

**U.S. Department of Health and Human Services**  
**Office of the National Coordinator for Health Information Technology**

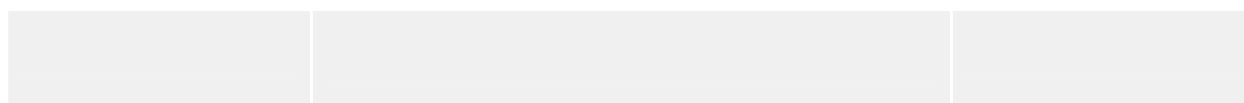


**Consultations & Transfers of Care**  
**Detailed Use Case**  
**March 21, 2008**



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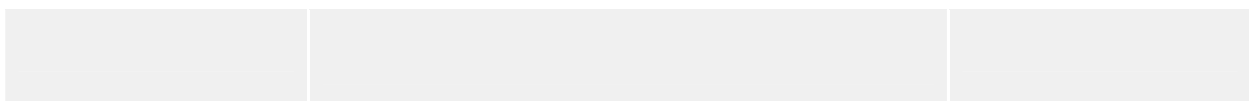
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## 1.0 Preface

Use cases developed for the American Health Information Community (AHIC) are based on the priorities expressed by the AHIC, which include needs expressed by the AHIC Workgroups. These high-level use cases focus on the needs of many individuals, organizations, and systems rather than the development of a specific software system. The use cases describe involved stakeholders, information flows, issues, and system needs that apply to the multiple participants in these arenas.

The use cases strive to provide enough detail and context for standards harmonization, certification considerations, architecture specifications, and detailed policy discussions to advance the national health information technology (HIT) agenda. These high-level use cases focus, to a significant degree, on the exchange of information between organizations and systems rather than the internal activities of a particular organization or system.

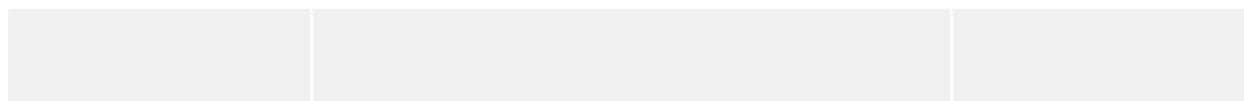
During the January 2007 AHIC meeting, nine priority areas (representing over 200 identified AHIC and AHIC workgroup detailed issues and needs) were discussed and considered. Three of these areas (Consumer Access to Clinical Information, Medication Management, and Quality) were selected for use case development and the final 2007 Detailed Use Cases were published in June, 2007.

The remaining six priority areas from the January 2007 AHIC meeting (Remote Monitoring, Patient-Provider Secure Messaging, Personalized Healthcare, Consultations & Transfers of Care, Public Health Case Reporting, and Immunizations & Response Management) have been developed into the 2008 Use Cases which will be processed in the national HIT agenda activities in 2008.

The 2008 Use Cases have been developed by the Office of the National Coordinator for Health Information Technology (ONC) with opportunities for review and feedback by interested stakeholders within both the private and public sectors. To facilitate this process, the use cases have been developed in two stages:

- The **Prototype Use Case** describes the candidate workflows for the use cases at a high level, and facilitate initial discussion with stakeholders; and
- The **Detailed Use Case** documents all of the events and actions within the use cases at a detailed level.

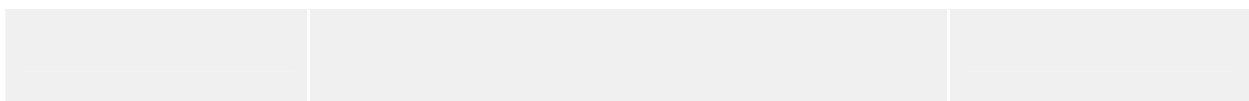
This document is the Detailed Use Case. Feedback received on the Draft Detailed Use Case have been considered and incorporated where applicable into this document.





This Detailed Use Case is divided into the following sections:

- Section 2.0, Introduction and Scope, describes the priority needs identified by one or more AHIC workgroups and includes draft decisions made regarding the scope of the use case.
- Section 3.0, Use Case Stakeholders, describes individuals and organizations that participate in activities related to the use case and its components.
- Section 4.0, Issues and Obstacles, describes issues or obstacles which may need to be resolved in order to achieve the capabilities described in the use case.
- Section 5.0, Use Case Perspectives, describes how the use case combines similar roles (or actors) to describe their common needs and activities. The roles are intended to describe functional roles rather than organizations or physical entities.
- Section 6.0, Use Case Scenarios, describes how various perspectives interact and exchange information within the context of a workflow. Use case scenarios provide a context for understanding information needs and are not meant to be prescriptive.
- Sections 7.0 and 8.0 provide a greater level of detail for each scenario and include information flows. Specific events and actions for each perspective and scenario are presented and discussed. These are also not intended to be prescriptive.
- Section 9.0, Information Exchange, describes the role of information exchange in the use case at a high level.
- Section 10.0, Dataset Considerations, identifies specific information opportunities relevant to this use case that may support future standardization and harmonization activities.
- Appendix A, the Glossary, provides draft descriptions of key concepts and terms contained in the detailed use case.
- Appendix B, Detailed Core Dataset Considerations, identifies specific data types that may support future industry efforts to identify information needs for standardization and harmonization activities.





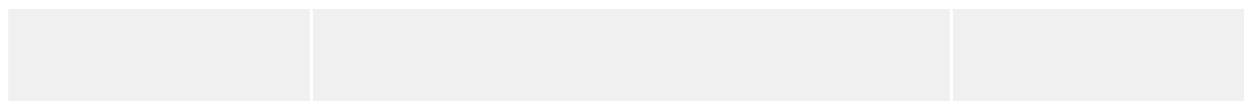
## 2.0 Introduction and Scope

In January 2007, the AHIC approved a recommendation to develop a use case addressing consultations and transfers of care. The Consultations & Transfers of Care Detailed Use Case is focused on the electronic exchange of information between clinicians, particularly between requesting clinicians and consulting clinicians, to support consultations such as specialty services and second opinions. This use case also focuses on the exchange of clinical information needed during transfers of care. Transfer of care occurs when patients are discharged and transferred from one health setting to another, such as to or from an acute care hospital, skilled nursing or rehabilitation facility, or to home with or without home health care services. Patients participate in this electronic exchange of information as recipients of information exchange and may designate authorized recipients of health care information during consultations and transfers of care.

In specific terms:

- Clinicians and patients could benefit from electronic communication supporting an electronic request for, and fulfillment of, a consultation and in support of transfers of care. This could include bi-directional, standardized exchange of necessary electronic information, and/or information retrieval across different organizations.
- Patients could benefit from greater continuity and quality of care during consultations with providers and transitions of care settings. Clinicians could benefit from more comprehensive and usable health information with which to coordinate and improve care, minimize medical errors and costs, and maximize efficiency.
- Lapses in information exchange between settings, particularly in the case of both consultations and transfers of care, pose a significant challenge to ensuring that clinicians have accurate and timely data with which to provide high quality care. Both quantitative and qualitative studies indicate that patient safety can be threatened by limited continuity of care, redundancy in care delivery, and poorly informed patients and clinicians. Additionally, the existing consultation process is, at times, not timely and not supported by adequate information. As a result, delayed diagnoses, poor continuity of care, redundancy in care delivery, and frustrated patients and clinicians can result. All of these issues can impact the quality of the care delivered.

