

# **Washington State Health Information Exchange**

## **Use Case Document**

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# Health Information Exchange Use Cases

A Use Case is a specific service that is enabled by the exchange, providing benefits to patients and/or providers, payers and other healthcare organizations. The OneHealthPort team believes that the selection and sequencing of services to operate through the exchange should ultimately be driven by the marketplace. Nevertheless, it is an appropriate role of the HIE to promote development of Use Cases and to “seed the market” with initial services. Since some potentially valuable Use Cases will require cooperation among many institutions, the HIE also has a role coordinating the efforts of disparate organizations to bring certain Use Cases to fruition.

The Use Cases presented here have been deemed by the OneHealthPort project team to be valuable early pursuits. They are presented in a priority order, with the priority having been set by a combination of factors including early adopter interest, clinical value, ease of implementation, financial sustainability, and federal/state requirements. The list should not be considered immutable. The market reception of these services will ultimately determine if and when these services are deployed. The HIE should also encourage the introduction of new Use Cases. As an organization accepting a certain public trust, the HIE will equally serve all hospitals, healthcare providers, and entrepreneurs. While we will ensure that sound policy and consumer protection accompany any new service, we will allow these services to develop without discriminating against ideas and ventures from the community. Throughout the explanation and definition of the Use Cases, the concept of health record banking and consumer access is universal. Use Cases have been identified and described by the type of data moving through the exchange as well as the producers and consumers of that data. However, an overlying concept that consumers should have access to the data flowing through the system is present throughout, and while consumers are not referenced explicitly as data consumers, there is an assumption that as soon as technically feasible, consumers will have the ability to access any data flowing through the system about them, based on the consumer facing application connecting to the HIE to gain access to data flows based on defined permissions and policies.

Use Case Attribution note: This use case document was developed based on modeling provided by the HIE Maryland State use case document and customized for the Washington State HIE design and market supplied use cases.

## Version

Version	
Issue Date	Explanation
05-2010	Version 0.1
06-03-2010	Version 0.2 Minor Edits
06-07-2010	Version 0.3 Added additional Use Cases supplied by Dept of Health
06-21-2010	Version 0.4 – Updates to Use Cases for Dept of Health
07-01-2010	Version 0.5 – Updates for Washington Vaccine Alliance requirements for Immunization reporting.

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# **1. Admission, Discharge, Transfer and Patient Demographic details from Hospitals to Health Plans**

## **Summary**

The requirements gathering process highlighted a consistent interest in ADT information from hospitals for payers to track their covered lives, coordinate care and utilization management. Many payers noted that they receive varying levels of detail and paper information and would be interested in nightly automated electronic reports for all covered lives.

## **Clinical Value**

The core clinical value and the primary objective of the ADT transaction notification to payers are to improve coordination and transitions of care that require payer approval. Additional costs and delays in patient transitions can occur if the payer is unaware of an admission or the readiness of the patient to be transitioned to a different level of care.

## **Ease of Implementation**

Implementing the electronic ADT transaction has a minimal level of effort from a technical perspective. Most inpatient facilities have ADT software with the ability to transfer ADT information to other systems. The HIE would be required to define the protocol and implementation of the ADT transaction exchange and convention for identifying all payers participating in the exchange and interested in receiving ADT notifications.

## **Consent**

Under the law, the electronic ADT notification requires no additional consent beyond implied consent for treatment and billing. The best practice recommendation could include encouraging informed consent to be obtained verbally by the registrar and supported by patient education information.

## 2. Admission, Discharge, Transfer and Patient Demographic details from Hospitals to Primary Care/Consulting Physicians

### **Summary**

The requirements gathering process highlighted a consistent interest in ADT information from hospitals for Primary Care and Consultants associated with a patient to track their admission, coordinate care and provide follow up consistent with discharges plans. Many physicians noted that they may not be aware of a patient they normally treat being admitted to a hospital for other reasons. The primary care provider and continuing consultants need visibility into inpatient stays and procedures where the patient has listed them as a part of ongoing care.

### **Clinical Value**

The core clinical value and the primary objective of the ADT transaction notification to primary care physicians and consultants is to improve continuity of care and assist physicians who are rounding on patients to be alerted to admissions and room changes for rounding.

### **Ease of Implementation**

Implementing the electronic ADT transaction has a minimal level of effort from a technical perspective. Most inpatient facilities have ADT software with the ability to transfer ADT information to other systems. The HIE would be required to define the protocol and implementation of the ADT transaction exchange and convention for identifying all physicians identified by the patient for notification and practice participating in the exchange and interested in receiving ADT notifications.

### **Consent**

Under the law, the electronic ADT notification requires no additional consent beyond implied consent for treatment and billing. The best practice recommendation could include encouraging informed consent to be obtained verbally by the registrar and specific request for a list of primary care providers and other consulting practices that should be notified of the admission upon admission.

