Leveraging a Health Information Exchange to Maximize Value-Based Care Program & Alternative Payment Model Requirements

A Look at How HealthShare Exchange Service Offerings Benefit Member Initiatives to Support the Triple Aim

July 2017

Overview

Connectivity of electronic health information and interoperability of health information technology is a critical national priority supporting the goals of the Triple Aim – quality safe care for patients in accessible, cost effective settings to improve the health of Americans.[1]

During the last decade, the United States (U.S.) has experienced dramatic progress in health information technology's evolution across the direct care, population health, care coordination and research domains.[2]

The national requisite to meet Meaningful Use requirements demanded that hospitals and physicians share data through technology. Early efforts for this type of clinical data exchange revealed the challenge of creating data sharing linkages between diverse entities with disparate electronic health technology platforms.

Born was the Health Information Exchange (HIE), an 'entity' enabling the interoperability of automated health data, (that) can facilitate important improvements in healthcare quality and efficiency.[3] Various models of HIEs developed nationally – each unique based on the state/regional healthcare markets. Many grew out of state orchestration whereas others were established by clinically integrated health systems and networks; however, regional 'stand-alone' HIEs also evolved in mature markets like Southeastern Pennsylvania and Southern New Jersey, where larger geographic clinical data sharing was imperative beyond such networks.

HIEs, such as HealthShare Exchange, currently offer services that can be effectively deployed to support such areas like improving follow-up care post-hospitalization, reducing emergency department utilization, closing gaps in care and enhancing electronic communication between providers.

These areas are core elements of the new reimbursement and care models that are being rapidly implemented across the U.S. and present a significant opportunity for provider-based organizations to leverage HIEs to maximize value-based care programs and alternative payment model requirements.

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[1] The IHI Triple Aim. http://www.ihi.org/engage/initiatives/TripleAim/Pages/default.aspx

[2] "Connecting Health and Care for the Nation: A 10-Year Vision to Achieve an Interoperable Health IT Infrastructure." The Office of the National Coordinator for Information Technology. https://www.healthit.gov/sites/default/files/ONC10yearInteroperabilityConceptPaper.pdf

[3] Byers, Jeff. JAMIA: A brief history of HIE.*Journal of the American Medical Informatics Association. http://www.clinical-innovation.com/topics/health-information-exchange/jamia-brief-history-hie*

HealthShare Exchange Background

HealthShare Exchange (HSX) is a non-profit HIE and an accredited health information organization (HIO).

HSX enables a collaborative and coordinated healthcare environment for its Participants, where availability of patient information across providers and health plans benefits consumers by supporting key clinical decisions, reducing duplicative services, and improving care outcomes.

HSX is a membership driven organization. Its membership spans the continuum of care and while the organization was founded by the Greater Philadelphia region's thirty-seven hospitals/health systems and three of the region's health plans, the organization has expanded beyond its primary service area to serve provider organizations in other Pennsylvania counties and into the State of New Jersey.[4]

Critical to HSX's strong sustainability model are HSX members, who contract with the organization through a Participation Agreement, which binds all Participants to regulatory and legal requirements and has helped to create a community of trust, anchored in formal use cases and a robust data security program.

Recent Changes to Healthcare Payment Models to Improve Care

Several historic shifts in healthcare in the U.S. are offering challenges to health information technology. The data-management component of the care system will not only have to keep pace with these changes but help to drive them.

Most visible among alterations in the system now is a new paradigm for payments. In order to transition to value-based reimbursement, and away from fee-for-service payments, the U.S. healthcare system is now implementing a number of alternative payment models (APMs). The U.S. Department of Health and Human Services (HHS) has been at the forefront of this shift — setting ambitious goals, for example, for tying Medicare payments to APMs.[5]

By the end of 2016, HHS had met its first goal of having 30 percent of payments tied to an APM. The department's next goal is to hit the 50 percent mark by the end of 2018.[6] The passage of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), modified the way

[4] HSX Current Membership List. https://www.hsxsepa.org/current-participants.

[5] Leventhal, Rajiv. "CMS Expands Advanced APM Opportunities as Stakeholders Push for Track 1+ details." December 15, 2016. https://www.healthcare-informatics.com/news-item/payment/cms-expands-advanced-apm-opportunities-stakeholders-push-track-1-details

[6] Miliard, Mike. "HHS gets to value-based reimbursement goal ahead of schedule." Mike Miliard. Healthcare IT News: March 3, 2016. http://www.healthcareitnews.com/news/hhs-gets-value-based-reimbursement-goal-ahead-schedule

providers are paid by Medicare by tying their payments to quality, whether through the Merit-Based Incentive Payment System (MIPS) track or the Advanced APM track, thus aiding HHS in attaining these goals.