This use case is focused on the exchange of relevant patient information between providers of care. In particular, the scope of this use case includes an articulation of needs to enable the exchange of information between providers and between providers and patients in relation to consultations and transfers of care. In this sense, a provider may be an individual clinician (as in the case of a consultation) or a care delivery setting (as in the case of a transfer of care). Electronic consultation between patients and providers is not included





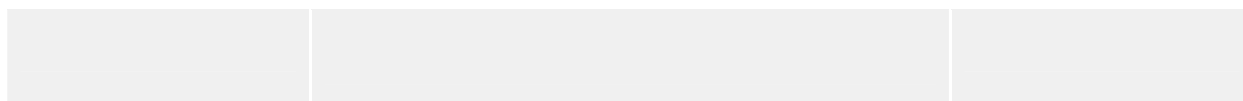
within this use case and is addressed in the Patient-Provider Secure Messaging Detailed Use Case.

The use case identifies clinical information for sharing in a standardized manner during consultations and transfers of care. This set of information includes a reason for the consult or transfer, necessary patient data, and information regarding the intended care to be provided by the consulting clinician or receiving care setting. Some clinical information is of a general nature and some is setting and specialty-specific. This use case also addresses capabilities for consulting clinicians to access and retrieve, as appropriate, additional patient information to supplement that which is sent in the consult request. This use case also includes the communication of information needed by the requesting clinician to continue to manage the patient upon completion of a consultation. Some refinements to a common or core set of information, as illustrated in Appendix B, will be identified and developed over time by appropriate industry efforts.

Clinician-to-clinician requests for consultations in circumstances like ambulatory care settings, where information must flow between organizations, is a primary focus, as compared to the information exchange within an organization. The process includes both initiating the request for consultation and providing the relevant clinical findings and care management information back to the originator of the request (typically, the primary care provider). Consultation requests may become a patient referral for the consulting clinician to take over responsibility for managing the patient and providing care.

Transfer of care is focused on providing patient information needed by clinicians to accomplish a transition in care from one care setting to another. The focus is on transitions between acute, long-term care, nursing facility, rehabilitation facility, home health care, and other inter-organizational transitions rather than transfers within a given care setting. In the ambulatory care setting, a referral may constitute a transfer of care from one ambulatory care provider to another ambulatory care provider. Specific information needs may vary depending on the care settings involved. It is acknowledged that intra-organizational transfers within an organization have similar information needs as the transfers between organizations identified within this use case. However, it is common for health information technology systems implemented within an organization to provide access to an entire patient's record to its providers of care. Therefore, these information needs are not a primary focus of this use case.

This use case assumes the developing presence of electronic systems such as Electronic Health Records (EHRs), Personal Health Records (PHRs), and other local or Web-based solutions supporting clinicians and patients, while recognizing the issues and obstacles associated with these assumptions.

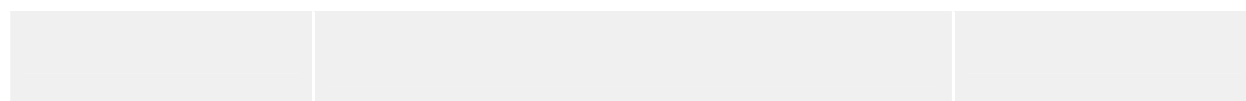




### 3.0 Use Case Stakeholders

**Figure 3-1. Consultations and Transfers of Care Use Case Stakeholders Table**

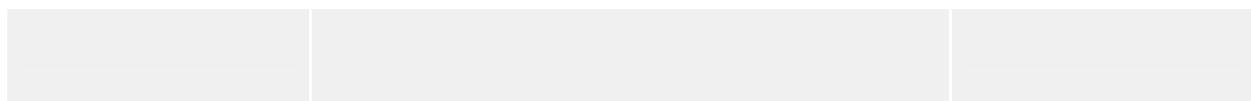
Stakeholder	Contextual Description
<b>Care Coordinators</b>	Individuals who support clinicians in the management of health and disease conditions. These can include case managers and others.
<b>Clinical Support Staff</b>	Individuals who support the workflow of clinicians.
<b>Clinicians</b>	Healthcare providers with patient care responsibilities, including physicians, advanced practice nurses, physician assistants, nurses, psychologists, pharmacists, and other licensed and credentialed personnel involved in treating patients.
<b>Consumers</b>	Members of the public that include patients as well as caregivers, patient advocates, surrogates, family members, and other parties who may be acting for, or in support of, a patient receiving or potentially receiving healthcare services.
<b>Diagnostic Imaging Service Providers</b>	Organizations which provide radiology and diagnostic imaging services to patients in various settings, which perform and analyze the study as ordered by clinicians to assess the health status of patients.
<b>Electronic Health Record (EHR)/Personal Health Record (PHR) System Suppliers</b>	Organizations which provide specific EHR and/or PHR solutions to clinicians and patients such as software applications and software services. These suppliers may include developers, providers, resellers, operators, and others who may provide these or similar capabilities.
<b>Geographic Health Information Exchange/Regional Health Information Organizations</b>	A multi-stakeholder entity, which may be a free-standing organization (e.g., hospital, healthcare system, partnership organization) that supports health information exchange and enables the movement of health-related data within state, local, territorial, tribal, or jurisdictional participant groups. Activities supporting health information exchanges may also be provided by entities that are separate from geographic health information exchanges/Regional Health Information Organizations including integrated delivery networks, health record banks, and others.
<b>Health Information Management (HIM) Personnel</b>	Personnel who manage healthcare data and information resources, encompassing services in planning, collecting, aggregating, analyzing, and disseminating individual patient and aggregate clinical data.





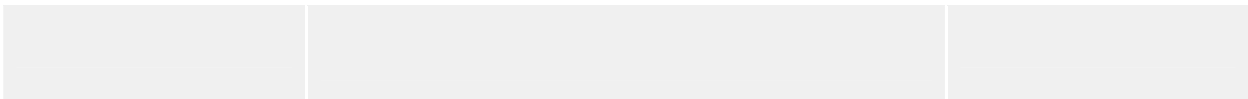


Stakeholder	Contextual Description
<b>Health Record Banks</b>	Entities/mechanisms for holding an individual's lifetime health records. This information may be personally controlled and may reside in various settings such as hospitals, doctor's offices, clinics, etc.
<b>Healthcare Entities</b>	Organizations that are engaged in or support the delivery of healthcare. These organizations could include hospitals, ambulatory clinics, long-term care facilities, community-based healthcare organizations, employers/occupational health programs, school health programs, dental clinics, psychology clinics, care delivery organizations, pharmacies, home health agencies, hospice care providers, and other healthcare facilities.
<b>Healthcare Payors</b>	Insurers, including health plans, self-insured employer plans, and third party administrators, providing healthcare benefits to enrolled members and reimbursing provider organizations.
<b>Laboratories</b>	A laboratory (often abbreviated lab) is a setting where specimens are sent for testing and analysis, are resulted, and then results are communicated back to the requestor. The types of laboratories may include clinical/medical, environmental, and veterinarian, and may be both private and/or public.
<b>Medication Network Intermediaries (MNIs)</b>	These entities support the healthcare process by accomplishing communication among providers, pharmacies, and pharmacy benefits managers or payors as needed for medication dispensing and reimbursement. In this role, they are both a conduit for communication and a source of information on aspects of medication management such as medication prescription history, dispensing status, and pharmacy benefits. This group includes Pharmacy Network Intermediaries, ePrescribing Network Intermediaries, clearinghouses, and similar organizations.
<b>Patient</b>	Members of the public who receive healthcare services. For hospice providers, the patient and family are considered a single unit of care. Synonyms used by various healthcare fields include client, resident, customer, patient and family unit, consumer and healthcare consumer.
<b>Providers</b>	The healthcare clinicians within healthcare delivery organizations with direct patient interaction in the delivery of care, including physicians, nurses, psychologists, and other clinicians. This can also refer to healthcare delivery organizations.





