

INPC Examples of Successful Interoperability

Description Template

Profile Element	Description	
Responsible Entity	The owner of the project	IHIE
Participating Entities	Types of organizations participating, e.g., hospital, provider	Hospitals, physician practices
Description	Short description of the project	<p>Centralized, federated clinical data repository</p> <p>The INPC provides a single point of collection for all clinical data provided by the supporting organizations (data providers). The INPC clinical data is normalized (standardized coding) during the storage process, this allows the data from multiple care settings to be compared and graphed as required in the clinical setting.</p> <p>The clinical data contained within the INPC (from all data providers) is made available to all clinical providers that have a clinical relationship with a patient, as indicated by either a registration or schedule transaction.</p> <p>Patient presents in the ED. The patient registration process generates an HL7 transaction which triggers the creation of a clinical summary that contains the most recent clinical information for that patient (i.e. recent admissions, problems, allergies, medications, labs, radiology results, etc.). This summary is printed on a designated printer in the ED department and/or sent to the facilities EMR as an embedded PDF within an HL7 transaction.</p>
Standards Implemented	What standards were implemented in the project	HL7 ADT messages
Policies Adopted	What policies were implemented/adopted to support the implementation	

Timeframe	Start date, key milestones	Launched in 1994 in the Indianapolis metro area with 5 hospitals; major expansion throughout Indiana in 2000's. Currently 106 hospitals participate.
Volumes	Quantitative indicators, e.g., number of providers, number of records exchanged	See table below
Impacts	Quantitative results, e.g., reduction in delays, cost savings	
	Qualitative results, e.g., provider satisfaction, perceptions, testimonies	A representative from a regional hospital in southern Indiana stated, "We are using to generate abstracts for 100% of our ED patients. We also send Transitions of Care via Direct which has been a tremendous help as we strive to meet MU."
References	Links or attached documents	
Contacts	Point of contact for further information	Chuck Christian VP / Technology & Engagement Indiana Health Information Exchange cchristian@ihie.org

Profile Element	Description	
Responsible Entity	The owner of the project	IHIE
Participating Entities	Types of organizations participating, e.g., hospital, provider	Hospitals, reference labs, imaging centers, physician practices, SureScripts
Description	Short description of the project	Centralized, federated clinical data repository The INPC provides a single point of collection for all clinical data provided by the supporting organizations (data providers). The INPC clinical data is normalized (standardized coding) during the storage process, this allows the data from multiple care settings to be compared and graphed as required in the clinical setting.

		<p>The clinical data contained within the INPC (from all data providers) is made available to all clinical providers that have a clinical relationship with a patient, as indicated by either a registration or schedule transaction.</p> <p>Patient presents in a physician's office for a scheduled appointment or is admitted to participating hospital. The INPC information can be accessed in several different manners; the authorized clinicians can use the web-based CareWeb application or if the Single-Sign-On (SSO) integration has been completed, within their EMR; they can click the CareWeb icon, which will bring the CareWeb application up with the patient's information displayed in context.</p>
Standards Implemented	What standards were implemented in the project	HL7 lab result message
Policies Adopted	What policies were implemented/adopted to support the implementation	
Timeframe	Start date, key milestones	Launched in 1994 in the Indianapolis metro area with 5 hospitals; major expansion throughout Indiana in 2000's. In 2015, 106 hospitals participate. SSO in clinical setting begun in 2014. Provide EMR interoperability with over 30 EMR systems at the end of 2015.
Volumes	Quantitative indicators, e.g., number of providers, number of records exchanged	See table below
Impacts	Quantitative results, e.g., reduction in delays, cost savings	
	Qualitative results, e.g., provider satisfaction, perceptions, testimonies	<p>A representative from a large hospital system said, "We LOVE CareWeb!" Uses within the hospital system include:</p> <ul style="list-style-type: none"> - review of lab results - review of medical procedures - review of problem lists

		<ul style="list-style-type: none"> - a reduction of redundant imaging or lab tests - to better prepare caregivers for patient appointments
References	Links or attached documents	
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Profile Element	Description	
Responsible Entity	The owner of the project	IHIE
Participating Entities	Types of organizations participating, e.g., hospital, provider	Hospitals
Description	Short description of the project	<p>Centralized, federated clinical data repository</p> <p>The INPC provides a single point of collection for all clinical data provided by the supporting organizations (data providers). The INPC clinical data is normalized (standardized coding) during the storage process, this allows the data from multiple care settings to be compared and graphed as required in the clinical setting.</p> <p>The clinical data contained within the INPC (from all data providers) is made available to all clinical providers that have a clinical relationship with a patient, as indicated by either a registration or schedule transaction.</p> <p>Patient admitted as an Inpatient. The patient registration process establishes the care relationship with the patient. A clinical summary (as in the ED use case) is sent to the facility as an embedded PDF within an HL7 transaction. The clinicians are provided access to the patient's clinical records in the INPC by either access the web-based</p>