HIEs, working in synchrony with EHRs, are looking to serve government, providers, payers, researchers, care-management organizations — and of course consumers.

Fortunately, concurrent with the roll-out of these heavily data-dependent programs has been a newly expanded and essential emphasis on clinical data interoperability and sharing. Government and non-profit organizations and vendor companies serving healthcare are tackling compatibilities among electronic health record systems (EHRs), as many of the nation's HIEs are also innovating to serve their respective service areas across the country.

HIEs, working in synchrony with EHRs, serve government, providers, payers, researchers, care-management organizations, and of course, ultimately, the consumer, in supporting the new payment models with their need for more information and efficient, effective care coordination.

For some, HSX could be a game changer to address these current needs.

HealthShare Exchange Service Descriptions

Today, HSX offers an array of services that benefit its members. Services available to provider-based organizations are outlined below.

Direct Secure Messaging (Direct)

HSX facilitates the secure routing of clinical information to providers' direct addresses using the national Direct Project standards — an email-based protocol for confidential transmission of patient health information between trusted entities. Includes sending of continuity of care (C-CDA) documents with discharge information and referrals for transitions of care. HSX provides Direct Messaging services to its members, if needed. Many HSX members use their own EHRs to send and receive direct messages but leverage the HSX Provider Directory to enhance clinical information exchange.

Using Direct can also assist with efforts to close the referral loop by providing the technical transport of this information between members' EHRs and through the distribution of the HSX Provider Directory on a weekly basis. See Exhibit A for the Direct/Provider Directory diagram.

Provider Directory

The HSX Provider Directory contains direct addresses for physicians and other healthcare providers who actively participate with HSX. Members leverage the directory to send secure messages containing transition-of-care documents to primary care providers and specialists to update them

about care their patients have received. See Exhibit A for the Direct/Provider Directory diagram.

Automated Care Team Finder (ACTF)

HSX has enhanced the basic capabilities of Direct by engaging its health plan members to identify attributed primary care providers (PCP) for patients; it then uses this information to route C-CDA documents, containing discharge information, to the downstream provider using Direct secure messaging. HSX has experienced that it is challenging for hospitals to accurately capture PCP information, making ACTF an effective way to get clinical information to the right provider shortly after an emergency department visit or hospitalization. See Exhibit B for the ACTF diagram.

Clinical Activity History (CAH)

This HSX service involves the collection of recent clinical history about a patient from the patient's healthcare insurer, based on the patient's member identification within the health plan. The health plan then translates this claims/utilization data to a clinical care document — returning this information to the requesting provider or emergency department using Direct secure messaging. The CAH document is particularly useful to providers who have never seen the patient before. It provides necessary information about recent procedures, tests and medications that help the care team understand the patient's history at the point of care. See Exhibit C for the CAH diagram.

Encounter Notification Service (ENS)

Delivers notifications to HSX Participants who subscribe to the service when one of their patients or members is hospitalized or presents to an emergency department or skilled nursing facility. Subscribing entities can also be notified when their patients or members are discharged from these same care settings, allowing for more timely, effective follow-up and outreach. See Exhibit D for the ENS diagram.

Encounter Notification Service for Facilities

Once a hospital or facility supplies Admit, Discharge, Transfer (ADT) feeds to HSX, HSX can automatically subscribe discharged patients for the participating hospital or long-term care/skilled nursing facility. ENS auto-subscription provides notifications back to the HSX Participant about discharged patients who are subsequently admitted within a defined timeframe (e.g. 30 days, 45 days) to another HSX Participant emergency department, hospital or long-term care/skilled nursing facility. See Exhibit E for the ENS for Facilities diagram.

Clinical Data Repository (CDR)

Collects and retains medical records data about patients, permitting a patient's provider or care team to query the exchange and retrieve clinical information. The HSX CDR is a large database of health information that over time is a valuable tool for care coordination, viewing a patient's longitudinal record across many data sources and population health management. While its primary use is for treatment purposes, inclusive of care coordination, the data stored within the CDR can be leveraged for other services as developed by the HSX community and in accordance with the permitted purposes in the HSX Participation Agreement.