Stakeholder	Contextual Description
<b>Registries</b>	Organized systems for the collection, storage, retrieval, analysis, and dissemination of information to support health needs. This also includes government agencies and professional associations which define, develop, and support registries. These may include emergency contact information/next of kin registries, patient registries, disease registries, etc.



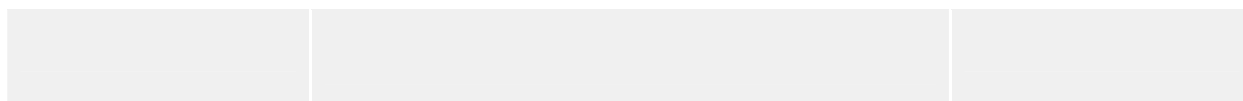


## 4.0 Issues and Obstacles

Realizing the full benefits of HIT is dependent on overcoming a number of issues and obstacles in today's environment. Inherent is the premise that some of these issues and obstacles are cross-cutting and therefore shown in all use cases, while others are unique to this specific use case. Some of these topics appear in both the cross-cutting and use case-specific sections so that, in addition to the shared characteristics of the issue, considerations specific to a use case may be addressed.

Issues and Obstacles which are applicable across use cases appear below in problem and consequence form:

- **Confidentiality, privacy, and security:**
  - In order for consumers to accept electronic health records, appropriate privacy and security protections may be needed to manage access to personal health information. Consumers may also want to decide who will view and communicate their personal health information. Privacy and security controls and the means of restricting data access are not standardized or regulated.
    - Without permissions and controls, consumer participation in the act of electronic health information exchange may be limited.
  - There are regulations concerning the storage, transmission, or destruction of electronic health information. These regulations are inconsistent across federal, state, and local jurisdictions.
    - Without consistent standards, the viewing, accessing, or transmitting of electronic health information may be inhibited.
- **Information integrity, interoperability, and exchange:**
  - Incomplete, inaccurate, or proprietarily-formatted information prevents efficient health information exchange activities or utilization of electronic health information.
    - Without data standards that promote compatibility and interoperability, longitudinal patient medical records may be incomplete or of questionable integrity.
- **EHR and HIT adoption:**
  - The processes identified in the use cases rely upon successful integration of EHRs into clinical activities. Because this integration may not align with



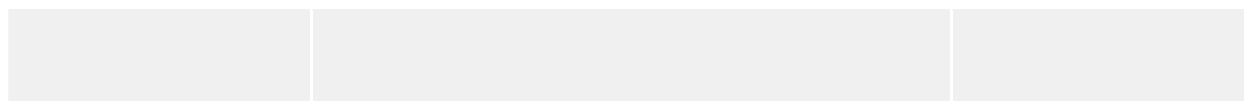


current workflow and may require additional upfront costs, it may not be widely pursued or implemented.

- Low adoption of HIT, particularly within rural areas and long-term care settings, may create disparate service levels and may adversely affect healthcare for these populations.
- **Lack of business model and infrastructure:**
  - Financial incentives are not currently sufficient to promote the business practices necessary for sustainable HIT.
    - If sufficient reimbursement policies and other financial incentives are not established, HIT adoption may be difficult or unsustainable.
  - Activities involving health information exchange will require additional technical infrastructure, functionality, and robustness, beyond what is currently available.
    - Unless the requisite infrastructure for health information exchange capabilities is established, improved upon, and sustained, these capabilities may have limited success and provide few benefits.
- **Clinical Decision Support:**
  - The capabilities, requirements, and standards needed for consistent development, implementation and maintenance of Clinical Decision Support have not been identified.
    - The utility and benefits of Clinical Decision Support cannot be fully realized without the development of workflows and standards demonstrating benefits for consumers, patients, and providers.

In addition to the cross-cutting issues and obstacles described above, several other issues or obstacles exist that are specific to this use case.

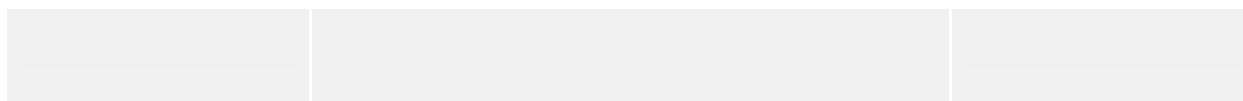
- **Lack of standardization of data content:**
  - There is limited standardization of EHR content that explicitly identifies the types of information contained within an electronic health record. The universe of data that could be relevant during a consultation or transfer varies widely. Although there is some common information that may be shared for consultations and transfers, information needs vary depending upon patient and clinical care details. There is no uniform information set for the comprehensive universe of data that may be shared during a request for





consultation/transfer, upon completion of the consultation/transfer, or information needs that may exist in addition to core data.

- Without data standards that identify core data required for a consultation or transfer of care, information exchanged between care settings and providers may be incomplete or of questionable integrity and delayed.
- **Patient data access and communication:**
    - In order to coordinate transfer of care, patient information is sent to a facility or provider to determine its ability to accept the patient. If a setting determines that it is not able to accept, the patient data may still be accessed by this setting. There is a need to consider the duration for which patient information is accessible by recipients of this information.
      - Without processes that define the duration that patient data is accessible, patient information may be sent or accessible to a setting that did not accept the patient or for a patient that are no longer its responsibility.
    - Patient information within a setting may be updated after an initial information transfer of core data to the next provider of care has taken place. The updated information may need to be communicated to providers and other stakeholders. There is a need to consider the scope, mechanism, and timeframe by which updated information is communicated to recipients.
      - Without processes that define the method and duration to send or receive updated patient information, information exchanged between care settings may be incomplete, or of questionable integrity. Providers may also receive updates for patients who are no longer their responsibility.





## 5.0 Use Case Perspectives

The Consultations & Transfers of Care Detailed Use Case describes the flow of clinical information between EHR systems from one provider of care to another. In this sense, a provider may be an individual clinician (as in the case of a consultation) or a care delivery setting (as in the case of a transfer of care). This use case includes six perspectives that are intended to indicate roles and functions, rather than organizations or physical locations. Each perspective represents the exchange of clinical information from the viewpoint of the major stakeholders involved in sharing data between clinicians and provider settings. Each perspective is described below:

- **Requesting Clinician**

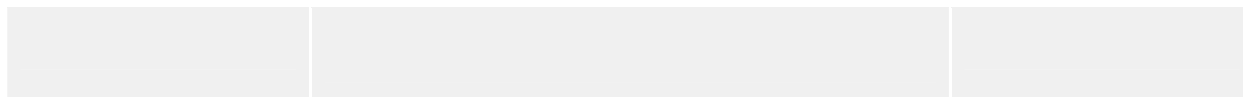
The requesting clinician perspective includes physicians, nurses, nurse practitioners, physician assistants, psychologists, and other clinical personnel who determine the need for a consultation and initiate a request for consultation for services. A requesting clinician may seek a consultation for any number of reasons, including asking the consulting clinician to advise on the establishment of a diagnosis, offer a second opinion, validate findings, conduct a procedure or test, implement a specialized plan of care, etc. The requesting clinician may transmit information from the clinician's EHR to another provider's EHR, or retrieving information from an external EHR.