### 3. Eligibility, Benefits and Claim Status checking

#### **Summary**

Today most hospitals and large group practices have staff that routinely check websites for patient eligibility, benefits and claim payment status. Staff then transfers data manually to facility systems. Batch processing via EDI transactions could improve data quality and reduce manual processing by staff in several departments. Nightly batch requests in combination with as needed individual transactions from hospital and clinic business and clinical systems to health plans and public payers is now considered meaningful use transactions and reduces administrative overhead.

#### **Clinical Value**

While one could debate there is very little clinical value in business transactions, there is ample motivation to include business transactions that could accelerate “meaningful use” requirements for provider organizations.

#### **Ease of Implementation**

Implementing EDI batch or individual ANSI x12 transactions is supported by most major software vendors but does require some integration work in many clinical organizations. Meaningful Use dollars may provide the motivation that has been missing for years to elevate the project priority.

#### **Consent**

Under the law, the exchange of eligibility, benefit and claims status for treatment and billing purposes is covered and does not require additional consent. Most facilities by policy require verbal or written consent on registration to confirm the responsible payer for billing purposes.

## 4. Medication Histories in Emergency Departments / Hospitals

### **Summary**

OneHealthPort developed the Medication Information eXchange (MIX) project in April 2008 with participation from the major national and regional health plans. MIX was designed to leverage RxHub's secure exchange of medication history, drug formularies and e-Prescribing transactions.

The electronic medication history service functions when, at the time of hospital registration, a query is sent to an HIE infrastructure and then routed to RxHub, who in turn queries the PBMs in the network and returns a list of prescription medications to a printer at the hospital. The communication occurs across a secure connection. The prescription medication list is derived from insurance claims information and does not have 100% coverage of all medications a patient may be taking; some patients are not in the system and some medications may have been obtained in a manner that is not captured by PBMs. Rather, the list is an aid to the physician during the medication reconciliation interview required by JCAHO, helping to create a more accurate medication history than could otherwise be obtained. With the participation of all major regional and national health plans, the medication history has been measured to provide between 30-70% coverage depending on the patient's insurance coverage. While RxHub requires the application to be certified to request medication history, the role of the Washington State HIE will not be to provide the application but rather a common secure connection to RxHub for the pre-certified application hosted by the facility.

### **Clinical Value**

The core clinical value and the primary objective of the medication history service are to streamline the mandatory process of taking a medication history when a patient presents in a number of care settings. This process customarily begins when a caregiver asks the patient (if the patient can respond) what prescription and non-prescription medications he is taking. The data collected is often inaccurate, as patients are frequently forgetful and rarely know the exact names and doses of their current and recent prescriptions. At times, a patient will describe the color or characteristics of a certain pill without knowing its brand or generic name. This interaction—however useful or not—is typically the first source of data. Next, the clinician might pull charts or search other hospital data or internal systems if available, or they might even try to call a pharmacy to obtain records (assuming the pharmacy is open). Typically all of this information is fragmented, requiring a cumbersome, time-consuming, and challenging process with highly variable results. By delivering ED providers a robust electronic medication history, the medication reconciliation process is meaningfully improved.

### **Ease of Implementation**

Implementing the electronic medication history service has a minimal level of effort from a technical perspective. Existing networks that have the ability to accept demographic information to query data sources (RxHub / SureScripts), and existing medication reconciliation workflow processes are generally supportive of additional information being injected into the process.

### **Consent**

Under the law, the electronic medication history service requires no additional consent beyond implied consent for treatment, though the HIE standard will encourage informed consent to be obtained verbally by the registrar and supported by patient education information.

## 5. Lab Results Delivery to Physicians and Clinics

### **Summary**

One of the most financially successful services deployed by RHIOs and HIEs around the country has been that of lab results delivery to physicians and clinics. Most of the regional and large national laboratories (including LabCorp, Quest, PAML, PacLab, UW) already offer electronic delivery of results to ordering physicians through proprietary portals. The services offered through the Washington State HIE could include the national labs as well as hospital and local/regional laboratories. By consolidating multiple sources into a common application connection, physicians will realize efficiencies by not having to access multiple portals, faxes, or mailed reports to obtain results for patients. As far as hospital labs are concerned, they are mostly utilizing paper to mail results to physicians today. By enabling electronic delivery, hospitals can reduce the administrative costs of paper and postage.

This service would simply route lab results from the processing lab to the ordering physician, along with any requested copies to other physicians. Because this is a direct “push” of data from one provider to another, there would be minimal need to access the EMPI or patient registry.

### **Clinical Value**

While realizing tremendous administrative savings and simplifying workflows, there is no improvement in clinical value realized through delivery of lab results. This Use Case replaces an existing function with a more efficient one, but no new clinical value is derived.