National, Regional, and Local Programs & HSX Service Alignment

Local, regional, and national programs launched in the last few years has moved providers from a fee-for-service payment model to value-based care. The tables below provide an overview of the major programs with which HSX members currently participate and outline the HSX services that can be leveraged to improve the outcomes these incentive programs promote.

MIPS	
Program Manager	The Centers for Medicare & Medicaid Services (CMS)
Reach	National
Program Goals	Base provider payments on a composite score from four categories: quality measures, resource use, advancing care information (formerly Meaningful Use), and improvement activities
Programmatic Health IT Requirements	In 2017, use 2014 Certified EHR Technology (CEHRT), and in 2018, use 2015 CEHRT. For bonus points in the quality category, use end-to-end electronic reporting of eCQMs. This requires using certified health IT product to record, calculate, and report, or if working with a QCDR/qualified registry, using a standards-based method for sending data from the EHR to the QCDR/qualified registry
Aligned HSX Services	• **Direct** messaging assists with Advancing Care Information; providers must be able to send and receive summaries of care*[7] • **Encounter Notification Service** to enhance care coordination as one type of improvement activity**[8] • **Clinical Data Repository** - Querying data (in C-CDA format) from HSX supports one of the Advancing Care Information measures***[9]
Additional Critical Success Factors	• Creating and exchanging care plans supports the improvement activity category

[7] Advancing Care Information. https://qpp.cms.gov/mips/advancing-care-information

[8] Improvement Activities. https://qpp.cms.gov/mips/improvement-activities

[9] Advancing Care Information. https://qpp.cms.gov/mips/advancing-care-information

* For at least one transition of care or referral, the MIPS eligible clinician that transitions or refers their patient to another setting of care or health care provider-(1) creates a summary of care record using certified EHR technology; and (2) electronically exchanges the summary of care record

**Establish standard operations to manage transitions of care that could include one or more of the following: Establish formalized lines of communication with local settings in which empaneled patients receive care to ensure documented flow of information and seamless transitions in care; and/or Partner with community or hospital-based transitional care services.

***For at least one transition of care or referral received or patient encounter in which the MIPS eligible clinician has never before encountered the patient, the MIPS eligible clinician performs clinical information reconciliation. The MIPS eligible clinician must implement clinical information reconciliation for the following three clinical information sets: (1) Medication. Review of the patient's medication, including the name, dosage, frequency, and route of each medication. (2) Medication allergy. Review of the patient's known medication allergies. (3) Current Problem list. Review of the patient's current and active diagnoses.

Medicaid EHR Incentive Program (Meaningful Use)	
Program Manager	CMS and Pennsylvania Department of Human Services (PA DHS)
Reach	State
Program Goals	Promote the use of health IT to improve patient care
Programmatic Health IT Requirements	In 2017, use 2014 CEHRT, and in 2018, use 2015 CEHRT.
Aligned HSX Services	• **Direct** messaging**/Provider Directory** enhances provider to provider communication and fulfills Health Information Exchange measure*[10] • **Clinical Data Repository** - Querying data (in C-CDA format) from an HIO supports the receive and incorporate measure for Stage 3 Meaningful Use**[11]

*The Health Information Exchange measure requires eligible providers who transition their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each transition of care or referral. This needs to occur for more than 10 percent of transitions of care and referrals.

** The eligible provider incorporates summary of care information from other providers into their EHR using the functions of CEHRT.

[10] https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/TableofContents_EP_Medicaid_ModifiedStage2.pdf
[11] https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/MedicaidEPStage3_Obj7.pdf

Comprehensive Primary Care (CPC)+	
Program Manager	CMS with Aetna and IBC
Reach	Greater Philadelphia Region
Program Goals	Provide comprehensive primary care and preventive services to complex patients to improve quality and reduce the cost of care.
Programmatic Health IT Requirements	In 2017, use 2014 CEHRT. Starting January 1, 2018 use 2015 CEHRT. By January 1, 2019, use the following 2015 Edition capabilities: 1) record and report eCQMs (§170.315(c)(1), (c)(2), (c)(3), and (c)(4)); 2) record social, behavioral, and psychological data (§170.315(a)(15)); and 3) create care plans using the C-CDA template (§170.315(b)(9)).
Aligned HSX Services	• **Encounter Notification Service** supports care managers knowing about their patients who are in the hospital and/or present to the emergency department* • **Encounter Notification Service** supports reporting overall emergency department utilization for a physician practice**
Additional Critical Success Factors	• Patient risk stratification or risk score assignment for managing a panel • Cost of care information for patients • Care gap alerts for each patient to ensure appropriate care is provided

