medicaid and public health to support a variety of programs.
Provide a complete inventory of inbound or outbound streams of clinical data between HHSC and Texas health care providers, how much data is flowing in each, what data and transport standards are in use for each, whether there are existing national/industry standards that could be used for each type of data and what the plan is to move toward those standards.	Complete	Much of this material is contained in *Interoperability for Texas: Powering Health*. In 2020, the interoperability subcommittee reviewed this report and determined it met the intent of this recommendation.
Create payment incentive for Medicaid providers to engage with Local HIE if available in their area.	Ongoing	This is being accomplished through Strategy 1 of the Medicaid HIE IAPD.
Since HIEs are allowed by statute to receive PMP data, direct the State Board of Pharmacy to facilitate a cost-effective integration for data sharing with HIEs within statutory constraints.	Incomplete	The PMP is managed by the Texas Board of Pharmacy. Legislative action would be required.
Include HIEs as a standard component in disaster relief planning.	Ongoing	Planning for this activity is referenced in the 1115 Waiver Health IT Strategic Plan.
Expand bi-directional interoperability for electronic data exchange.	Ongoing	The connection between HHS and HIETexas, established as part of the HIE IAPD, will enable easier bi-directional data flows between providers and HHS agencies. DSHS is working to enhance interoperability for systems supporting newborn screening. In June 2020, the

Committee Recommendation	Status	Action Needed
		ImmTrac2 system established a pathway for bidirectional data exchange of immunization data between DSHS and providers.

** As part of implementation of S.B. 640, 87th Legislature, Regular Session, 2021, OeHC is coordinating a behavioral health (including substance use) and social determinants of health provider survey. A full report on the barriers and opportunities of expanding interoperability for these providers, including their technological readiness, is due by August 2022.*

3.1.3 Mechanisms to Advance Health IT/HIE Objectives

3.1.3.1 Building on HHSC's HIE IAPD

HHSC's HIE IAPD, which was funded through HITECH and implemented in collaboration with THSA, local HIEs, providers and DSHS, ended September 30, 2021. The strategies included in the IAPD have been central to advancing Medicaid's health information exchange goals over the past several years.

HHSC's successor IAPD was approved by CMS in September 2021 to continue the HIETexas PULSE initiative and strategies in the completed IAPD. Continuation of these strategies will further the goal of increasing HIE use and adoption by Texas Medicaid providers, as well as generate additional HIE capacity to support improved adoption and use. These strategies bring clinical information, such as that provided in consolidated clinical document architecture transition of care (C-CDA ToC) summaries, into the Texas Medicaid program, providing the opportunity to review use cases for the HIE data to support improved patient outcomes, increased efficiency and enhanced fraud detection, among other opportunities.

3.1.3.2 Use of EHRs and the Promoting Interoperability Program

In the Medicaid PI Program, eligible health care providers received funding over a three-year (hospitals) to six-year (eligible professionals) period for meeting certain criteria, such as adopting and meaningfully using certified EHR technology (CEHRT) and meeting a minimum percentage threshold of Medicaid patient volume (the threshold varies by provider type). The final year for a participant in the Medicaid PI Program to receive an incentive payment is calendar year (CY) 2021. HHSC's Medicaid/CHIP Services Department is currently

planning close-out activities for the program. CMS has not announced a follow-on program for the Medicaid provider community.[106]

While most Texas hospitals and physicians now use EHRs, driven by the Medicaid and Medicare PI programs, there is still a need to expand EHR use and meaningful data exchange to include the remaining physicians and hospitals as well as other key Medicaid providers. The Medicaid and Medicare PI Programs did not include non-physician behavioral health provider types or long-term care providers. One of the recommendations eHAC made in its February 2021 report was to encourage data sharing of behavioral health data from LMHAs through HIEs across the state as needed within legal constraints. S.B. 640, 87th Legislature, Regular Session, 2021 requires a study on the interoperability needs and technology readiness of behavioral health service providers in Texas. Based on the results of the study, HHSC is required to submit a report to the legislature, lieutenant governor, and governor that includes a state plan, including a proposed timeline, for aligning the interoperability and technological capabilities in the provision of behavioral health services with applicable law.[107] Since Medicaid serves many enrollees with behavioral health needs, the S.B. 640 report is an important next step for data sharing and care coordination in Texas. HHSC has convened a workgroup with a broad base of behavioral health stakeholders and will publish the required state plan by August 31, 2022. HHSC could leverage the PI Program technology to support the goals of S.B. 640.

3.1.3.3 New Federal and State Requirements Regarding Interoperability and Patient Access

Recent federal rules from CMS and ONC seek to improve interoperability and health information access for patients, providers and payers while reducing the burden of certain administrative processes. CMS and ONC published final rules on May 1, 2020 – the CMS Interoperability and Patient Access final rule[108] and

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[106] Texas HHS. *Interoperability for Texas: Powering Health 2020, As Required by H.B. 2641, 84th Legislature, Regular Session, 2015*. December 2020, Revised February 26, 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2020/hb-2641-interoperability-texas-powering-health-2020.pdf, November 30, 2021.

[107] S.B. 640, 87th Regular Legislature, Regular Session, 2021, https://capitol.texas.gov/tlodocs/87R/billtext/pdf/SB00640F.pdf, Accessed November 30, 2021.

[108] CMS. Interoperability and Patient Access final rule. https://www.federalregister.gov/documents/2020/05/01/2020-05050/medicare-and-medicaid-programs-patient-protection-and-affordable-care-act-interoperability-and. Accessed November 30, 2021.

the ONC 21st Century Cures Act final rule.[109] The CMS regulations include policies that require or encourage payers to implement APIs to improve the electronic exchange of health care data. Specifically, the rule requires certain CMS-regulated payers to establish patient access and provider directory APIs and requires payer-to-payer data exchange, which is encouraged through the use of a FHIR-based API. HHSC and its contracted managed care plans have and/or are preparing to comply with the requirements of these rules, including rules related to patient access to their health data, payer-to-payer data exchange, making updated provider directory information easily accessible, timely exchange of dual eligible data between states and CMS, and hospitals sending ADT notifications to post-acute providers and PCPs. These new rules already have led to increased data sharing in Texas.

Some states are leveraging the new federal rules to ensure data gets to PCPs and other providers in a format that facilitates care coordination. ADT data is essential for care coordination because it notifies community-based providers when their patients have been in the hospital or sought care at an emergency department.

Texas Medicaid has taken an initial step in its proposed new hospital directed payment program – the Comprehensive Hospital Increased Reimbursement Program (CHIRP) – by proposing that hospitals that seek to participate in both components of CHIRP report on their status in sending ADT data either through a formal MCO relationship or EDEN notification. As of the submission of this report, CMS has not approved this program, but Texas and CMS continue to negotiate terms for its approval. If approved, Texas Medicaid would have a more comprehensive picture of the extent of ADT data sharing by hospitals and, as determined beneficial, could build on this CHIRP reporting requirement by considering pay for performance in the future.

THSA reports that due to the new federal regulations and anticipated CHIRP parameters, more hospitals are interested in connecting with EDEN to share ADT data. As of December 2021, over 77 hospitals and 7 urgent care centers were sharing ADT information with EDEN (either directly or via an HIE), with 18 implementations in progress and about 50 hospitals in the pipeline to share this information. Based on the new requirements, THSA anticipates ADT data sharing will become ubiquitous throughout Texas.

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[109] ONC. 21st Century Cures Act final rule. https://www.federalregister.gov/documents/2020/05/01/2020-07419/21st-century-cures-act-interoperability-information-blocking-and-the-onc-health-it-certification. Accessed November 30, 2021.