### **Ease of Implementation**

Because the national and regional labs are already delivering results electronically, it will be relatively simple to re-purpose existing messages to flow into the exchange and be available to the ordering provider. The ease of implementation will likely vary widely from hospital to hospital and from local lab to local lab based on the use of homegrown (non-standard) code sets and the level of electronic enablement present in each system.

### **Consent**

Since information is flowing from a processing lab directly to the physician who ordered the test, there is no need for patient consent in this Use Case. By altering the means of transportation of the clinical message but not the recipient or subsequent access to the data, there should be no need to alter any existing consent forms or processes.

## 6. Medication Histories and Drug Formularies to e- Prescribing Applications used by Physicians

### **Summary**

OneHealthPort developed the Medication Information eXchange (MIX) project in April 2008 with participation from the major national and regional health plans. MIX was designed to leverage RxHub's secure exchange of medication history, drug formularies and e-Prescribing transactions.

The electronic medication history service functions when, at the time of a new or refill prescription, a query is sent to an HIE infrastructure and then routed to RxHub, who in turn queries the PBMs in the network and returns a list of prescription medications to the certified e-Prescribing application. The communication occurs across a secure connection. The prescription medication history is derived from insurance claims information and does not have 100% coverage of all medications a patient may be taking; some patients are not in the system and some medications may have been obtained in a manner that is not captured by PBMs. Rather, the list is an aid to the physician during the medication review to measure compliance with medication regimens. With the participation of all major regional and national health plans, the medication history has been measured to provide between 30-70% coverage depending on the patient's insurance coverage. While RxHub requires the application to be certified to request medication history, the role of the Washington State HIE will not be to provide the application but rather a common secure connection to RxHub for the pre-certified application hosted by a provider practice.

### **Clinical Value**

The core clinical value and the primary objective of the medication history service is to assist the provider with medication compliance information and supply drug formulary information during the e-Prescribing process. Often providers are faced with changing medication regimens that do not appear to be working without adequate information to determine if the patient is truly compliant on the current medication regimen or whether the therapeutic failure is really due to non-compliance. Changing drug regimens generally means moving to a more expensive or more complex regimen that has greater risks and potential side effects for the patient. Having an accurate picture of compliance can inform the patient/provider discussion of therapeutic pathways.

### **Ease of Implementation**

Implementing the electronic medication history service has a minimal level of effort from a technical perspective. The e-Prescribing application or EMR utilized by the physician practice must be certified by RxHub/SureScripts in order to be authorized to access patient medication history and the patient specific medication benefit and drug formulary. The HIE HUB would require proof of current certification before allowing routed requests from a physician practice.

### **Consent**

Under the law, the electronic medication history service requires no additional consent beyond implied consent for treatment, though the HIE standard will encourage informed consent to be obtained verbally by the registrar and supported by patient education information.

## 7. Clinical Messaging Services to Provider Portals

### **Summary**

Clinical messaging allows providers to route reports, records, or notes to other authorized users of the exchange securely and easily. This service is similar to secure email, where each time a user logs onto the exchange, he will see messages in his inbox. Those messages may be a request for consult with referral notes, a lab result delivery, a discharge summary making a PCP aware that one of his patients was in the emergency room, or any other form of message that could be sent from one user to another.

### **Clinical Value**

In addition to being the backbone of the clinical data exchange, there is clinical value because messaging services allow physicians to route records to other physicians for consults or second opinions. While this function does exist today, it is often cumbersome and requires either the transfer of paper records or the scheduling of additional patient visits for personal evaluation.

### **Ease of Implementation**

As clinical messaging is at the core of most HIE efforts, there is little additional work required to implement this functionality. However, clinical messaging is dependent on the full deployment of the exchange's core infrastructure, so while little additional effort is required for this Use Case, the base functionality must exist before it can be used. Each unique exchange user must be associated with a unique secure inbox for message receipt and a unique identity for sending messages. This will be included in the user setup protocols for the core infrastructure.

### **Consent**

In cases where clinical messaging is utilized to deliver data that would have been delivered by other means in the past, no additional patient consent should be required. While the routing of patient data from one physician to another for consult purposes may be covered under the Treatment, Payment and Operations sections of HIPAA, it will likely be advisable to obtain explicit consent from the patient prior to routing that patient's records to another clinician. Today, referrals for consults are often made verbally or written on a prescription pad. It is up to the patient to determine whether to follow through on the referral or not, and the patient is free to disclose whatever data he or she desires to the second clinician. Patients should maintain that right in the future by actively consenting that another clinician be given access to their records through the HIE for purposes of additional treatment.