- **Consulting Clinician**

The consulting clinician perspective includes physicians, nurses, nurse practitioners, physician assistants, psychologists, and other clinical personnel who may receive the request for consultation. This request for consultation may include an explicit request by the requesting clinician detailing the reason or need for consultation and relevant clinical information. In the case of a patient-initiated consultation, the request may include information provided by the patient and/or patient's clinician. The consulting clinician may transmit information through a clinician's EHR when there is a request for consultation from another provider, and includes communications back to the requesting clinician and, at times, the patient. Consulting clinicians may also request and view additional clinical information via information exchange as necessary to develop a comprehensive clinical picture.

- **Discharging/Transferring Setting**

When a patient completes a stay or visit in a particular care setting, he or she is either formally "discharged" home or discharged and transferred to another care setting. The formal "discharge" or transfer to another care setting may be conducted by a case manager, social worker, clinician, etc. The transfer of care setting may include a hospital, post-acute care setting, long term care setting, nursing facility, rehabilitation





facility, intermediate care facility, home health care, or outpatient care. Those involved in the discharging/transferring setting may transmit critical patient information through a discharging/transferring care setting's EHR to the next provider of care's EHR. When the patient is discharged home or transferred to another care setting, relevant information may be shared with the patient's personally controlled health records which may include PHRs, health record banks, etc.

- **Receiving Care Setting**

When a patient is transferred from another care setting, he or she is accepted into the new care setting. The receiving care setting may be a hospital, post-acute care setting, long term care setting, nursing facility, rehabilitation facility, home health care, or patient home. The provision of care to a patient discharged to home or any other setting may be carried out by a physician, clinician, social worker, care manager, etc. Those involved in the receiving care setting require access to critical patient information from the discharging/transferring provider of care's EHR within the receiving care setting's EHR.

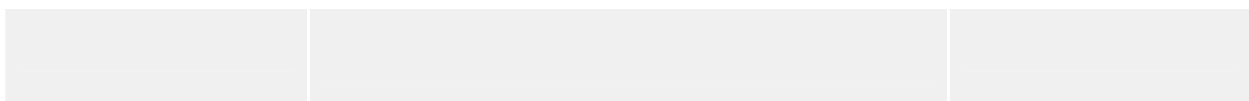
- **Patient**

This perspective describes the patient, (or guardians, family caregivers, patient surrogates, advocates, and other parties who may be acting for, or in support of, a patient) who may receive consultation and/or be transferred to another care setting. Patients may transmit information between a patient's personally controlled health records which may include PHRs, health record banks, etc. and a provider's EHR in a consultation or transfer that is initiated by a provider and also a consultation that may be initiated by the patient, such as a second opinion. Family members may provide care once the patient is discharged home, and may be granted access to the patient's PHR to assist/inform continued care.

- **Information Exchange**

The information exchange perspective may include a variety of organizations including free-standing or geographic health information exchanges (e.g., Regional Health Information Organizations (RHIOs)), integrated care delivery networks, provider organizations, health record banks, public health networks, specialty networks, etc. These entities may support specific functional capabilities which assist in facilitating health information exchange activities.

These perspectives are the focus of the events detailed in the scenarios described in Section 6.0.





## 6.0 Use Case Scenarios

The Consultations & Transfers of Care Detailed Use Case focuses on the exchange of a core set of information between clinicians, care settings, and patients. This use case describes two scenarios.

- **Consultations**

This scenario is focused on the sharing of information to support a request for a consultation, the consultation itself, and the sharing of information back to the requesting clinician and patient upon completion of the consultation. This scenario includes the communication of a request for consultation and a core set of clinical and administrative information between clinicians, as well as additional context specific information which may be provided to and/or requested by the consulting clinician. Requesting clinicians can transmit a core set of patient information, which can include (but is not limited to) reason for the consult request, patient summary information, diagnostic images, procedure reports, laboratory results, etc. Consulting clinicians may also seek access to additional clinical information via an information exchange as necessary and relevant to develop a comprehensive clinical picture. Depending upon patient care needs, consultation requests at times may become patient referrals where the consulting clinician assumes responsibility for managing the patient and providing care.

- **Transfers of Care**

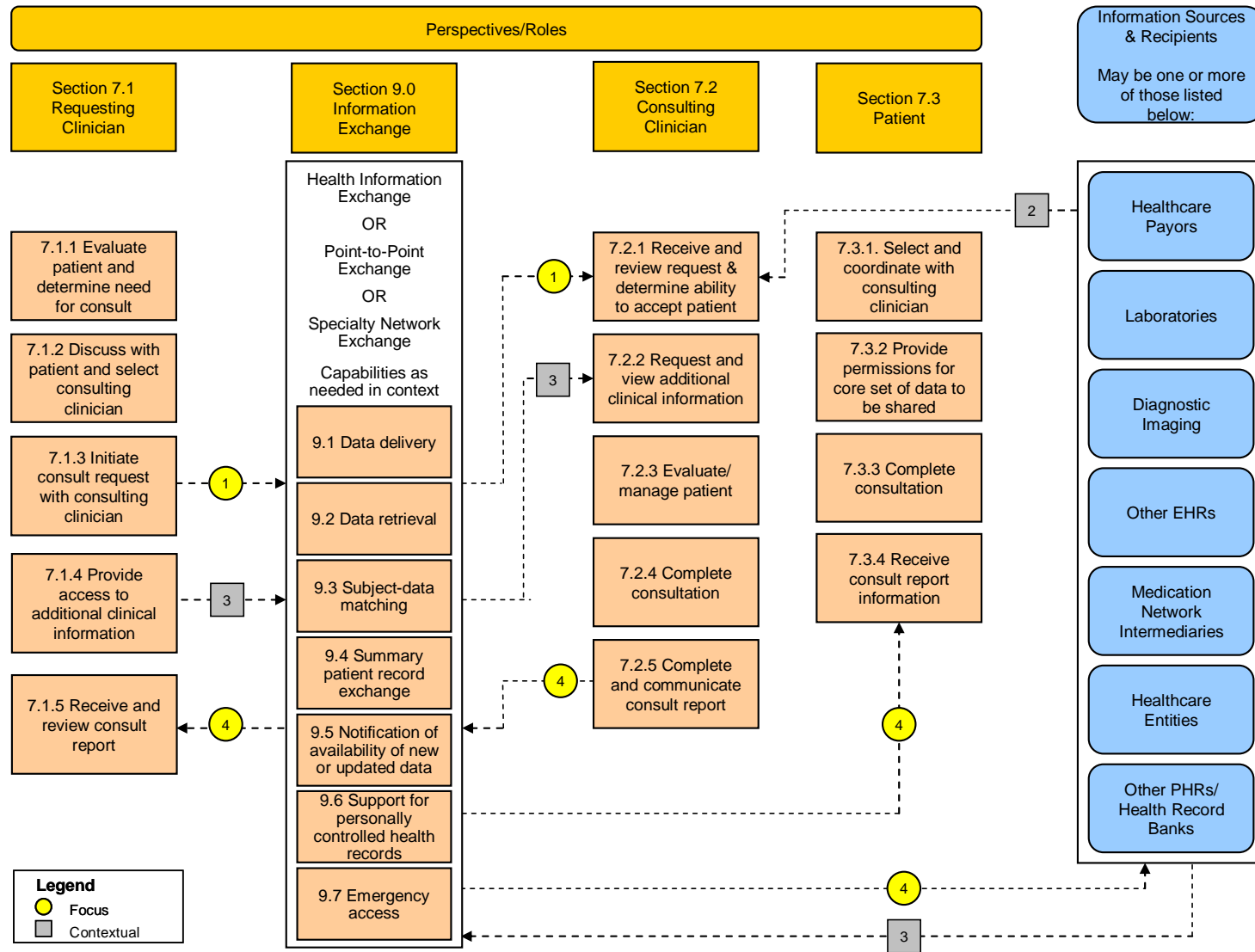
This scenario is focused on the sharing of information to support the discharge and/or transfer of a patient from one care setting to another. The clinical accountability and management of the patient is transferred from one clinician and care setting to another. This scenario includes the sharing of a set of clinical and administrative information between provider organizations, as well as additional information which may be accessed or requested by the new provider of care. The transferring setting can transmit a core set of clinical information to the receiving setting to assist in the coordination and management of patient care and may also send relevant information to the patient's personally controlled health records which may include PHRs, health record banks, etc. This core set of clinical information can include (but is not limited to) patient summary information, discharge summary, plan of care, procedure documentation, and clinical results. The receiving setting may also seek access to additional clinical information via an information exchange as necessary and relevant to develop a comprehensive clinical picture.