3.1.3.4 Medicaid Managed Care Quality Initiatives and Value-Based Purchasing

Since Texas Medicaid's primary delivery model is managed care, it is through managed care that HHSC works to drive value-based care and improve health outcomes. In the next three years, HHSC will be re-procuring health plan contracts for all of its managed care models: STAR Health, STAR+PLUS, STAR/CHIP, and STAR Kids. There are existing requirements and incentives around data sharing in the current managed care contracts, and the procurements present an opportunity to further strengthen timely, actionable data sharing between HHSC and its contracted MCOs, providers and patients. HHSC has many different managed care quality initiatives. As part of its DSRIP transition planning work, HHSC released an updated *Value Based Payment Roadmap* in March 2021.[110] The roadmap highlights key initiatives in Medicaid managed care that incentivize health plans and providers to deliver high value care:

- Pay for Quality (P4Q) program – A percentage of MCO capitation payments is withheld and paid contingent on performance on designated quality measures.
- PIPs – Each MCO conducts quality improvement activities with measurable goals in areas where there is significant opportunity for improvement.
- Value-Based Enrollment Incentive Program – Beginning in SFY 2021, HHSC began incorporating measures of quality and efficiency into the auto-assignment process for enrollees who do not select an MCO. Plans that perform better on key risk-adjusted cost and quality measures and have higher member satisfaction receive a greater share of these enrollments.
- Hospital Potentially Preventable Readmissions and Complications programs – These programs hold hospitals and MCOs financially accountable if they perform poorly on these potentially preventable events.
- APM targets – Beginning in 2018, HHSC required that a certain percentage of MCO payments to providers be in APMs (overall and risk based). For 2021, the targets are 50 percent of payments in an APM and 25 percent of payments in an APM with downside risk for the provider.

All of these programs incentivize MCO coordination with providers to improve health outcomes. Data sharing is essential to achieving program goals. For the APM program, MCOs are required to share data and performance reports with

[110] HHSC. *Value Based Payment Roadmap* (DSRIP Transition Plan deliverable). March 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/Waivers/medicaid-1115-waiver/value-based-payment-roadmap.pdf, Accessed November 30, 2021.

providers on a regular basis.[111] HHSC is working to strengthen these incentives in the coming years. Since the original targets for the APM program extended through 2021, HHSC is working with its Value Based Payment and Quality Improvement Advisory Committee on how to strengthen that program for 2022 and future years. Factors related to health information exchange and other data and information sharing likely will be part of those enhancements.

The *Value Based Payment Roadmap* discusses the Texas Medicaid HIE Connectivity Project, stating that it "will allow for Texas health care providers to exchange clinical data electronically, which will improve the coordination and quality of care for Medicaid clients throughout the state. As Medicaid MCO payment models change, health information sharing across the state's Health IT ecosystem becomes more relevant." The Roadmap also discusses the recent federal rules, including related to hospital sharing of ADT data, as important to the success of value-based payment models.

Along with these existing programs, Texas Medicaid and its partners are recognizing the interplay between social determinants of health (SDOH) and health outcomes. As part of DSRIP transition planning, HHSC completed an *Assessment of Social Factors impacting Health Care Quality in Texas Medicaid* in March 2021.[112] HHSC and its contracted MCOs participate in an ongoing learning collaborative specific to SDOH. To the extent that social factors such as food insecurity, housing and transportation affect health, a key question is what role health care providers can play to help address these needs. Medicaid MCOs are piloting various initiatives to address SDOH, including screening and referrals to community-based organizations. Data sharing between the health care sector and community partners will be essential to address social factors that impact health.

In this regard, HHSC can leverage the lessons learned from the CMS Innovation Center's Accountable Health Communities model. Three Texas entities are among the 28 participants nationwide in this model, which tests whether systematically identifying and addressing the health-related social needs of Medicare and Medicaid beneficiaries through screening, referral and community

[111] HHSC. *Uniform Managed Care Manual*, Sec. 8.1.7.8.2 MCO Alternative Payment Models with Providers

[112] HHSC. *Assessment of Social Factors impacting Health Care Quality in Texas Medicaid* (DSRIP Transition Plan deliverable), March 2021, https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/Waivers/medicaid-1115-waiver/assessment-social-factors.pdf, Accessed November 30, 2021.

navigation services will impact health care costs and reduce health care utilization.[113]

3.1.3.5 Telemedicine/Telehealth and Broadband Expansion

Texas Medicaid has made significant strides in expanding access to telemedicine and telehealth services over the past several years. This progress will continue in the coming years due to state and federal policies and funding recognizing the importance of universal broadband, including in its role in enabling teleservices as one modality to deliver care across the state.

H.B. 4, 87th Legislature, Regular Session, 2021 builds on the state's recent experience with teleservices, making permanent many teleservices flexibilities provided by Texas Medicaid and other HHS programs during the COVID-19 PHE. Examples of these policies include allowing rural health clinics to be a distant site provider, allowing certain assessment and care coordination services to be delivered via teleservices, and allowing for audio-only behavioral health services.[114]

HHSC's implementation of H.B. 4 also builds on the experience in the DSRIP program, in which many initiatives leveraged telehealth to provide virtual medical appointments and/or consultations with a PCP, specialty care provider, psychiatrist or dentist. As one of Texas' DSRIP transition plan milestones, HHSC completed an *Assessment of Texas Medicaid Rural Teleservices.* That assessment identified a 3,410 percent increase in the number of teleservices delivered to Texas Medicaid enrollees after the onset of the public health emergency. However, teleservice utilization did not increase as much in rural areas as in urban and suburban areas, possibly due to lack of adequate broadband in many of the state's rural areas. Audio-only behavioral health services were one area of significant increase in rural communities.[115]

Public health has been using telemedicine to manage adherence to medication schedules required for the home-based treatment of highly contagious diseases such as tuberculosis. DSHS expects to continue this usage and expand services, as appropriate.

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[113] CMS. Accountable Health Communities webpage. https://innovation.cms.gov/innovation-models/ahcm, Accessed November 30, 2021.

[114] H.B. 4, 87th Legislature, Regular Session, 2021. https://capitol.texas.gov/BillLookup/Text.aspx?LegSess=87R&Bill=HB4, Accessed November 30, 2021.

[115] HHSC. *Assessment of Texas Medicaid Rural Teleservices* (DSRIP Transition Plan deliverable), June 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/Waivers/medicaid-1115-waiver/assessment-texas-medicaid-rural-teleservices.pdf, Accessed November 30, 2021.

Acknowledging the importance of high-speed broadband access, H.B. 5, 87th Legislature, Regular Session, 2021 created the Texas Broadband Development Office and Broadband Development Program to narrow the state's digital divide.[116] The DSRIP Transition Plan milestone *Assessment of Texas Medicaid Rural Teleservices* also emphasizes the importance of the expansion of broadband: "The ability to fully benefit from digital services, such as teleservices, largely depends on three factors: 1) a connection to broadband or high-speed internet; 2) routine access to or ownership of hardware technologies, such as audio/visual enabled desktops, laptops, and smartphones and 3) the digital literacy to effectively operate these technologies."[117]

In the past year, Congress has allocated significant funding that states and local governments can leverage to improve broadband coverage and affordability. The federal American Rescue Plan Act (ARPA) of 2021[118] includes provisions that provide about $388 billion in flexible funding, some of which may be used for broadband-related purposes. Also, the Consolidated Appropriations Act of 2021 created a $3.2 billion Emergency Broadband Benefit Program to help families and households struggling to afford internet service during the COVID-19 PHE.[119] Most recently, the Infrastructure Investment and Jobs Act appropriated $65 billion for broadband access, affordability and equity initiatives.[120] Of this amount $42.5 billion will go to states through matching grants for the Broadband Equity, Access and Deployment Program, and $14.2 billion will be used to expand and make permanent the Emergency Broadband Benefit Program (under the new name Affordable Connectivity Program).