## 8. Emergency Department Hospital Discharge Summaries to Physicians and Clinics

### **Summary**

Delivering emergency department and hospital discharge summaries to physicians and clinics is a critical Use Case that enables the transfer of key information following an acute health event so that appropriately informed follow-up care can take place. However, not all emergency room care is for emergent situations. Washington State has experienced ER crowding due in part to poor access to primary care and in part to poor patient awareness of how to effectively receive primary care for non-emergent health events. This Use Case supports appropriate use of emergency rooms by supplying physicians and clinics with detailed discharge information but also informs clinics of patients who may not have a primary care physician, thus allowing for outreach efforts to be employed and seeking to discourage non-emergent use of the ER while promoting primary, clinic-based care when appropriate.

### **Clinical Value**

The inclusion of emergency room discharge information is powerful during follow-up care to ensure an accurate understanding of the previous episode of care is conveyed to the next provider. Enabling this improvement in the continuity of care through sharing of discharge summaries is a clear example of the core clinical benefits of health information exchange.

### **Ease of Implementation**

Implementation challenges for this Use Case include defining the elements and structure of a discharge summary, similar to the need to define the elements of a clinical summary. Early deployments of this Use Case may rely on unstructured documents delivered through the exchange as discharge summaries, still delivering the clinical content but without the ability to effectively integrate that content with other data sources.

### **Consent**

Patient consent for this Use Case is not explicitly required for each encounter, since consent is implicit for treatment purposes. However, as in other Use Cases, this does not make robust patient education unnecessary and informed consent should still be pursued.

## 9. Chart Summaries to Emergency Departments / Hospitals

### **Summary**

Chart summaries provide a concise but holistic view of an individual's overall healthcare experience. A clinical summary should contain demographics (name, date of birth, address, sex), medications, allergies, conditions/problems, results when available, and past hospitalizations and surgeries where possible. The chart summary should be in a structured document (CCD) format but may vary depending on what is available. We would encourage the inclusion of those outlined above and perhaps expand our definition as we move into any implementation and further our understanding of what is important to our deploying stakeholders.

Potential sources of information for a chart summary include electronic health record systems from participating providers, ancillary service provider systems, personal electronic health records or health record banks, and claims systems for payers. The HIE model will seek to integrate all sources available to the exchange and would be sufficiently flexible to permit the addition of new data sources as they become available.

### **Clinical Value**

The primary advantage of the chart summary to emergency departments and hospitals is the ability to quickly understand a patient's medical history. Like the medication history service described above, the purpose of the chart summary is not to replace conversation with the patient but rather to provide a reference source for the conversation that may help to avoid accidental or deliberate miscommunication or forgetfulness on the patient's part.

Not only would caregivers get a view of conditions currently affecting the patient, but the chart summary may give the provider indications of how long conditions have been affecting the patient, how effectively they are being treated, and perhaps even clues regarding the patient's compliance with treatment regimens. All of this information may assist the provider in diagnosis and treatment of current symptoms and may help to prevent medical errors. For example, something in the patient's chart summary may raise concerns about a planned course of treatment and prompt more examination.

### **Ease of Implementation**

Chart summary implementation is more complicated than specific data type services, such as the medication history service. Technical analysis will be required to determine available information and create a summary structure appropriate to the information. Additional analysis will be required to ensure that the structures and information selected are presented in the most effective way to make it clinically valuable for providers. As noted above, flexibility in structures is critical to allowing the addition of new data sources as they become available.

Implementation of chart summaries also involves a significant education and training effort for the providers who will receive the information. Good design should render interpretation of the presented information largely intuitive, but care must be taken to ensure that providers understand the limitations of the presented information, lest errors of omission undermine the clinical value of the chart summary.

### **Consent**

The chart summaries to emergency departments and hospitals Use Case is similar to the medication history Use Case from a consent perspective. The chart summary service requires, by law, no additional consent beyond implied consent for treatment, the HIE suggests requiring informed consent to be obtained verbally by the registrar and supported by patient education information, or a more stringent process, should the participant deem it appropriate. Assuming chart summaries are implemented after or at the same time as the medication history service, the minimal modification of emergency department registration systems to capture patient consent at the time of registration implemented for medication history should also support the necessary consent for chart summaries.

## 10. Chart Summaries to Physicians and Clinics

### **Summary**

The summary of this service is identical to that for chart summaries to emergency departments and hospitals provided above.

### **Clinical Value**

The clinical value description for chart summaries to emergency departments and hospitals also applies to chart summaries to physicians and clinics, with some additional value. Physicians may use the chart summary to identify gaps in recommended preventive care or care for maintenance of a chronic condition and thus use the chart summary to enhance their overall health management efforts. Further, chart summary delivery to clinical and other primary care settings can be used as an ER diversionary tactic, easing the volume burden on already overflowing emergency rooms.