## 7.0 Scenario 1: Consultations

Figure 7-1. Consultations

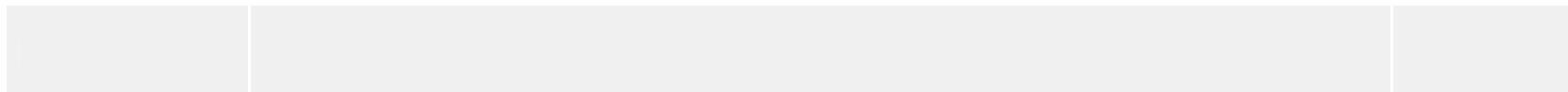




**Figure 7-2. Consultations Scenario Flows**

- 1 Consult request letter and core set of patient data is communicated by the requesting clinician through information exchanges to the consulting clinician.
- 2 Administrative data exchange to support eligibility determination and coverage authorization occurs between consulting clinician and payor.
- 3 Consulting clinician requests and views additional patient data from other sources provided via information exchange.
- 4 Consult report is communicated to the patient and other recipients via information exchange upon completion.

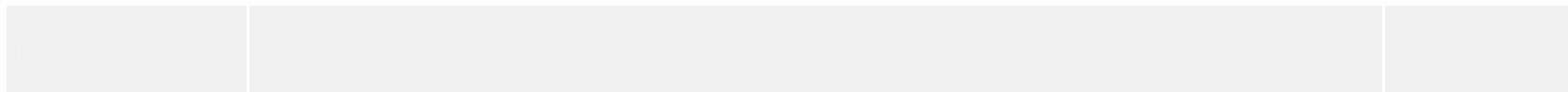
- Legend**
- Focus: Information exchange that is a primary focus of this use case.
  - Contextual: Information exchange that is not the primary focus of this use case, but is provided for contextual understanding.





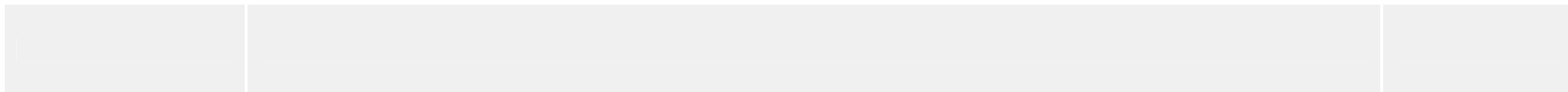
**Figure 7-3. Consultations, Requesting Clinician Perspective**

Code	Description	Comments
7.1.1	<b>Event:</b> Evaluate patient and determine need for consult	
7.1.1.1	<b>Action:</b> Evaluate patient and document patient encounter.	The patient is routinely evaluated by the clinician who documents each encounter in an EHR. During the normal course of care, the clinician may have ordered tests, received results, and prescribed medications. The clinician may have access to additional patient information which could be gathered electronically via the patient's personally controlled health records which may include PHRs, health record banks, etc., or health information exchange, or from other provider EHRs and other sources that hold information about the patient.
7.1.1.2	<b>Action:</b> Determine need for consultation.	The clinician evaluates the patient and reviews any relevant results received for previously ordered tests. The clinician determines a need to send the patient to a clinician outside of the clinician's institution for a consultation. The clinician may seek another clinician's opinion as a specialist or expert in a particular care area or as a second opinion.
7.1.2	<b>Event:</b> Discuss with patient and select consulting clinician	
7.1.2.1	<b>Action:</b> Discuss with patient the recommendation for a consultation with another provider.	The clinician discusses the need and reason for consultation with the patient.
7.1.2.2	<b>Action:</b> Select consulting clinician.	The clinician may provide the patient with the name(s) of recommended clinicians, clinician practice, or facility. The clinician may also assist the patient in selecting a particular clinician based upon the patient's insurance coverage network and/or preferences.
7.1.3	<b>Event:</b> Initiate consult request with consulting clinician	<b>Figure 7-1, Flow 1</b>



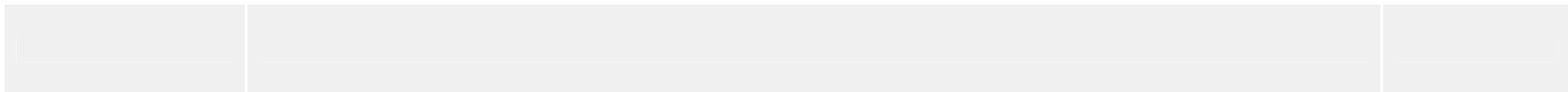


Code	Description	Comments
7.1.3.1	<b>Action:</b> The consulting clinician is selected.	The clinician recommends or selects a consulting clinician or is notified of the patient's preference for the consulting clinician.
7.1.3.2	<b>Action:</b> The requesting clinician documents the need for a consultation and compiles the core set of consult request data for electronic transmission to the consulting clinician.	<p>The clinician compiles and documents the relevant information for the request for consulting clinician electronically. This request for consultation and core set of data is communicated electronically to the consulting clinician's EHR and which corresponds to Figure 7-1, Flow 1. This core set of data may provide the consulting clinician with reason for the consultation request, background on related treatment provided, request for a specific outcome (evaluation, validate with a second opinion, conduct a specific test or procedure, etc.). A core dataset including (but not limited to) patient clinical data, medication reconciliation information, patient history, insurance information, and contact information for the requesting clinician is communicated to the consulting clinician electronically. Additional information regarding datasets is provided in Section 10.0, which may be representative of the information contained within consult letter.</p> <p>If required, the requesting clinician may also include items needed for payor approval of the consultation such as an authorization number, referral valid end date, and/or authorization signature.</p> <p>There are standardization needs for the set of information clinicians may require to effectively understand the reason for requesting a consultation and communicating the relevant data for the consultation.</p>
7.1.4	<b>Event:</b> Provide access to additional clinical information	<b>Figure 7-1, Flow 3</b>