One of the charges of the 87th Legislature, Third Called Session, which convened on September 20, 2021, was how to allocate about $16 billion in coronavirus relief funds from ARPA. S.B. 8, 87th Legislature, Third Called Session, 2021 appropriates $500.5 million from the Coronavirus Capital Projects Fund to the Comptroller of Public Accounts for broadband infrastructure, $75.0 million of

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[116] H.B. 5, 87th Legislature, Regular Session, 2021. https://capitol.texas.gov/BillLookup/Text.aspx?LegSess=87R&Bill=HB5, Accessed November 30, 2021.

[117] HHSC. *Assessment of Texas Medicaid Rural Teleservices*, June 2021. https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/policies-rules/Waivers/medicaid-1115-waiver/assessment-texas-medicaid-rural-teleservices.pdf, Accessed November 30, 2021.

[118] American Rescue Plan Act of 2021, H.R. 1319, 117th Congress

[119] https://www.brookings.edu/research/the-american-rescue-plan-is-the-broadband-down-payment-the-country-needs/, Accessed November 30, 2021.

[120] Infrastructure Investment and Jobs Act. H.R. 3684, 117th Congress (2021-2022), https://www.congress.gov/bill/117th-congress/house-bill/3684, Accessed November 30, 2021.

which is to be used for the Texas Broadband Pole Replacement Program. The bill also provides $20.0 million to HHSC to implement a single, consolidated portal for Medicaid and CHIP provider data.[121]

The Texas Broadband Development Office established in H.B. 5 can help coordinate how best to spend available federal relief funds related to broadband. By June 2022, the office must publish the initial state broadband plan establishing long-term goals for greater access to and adoption, affordability and use of broadband services in Texas. The new Broadband Development Program will award grants, low-interest loans and other financial incentives to applicants for the purpose of expanding access to and adoption of broadband service. Mapping of areas eligible to receive funding under the Broadband Development Program must be published no later than January 1, 2023.

3.1.3.6 Coordination with Public Health

The continued collaboration and coordination between Texas Medicaid/CHIP, DSHS as the state public health agency and other public health entities includes expanding the breadth and functions of health information exchange to improve the quality, timeliness, and utility of data and information services provided by DSHS as well as reduce providers' administrative burdens in supplying data. Key aspects of collaboration include:

- Continued development of the iCoE;
- Expanding the use of PULSE and other interoperability tools to support surveillance activities;
- Expanding laboratory services; and
- Expanding connectivity and linkages with DSHS data resources.

DSHS and HHSC have collaborated to develop the iCoE technology service as a primary point for data exchange between HHS agencies and health care providers, MCOs and other trading partners (see Section 2.5.6 for more detail). A next step for the iCoE can be to expand use of the iCoE to other use cases, including additional support for data exchange related to COVID-19 response activities. This work will entail:

- Identifying data resources that may be shared outside DSHS;
- Building on current data governance processes to include policies and processes for sharing data with external entities;

[121] S.B. 8, 87th Legislature, Third Called Session, 2021. https://capitol.texas.gov/BillLookup/History.aspx?LegSess=873&Bill=SB8, Accessed November 30, 2021.

- Expanding data enrichment capabilities; and
- Improving data quality by leveraging internal and external data.

As described in Section 2.5.2.4, THSA is currently working with HHSC and DSHS to develop PULSE in Texas. PULSE is designed to access health information from multiple sources during response to a natural or manmade disaster. Using PULSE, authenticated health care professionals can securely access patients' health histories, including medications, allergies, diagnoses and lab results. Access can be provided wherever Internet access is available, such as shelters or other environments. PULSE uses a web browser to provide access and requires limited training to use the system to access records. PULSE leverages prior investments in technology supporting data security to comply with the requirements of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). PULSE allows the viewing of patients' critical medical records. At this time, however, PULSE does not have the function to add information to patients' records.

PULSE also has the capacity to support public health investigations by supporting remote access to epidemiologists working for public health agencies at the state and local level. This access would enhance professionals' ability to more rapidly conduct disease investigations. Using PULSE, epidemiologists can place less burden on providers in responding to inquiries. In addition to using PULSE for collecting information regarding contagious diseases, the system, along with expanding EDEN, can be used to improve public health's ability to access and use information critical to reducing maternal mortality as well as reducing costs and improving care for infants with birth defects.

For the public health laboratory, the Newborn Screening initiative plans to expand DSHS' capacity to electronically receive newborn screening test orders and provide test results to health care providers. This initiative would reduce the steps required by enabling the secure, standards-based electronic transactions between providers' EHRs and DSHS' systems.

DSHS expects to continue to work with Medicaid programs to leverage DSHS-maintained data resources to improve health outcomes for people served by Medicaid. Medicaid-supported technology services, such as EDEN, support improvements in DSHS' ability to collect necessary data from providers while minimizing administrative activities by providers in supplying the data. DSHS also is working to enhance its analytics capabilities to transform data it receives into actionable information.

Ensuring network and reporting reliability is critical for the success of health information exchange. Appropriate investment in infrastructure and contingency

planning is needed to address issues such as power failures. Managing potential single points of failure is critical when considering the real-time access to data required for managing disaster events.

Some specific areas for potential collaboration between DSHS and the Texas Medicaid program follow.

Newborn Screening
DSHS expects to expand its services for the electronic submission of requests for newborn bloodspot screening and returning results to ordering providers, reducing administrative activities associated with a large number of births (375,000 births in 2020) with two rounds of screening required for each birth. Efforts also may include changes to routing information to provide notice to MCOs regarding at-risk people. Additional services may include leveraging EDEN and modifying systems and workflow to identify and reduce gaps in testing through provider and patient education.

Maternal Mortality, Birth Defects and Other Services
DSHS and HHSC may collaborate on using additional exchange tools described in the federal Interoperability Standards Advisory (ISA) and the iCoE to facilitate providers using direct and indirect connectivity to supply standards-based data used by DSHS for maternal mortality analyses, birth defect data collection and care services. Data analysis by DSHS will be shared with HHSC and used to inform Medicaid about potential adjustments in programs to improve health outcomes.

Disaster Response
Areas of focus for PULSE are program governance, including guidance for trigger events for activating PULSE for a particular disaster, the process for approving users to access the system when used for disaster response, what public forums will be used to disseminate information about PULSE and how the system will be funded beyond FFY 2023.

A second area for focus will include the use of PULSE in supporting case investigations for public health, both by DSHS and by LHDs. Using the PULSE infrastructure for these types of day-to-day activities will help ensure the network is available and fully operational if a disaster occurs, as well as substantially improving public health's ability to complete case investigations at an increased pace, with access to higher-quality information, and a reduction in provider burden in responding to queries from public health staff.

EHR and Telemedicine Use
DSHS also is procuring an EHR to support the management and delivery of health services provided through DSHS' regional offices, where the agency serves as the LHD. Patient records are expected to include vaccination information (which will

be integrated into the state's immunization registry) as well as service delivery related to the management of highly infectious diseases such as tuberculosis. DSHS also expects to continue to use and expand telemedicine services, focused on ensuring medication adherence, reducing the need for public health nurses to conduct home visits to ensure adherence to required medication schedules.

3.2 Future IT Systems Architecture

3.2.1 Medicaid Management Information System

Currently, HHSC's MMIS is a massive, fully integrated, highly complex ecosystem used in support of the Texas Medicaid delivery system. In 2015, CMS directed states to modernize their MMIS and emphasized a multi-vendor, modular design to provide the most efficient and cost-effective long-term solution for meeting states' business needs. HHSC released two solicitations in late fall 2021 and released a third solicitation in January 2022 to procure the service components for a modernized, modular MMIS. In a pre-solicitation announcement, updated in May 2021, HHSC alerted the vendor community to the planned procurements. It is expected that HHSC's new service model will require minimal customization and will support HHSC's transition to national standard code sets. The new service model will provide a solid infrastructure through which Texas Medicaid could integrate additional clinical data for program management, care transitions and care coordination.