### **Ease of Implementation**

The implementation process is as described for chart summaries to emergency departments and hospitals, with the understanding that the organization and presentation of the chart summary may be different for physicians. Also, given the much larger number of physicians and clinics compared with hospitals, efforts to develop training materials and programs will undoubtedly be more expansive.

### **Consent**

Patient consent for the chart summary service is no different than the consent a physician or clinic requires to interact with other providers or payers on the patient's behalf and is likely covered under existing consent documentation in use by providers today. Nonetheless, the HIE recommends that physicians and clinics either modify their existing consent documents to explicitly describe the use of the HIE chart summary service or ensure that patients are aware that they are participating in the HIE.

## 11. Radiology Reports to Emergency Departments / Hospitals

### **Summary**

The HIE planning process found that the delivery of radiology reports to emergency departments and other hospital settings could be immensely valuable. This finding contradicted an initial feeling among workgroup members that radiology reports would not be valuable, partly based in the underlying fact that imaging is a profit center for most institutions that do it, and reducing the need for images would be detrimental to that revenue stream. Instead, the workgroup concluded that revenue from radiology is not at risk from report sharing because many images would be re-taken anyway; generally providers will want to ensure that the health issues requiring an image have not deteriorated or otherwise changed since the original image by reviewing the report. The services offered through the HIE would include connectivity with national radiology centers as well as hospital and local/regional centers.

### **Clinical Value**

The clinical value of sharing radiology results is the ability to benchmark against prior images and report and assess the progression of any particular health issue. As the exchange grows and matures, functionality allowing for more rapid interpretations of historical radiology reports will likely become available, thus increasing the overall value of this particular Use Case.

### **Ease of Implementation**

This Use Case includes varying levels of implementation challenges dependent upon the degree of integration and the pursuit of structured data. For example, delivery of an unstructured text radiology report as a document through the exchange does not present as many implementation challenges as exchanging radiology images or structured results data. The benefit of this reality is that this Use Case can be an early entrant to the HIE and provide near-term clinical value.

### **Consent**

Patient consent for this Use Case is not explicitly required for each encounter since consent is implicit for treatment purposes. However, as in other Use Cases, this does not make robust patient education unnecessary and informed consent should still be pursued.

## 12. Radiology Reports to Physicians and Clinics

### **Summary**

The summary of this service is identical to that provided for radiology reports to emergency departments and hospitals.

### **Clinical Value**

The clinical value of sharing radiology reports is the ability to benchmark against prior images and report and assess the progression of any particular health issue. As the exchange grows and matures, functionality allowing for more rapid interpretations of historical radiology reports will likely become available, thus increasing the overall value of this particular Use Case.

### **Ease of Implementation**

This Use Case includes varying levels of implementation challenges dependent upon the degree of integration and the pursuit of structured data. For example, the delivery of an unstructured text radiology report as a document through the exchange does not have as many implementation challenges as exchanging radiology images or structured results data. The benefit of this reality is that this Use Case can be an early entrant to the HIE and provide near-term clinical value.

### **Consent**

Patient consent for this Use Case is not explicitly required for each encounter as consent is implicit for treatment purposes, which is the purpose for which radiology reports and images would be exchanged. However, as in other Use Cases, this does not make robust patient education unnecessary and informed consent should still be pursued.

## 13. Reporting to Public Health

### **Summary**

Washington State has a variety of registries that require clinical reporting from the healthcare community in order to track the health of the population. Birth, death, tumor, cancer, STD, HIV, required tests such as AFP or blood tests for marriage licenses are all examples of reportings from a health care organization to a registry operated by the Department of Health or other public entities.

### **Clinical Value**

The clinical value of reporting registry information provides a richer data set for population management in the face of communicable disease outbreaks, population trending, and for monitoring global community health and wellness.

### **Ease of Implementation**

This Use Case includes varying levels of implementation challenges dependent upon the degree of integration and the pursuit of structured data. For example, the delivery of an unstructured text report as a document through the exchange does not have as many implementation challenges as exchanging a specific structured message for each specific registry.

### **Consent**

Patient consent for this Use Case is not explicitly required for each encounter as consent is implicit for public safety purposes, which is the purpose for which registry reports would be exchanged. However, as in other Use Cases, this does not make robust patient education unnecessary and informed consent should still be pursued.