* CPC+ Track 1 requires under the Care Management function that patients with ED visits receive a follow up interaction within one week of discharge and that contact occur with at least 75% of patients who were hospitalized in target hospital(s), within 2 business days.[12]

** CPC+ Track 1 requires under the Comprehensiveness & Coordination function that providers identify hospitals and EDs responsible for the majority of patients' hospitalizations and ED visits, and assess and improve timeliness of notification.[13]

[12] CPC+ Practice Care Delivery Requirements. https://innovation.cms.gov/Files/x/cpcplus-practicecaredlvreqs.pdf pg. 4.

[13] CPC+ Practice Care Delivery Requirements. https://innovation.cms.gov/Files/x/cpcplus-practicecaredlvreqs.pdf pg. 5.

Medicare Shared Savings Program (ACOs)	
Program Manager	CMS
Reach	Majority multi-state with small number of regional
Program Goals	Improve care coordination for patients to improve quality and reduce the cost of care by allowing providers to keep savings they generated through improved coordination.
Programmatic Health IT Requirements	At least 50% of participants must use CEHRT.
Aligned HSX Services	• **Direct** messaging to close the referral loop and provide clinical information back to the referring provider; **Provider Directory** for patient attribution and referral ordering for more effective transitions of care, which can assist with the reduction of readmissions for ACO participants • **Encounter Notification Service** to support follow-up with patients after hospital visits and prevent readmissions
Additional Critical Success Factors	• Shared care plans among the care team for managing the patient • Cost of care information for patients • Patient risk stratification or risk score assignment for managing a panel • Eligibility and benefit information to ensure patients stay in network • Care gap alerts for each patient to ensure appropriate care is provided • Calculate quality measures both across the ACO and at the individual provider and practice level

Episode Payment Models (Bundled Payments)	
Program Manager	CMS
Reach	National
Program Goals	Reduce duplicative and unnecessary services (and therefore cost) by bundling together the payment for a specific episode, and providing a single payment for all services that is split across all providers who provided care.
Programmatic Health IT Requirements	Some of the Episode Payment Models (EPMs) require the use of CEHRT, which qualifies the model as an Advanced APM.
Aligned HSX Services	• **Encounter Notification Service for Facilities** to help coordinate follow-up care between provider organizations • **Clinical Data Repository** access to pull supplemental clinical information about encounters
Additional Critical Success Factors	• Shared care plans amongst the care team for managing the patient • Automatic assignment of encounters to a specific bundle along with the associated cost data for each encounter • Electronic eligibility and benefit information to ensure patients stay in network or within the bundle when referrals are ordered

Health Enterprise Zone (HEZ)	
Program Manager	PA DHS
Reach	North Philadelphia
Program Goals	Coordinate care for the Medicaid recipients in the HEZ to improve the quality of care, improve care outcomes, and decrease cost.
Programmatic Health IT Requirements	No codified requirements at this time but all participants are strongly encouraged to leverage all HSX services.
Aligned HSX Services	• **Direct** messaging to close the referral loop and provide clinical information back to the next provider of care; Provider directory for patient attribution and referral ordering for more effective transitions of care • **Encounter Notification Service** to enhance follow-up care and outreach patients receive post-hospitalization and after emergency department visits • **Clinical Activity History** to receive information about the patient at the point of care in a physician practice or emergency department
Additional Critical Success Factors	• Use of a population health management tool capable of exchanging care plans and interoperable with all EHRs used by the participants

Delivery System Reform Incentive Payment Program (DSRIP)	
Program Manager	CMS and State of New Jersey
Reach	Statewide
Program Goals	Hospitals may qualify to receive incentive payments for implementing quality initiatives within their community and achieving measurable, incremental clinical outcome results, demonstrating the initiatives' impact on improving the New Jersey healthcare system. 49 Hospitals and regional collaboratives focus on disease specific projects. It is unclear if CMS will extend this program for a second round as of June 2017.
Programmatic Health IT Requirements	Hospitals and collaborative must calculate NJ DSRIP specific measures based on Medicaid claims data and clinical quality data.
Aligned HSX Services	• **Encounter Notification Service** to better understand hospital & emergency department utilization
Additional Critical Success Factors	• As NJ requests a second round of DSRIP, the ACO like model will required more community coordination. • Shared care plans • National quality measures will be part of second round of DSRIP (TBD)