In addition to the three solicitations, HHSC used on existing interagency agreement to successfully transition modernized applications from the incumbent vendor's data center to a state-owned data center managed by the Texas Department of Information Resources (DIR).

HHSC plans to separately procure the following three service components:

1. Business Operations and Business Services Integration – to ensure effective functioning of the Medicaid ecosystem when divided across multiple vendors.

2. Claims Processing Adjudication and Financial Services – for Fee-For-Service claims (representing less than 7 percent of Medicaid enrollees) and fiscal agent processing.

3. Application Maintenance and Development of MMIS Modernized Systems – including the support of recently updated applications which will reside in the DIR data center, including Provider Management, Electronic Visit Verification, and Transformed Medicaid Statistical Information System (T-MSIS) for federal reporting, and other systems.

3.2.2 MITA Assessment Implementation

As described in the As-Is section of this plan, the MITA 3.0 SS-A completed in 2020, noted that although each of the Texas HHS operating agencies has sound internal processes and systems, the Texas HHS enterprise needs to continue increasing MITA maturity. This can be accomplished by focusing on sharing data, aligning common processes and actively managing the satisfaction level of providers, members and other entities that interact with the enterprise.

Areas of greatest improvement from the MITA 3.0 SS-A completed in 2015 to the MITA 3.0 SS-A completed in 2020 were: Business Relationship Management, Financial Management, Operations Management, Performance Management and Provider Management. The MITA business areas with the largest expected (To-Be) maturity improvements over the next five years included: Eligibility and Enrollment Management, Contractor Management, Operations Management, Performance Management, Plan Management, and Provider Management. The upcoming MMIS procurements are designed to strengthen Texas' MITA maturity.

In the MITA SS-A, one area where Texas had not made much progress and does not anticipate significant progress in the near future is Care Management. Care Management covers programs over a wide range of services such as home-based personal care services, early childhood through youth services, and mental health and substance use disorder services. The MITA SS-A noted that there are over 15 applications associated with Care Management programs, with some applications running on older mainframe technology that do not easily fit the MMIS category of "mechanized claims processing and information retrieval system," and resultantly would not qualify for MMIS funding for enhancements and/or replacements. This makes it challenging to fund enhancements to improve the management of these programs.

Texas has requested CMS provide the de-identified MITA maturity scores from other states as submitted on the Electronic State Self-Assessment (eSS-A) tool to determine if this issue is specific to Texas or if it is common to other state Medicaid programs. In addition, Texas will work with multi-state groups (e.g., CMS Cohort) to see if other states have found solutions, including available applications and funding to help improve this maturity. Care management is a key function in the managed care delivery system for the advancement of value-based care. HIE is necessary for improving care coordination, including for SDOH and public health emergencies such as COVID-19. Improving HIE can assist care coordinators, both with MCOs and providers, to more effectively manage care.

3.3 Future HIE Governance Structure

The chief governance challenges facing Texas HHS are how to coordinate projects and maintain alignment across the HHS system and Medicaid, including statewide and national initiatives related to health IT and interoperability. To achieve interoperability for meaningful use, the Medicaid/CHIP Services Department will need to ensure continued collaboration with eligible professionals and hospitals and ongoing coordination activities with MCOs, providers, HIEs and THSA.

In Texas Medicaid, internal governance will be achieved through existing processes within the Medicaid Operations Department. Medicaid Operations also has a presence in the HHSC IT Governance Committee that includes participation from the various divisions within HHSC and will present projects to this committee as appropriate.

Medicaid health IT projects that cross both agency and division boundaries will be coordinated through the OeHC. The OeHC is formally recognized within Texas HHS as the coordination point for all health IT activities that cross organizational boundaries within the HHS system.

Another central point of coordination is the eHAC. Medicaid Operations also acts an ex-officio member on this committee and regularly presents on related initiatives. This committee advises Texas HHS on strategic planning, policy, rules and services related to the use of health IT, health information exchange systems, telemedicine, telehealth and home telemonitoring services. It has broad stakeholder representation.

While there are separate and distinct responsibilities for the successful implementation of HIE infrastructure and programs, there are many more interdependencies that call for Medicaid to have a key role in the governance and implementation of the state's HIE infrastructure. THSA is responsible for promoting, implementing, and facilitating statewide HIE efforts, pursuant to Texas Health and Safety Code, Chapter 182. To further collaboration between HHSC and THSA, HHSC holds an ex-officio seat on the THSA governor-appointed board of directors. Medicaid plans to continue to participate in HIE planning and implementation activities as they unfold. This includes continued collaboration with THSA, advisory groups, local HIEs, MCOs, DSHS, providers and other partners.

While HHS has governance structures in place to coordinate projects within Medicaid and across the system, HHS will continue to refine these processes and structures as needed to ensure effective alignment.

4 Activities Necessary to Administer and Oversee the EHR Incentive/Promoting Interoperability Program

HHSC is involved in significant programmatic and technological activities to complete the final year of incentive payments for the Promoting Interoperability Program and to close out the program by September 30, 2023.

Final incentive payments for Program Year (PY) 2021 will be issued by December 31, 2021, except in cases of audit or appeal. The state will continue to conduct additional administrative tasks to successfully end the program by September 30, 2023. The state level repository (SLR), also known as the Medicaid Incentive (MI) 360 system, will be decommissioned and disconnected from the CMS National Level Repository (NLR) by September 30, 2023.

Key historical activities and activities to conclude the Promoting Interoperability Program are detailed in the tables below. Specific information related to audits and appeals can be found in the state's separately submitted Audit Strategy document. In addition, the state is following a formal communication plan to conduct ongoing outreach activities through web notices and targeted emails to providers to inform them of final year attestation requirements, important deadlines and final incentive payments.

Historical Activities	
Date	**Activity**
January 3, 2011	Registration Implementation: Opening of Texas Medicaid SLR for provider registration
February 28, 2011	Adopt-Implement-Upgrade (AIU) Attestation Implementation: SLR open for eligible professional (EP) and eligible hospital (EH) attestations to receive EHR incentive payments
May 7, 2011	Payment Implementation: Texas Medicaid begins issuing incentive payments
January 8, 2012	Meaningful Use (MU) Attestation Implementation: SLR open for EP and EH meaningful use attestations
January 15, 2013	Audit Implementation: Texas Medicaid initiates post-payment audits of EPs and EHs
August 1, 2021	Attestation deadline for final year of program (PY 2021)
August 2021	Completion of post-payment audits for PYs 2011-2019
September 2021	Initiation of post-payment audits for PY 2020
October 1, 2021	Transition of HIE funding from HITECH to MMIS funding stream

October 15, 2021	Deadline for providers to appeal an eligibility determination for PY 2021

Close-out Activities	
Date	**Activity**
October-November 2021	Planning activities for SLR decommissioning: • HHSC IT review of SLR database specifications and interfaces • Development of decommissioning timeline and project tasks
December 31, 2021	• Final incentive payments issued, except for audit and appeal adjustments, including Security Risk Assessment (SRA) Objective 1 appeals • Completion of environmental scan
January 31, 2022	• Deadline for providers to upload SRA for Objective 1 • Last date for providers to edit attestation data, unless requested by HHSC • Final Quarterly HITECH Report due to CMS
February 1, 2022	Initiation of post-payment audits for PY 2021
March 31, 2022	Final SMHP submission to CMS
April 30, 2022	Final Audit Strategy submission to CMS
May 31, 2022	Final HITECH Annual Report due to CMS
August 2022	Anticipated completion of post-payment audits for PYs 2020-2021
June 30, 2023	• Completion of audit appeals for all program years • Final electronic reporting of audits and appeals to CMS via E7 and E8 NLR interfaces • Closing of SLR access for providers • Final D18 transactions (if needed) to CMS for appeal-related payment adjustments, including SRA Objective 1 appeals
August 2023	Transfer of SLR data from vendor to HHSC via HHSC's secure FTP site in a format to be specified by HHSC

September 2023	• Decommissioning of SLR and disconnect from CMS NLR and state payment system • SLR no longer available to state staff • End of all HITECH-funded activities

5 The State's Medicaid Promoting Interoperability Program Audit Strategy

HHSC conducts pre-payment and post-payment audits of eligible professionals and eligible hospitals participating in the EHR Incentive/Promoting Interoperability (PI) Program. HHSC's primary objectives are to:

- Minimize fraud and abuse and reduce the potential for payment errors;
- Avoid making improper payments by ensuring that payments only go to eligible professionals and eligible hospitals that meet all program requirements related to eligibility, adoption/implementation/upgrade, and meaningful use; and
- Recoup improper payments, if they occur.