## *13a. Immunization Reporting*

# **Immunization Reporting to State Registry and Vaccine Alliance**

### **Summary**

Washington State has hosted a statewide Immunization Registry for a number of years called CHILD Profile. While reporting is not mandated in Washington State, 90% of about 1,200 practice sites administering immunizations to children are enrolled and contribute data on a regular basis (80% within 30 days of administration). Many family practice clinics also are enrolled, and the registry contains 50 million vaccination records for individuals of all ages. Currently, the CHILD Profile system has HL7 real-time or HL7 batch capabilities, and live interfaces with over 100 practice sites using 13 different EHR products. Two products (13 practices) have bidirectional exchange with the registry. The registry has a waiting list of providers eager to connect their EHRS with the system. The main barriers are lack of readiness on the EHR side, the cost to providers of an EHR interface, and limited staff resources on the CHILD Profile team. The addition of immunization reporting as a “meaningful use” requirement may increase interest in real-time data exchange through the HIE. The newly formed Washington Vaccine Association (WVA) is working to provide funding for statewide vaccinations and needs reporting to assist in this new public need.

### **Clinical Value**

The clinical value of reporting immunization information provides a richer data set for population management in the face of communicable disease outbreaks. It also gives providers easy access to a consolidated immunization history for patients, thus contributing to efficiencies in determining which vaccines an individual needs. Decision support is also provided in the registry through the forecasting tool which gives patient-specific immunization recommendations, especially helpful as the complexity of the vaccination schedule increases every year. The data also supplies tools to assist in identifying areas of improvement in immunizing populations at risk. The ability to query the database for immunizations history on an individual patient may also help improve immunization rates.

### **Business Value**

The recent change in Washington State funding of immunizations has created a new business need to have reporting of immunization use available to assist in the payment of immunizations and thus the availability for clinical use. The Delivery of a claim to the guarantor with a separate claim to the WVA is an added burden on practitioners in need of a better process solution. If the reporting solution is able to meet Registry reporting needs and WVA needs to track the payment of immunizations this would simplify reporting compliance for providers.

### **Ease of Implementation**

This Use Case includes varying levels of implementation challenges dependent upon the degree of integration and the pursuit of structured data. The CHILD Profile immunization registry has the

capability of accepting flat files in a designated format, which are usually generated from provider billing systems. These are usually fairly simple for their vendors to develop, though they lack many of the data elements that providers and public health would like to capture in the registry. The registry also has the ability to accept HL7 messages following the CDC Implementation Guide for Immunization Data Transactions using HL7 v 2.3.1, and is planning to move to the recently released CDC document for 2.5.1. The implementation of a solution that meets both CHILD Profile and WVA needs may require a superset of information or two different paths for clinical and business data needs. It is important that the use case requirements reflect the needs of both immunization reporting to the registry and immunization reporting to support funding of immunizations to the community. The optimal method to support the funding needs has not been articulated to date but the WVA workgroup is looking at various options which could include additional requirements being shared with the HIE to see if there is an opportunity to leverage the emerging HIE infrastructure to reduce duplicate reporting requirements related to immunization usage.

### **Consent**

The HIPAA Privacy Rule permits a covered entity (i.e., health care providers and health plans) to disclose protected health information for public health activities and purposes without individual authorization. The activities conducted by the CHILD Profile program are not covered functions under HIPAA and, as a result, the HIPAA privacy rules don't directly apply to CHILD Profile. Providers, health plans, and other covered entities may nonetheless disclose protected health information to CHILD Profile without patient authorization, and without a business associate agreement, since the disclosure is allowed as a public health activity related to controlling or preventing disease.

Also, sharing of immunization records among health care providers, for the purpose of assisting the health care provider to deliver health care to a patient, is compatible with the Health Care Information Act (RCW 70.02). Patient-specific information in the CHILD Profile database is available to those health care providers providing or coordinating care for a specific patient and authorized to use the database through a signed information sharing agreement.

However, as in other Use Cases, this does not make robust patient education unnecessary and informed consent should still be pursued.

Sharing of the information for billing purposes does not require consent of the patient.

## *13b. Biosurveillance tracking via a Regional Repository*

### **Summary**

Washington State has hosted a statewide syndromic surveillance system for a number of years called The Public Health Emerging Event Detection System (PHEEDS) that identifies unusual clusters using statistical tools and performs automated analysis of trends. This was successfully used during the 2009 H1N1 outbreak for situational awareness. This system uses mostly de-identified data from emergency rooms and urgent care facilities. It is capable of processing richer data streams from providers and hospitals served by RHIOs or HIEs.

### **Clinical Value**

Biosurveillance provides a mechanism for monitoring the health of the general population in near-real time. This can be very useful for managing population health during communicable disease outbreaks and for monitoring the impact of such outbreaks on health resources. Information gathered from biosurveillance is used to guide decisions about community level interventions for the mitigation of illness. Biosurveillance can also provide awareness of community health during any event with potential health significance. Information obtained from biosurveillance can be provided back to physicians which may be useful for clinical practice.