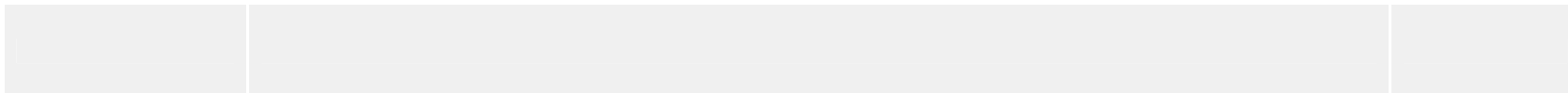
Code	Description	Comments
7.1.4.1	<b>Action:</b> The requesting clinician sends additional relevant patient information to the consulting clinician electronically.	The clinician sends any additional relevant patient information or documentation to the consulting clinician that may not be included in the core set of data included in the consultation request. This information may include (but is not limited to) copies of reports, images, EKG strips, etc. and could include any relevant information that is included within a patient's medical record. This information corresponds to Figure 7-1, Flow 3.
7.1.4.2	<b>Action:</b> The requesting clinician receives a request for specific information from the consulting clinician.	The clinician may receive an inquiry from the consulting clinician for additional patient data that was not included in the prior transmission of data. This information may include (but is not limited to) historical patient documentation and test results.
7.1.4.3	<b>Action:</b> The requesting clinician provides access to additional patient information in response to a request for specific information from the consulting clinician.	The requesting clinician compiles this information and provides access to the consulting clinician. This information may include (but is not limited to) historical patient documentation and test results. This information corresponds to Figure 7-1, Flow 3.
7.1.5	<b>Event:</b> Receive and review consult report	<b>Figure 7-1, Flow 4</b>
7.1.5.1	<b>Action:</b> The requesting clinician receives a report from the consulting clinician upon the completion of the consult.	<p>The requesting clinician receives the consult report electronically and accesses the information in the EHR, which corresponds to Figure 7-1, Flow 4.</p> <p>There are standardization needs for the set of information communicated to the clinician in response to a consult request for effective communication of the care transition and continued management of the patient.</p>
7.1.5.2	<b>Action:</b> The requesting clinician continues to evaluate and manage the patient.	The requesting clinician updates relevant patient information in the EHR to reflect the new treatment plan or continuation of current treatment plan based upon the consulting clinician's recommendation. The requesting clinician continues to evaluate and manage the patient and documents patient encounters in the EHR.





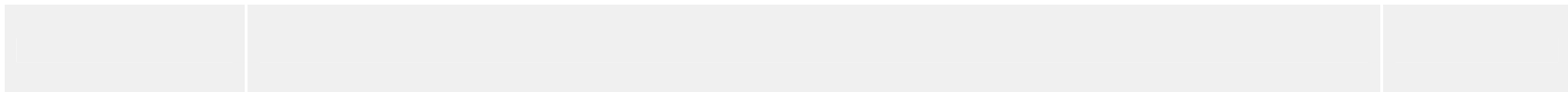
**Figure 7-4. Consultations, Consulting Clinician Perspective**

Code	Description	Comments
7.2.1	<b>Event:</b> Receive and review request & determine ability to accept patient	<b>Figure 7-1, Flow 1 and Flow 2</b>
7.2.1.1	<b>Action:</b> Receive consult request letter and core set of patient data from requesting clinician.	<p>The consulting clinician receives a request for consultation and patient information electronically, which corresponds to Figure 7-1, Flow 1. The clinician reviews the core set of patient information and consultation needs from the requesting clinician, assesses the urgency, and determines ability to accept the patient.</p> <p>If applicable, the request for consultation includes the necessary referral information (e.g., referring clinician information, referral date, number of visits, referral expiration date, and referral number) needed for insurance coverage for the consultation.</p> <p>There are standardization needs for the set of information for clinicians to effectively understand the reason for receiving a consultation request and communicating the relevant data for the consultation.</p>
7.2.1.2	<b>Action:</b> Review patient data and evaluate patient.	The consulting clinician may review patient data, evaluate the patient, and perform medication reconciliation for any modified medications as stated in the 2007 Medication Management Use Case.





Code	Description	Comments
7.2.1.3	<b>Action:</b> Support needs for payor to authorize/cover consultation as appropriate.	Upon reviewing patient information and evaluating the patient, the consulting clinician may determine that a payor authorization is required for a service or equipment to be provided during the course of care for the patient and perform this electronically, which corresponds to Figure 7-1, Flow 2. Authorization may be required for patient coverage for a procedure, test, or medical equipment (e.g. surgical, continuous glucose monitor, insulin pump, prosthetics). The requesting clinician may also have performed the necessary payor authorization as part of the referral process.
7.2.2	<b>Event:</b> Request and view additional clinical information	<b>Figure 7-1, Flow 3</b>
7.2.2.1	<b>Action:</b> The consulting clinician requests additional patient data.	The consulting clinician may request additional patient data that was not included as part of the core set of consult data sent by the requesting clinician or as part of the request for consultation.
7.2.2.2	<b>Action:</b> Receive and review additional patient information.	The consulting clinician receives and reviews this information electronically within the EHR from the requesting clinician or health information exchange. This information may include (but is not limited to) historical patient documentation such as prior hospital discharge summaries, historical results, imaging studies, etc. Information received may be from the requesting clinician or from care received from other providers or facilities, which corresponds to Figure 7-1, Flow 3.
7.2.3	<b>Event:</b> Evaluate/manage patient	
7.2.3.1	<b>Action:</b> Evaluate and manage the patient for the requested scope of services.	The consulting clinician provides care for the patient and documents patient encounter(s) in the EHR.
7.2.4	<b>Event:</b> Complete consultation	

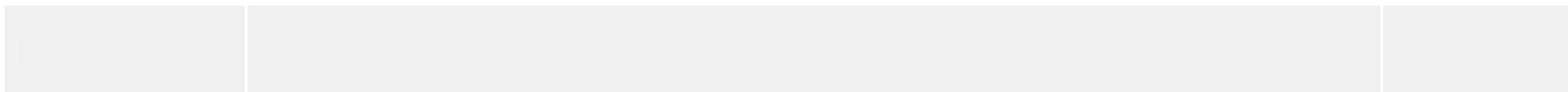




Code	Description	Comments
7.2.4.1	<b>Action:</b> Complete consultation and document patient encounter(s).	Consulting clinician completes consultation and documents patient encounter(s) in the EHR.
7.2.5	<b>Event:</b> Complete and communicate consult report	<b>Figure 7-1, Flow 4</b>
7.2.5.1	<b>Action:</b> Complete consultation report and communicate it to the requesting clinician, patient, and other providers of care.	After the consultation is completed, the patient may continue to be managed by the requesting or other clinicians. The clinician completes the consultation and documents the summary of care provided in the form of a consult report. It may be possible that the consultation request may need to be processed as a referral and the consulting clinician may continue to provide care for or manage the patient. A consultation report is communicated to the requesting clinician and may include: summary of treatment provided, recommended continued treatment plan, and medication reconciliation information (medications stopped, medications changed, added, or put on hold and a complete current medication list per the 2007 Medication Management Detailed Use Case). This consult report is communicated to the requesting clinician, patient, and any other related providers of care and corresponds to Figure 7-1, Flow 4.