HHSC's audit procedures and sampling methodology are described in detail in the state's separately approved Audit Strategy. The most recent Audit Strategy was approved by CMS in April 2020 and includes pre-payment and post-payment audit procedures from PY 2011 through the final year of the PI Program in 2021. HHSC will submit a Final Audit Strategy in 2022 with any necessary updates related to final year audit procedures and sampling.

6 The State's Health IT and HIE Roadmap

HHSC is using Texas' final SMHP planning process to further refine its vision as a value purchaser. Health IT and HIE are critical tools to achieving Texas Medicaid's goal of better coordinating care. Texas has made substantial progress over the past several years with federal support for EHR adoption and HIE. However, the state still has a lot of work to do to ensure that patients, providers, health plans and Medicaid have timely, actionable data to improve care and health. HHSC will need to continue to work on aligning current and future health IT activities in departments and programs across the Texas HHS system and coordinate with the state-level HIE strategy to achieve improved health outcomes for Texans.

The following table defines the goals and benchmarks that serve as measurable indicators of progress for Texas Medicaid to advance its health IT and HIE efforts over the next five years.

Health IT/ HIE Initiative	Description	Measure	As-Is Status	To-Be Milestones
HIE IAPD Strategy 1	Connect Medicaid providers to local HIEs	Number of Medicaid providers connected to local HIEs by this project, with capability to transfer consolidated clinical document architecture (C-CDA) or admission, discharge, and transfer (ADT)-based clinical data	As of September 2021, 40 hospitals and 75 ambulatory practices, with a total of 342 providers, have been onboarded through this project.	Goal is 450 total Medicaid providers connected to local HIEs as an outcome of this project by September 30, 2023.
HIE IAPD Strategy 2	Onboarding local HIEs to the THSA	Number of local HIEs connected to THSA by this project	As of September 2021, three (3) HIEs connected to THSA as an outcome of this project	Goal is four (4) HIEs connected to THSA as an outcome of this project by September 30, 2023.
HIE IAPD Strategy 3	Medicaid Emergency Department Encounter Notification (EDEN) Initiative	Number of local HIEs contributing hospital emergency department ADT data	As of September 2021, three (3) local HIEs contributing hospital ED ADT data as an outcome of this project	Goal is four (4) local HIEs contributing hospital ED ADT data as an outcome of this project by September 30, 2023.
HIE IAPD HIETexas PULSE Enterprise Edition (EE)	HIETexas PULSE EE launched during declared disasters	Deploy new HIETexas PULSE EE with future disaster declarations	Most recent operations under PULSE COVID	Launch HIETexas PULSE EE with next disaster declaration
MMIS Procurement – Business Operations and Business Services Integration	Contracting to ensure effective functioning of the Medicaid ecosystem when divided across multiple vendors	Request for Offer (RFO) Contract Start Implementation	MMIS operations under current vendor	RFO Posted - Fall 2021 Anticipated Contract Start - Fall 2022 Implementation - 9/1/2023
MMIS Procurement – Claims Processing Adjudication and Financial Services	Contracting for fee-for-service claims and fiscal agent processing	RFO Contract Start Implementation	MMIS operations under current vendor	RFO Posted - Fall 2021 Anticipated Contract Start - Fall 2022 Implementation - 9/1/2023

Health IT/ HIE Initiative	Description	Measure	As-Is Status	To-Be Milestones
MMIS Procurement – Application Maintenance and Development of MMIS Modernized Systems	Contracting for the support of recently updated applications which will reside in the Texas Department of Information Resources (DIR) data center, including Provider Management, Electronic Visit Verification, and Transformed Medicaid Statistical Information System (T-MSIS) for federal reporting, and other systems	RFO Contract Start Implementation	MMIS operations under current vendor	RFO Posted – January 2022 Anticipated Contract Start - Fall 2022 Implementation - 9/1/2023
Data Center Migration to DIR	Interagency agreement will transition modernized applications from the incumbent vendor's data center to a State-owned data center managed by DIR	Transition modernized applications to DIR data center	Transition modernized applications to DIR data center – Completed October 1, 2021.	Transition modernized applications to DIR data center – Completed October 1, 2021.
Data Storage and Use Solution for HIE Connectivity Project Data	Develop a solution to make HIE Connectivity Project data more accessible and usable for other programs within Medicaid and HHS	Deploy data storage and use solution for HIE Connectivity Project data	HIE Connectivity Project data stored with a vendor in a manner that is challenging to access	Deployment of data storage and use solution for HIE Connectivity Project data planned for Fall 2022
Behavioral Health (BH) Interoperability Strategic Plan	Develop a state plan, including a proposed timeline, for aligning the interoperability and technological capabilities in the provision of behavioral health services, in accordance with S.B. 640, 87th	Submission of BH Interoperability State Plan	Workgroup to develop BH Interoperability State Plan kicked off October 2021.	Submit BH Interoperability State Plan by August 31, 2022

Health IT/ HIE Initiative	Description	Measure	As-Is Status	To-Be Milestones
	Legislature, Regular Session, 2021			
Implement new MCO contract requirements for alternative payment models (APMs)	Implement new MCO contract requirements related to APMs, which require data sharing with providers to be successful	Implement new MCO contract requirements related to APMs	New MCO contract requirements related to APMs under development	Implement new APM contract requirements by September 1, 2022
Data management operating model conforming with the DIR Data Management Framework	S.B. 475, 87th Legislature, Regular Session, 2021 requires changes to the HHSC data management operating model	Implement new data management operating model to conform with the Texas DIR Data Management Framework	HHSC operates under successor data governance processes	By November 15, 2022, HHSC implements data management operating model to conform with the Texas DIR Data Management Framework
HHSC data maturity assessment of agency data governance processes	S.B. 475, 87th Legislature, Regular Session, 2021 requires a data maturity assessment of the agency's data governance processes	HHSC submits a data maturity assessment of the agency's data governance processes	HHSC operates under successor data governance processes	By November 15, 2022, HHSC submits a data maturity assessment of the agency's data governance processes
Medicaid/CHIP provider enrollment data portal	Release consolidated internet portal redesign for Medicaid and CHIP medical services provider data	Release of consolidated provider enrollment portal redesign	As of September 2021, operating with multiple provider enrollment portals.	Release of the consolidated provider portal redesign – December 13, 2021

Health IT/ HIE Initiative	Description	Measure	As-Is Status	To-Be Milestones
Formalize Medicaid Health IT Governance	Formalize the governance process for Medicaid Health IT projects.	Establish a formalized Medicaid Health IT Governance process.	No formal Medicaid Health IT Governance process.	Formalize and document a Medicaid Health IT Project Governance process – November 2022
Establishment of Use Cases for HIE Data	Texas Medicaid internal stakeholders establish use cases for HIE data	Documentation of use cases by team, with inclusion in process workflow documentation, as applicable	No formal HIE use cases documented	Documentation of use cases by impacted Medicaid/CHIP Services Department teams targeted for Spring 2023

APPENDIX A – Legislative Background[122]

National Legislation

American Recovery and Reinvestment Act of 2009

On February 17, 2009, the American Recovery and Reinvestment Act of 2009 (ARRA) was signed into law, and established the framework for financial incentives to stimulate growth and improve the health of the nation's economy and health care system. ARRA defined specific roles and incentives for the U.S. Department of Health and Human Services (HHS) and its partners – State Medicaid agencies – in improving the nation's health and care through the meaningful use of EHR technologies.[123] Two Titles in ARRA, Title XIII, Division A, Health Information Technology, and Title IV Division B, Medicare and Medicaid Health Information Technology, comprise the "*Health Information Technology for Economic and Clinical Health"* (HITECH) Act, which provides unprecedented opportunities for states to plan, design, and meaningfully use EHRs and HIE to improve health, care quality and cost efficiency.