		CareWeb or if the SSO integration has been completed, within their EMR; they can click the CareWeb icon, which will bring the CareWeb application up with the patient's information displayed in context.
Standards Implemented	What standards were implemented in the project	HL7 ADT messages
Policies Adopted	What policies were implemented/adopted to support the implementation	
Timeframe	Start date, key milestones	Launched in 1994 in the Indianapolis metro area with 5 hospitals; major expansion throughout Indiana in 2000's. In 2015, 106 hospitals participate.
Volumes	Quantitative indicators, e.g., number of providers, number of records exchanged	See table below
Impacts	Quantitative results, e.g., reduction in delays, cost savings	
	Qualitative results, e.g., provider satisfaction, perceptions, testimonies	<p>A GI specialist said that with their participation they have seen, "better care coordination, a more complete view of a patient's medical history and an enhanced work flow."</p> <p>A physician with a non-profit health center said that the INPC "has helped with communication of patient information and continuity of care for patients from hospital, ER, lab, and consultants. It has saved many hours of staff time in tracking down results. It has provided prompts for follow-up of patients who have been in the ER or hospital."</p>
References	Links or attached documents	
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Profile Element	Description	
Responsible Entity	The owner of the project	IHIE
Participating Entities	Types of organizations participating, e.g., hospital, provider	Long Term Care facilities, hospitals
Description	Short description of the project	<p>Centralized, federated clinical data repository</p> <p>The INPC provides a single point of collection for all clinical data provided by the supporting organizations (data providers). The INPC clinical data is normalized (standardized coding) during the storage process, this allows the data from multiple care settings to be compared and graphed as required in the clinical setting.</p> <p>The clinical data contained within the INPC (from all data providers) is made available to all clinical providers that have a clinical relationship with a patient, as indicated by either a registration or schedule transaction.</p> <p>A resident of Long Term Care Facility or a patient of a Palliative Care Facility must be transferred to a hospital for treatment or an outpatient procedure. Hospital staff admitting and caring for the patient can view information contributed by the LTC/Palliative Facility. Contributed data includes advanced directives, allergies, pharmacy, problem lists, and SBAR's (Situation Background Assessment Recommendation). In these cases hospital staff can access recent information regarding the patient's medications, mobility, diet, etc which allows them to better anticipate the patient's needs. Similarly, the LTC/Palliative Facility staff can follow the patient's care while at the hospital so they can better anticipate their care needs when they are transferred back.</p>

Standards Implemented	What standards were implemented in the project	HL7 lab messages HL7 CCD
Policies Adopted	What policies were implemented/adopted to support the implementation	
Timeframe	Start date, key milestones	Launched in 1994 in the Indianapolis metro area with 5 hospitals; major expansion throughout Indiana in 2000's. In 2015, 106 hospitals participate, with 193 total facilities that participate, including LTC and other non-hospital affiliated sites.
Volumes	Quantitative indicators, e.g., number of providers, number of records exchanged	See table below
Impacts	Quantitative results, e.g., reduction in delays, cost savings	
	Qualitative results, e.g., provider satisfaction, perceptions, testimonies	
References	Links or attached documents	
Contacts	Point of contact for further information	Chuck Christian VP / Technology & Engagement Indiana Health Information Exchange cchristian@ihie.org

Profile Element	Description	
Responsible Entity	The owner of the project	IHIE
Participating Entities	Types of organizations participating, e.g., hospital,	Hospitals

	provider	
Description	Short description of the project	<p>Centralized, federated clinical data repository</p> <p>The INPC provides a single point of collection for all clinical data provided by the supporting organizations (data providers). The INPC clinical data is normalized (standardized coding) during the storage process, this allows the data from multiple care settings to be compared and graphed as required in the clinical setting.</p> <p>The clinical data contained within the INPC (from all data providers) is made available to all clinical providers that have a clinical relationship with a patient, as indicated by either a registration or schedule transaction.</p> <p>Can track the current census, available beds, and types of beds with ADT messages. Hospitals send all ADT messages. For emergency management can tell availability of beds. Had an emergency with a concert where there were high winds knocked over equipment. Lots of people injured. Needed to know where injured people were located. After event work group came up with plan to use ADT transactions to identify where a patient has been taken. Needs to be done in a command center in a very controlled manner.</p> <p>Indy 500 – Marion County Health Department requested access to INPC by EMS workers at event for that day. Can provide quick information about the patient.</p>
Standards Implemented	What standards were implemented in the project	HL7 ADT messages
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		throughout Indiana in 2000's.
Volumes	Quantitative indicators, e.g., number of providers, number of records exchanged	See table below
Impacts	Quantitative results, e.g., reduction in delays, cost savings	
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Participating Hospitals	106
Participating Clinics, Surgical Centers, & other HCOs	110
Physicians receiving clinical messaging	25,000+
The Indiana Network for Patient Care (INPC) contains:	
Pieces of clinical data	3,000,000,000
Population covered	6,000,000
Radiology Images	80,000,000

	Text Reports	50,000,000
	EKG Readings	750,000
ADT Messages received		
	Jan - Dec 2014	16,641,353
	Jan - Jun 2015	10,410,001
CCDs Received		
	Jan - Dec 2014	492,706
	Jan - Jun 2015	485,992
CCDs Delivered (new service in 2014)		
	Jan - Dec 2014	625,385
	Jan - Jun 2015	659,636
Clinical Messages Delivered		
	Jan - Dec 2014	160,480,690
	Jan - Jun 2015	92,043,274
EMR vendors to which we have created an HL7 integration		33