**Figure 7-5. Consultations, Patient Perspective**

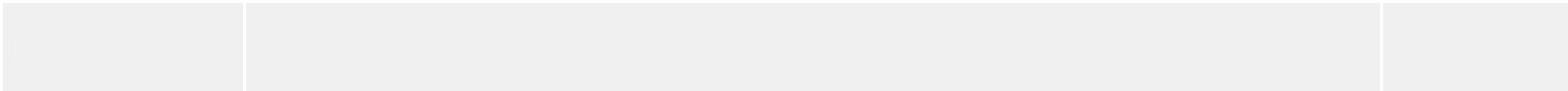
Code	Description	Comments
7.3.1	<b>Event:</b> Select and coordinate with consulting clinician	
7.3.1.1	<b>Action:</b> Select consulting clinician based upon requesting clinician recommendations.	The requesting clinician may provide the patient with the name(s) of recommended clinicians or assist the patient in selecting a particular clinician based upon the patient's insurance coverage network and/or preferences.





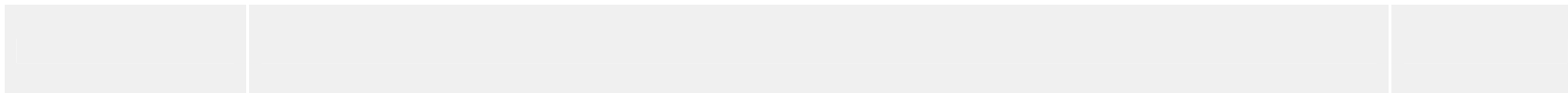


Code	Description	Comments
7.3.1.1a	<b>Alternative Action:</b> The patient selects a clinician for a patient-initiated consultation.	The patient may self-initiate a consultation when seeking a second opinion or direct consultation.
7.3.1.2	<b>Action:</b> The patient coordinates an office visit with the consulting clinician.	The patient schedules an office visit with the consulting clinician.
7.3.2	<b>Event:</b> Provide permission for core set of data to be shared	
7.3.2.1	<b>Action:</b> The patient grants access to his/her information to the consulting clinician.	<p>The patient may create and/or update their list of providers and determine the access permissions that should be granted to those providers for their personally controlled health information as described in the Consumer Empowerment: 2007 Consumer Access to Clinical Information Detailed Use Case. The patient may also grant privileges to a consulting clinician to access personal health data within a health record bank.</p> <p>In a self-initiated consultation, the patient may provide permission to existing providers of care to share the core set of data associated with a consultation request. There are standardization needs for the set of information clinicians may require to effectively communicate the relevant data for a consultation.</p>
7.3.3	<b>Event:</b> Complete consultation	
7.3.3.1	<b>Action:</b> The patient is evaluated by the consulting clinician.	The patient is evaluated by the consulting clinician and receives care/treatment as directed. The patient may be instructed to stop, modify, or take new medications during the course of treatment. During the course of treatment, the patient may access updated clinical information via health information exchange as described in the Consumer Empowerment: 2007 Consumer Access to Clinical Information Detailed Use Case.





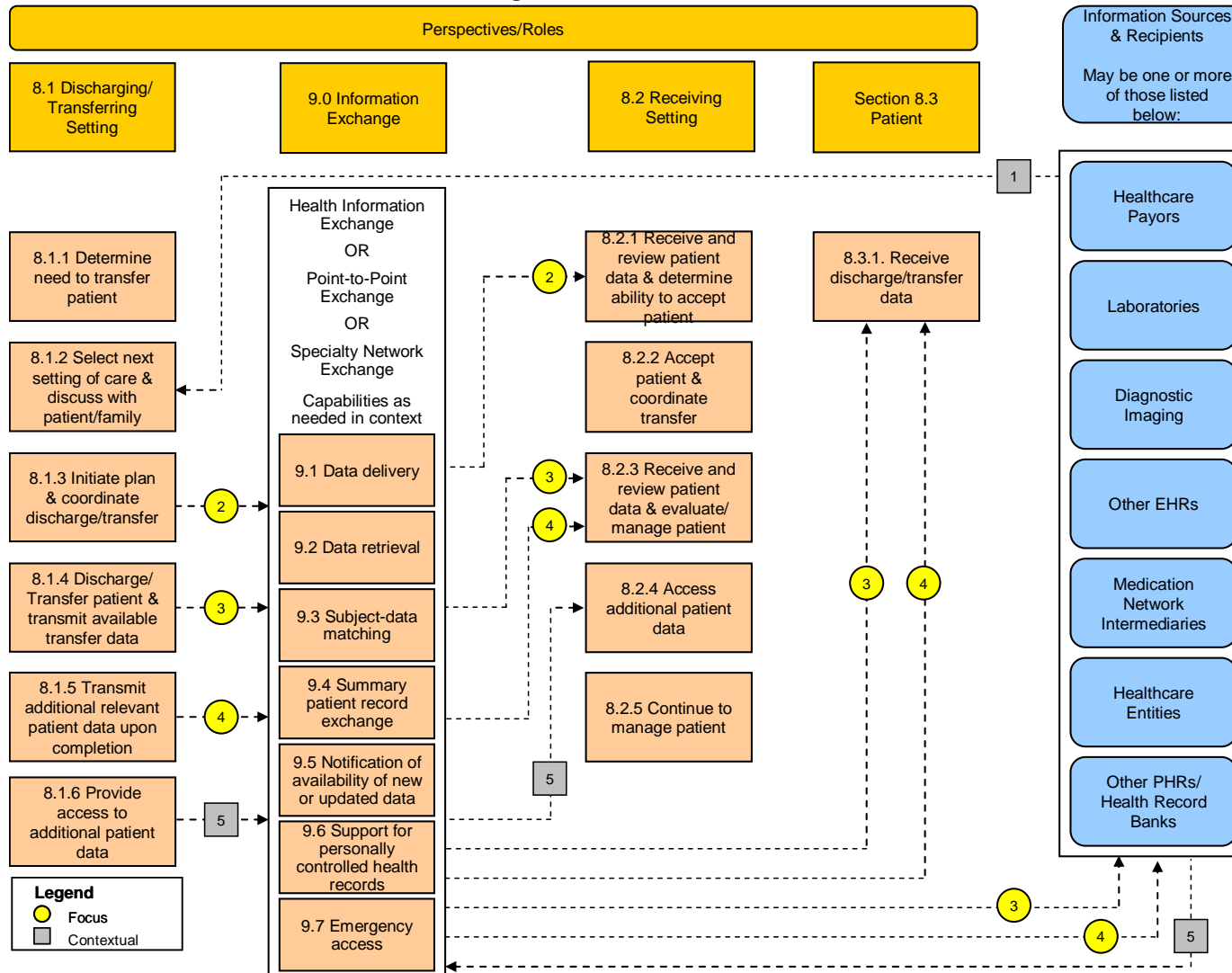
Code	Description	Comments
7.3.4	<b>Event:</b> Receive consult report information	<b>Figure 7-1, Flow 4</b>
7.3.4.1	<b>Action:</b> The patient receives a copy of the report from the consulting clinician upon the completion of the consultation.	<p>The patient is able to access a copy of the consult report sent to the requesting clinician in the personally controlled health records which may include PHRs, health record banks, etc. This corresponds to Figure 7-1, Flow 4.</p> <p>There are standardization needs for the set of information communicated to the requesting clinician and patient in response to a consult request for effective communication of the care transition and continued management of the patient. The same set of information can be communicated to both the requesting clinician and the patient.</p>
7.3.4.2	<b>Action:</b> The patient continues to receive care from the selected and/or medically appropriate care provider.	The patient may continue to receive care from the requesting clinician upon completion of the consultation or continue to receive care from the consulting clinician or other providers.
7.3.4.3	<b>Alternative Action:</b> Following the completion of a self-initiated consultation, the patient may select a clinician to provide follow-up or continued care.	For a self-initiated consult, the patient may select a clinician for follow-up care or continue receiving care from the consulting clinician.