Title XIII, Health Information Technology, established the Office of the National Coordinator of Health Information Technology (ONC) and provided nearly $2 billion in grant funds for ONC to administer in supporting EHR adoption, the electronic exchange of health information, and research to enhance the use of health IT.

Title VI, Medicare and Medicaid Health Information Technology, established the EHR Incentive Payment Program that is administered through CMS. The Medicaid program is administered in cooperation with state Medicaid agencies. This program, as originally passed, was responsible for an estimated $27 billion in direct funds and a projected $36 to $46 billion in total funds and costs savings nationwide.

These transformative programs are driven by the goals of HITECH to:

1. Improve individual and population health;
2. Increase transparency and efficiency; and
3. Improve the ability to study and advance care delivery.

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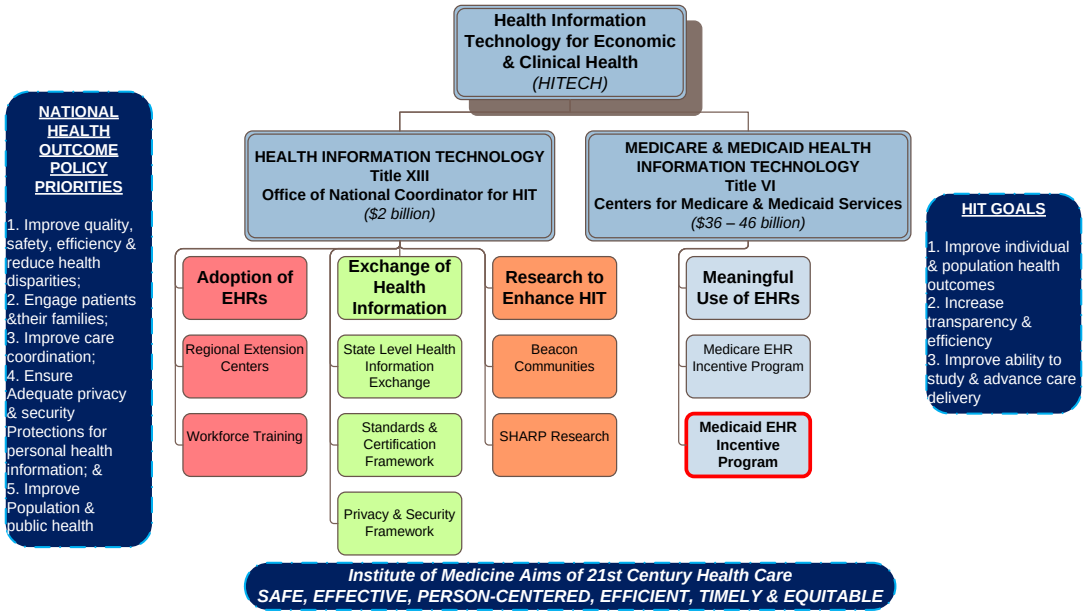
[122] This appendix includes the information from the 2017 *Texas State Medicaid Health IT Plan* Appendix A, plus major health IT/HIE legislation since then.

[123] American Recovery and Reinvestment Act of 2009, https://www.congress.gov/bill/111th-congress/house-bill/1/text, Accessed November 30, 2021.

HITECH Organization



The vision of CMS, which administers this EHR Incentive Program (since renamed the Promoting Interoperability Program) with state Medicaid agencies, is "The right care, for every person every time." CMS developed an overarching Quality Strategy for Medicaid and CHIP that is aligned with the Institute of Medicine's "*Aims of a 21st Century Health Care System*" to ensure care "safe, effective, efficient, person-centered, timely and equitable." The pillars of the Quality Strategy are to:

Focus on Patient Centeredness	Implement Evidenced-Based Care and Quality Measurement	Support Value-Based Payment Systems	Leverage Health IT – turn Data into Information	Continue to Build Effective Partnerships	Disseminate Information and Provide Technical Assistance	Facilitate Equity in the Delivery of Care

The Center for Medicaid and State Operations within CMS issued two State Medicaid Director's letters, one on September 1, 2009, and one on July 23, 2010, to provide additional guidance and interpretation of the rules. As states developed their SMHPs and IAPDs to implement the EHR Incentive Payment program, CMS addressed their questions and provided further guidance through bi-weekly All-States' Calls and through FAQs on their website. As the program developed at the national level, these tools were critical in further directing states.

MACRA[124]

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA)[125] established the Quality Payment Program (QPP). The QPP rewards high-value, high-quality Medicare clinicians with payment increases, while reducing payments to clinicians who do not meet performance standards. The Quality Eligible clinicians have two tracks to choose from in the Quality Payment Program based on their practice size, specialty, location, or patient population:

- APMs; or
- MIPS.

Under MACRA, the Medicare EHR Incentive/Promoting Interoperability Program was transitioned to become one of the four components of MIPS, which consolidated multiple quality programs into a single program to improve care. Clinicians participating in MIPS earn a performance-based payment adjustment while clinicians participating in an Advanced APM may earn an incentive payment for participating in an innovative payment model.

21st Century Cures Act[126]

There are many provisions of the 21st Century Cures Act[127] intended to improve the flow and exchange of electronic health information. ONC is responsible for implementing those parts of Title IV, *Delivery*, related to advancing interoperability, prohibiting information blocking, and enhancing the usability, accessibility, and privacy and security of health IT. ONC works to ensure that all people, their families and their health care providers have appropriate access to electronic health information to help improve the overall health of the nation's population.

In addition to supporting medical research, advancing interoperability, clarifying HIPAA privacy rules, and supporting substance abuse and mental health services, the Cures Act defines interoperability as the ability to exchange and use electronic health information without special effort on the part of the user and in a way not constituting information blocking.

ONC focuses on the following provisions as it implements the Cures Act:

- Section 4001: Health IT Usability
- Section 4002(a): Conditions of Certification
- Section 4003(b): Trusted Exchange Framework and Common Agreement

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[124] ONC. Health IT Legislation webpage. https://www.healthit.gov/topic/laws-regulation-and-policy/health-it-legislation, Accessed November 30, 2021.

[125] H.R. 2, Pub.L. 114–10

[126] ONC. Health IT Legislation webpage. https://www.healthit.gov/topic/laws-regulation-and-policy/health-it-legislation, Accessed November 30, 2021.

[127] H.R. 34, Pub.L. 114-255

- Section 4003(c): Health Information Technology Advisory Committee
- Section 4004: Identifying reasonable and necessary activities that do not constitute information blocking

ONC also is supporting and collaborating with its federal partners, such as CMS, the HHS Office of Civil Rights, the HHS Inspector General, the Agency for Healthcare Research and Quality, and the National Institute for Standards and Technology.