HSX Service Enhancements Maintain Focus on Value-Based Care

Currently, HSX is well positioned to assist providers, systems, and payers across its widening service area. In pursuing the aforementioned programs, a well-designed and inclusive HIE is a rigorous tool for achieving the goals of trust, coordination, interoperability and data mobility across a large geography. This is where HSX plays an instrumental role in supporting its membership and coordinating priorities across the region through its various service offerings. HSX provides the technical and legal structure and support needed to achieve this coordination, as well as the financial stability of a member-driven approach. HSX also has an experienced engagement and adoption team working directly with members. The below represents areas where HSX is focused on enhancing its current suite of services to facilitate enhanced HIE across its trusted community.

A well-designed and inclusive HIE is a rigorous tool for achieving the goals of trust, coordination, interoperability and data mobility across a large geography.

Smart Encounter Notifications & Intelligent Routing of Clinical Information

As ENS goes into its third year of deployment and adoption across the HIO's member community, HSX sees opportunity to enhance and tailor the way notifications and more robust clinical data are delivered to subscribing providers and organizations. HSX is working with key stakeholders to determine how various types of care providers (e.g. specialists, emergency physicians) can be more effectively notified about patients with certain conditions, patients who receive new medication orders and about patients who present to emergency departments who could be potentially considered a readmission.

Furthermore, HSX understands the emphasis its membership currently has on preventing readmissions. Recent literature has shown that "access to patient information is critical to reducing readmissions" and that "in study of emergency physicians' perspectives of HIE conducted in New York City, the majority of respondents (63%) answered that their patients would benefit from information provided by HIE [with one study demonstrating] data extracted from HIE can enhance predictive modeling and create alerts for patients at high risk of readmission".[14]

Finally, HSX is looking for opportunities to better integrate notifications and other clinical documents into EHR workflows and population health management tools to support the investments its members have made to ensure timely and increased adoption. HSX anticipates being able to offer more intelligent routing and delivery of notifications by year-end 2017.

This timeline aligns well with the deployment of new payment and value-based care models in that the quicker and more accurately HSX can help its members to know critical encounter and clinical information about their patients, the more successful they will be in meeting the objectives of these programs.

Population Health Reporting

Currently HSX is also focused on developing a more formal offering around population health reporting to, in part, support the reporting requirements of the APMs and value-based care incentive programs with which its members participate. The development and approval of a use case on this subject is underway. Soon, HSX plans to develop a library of reports it can offer and regularly produce for its membership.

[14] Kash, B.A., Baek, J., Davis, E., Champagne-Langabeer, T., Langabeer, J.R. "Review of successful hospital readmission reduction strategies and the role of health information exchange." International Journal of Medical Informatics. 104 (2017) 97-104.

Quality and Performance Measurement

Medical practice offices, hospitals, and health systems spend significant resources on quality and performance and yet continue to underscore the challenges they face in measuring these areas. Such measurement localized to an organization overlooks the way that care continues to push beyond the walls of a traditional hospital or ambulatory setting. Data from other community providers on attributed patients is often missing from these efforts. HSX, as a community convener, will be able to close these gaps in quality and performance measurement by aggregating and calculating the data needed for various contracts and quality-focused programs, such as CPC+.

Conclusion

Connectivity of electronic health information and interoperability of health information technology is a critical priority nationally supporting the goals of the Triple Aim. As ever-evolving methods of reimbursement become the "new normal" for providers within the broader HSX community, it will become increasingly important for these organizations to fully understand the applicable programmatic and IT requirements.

