

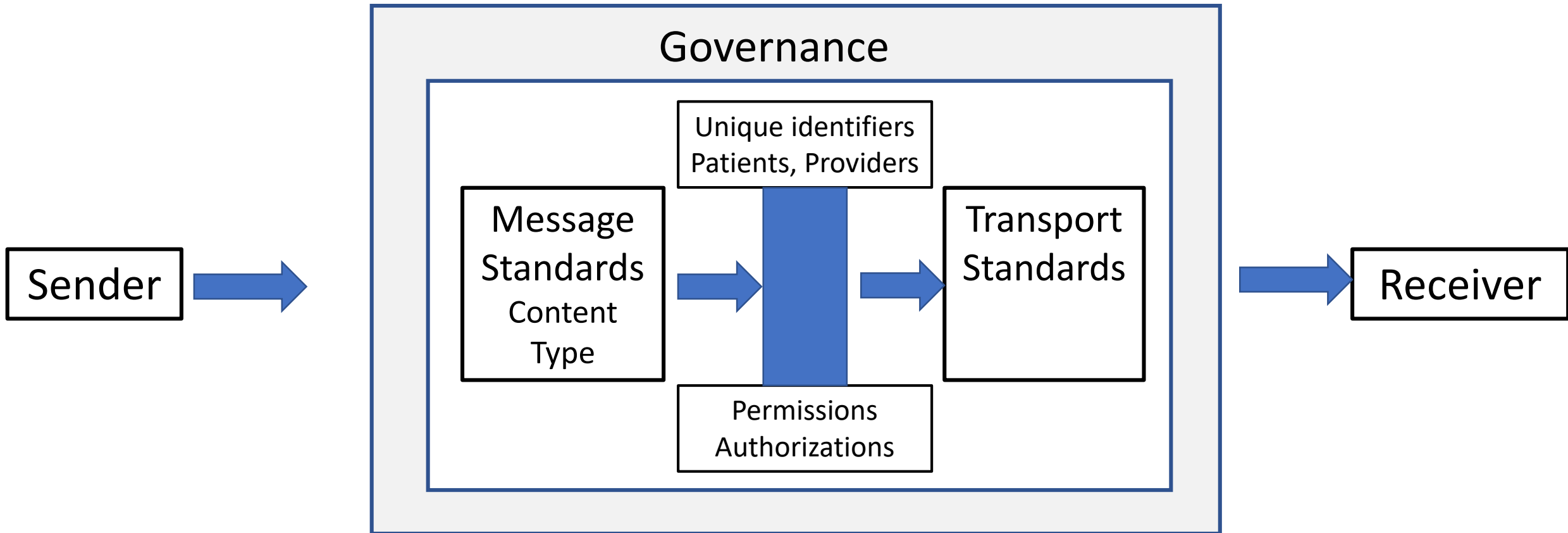
# Examples of Closed-Loop Exchanges

- Transitions of Care
  - Emergent: to ED and ED response
  - Temporary (routine or urgent): 360X clinician to clinician (EHR-A to EHR-B) referral request/response
  - Permanent: discharge to next clinician/clinical team, which may need to reply with request for more information
- Test/procedure order/result
- Coordination of Care
  - Message/request to and response from team member(s) regarding health/care concern(s)
  - May require reconciliation of new/modified clinical data
  - May require creation of new or modification of existing Longitudinal Care Plan
  - May require redistribution of updated data and/or care plan to relevant team members

# Common process for Closed-Loop Exchanges

- Require a common governance structure
  - Trust, privacy, security
  - Performance standards / expectations
  - Oversight and improvement of message content and exchange process
- Message exchanges all benefit from unique exchange identifier
- Message content varies but is standardized for each type of exchange
- Message format varies but is standardized for each type of exchange
- Transport process may vary but delivers the same message

# 360 X Message Process



# 360X as a Closed-Loop Exchange Paradigm\*

## Standards Categories

- Message type
- Message content (payload):
  - Content standards
  - Semantic standards
- Transport standards
- Stable shared identifier for each transactions until task is completed

## Cited Standards

- LOINC, SNOMED-CT
- C-CDA TOC
- HL7V2 OMG, HL7V2 OSU or SIU
- Direct SMTP or XDR SOAP
- Metadata (? Standard)

\* Applies to any closed-loop exchange: Orders, Referrals, Transitions, Longitudinal Care Plan

# 360X “Out of Scope” Requirements

- Unique patient identifier
- Unique provider identifier
- Authorization to share/exchange patient information
  - May be for specific data uses
- Governance
  - Timeliness (send, deliver, review, respond)
  - Completeness
  - Data quality
  - Process oversight and management
  - Control of data
  - Privacy protections for data released to or by patient (no longer HIPPA protected)

# Questions

- Are the categories of standards cited in 360X the same for the other closed-loop exchanges or do other exchanges require additional or different categories?
- Are the specifically cited standards in 360X applicable to the other closed-loop exchanges or do other exchanges require additional or different standards?
- Can some or all of the functions described in the 360X standard be performed using alternative standards?
- What specific standards are available for the 360X “Out of Scope” requirements?
- What specific standards are missing to complete the 360X “Out of Scope” requirements

# Do Standards Exist for these Requirements?

Type of Closed-Loop Exchange	Referral/ Response	Order/ Result	Transitions of Care	Coordination of Care
Require Sub-processes				
Unique patient identifier	R	R	R	R
Unique provider identifier	R	R	R	R
Consent to share	R	R	R	R
Authorization for specific data uses	R	R	R	R
Governance	R	R	R	R
Data quality	R	R	R	R
Timeliness	R	R	R	R
Completeness	R	R	R	R
Process oversight and management	R	R	R	R
Control of data	R	R	R	R
Privacy protections for data released by patient	R	R	R	R
Unique processes			R	R
Communication outside of EHR			R	R
Communication with non-clinical entities	R= require		R	R
Reconciliation of new data from multiple sources				R

# Possible Work Plan: Create the total package required to Order, Send and Receive

- Return to Orders/Results
- Apply 360X structure to the “automated” Orders/Results process
- Map the Orders/Results process in detail as a closed-loop exchange
- Identify both the available and missing standards for:
  - Message content (standardized order lists, order sets, lab bundles, etc)
  - Message type (HL7, C-CDA, FHIR, others)
  - Transport (Direct, XDR, FHIR, others)
  - Governance (TEFCA, Direct, others)
  - Patient identifier
  - Provider identifier
  - Performance standards/mutual expectations, Quality measures
- Repeat for Referrals, Transitions, and Care Coordination