Major Texas Legislation

H.B. 1218, 81st Legislature, Regular Session, 2009

HIE Pilot Program

H.B. 1218 authorized HHSC to establish a health information exchange pilot program to determine the feasibility, costs and benefits of Medicaid and CHIP exchanging secure electronic health information with local and regional HIEs comprising hospitals, clinics, physicians' offices and other health care providers. The pilot program consisted of bidirectional exchange of filled prescription histories between HHSC and a local HIE. The purpose of the pilot program was to explore the feasibility of exchanging clinical data and begin identifying legal, policy, and other procedural barriers to implementing HIE initiatives.

Medicaid Electronic Health Information Exchange System

HB 1218 authorized HHSC to develop an electronic health information exchange system to improve the quality, safety and efficiency of health care services provided under the CHIP and Medicaid programs. The legislation requires that the system be developed in accordance with the MITA initiative of CMS's Center for Medicaid and State Operations and conform to other standards required under federal law. The System was intended to be implemented in three stages:

- Stage 1 directs HHSC to implement a health information exchange system that offers an electronic health record for all Medicaid recipients. In addition, Stage 1 requires HHSC to coordinate e-prescribing tools used by health care providers and health care facilities under the Medicaid and CHIP programs and develop a claims-based electronic health record in Medicaid.
- Stage 2 would expand the EHR to include CHIP program clients; add state laboratory results, including the results of newborn screenings and tests conducted under the Texas Health Steps (EPSDT) program; improve data gathering capabilities; and use evidence-based technology tools to create client profiles.
- Stage 3 involves developing evidence-based benchmarking tools that can be used by health care providers to evaluate their own performances on health care outcomes and overall quality of care as compared to aggregated performance data regarding peers; and

expanding the system to include data exchange with state agencies, additional health care providers, laboratories, diagnostic facilities, hospitals, and medical offices.

HIE Systems Advisory Committee/e-Health Advisory Committee

The HIE Systems Advisory Committee established under H.B. 1218 advised HHSC on Medicaid activities related to health information technology. A key objective of the Committee was to ensure Medicaid/CHIP HIE is "interoperable" with broader statewide health information exchange being planned through the THSA.[128] In 2016 the advisory committee was renamed the e-Health Advisory Committee and combined with the former Telemedicine and Telehealth Advisory Committee.

The tasks of the eHAC include:

- Advising on the development, implementation and long-range plans for health care information technology and HIE, including the use of:
  - Electronic health records;
  - Computerized clinical support systems;
  - HIE systems for the exchange of clinical and other forms of health information; and
  - Other methods of incorporating health IT for the purposes of greater cost-effectiveness and better patient outcomes in health and population health; and
- Advising on the development, use, and long-range plans for telemedicine, telehealth, and home telemonitoring services; and
- Advising on incentives for increasing health care provider adoption and use of EHRs and HIEs.

Health Information Technology Standards

H.B. 1218 requires that any health IT used by HHSC or any entity acting on behalf of HHSC, in the Medicaid program or CHIP, conform to standards required under federal law.

H.B. 2641, 84th Legislature, Regular Session, 2015

H.B. 2641, passed in 2015, relates to the exchange of health information. This bill mandated that the state's HHS agencies adopt nationally recognized standards in their IT systems that interface in sending or receiving protected health information planned or procured on or after September 1, 2015. H.B. 2641 also amended a number of public health reporting statutes to enable providers to submit data to DSHS through HIEs. Additionally, the language in H.B. 2641

[128] Texas Senate. *Health Information Technology (HIT) and the Medicaid/CHIP Health Information Exchange (HIE) Advisory Committee*. https://senate.texas.gov/cmtes/81/c610/0415-JosephSchneider.pdf, Accessed November 30, 2021.

protects providers that submit information to an HIE from litigation if the HIE or another provider accessing the information uses it in a way that violates state or federal privacy and security laws relating to the disclosure of protected health information. Lastly, H.B. 2641 directs HHSC to develop a method, if determined feasible and cost effective, for reimbursing Medicaid providers who review and transmit electronic health information through HIEs.

S.B. 640, 87th Legislature, Regular Session, 2021

The federal EHR Incentive/PI Program did not include certain behavioral health provider types. S.B. 640 requires a study on the interoperability needs and technology readiness of behavioral health service providers in Texas. Based on the results of the study, HHSC is required to submit a report to the legislature, lieutenant governor, and governor that includes a state plan, including a proposed timeline, for aligning the interoperability and technological capabilities in the provision of behavioral health services with applicable law.[129]

[129] S.B. 640, 87th Legislature, Regular Session, 2021. https://capitol.texas.gov/tlodocs/87R/billtext/pdf/SB00640F.pdf, Accessed November 30, 2021.

APPENDIX B – Texas MMIS Overview

Components of the Texas MMIS system

- Data Entry
- Acute and Long Term Care Claims processing and adjudication
- Claim Check
- Financial
- Health Insurance Premium Payments System (HIPPS) and Insurance Premium Payment System (PPS)
- Long Term Care Client Assessment, Review and Evaluation (CARE) Form Processing
- Third Party Liability
- Provider
- Client/Recipient
- Medicare Buy-In
- Automatic Voice Response System
- Online Provider Lookup
- Provider Portal and Bulletin Board System
- Prescription Drug Point of Sale System
- Pharmacy Claims Payment
- Electronic Data Interchange (EDI) Processing System
- Customer Service Request (CSR) System
- Retrospective Drug Utilization Review (DUR)
- Reports online
- Web Portal
- Case Tracking
- Claims and Encounters Data Warehouse
- Ad hoc query and reporting platform
- Management and Administrative Reporting Subsystem (MARS)
- Surveillance and Utilization Review System (SURS)
- Medicaid Statistical Information System
- Program Integrity
- System Maintenance and Modification
- System Operations, Disaster Recovery, and Integrated Test Facility

Additionally, the system has multiple interfaces and ancillary applications that support internal and external users, state agencies and other vendors. The business functions performed by the Fiscal Agent include, but are not limited to the following:

- Primary Care Case Management
- Provider Services
- Client Services
- Decision Support Services
- Medical Policy
- Prior Authorization
- Surveillance/Utilization Review
- Third Party Resources
- Claims Processing
- Long Term Care Client Assessment, Review and Evaluation (CARE) Form Processing
- Long Term Care Programs
- Children with Special Health Care Needs (CSHCN)
- Family Planning
- County Indigent Health Care Program
- Medically Needy Program
- Financial Management
- Management and Administrative Reporting
- Reference Data Maintenance
- Eligibility Verification

APPENDIX C – Texas Value-Based Initiatives

Initiative	Description	Quality and/or Efficiency Measures	Benefit from Improved Health IT/HIE
Transition from Fee-for-Service to Managed Care	Over 90 percent of Medicaid and CHIP clients receive services through risk bearing Managed Care Organizations (MCOs) and dental contractors (DCs). The transition to managed care has occurred in carefully planned stages over a 24-year period.	Federal and state law require a number of quality related activities including routine reporting on evidence based measures of MCO and DC performance.	Care co-ordination is a foundation of the MCO service delivery model. The state's health IT strategy will establish a reliable pathway for the expeditious exchange of high quality data with MCOs and across providers engaged in the care of a person. The availability of clinical data will also improve the relevance of program performance measures, including eCQMs.
MCO Pay for Quality (P4Q)	Budget neutral program that creates incentives and disincentives for MCOs and dental contractors (DCs). Health plans that excel on specified quality metrics are eligible for additional funds	P4Q includes industry recognized process and outcome measures within a model that: 1) is easy to understand; 2) allows health plans to track performance and improvement; 3) rewards both high	Improved HIE will allow for more timely assessment of MCO performance using the most meaningful metrics possible, including metrics showing clinical outcomes and that are appropriately