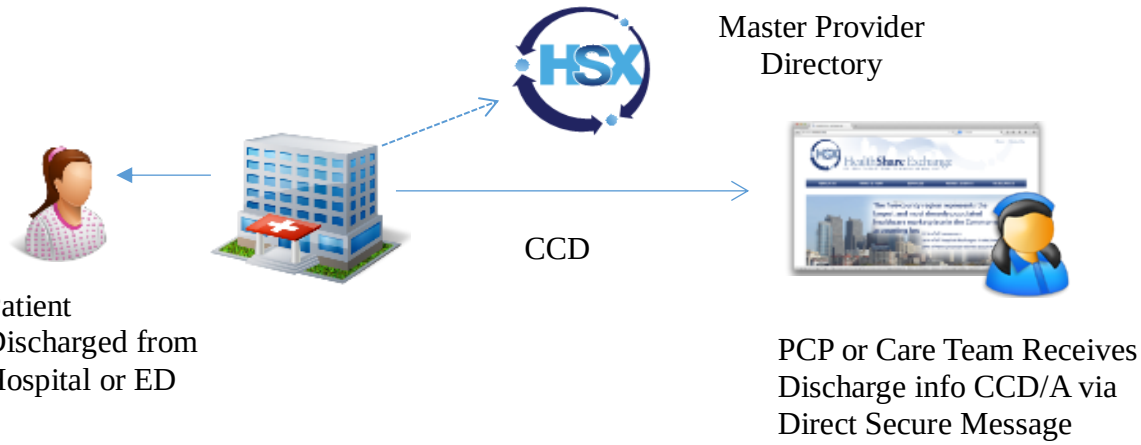
Excelling in any of the programs described in this paper requires a health IT strategy and products that can support the increased levels of care coordination and focus on quality measurement that the programs necessitate.

HSX is well positioned to meet the current and future clinical data exchange and management needs for its members, as the HIE services that are offered today can be leveraged to be better informed about care patients receive from a variety of sources.

HSX's ability to notify providers about patient encounters in a timely fashion, its ever-growing clinical data repository that can be tapped to reconcile longitudinal patient information and Direct/Provider Directory services that facilitate the necessary point to point communication needed to improve care coordination can have a positive impact on the health of populations, how patients experience healthcare received, and, ultimately on how healthcare costs can be controlled.

Exhibit A:

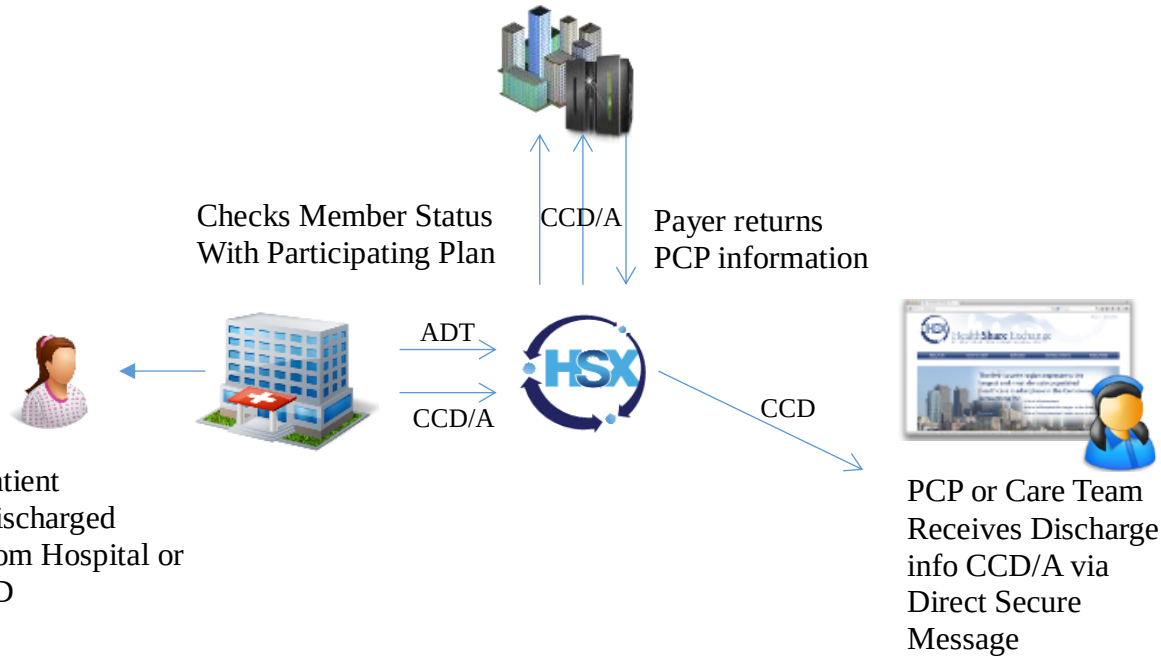
Direct Secure Messaging (Direct) / Provider Directory



This diagram shows how discharge information is delivered from Hospitals/Emergency Departments to downstream primary care providers (PCP) using Direct Secure Messaging and leveraging the HSX Provider Directory.