As of September 2000, the Washington Administrative Code (WAC) describing notifiable disease reporting requirements was revised to require physicians and health care facilities to notify local public health agencies of patients with diseases that may be due to a bioterrorism event; prior to the causative agent being known. In addition, the WAC was modified in such a way that clusters of certain diseases, syndromes, and conditions became reportable by law to allow for early identification of potential bioterrorism events (See WAC 246-101-010 and WAC 246-101-101). Detection of clusters of cases above expected levels is best done using statistical methods to identify when the number of cases exceeds an “expected” or “predicted” number of cases. In current practice, individual health care facilities generally do not analyze clinical data in real-time to allow prompt detection of clusters of cases. Biosurveillance uses statistical methods applied to information in near real-time to detect and monitor any unusual events that may be occurring.

### **Ease of Implementation**

This Use Case includes varying levels of implementation challenges dependent upon the degree of integration and the pursuit of structured data. For example, the delivery of a simple structured text report as a document through the exchange does not have as many implementation challenges as exchanging complex structured case data. Delivery of a claim to the repository with a copy to the State Department of Health would simplify reporting for providers and could leverage auto routing of a message. Public Health would be able to use a de-identified copy of every transaction to detect aberrations and trends in the population.

### **Consent**

Patient consent for this Use Case is not explicitly required for each encounter as consent is implicit for public safety purposes, which are the purposes for which mostly de-identified case reports would

be exchanged. However, as in other Use Cases, this does not make robust patient education unnecessary and informed consent should still be pursued.

## *13c. Electronic submission of notifiable condition reports to public health agencies*

### **Summary**

Washington State has a number of health conditions that are notifiable to local public health agencies and the Washington State Department of Health (DOH), as authorized under Chapter 246-101 of the Washington Administrative Code. <<http://apps.leg.wa.gov/WAC/default.aspx?cite=246-101>>

Diagnosis of notifiable conditions by a healthcare provider or by a hospital, and the occurrence of positive lab results for notifiable conditions, should be reported to public health via secure electronic transmission. For some situations, suspected cases should also be reported (e.g., diseases of suspected bioterrorism origin).

### **Clinical Value**

The purpose of notifiable conditions reporting is to provide the information necessary for public health officials to protect the public's health by tracking communicable diseases and other conditions. These data are critical to local health departments and the departments of health and labor and industries in their efforts to prevent and control the spread of diseases and other conditions.

Reporting notifiable condition information provides more complete and timely information for population management in the event of communicable disease outbreaks. It also allows for more accurate tracking of disease in the population and for monitoring the global health and wellness of communities. Public health officials take steps to protect the public, based on these notifications. Treating persons already ill, providing preventive therapies for individuals who came into contact with infectious agents, investigating and halting outbreaks, and removing harmful health exposures are key ways public health officials protect the public. Public health workers also use these data to assess broader patterns, including historical trends and geographic clustering. By analyzing the broader picture, officials are able to take appropriate actions, including outbreak investigation, redirection of program activities, or policy development.

<<http://apps.leg.wa.gov/WAC/default.aspx?cite=246-101-005>>

The Department of Health has documented improved reporting and greatly improved timeliness as a result of moving from manual to electronic reporting.

### **Ease of Implementation**

This Use Case includes varying levels of implementation challenges dependent upon the degree of integration and the pursuit of structured data. For example, the delivery of an unstructured text report as a document through the exchange does not have as many implementation challenges as exchanging a specific structured message or document. Most newer electronic medical record systems are able to create the HL7 messages that are the standard for laboratory reporting, and many can create the CDA documents that are the standards for public health case reporting. A reporter is able to send all reports for all Washington State residents to the Department of Health; DOH ensures that each report is directed to the appropriate responsible public health agency.

**Consent**

Patient consent for this Use Case is not explicitly required for each encounter as reporting is mandatory under the WAC. This is a legal requirement and is allowed for in HIPAA. However, as in other Use Cases, this does not make robust patient education unnecessary.

## 14. Matching Patient Records – Master Person Index

### **Summary**

Washington State has discussed a community Master Person Index for a number of years but has never completed a business case with enough interested participants to fund the initiative. The greatest challenge is the cost of licensing and operating an MPI repository when most enterprises already host an MPI to share records across different business and clinical systems inside their enterprise. The frequency of trading records has not historically justified the expense. The use case seems closer to reality with the advent of increased clinical record exchanges and the need to match unknown records with known existing records in order to have a complete history on any individual patient.

### **Clinical Value**

The clinical value is harder to quantify in the positive when the MPI is really an insurance policy against the negative. If an organization fails to match records and have a complete view of all the information available on an individual patient then the enterprise has risks and costs associated with incomplete information. The risk could be quite small in many cases but the enterprise would still need to make a decision on the importance of being able to match records and at what confidence level. Much of this work is done manually today and continues to be until the record volume reaches some critical point where manual matches are cost prohibitive.

