360 Exchange (360X) Closed Loop Referrals and Transfers: http://bit.ly/360Xreferrals.

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Overview

Problem: Despite major advances in Health Information Technology (HIT) and adoption thereof, the process of patient transitions of care (both transfers and referrals) continues to be fraught with risks of adverse events for the patient due to insufficient information, difficult to track and requires excessive steps and manpower for providers and staff. The additional challenge of ensuring that patients receive their necessary care and do not fall through the cracks, requires the ability to track transitions until the referral or transfer loop is closed. There are several companies that sell software specifically for this purpose.

360X is a series of IHE approved, and in process, specifications that describe functionality to be deployed directly from the initiating (referred by) clinical EHR to the receiving (referred to) clinical EHR to track patient care transitions across the spectrum of care. 360X requires only ubiquitously adopted technology standards, therefore, represents a relatively low bar for EHR development and implementation. It is important to note that the 360X specifications are freely available, and are themselves not a product.

Currently multiple large market share EHR vendors are in the process of deploying this functionality, others have added it to their product road map. Please ask your EHR vendor about their 360X plans.

Background

In July 2012, 360X launched as an initiative of ONC's State Health Information Exchange Cooperative Agreement Program, a component of the American Recovery and Reinvestment Act of 2009 with a goal of supporting states' efforts to rapidly build capacity for exchanging health information within and across state lines. Specifically, the mission of 360X was to "as quickly as possible using proposed Meaningful Use Stage 2 standards, enable providers to exchange patient information for referrals from their EHR workflow, regardless of the EHR systems and/or HISP services used (i.e., allowing information to move point-to-point between unaffiliated organizations, differing EHRs, and differing HISPs) and with at least the same quality of workflow integration providers currently experience when referring between homogeneous EHR systems."

Since its inception, the 360X project has had input from a broad representation of roles throughout the public and private sectors. The group has included clinicians, technical experts, including representation from many EHR and HIT vendors, and ONC representatives.

360X builds on the ability of certified EHR systems to push in real time, at the time of the referral or transfer request, C-CDA documents containing discrete data using standardized vocabularies (such as USCDI) as required by Meaningful Use and other CMS incentive programs. This enables the receiving

system/end user to pull the discrete data into the chart, reducing clinician transcription burden and eliminating transcription errors. For example, when the specialist office receives the referral request and referral note or patient summary C-CDA for a new patient, the staff can use the discrete data to populate a new patient chart. This data will include up to date demographic data, problems, allergies, medications, and immunizations at a minimum. When the patient arrives for the encounter with the specialist, the information is verified with the patient.

Following the consultation, when the PCP receives the consultation note C-CDA from the specialist, the discrete data therein can be used to reconcile the patient's medications, problems, etc. in the PCP's patient chart based on what the specialist has prescribed and recommended thus ensuring that the chart always is accurate and up to date.

The initial goals were to:

- standardize the type of data exchanged and method of transport –achieved with C-CDA and Direct transport
- have transparency between the referring/transferring provider and the referred/transfer organization regarding progress of the process and gaps in care – achieved with standardized HL7v2 messages
- create a process with a low technical bar for entry and implementation to create broad rapid adoption across EHR vendors and clinical organizations – all standards are ubiquitously adopted
- Referral/transfer order assigned a global unique identifier that persists until the referral/transfer loop is closed. This specific referral number facilitates the EHR systems to readily identify and associate the communication across systems with the relevant patient.
- add value to patients, clinicians, office staff and overall clinical workflows

Achievements

360X for Referral Management is an IHE approved specification (profile)

- Currently in the process of being implemented by several leading market share EHR vendors

Acute or Ambulatory Transfer to Skilled Nursing Facility (SNF) also now an IHE approved specification (pending official publication)

- Currently in the process of being implemented by several leading market share LTPAC EHR vendors

In Process

These use cases were selected by the group due to their particular relevance during the COVID-19 Pandemic

360X for SNF to ED Transfer

- Submitted to IHE to begin the approval process

360X for SDOH Referrals from a clinician/provider organization to a Community Based Organization (CBO) or to an SDOH Referral Hub for distribution to a CBO

- Development in process

Technical Overview

The 360X implementation guide is built on several layers of interoperability, most of which are already in established use by many EHR systems. This is illustrated in the following diagram:

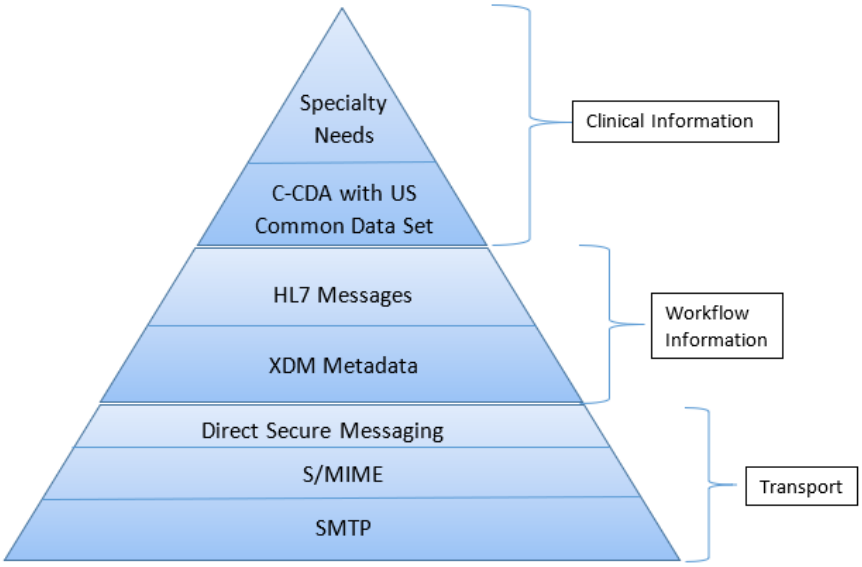

Figure 1: 360X layers of interoperability

In the process of developing the specification, the 360X via Direct project focused on the workflow information components in order to provide a base set of capabilities. We will illustrate this with the example of a referral from a PCP office system to a specialist recipient system. These base capabilities are:

Referral Initiator	Referral Recipient
• Ability to send referral information in addition to the C-CDA clinical summary, including patient and referral identifiers • Ability to process a decline of a referral • Ability to process an accept of the referral • Ability to detect that a response to the request has not been received in a timely manner • Ability to request a cancel for an existing referral • Ability to process the referral outcome (link C-CDA to the correct referral and patient) • Ability to detect that a referral outcome has not been received in a timely manner	• Ability to receive a referral request • Ability to properly manage the patient identifier and referral identifier as sent by the initiator • Ability to create and send accept or decline for a referral request • Ability to process a referral cancel request • Ability to send a referral outcome, including the referral information such as the proper patient and referral identifiers

The 360X specification also contains the option to share scheduling information between the initiator and the recipient. Since there are other ways for such sharing to take place (e.g. the Argonaut Project's Scheduling Implementation Guide[2]), there is no requirement to support the 360X scheduling option, however the following schedule sharing capabilities are considered highly desirable for improving the closed loop referral process:

Referral Initiator	Referral Recipient
• Ability to keep track of appointment identifiers • Ability to process an incoming scheduling notification (linking the appointment to the appropriate referral) • Ability to process an appointment cancelation notification • Ability to process a patient no-show notification • Ability to process an appointment change notification	• Ability to link appointment identifiers to external referrals • Ability to create and send a scheduled appointment notification, including the proper patient and referral identifiers • Ability to send an appointment cancel notification • Ability to send a patient no-show notification • Ability to send an appointment change notification (either cancel/reschedule with a new appointment identifier, or change existing appointment, while keeping the appointment identifier the same)

The layered approach of the 360X implementation guide allows the implementation community to enhance incrementally the specification with additional use cases and functionality. Medical societies can contribute specific clinical data requirements for referrals to given specialties, improving efficiencies and patient and clinician satisfaction during the referral process.

Requirements for Success

The specifications and protocols for 360X have been successfully tested across multiple EHR vendors both during 360X testing sessions and as part of IHE sponsored Connectathons. 360X has been demoed during the 2018 ONC Interoperability Forum, the HIMSS 2019 Interoperability Showcase, the May 2019 EMDI Meeting, the June 2020 DirectTrust Summit, and recorded for the 2020 HIMSS Interoperability Showcase. 360X Referral Management was also a use case for the CMS Electronic Medical Documentation Interoperability (EMDI) Program.

The success and broad adoption of 360X Referral Management requires the active use of Direct interoperability and Direct Directories, as well as a broad development and adoption of the 360X specifications and protocols across EHR vendors. To facilitate this development and adoption we encourage that 360X be considered for inclusion as an ONC EHR certification requirement in the next phase of certification requirements. In addition, we encourage other federal programs operating across the public and private sectors to consider using 360X via Direct to support patient care transitions. Finally, we strongly encourage clinical users of EHR systems to ask their vendors to add 360X functionality to their EHR systems.

Please visit our demonstration of 360 Exchange Closed Loop Referral at the HIMSS 2021 Interoperability Showcase: 360X Care Transitions for a COVID-19 Patient.

References

[1] https://www.ihe.net/uploadedFiles/Documents/PCC/IHE_PCC_Suppl_360X.pdf
[2] http://www.fhir.org/guides/argonaut/scheduling/