Exhibit B:

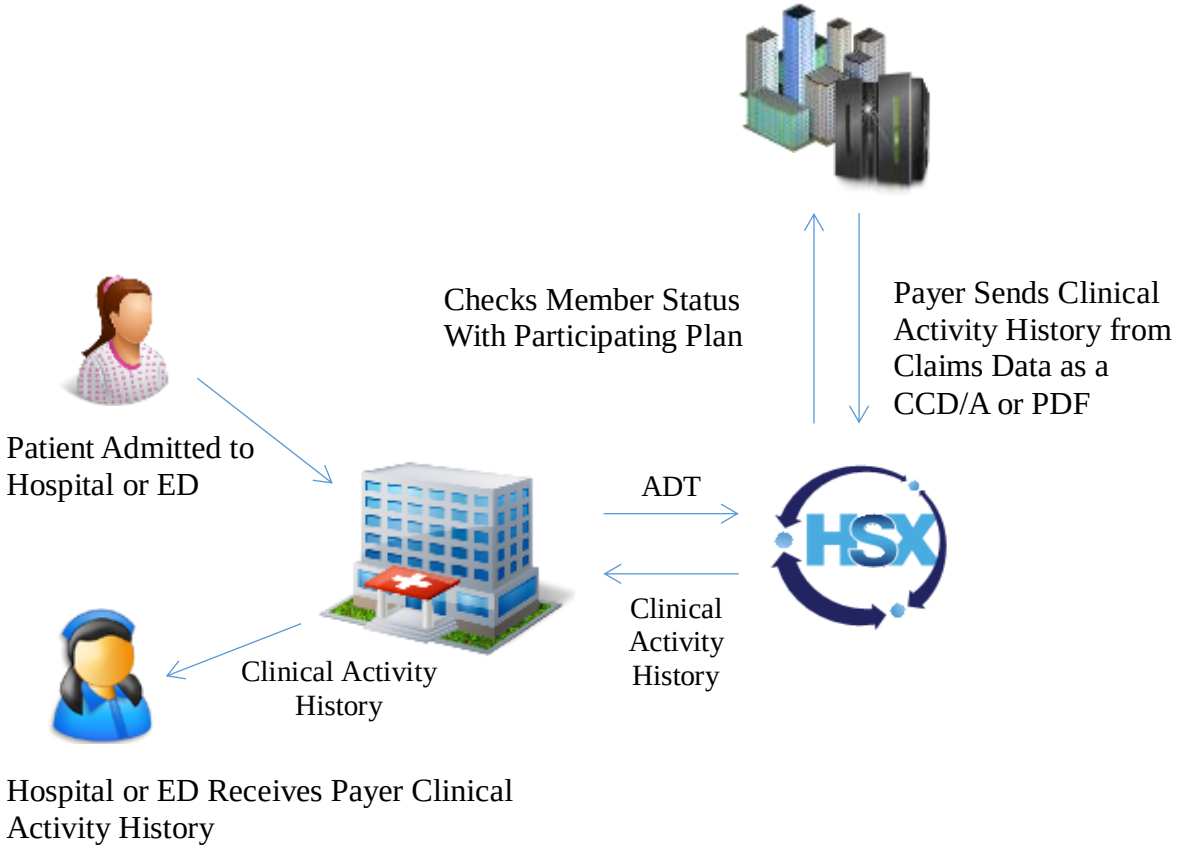
Automated Care Team Finder Service (ACTF)



This diagram shows how discharge information is delivered from Hospitals/Emergency Departments to downstream primary care providers (PCP) using Direct Secure Messaging and leveraging Payer PCP attribution and the HSX Provider Directory.

Exhibit C:

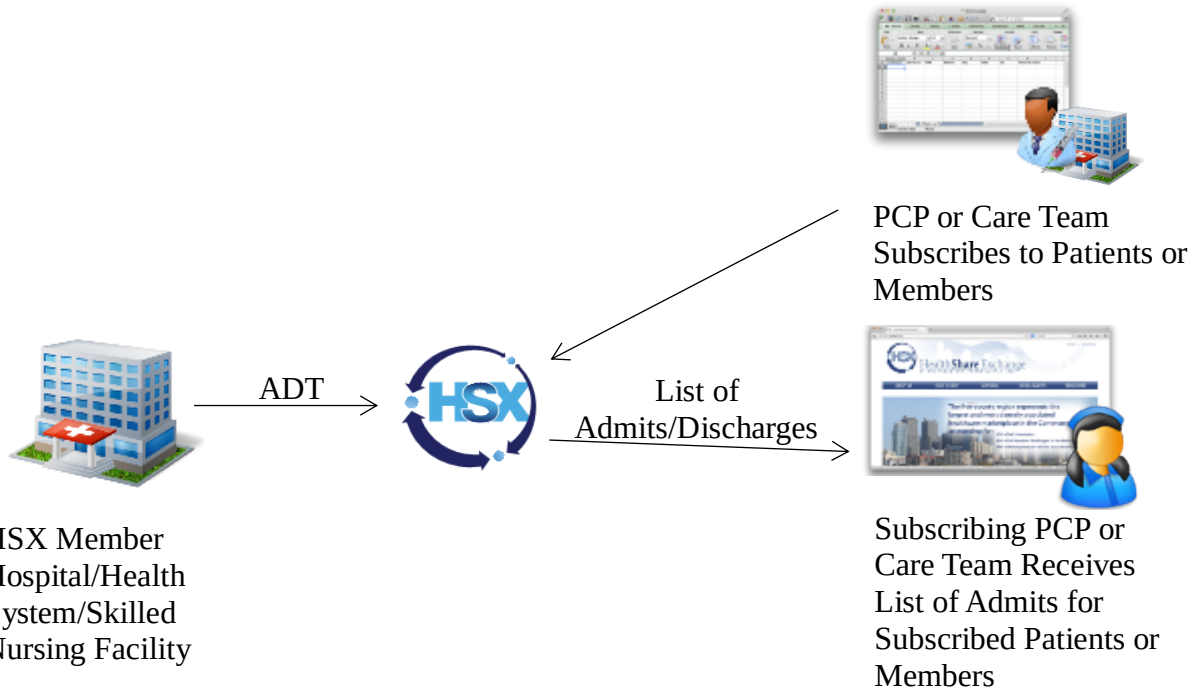
Clinical Activity History (CAH)



This diagram shows how a CAH document containing clinical history, according to payer claim, can be provided back to a requesting provider at the point of care (e.g. Emergency Department)

Exhibit D:

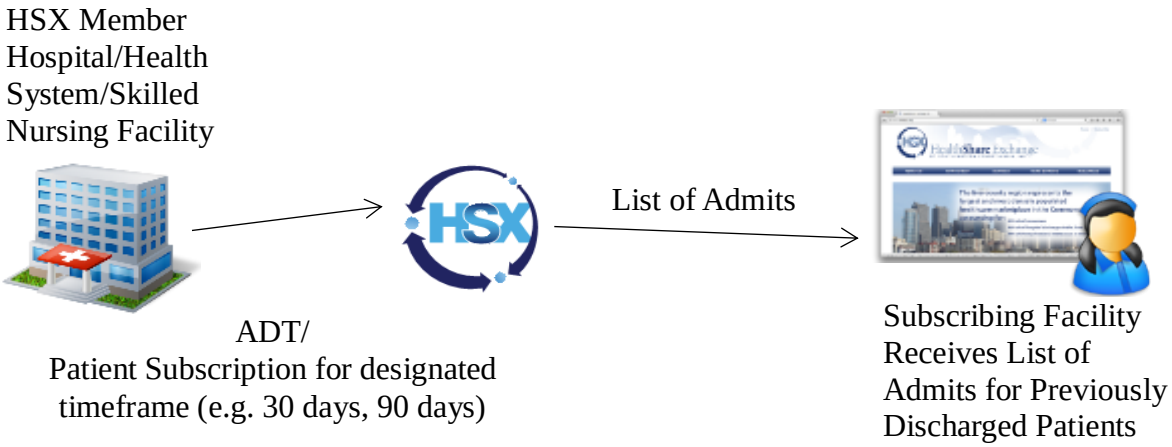
Encounter Notification Service (ENS)



This diagram shows how a patient is subscribed for and then how the subscribing PCP or Care Team is notified about admissions and discharges from HSX participating hospitals/health systems/skilled nursing facilities.

Exhibit E:

Encounter Notification Service (ENS) for Facilities



This diagram shows how a patient is subscribed for automatically by a hospital/health system or skilled nursing facility and then how that same organization is notified about admissions that happen at HSX participating hospitals/health systems/skilled nursing facilities within the defined subscription period (e.g. 30 days, 90 days).