Initiative	Description	Quality and/or Efficiency Measures	Benefit from Improved Health IT/HIE
	above their existing premium payments; health plans that don't meet their measures can lose funds.	performance and improvement; and 4) promotes transformation and innovation.	adjusted for clinical and social risk.
Hospital Quality Based Payment Program for Potentially Preventable Readmissions and Complications	Provides incentives and disincentives to hospitals to reduce potentially preventable readmissions and complications. MCOs pass incentives and disincentives on to hospitals based on a hospital's overall performance for Medicaid clients as calculated by HHSC.	Potentially Preventable Readmissions and Potentially Preventable Complications.	Real-time exchange of health information is crucial for care transitions that reduce preventable events. Admission, discharge, and transfer data has been demonstrated to reduce preventable hospital admissions and readmissions.
MCO Performance Improvement Projects (PIPs)	Two- year projects designed to follow a common quality improvement cycle. Projects should demonstrate significant improvement sustained over time for clinical and non-clinical care that has a	HHSC, with the EQRO, determines topics for PIPs based on improvement goals. MCOs create a PIP plan, report on progress annually, and provide a final report.	HIE will reduce data lag promoting the integration of rapid-cycle improvement approaches into the PIPs. Wider use of electronically exchanged clinical data/metrics will expand the range of viable QI

Initiative	Description	Quality and/or Efficiency Measures	Benefit from Improved Health IT/HIE
	favorable effect on health outcomes and enrollee satisfaction.		projects, particularly collaborative projects.
Quality Incentive Payment Program (QIPP)	Incentivizes nursing facilities to improve quality and innovation in the provision of services using the CMS five-star rating system as a basis.	Performance measures include: 1) high-risk residents with pressure ulcers; 2) percent of residents who received an antipsychotic medication; 3) residents experiencing one or more falls with major injury; 4) residents who were physically restrained.	Nursing homes maintain data in electronic format but may not participate in electronic health information exchange with other providers, despite the complex medical backgrounds of their residents. Realtime data exchange involving nursing homes is crucial for optimal care coordination and, in particular, will promote better transitions across care settings and higher performance on both nursing home and hospital metrics.
MCO Value-Based Contracting (or Alternative Payment	HHSC, through contract, requires MCOs to develop value-based	HHSC has established overall and risk-based targets for the level of MCO	More clinically relevant data, metrics, and data sharing across providers, MCOs,

Initiative	Description	Quality and/or Efficiency Measures	Benefit from Improved Health IT/HIE
Models) with Providers	payment models with providers.	reimbursement to providers through value- based payments relative to a plan's total medical expenses.	and agency programs is needed for the state to fully transition to a value-based Medicaid program.
Value-Based Enrollment into MCOs	HHSC considers measures of quality and efficiency in the algorithm used to auto assign clients who do not select an MCO.	Key risk adjusted cost and quality measures and member satisfaction.	Improved HIE will help MCOs and their contracted providers to achieve greater quality and efficiency.

APPENDIX D – List of Acronyms

Acronym	Full Name
ADT	admission, discharge and transfer
AIU	Adopt-Implement-Upgrade Attestation
APM	Alternative Payment Model
AHA	American Hospital Association
ARRA	American Recovery and Reinvestment Act of 2009
ARPA	American Rescue Plan Act of 2021
API	application programming interface
AIMS	Association of Public Health Laboratories Informatics Messaging Service
ACIA	Average Commercial Incentive Award
BH	Behavioral Health
BDES	Birth Defects Epidemiology and Surveillance
CY	calendar year
CMS	Centers for Medicare & Medicaid Services
CEHRT	Certified Electronic Health Record Technology
CIO	Chief Information Officer
CHIP	Children's Health Insurance Program
CARE	Client Assignment and Registration System
CMBHS	Clinical Management for Behavioral Health Services
CHIRP	Comprehensive Hospital Increased Reimbursement Program
C-CDA	Consolidated Clinical Document Architecture
COVID-19	novel coronavirus disease 2019
DGPM	Data Governance and Performance Management
DSRIP	Delivery System Reform Incentive Payment
DC	Dental Contractor
DFPS	Department of Family and Protective Services
DIR	Department of Information Resources
DSHS	Department of State Health Services
DPP	Directed Payment Program
DPP BHS	Directed Payment Program for Behavioral Health Services
eHAC	e-Health Advisory Committee
eCR	electronic case reporting
eCQM	electronic clinical quality measures
EHR	electronic health record
ELR	Electronic Laboratory Reporting
EH	eligible hospital
EP	eligible professional
ED	emergency department
EDEN	Emergency Department Encounter Notification
EE	Enterprise Edition
EPCS	e-prescribing of controlled substances

Acronym	Full Name
ESC	Executive Steering Committee
EQRO	External Quality Review Organization
FHIR	Fast Healthcare Interoperability Resources
FFY	federal fiscal year
FFS	fee-for-service
HHS	Health and Human Services
HHSC	Health and Human Services Commission
HIE	health information exchange
Health IT	health information technology
HITECH	Health Information Technology for Economic and Clinical Health Act
HIPAA	Health Insurance Portability and Accountability Act of 1996
HL7	Health Level Seven International
HMO	health maintenance organization
HPSA	Health Professional Shortage Area
HEDIS®	Healthcare Effectiveness Data and Information Set
H.B.	House Bill
IIS	immunization information system
IAPD	Implementation Advance Planning Document
IT	information technology
iCoE	Interoperability Center of Excellence
ISA	Interoperability Standards Advisory
LHD	local health department
LMHA	Local Mental Health Authority
MCO	managed care organization
MU	Meaningful Use
MITA SS-A	Medicaid Information Technology Architecture State Self-Assessment
MMIS	Medicaid Management Information System
MCS	Medicaid/CHIP Services Department
MACRA	Medicare Access and CHIP Reauthorization Act of 2015
Mbps	megabits per second
MIPS	Merit-based Incentive Payment System
NEDSS	National Electronic Disease Surveillance System
NEHRS	National Electronic Health Records Survey
NLR	National Level Repository
NAACCR	North American Association of Central Cancer Registries
NTXSS	North Texas Syndromic Surveillance System
ODAP	Office of Data, Analytics, and Performance
OeHC	Office of e-Health Coordination
ONC	Office of the National Coordinator for Health Information Technology
PULSE	Patient Unified Lookup System for Emergencies
P4Q	Pay for Quality

Acronym	Full Name
PIP	Performance Improvement Projects
PCRA	Pharmacy Claims and Rebate Administration
PCP	primary care provider
PY	program year
PI Program	Promoting Interoperability Program
PHE	public health emergency
QI	quality improvement
QIPP	Quality Incentive Payment Program
QPP	Quality Payment Program
RFO	Request for Offer
RAPPS	Rural Access to Primary and Preventive Services
SRA	Security Risk Assessment
S.B.	Senate Bill
SANER	Situational Awareness Network for Emergencies
SDOH	social determinants of health
STC	Special Terms and Conditions
SFY	state fiscal year
SHO	State Health Official
SLR	state level repository
SMHP	State Medicaid Health Information Technology Plan
STAR	State of Texas Access Reform
SUD	substance use disorder
TCR	Texas Cancer Registry
TCID	Texas Center for Infectious Disease
TDA	Texas Department of Agriculture
TxEVER	Texas Electronic Vital Events Registrar
THCIC	Texas Health Care Information Collection
THSA	Texas Health Services Authority
THLC	Texas Healthcare Learning Collaborative Portal
TIPPS	Texas Incentives for Physician and Professional Services
TMHP	Texas Medicaid & Healthcare Partnership
TMA	Texas Medical Association
TxS2	Texas Syndromic Surveillance
T-MSIS	Transformed Medicaid Statistical Information System
TEFCA	Trusted Exchange Framework and Common Agreement
UC	Uncompensated Care
UHRIP	Uniform Hospital Rate Increase Program
USCDI	United States Core Data for Interoperability
VERS	Vaccination Event Registration System
VBP	value-based payment