### **Ease of Implementation**

This Use Case includes varying levels of implementation challenges dependent upon the MPI approach undertaken by the HIE and the participating enterprises. The HIE has not defined the specific MPI model but is exploring the feasibility of different models such as a federated, a hybrid or a-MPI (ambulatory MPI based on ADT data) instead of a traditional centralized database. Community-centric MPI offerings where more overlap of patients occurs naturally may have greater value than a statewide MPI.

### **Consent**

Patient consent for this Use Case is not explicitly required for each encounter as consent is implicit for treatment and public safety purposes, which is the purpose for which clinical records would be exchanged. However, as in other Use Cases, this does not make robust patient education unnecessary and informed consent should still be pursued.

## 15. Matching Provider Records – Provider Directory

### **Summary**

There are a number of Provider Directories hosted by HIOs and Medical Associations around the State of Washington. This Provider Directory would serve multiple purposes. The ability to look up an individual provider and find out contact information and trading partner details in order to send or request records. The ability to access the trading partner electronically to securely exchange records on patients.

### **Clinical Value**

The clinical value is being able to request or receive chart notes and other clinical information in a timely fashion to inform treatment and reduce repeat procedures.

### **Ease of Implementation**

This Use Case includes varying levels of implementation timelines. The collection of much of this data may be available during 2011 based on a new Statewide Credentialing project. That project will collect much of the office location information needed for the base directory. The connectivity information will require additional recruitment of provider organizations to determine their readiness to set up their trading partner expectations and capabilities. The HUB solution will house this portion of trading partner connectivity information.

### **Consent**

Patient consent for this Use Case is not required since this a Provider Directory. Provider consent is needed to list the provider for trading partners to access. Provider consent may be divided into patient access to data and other provider/payer/business partner use of the Provider Directory.

## 16. Finding Patient Records – Record Locator Service

### **Summary**

The Record Locator Service (RLS) has been discussed for the last four years as a part of the Health Information Infrastructure Advisory Board (HIIAB) deliberations. The Record Locator Service is often a complimentary service to a Master Person Index. The RLS provides pointers to distributed databases or record banks with patient clinical records. Regardless of the record structure, an RLS allows a central query of distributed record sources to minimize duplicate record storage.

### **Clinical Value**

The clinical value is related to finding records when needed for patients seeking care in emergency rooms, consulting services, change of primary care providers, change of community or any situation where the records are not readily available at the time of service. The RLS has value in identifying where lab and radiology results can be found to minimize duplicate procedures but of greatest value is knowing where the data is and some detail for the type of data and dates of service.

### **Ease of Implementation**

This Use Case includes many levels of complexity that make it a good candidate for a second phase of work. In order to produce value with an RLS there must be a large number of records available which generally requires a large number of participating organizations. During interviews with thirty potential early adopter organizations in Washington State, none of the organizations indicated they were ready to start use of an RLS and most agreed it would take some time to understand all that is required technically in their organization to make an RLS a priority project.

### **Consent**

Patient consent for this Use Case is not explicitly required for each encounter as consent is implicit for treatment and public safety purposes, which is the purpose for which clinical records would be exchanged. However, as in other Use Cases, this does not make robust patient education unnecessary and informed consent should still be pursued.

## 17. Chart Summaries and Results Reporting to Patient Health Record

### **Summary**

The summary of this service is identical to that for chart summaries to emergency departments and hospitals provided above. In this Use Case the PHR is hosted by a vendor, purchaser, payer or other aggregator and the patient is the primary character requesting copies of clinical records for coordination of care and sharing of care management with family and other care givers. The patient makes their request of the provider organization that “pushes” chart summaries and results reporting to the designated PHR via the HIE HUB.

### **Clinical Value**

The clinical value description for chart summaries and results reporting to Patient Health Records has been documented and studied by four pilot projects in Washington State which focus on the value of the informed patient and a variety of care givers that assist the patient and their family.

### **Ease of Implementation**

The technical implementation process is as described for chart summaries to emergency departments and hospitals. The policy implementation that must predate the technical implementation requires a thoughtful process and input on how the patient can request record access from all care givers and how providers document the PHR to be copied. There are a variety of ways to simplify the technical exchange of records to hosted PHR vendors once the policy management infrastructure is in place.

### **Consent**

Patient consent for populating their own PHR is no different than the consent a physician or clinic requires to interact with other providers or payers on the patient’s behalf and is likely covered under existing consent documentation in use by providers today. Nonetheless, the HIE recommends that physicians and clinics either modify their existing consent documents to explicitly describe the use of the HIE chart summary service or ensure that patients are aware that they are participating in the HIE. In addition new policies may be required that elaborate the responsibility of the provider in keeping patient permissions and designated PHR information updated.