## 8.0 Scenario 2: Transfers of Care

Figure 8-1. Transfers of Care





**Figure 8-2. Transfers of Care Scenario Flows**

- 1 Administrative data is exchanged to support eligibility determination and coverage authorization for the transfer between discharging setting and payor.
- 2 Core set of data available at time of transfer coordination is communicated via information exchanges to receiving setting.
- 3 Core set of data available at time of patient discharge and/or transfer is communicated via information exchanges to the receiving setting and other recipients of information.
- 4 Core set of data available after patient discharge and/or transfer is communicated via information exchanges to the receiving setting and other recipients of information. (Examples include: completed discharge summary, pending lab results, etc.)
- 5 Receiving setting requests and views additional patient data from other sources provided via health information exchange.

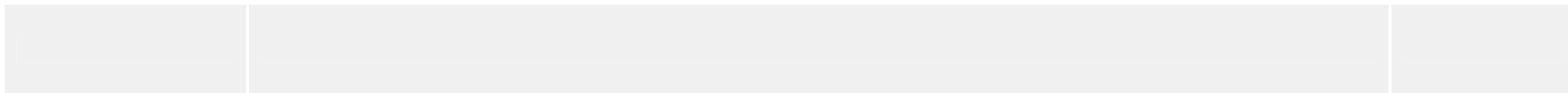
**Legend**

- Focus: Information exchange that is a primary focus of this use case.
- Contextual: Information exchange that is not the primary focus of this use case, but is provided for contextual understanding.



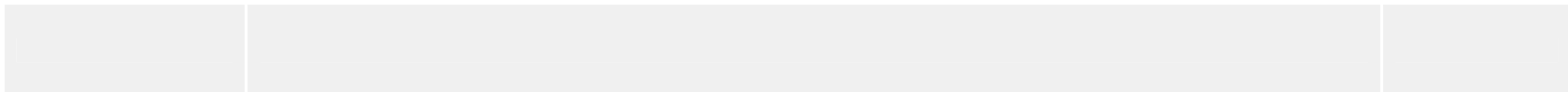
**Figure 8-3. Transfers of Care, Discharging/Transferring Setting Perspective**

Code	Description	Comments
8.1.1	<b>Event:</b> Determine need to transfer patient	
8.1.1.1	<b>Action:</b> Care providers perform discharge planning during the course of the patient's episode of care.	The patient is routinely evaluated by the clinician who documents each encounter in an EHR. Depending on the care setting, there may be a variety of care providers and health support personnel that provide care for the patient and document in the EHR. Care coordinators (such as Clinical Nurse Specialists, Home Health Nurses, Physical Therapists, Social Workers, Case Managers, Nurse Practitioners, and Discharge Planners in the hospital setting) may begin planning for discharge and transfer throughout the patient's episode of care. The care coordinator identifies the environment from which the patient originated (home, nursing home, etc.) and considers whether the patient may require transfer to another care setting (e.g., rehabilitation, assisted living, home health) upon discharge.
8.1.1.2	<b>Action:</b> The clinician responsible for care makes the determination that the patient is ready to be transferred to another care setting.	Upon notification that the patient is ready to be transferred to another care setting, the care coordinator may consult other care providers to obtain input for preparing for the transfer to another care setting and review documentation from other care providers within the EHR.
8.1.2	<b>Event:</b> Select next setting of care and discuss with patient/family	<b>Figure 8-1, Flow 1</b>
8.1.2.1	<b>Action:</b> Discuss the next setting of care with the patient or family.	The clinician determines the next setting of care. The care coordinator may select potential options and locations for the patient and review them with the patient and/or family. The patient/family may provide feedback to the care coordinator regarding preferred facilities or home health agencies.  Communication with the patient's payor and determination of authorization and/or coverage for transfer may be included in the coordination activities of the discharging care setting.



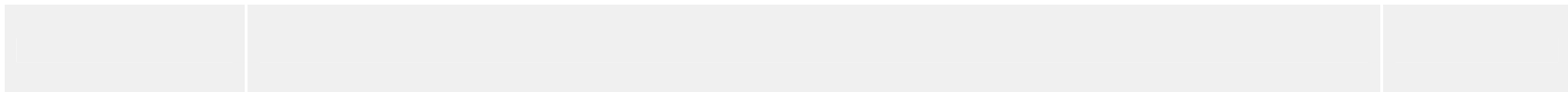


Code	Description	Comments
8.1.2.2	<b>Action:</b> Support payor needs to authorize transfer of care.	Authorization may be required for coverage approval to patient transfer to the next care setting and corresponds to Figure 8-1, Flow 1.
8.1.2.3	<b>Action:</b> Select next setting of care and prepare for transfer coordination.	The care coordinator has been notified of the preferred option(s) for transfer and prepares for the transfer coordination process. The clinician and care coordinators begin the discharge documentation process which includes information such as transfer coordination and plan of care information.
8.1.3	<b>Event:</b> Initiate plan and coordinate discharge/transfer	<b>Figure 8-1, Flow 2</b>
8.1.3.1	<b>Action:</b> The core set of data required for coordinating the transfer process is communicated to the receiving setting.	<p>The care coordinator begins the transfer coordination process by communicating electronically the core set of data needed to determine whether the receiving setting can accept the patient. This activity corresponds to Figure 8-1, Flow 2.</p> <p>It is important for the receiving setting to have critical information that determines the ability of the receiving setting to accept the patient based upon special patient care needs such as the presence of lines and catheters, oxygen requirements, cognitive status, and skin conditions/pressure ulcers. Insurance details and power of attorney information is also needed during this coordination process.</p> <p>There are standardization needs to develop the core dataset to coordinate a transfer of a patient. The type of data that is needed by the receiving setting includes (but is not limited to): patient demographic information, insurance/administrative information, reason for admission and history of present illness, expected date of transfer, transfer instructions, problems, medications, allergies, past medical history, treatment summary, advance directives, case manager/discharge planning notes, functional status, plan of care/discharge orders, pertinent labs, and pending tests.</p>



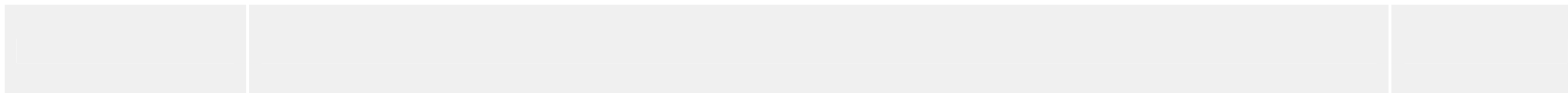


Code	Description	Comments
8.1.3.2	<b>Action:</b> The receiving setting notifies the discharging/transferring setting that it is able to accept the patient.	Upon reviewing patient data received, the receiving is able to accept the patient and notifies the discharging/transferring as such.
8.1.3.2a	<b>Alternative Action:</b> The receiving setting notifies the discharging/transferring setting that it is not able to accept the patient.	The receiving care setting notifies the discharging/transferring setting that it is unable to accept the patient. The discharging/transferring setting conducts the transfer coordination process with another facility/setting.
8.1.3.3	<b>Action:</b> Preparation for patient transfer/ discharge and discharge documentation process continues.	The clinician continues the discharge planning process. This may include development of discharge orders/care plan, discharge summary, and review of pending tests.
8.1.4	<b>Event:</b> Discharge/Transfer patient and transmit available transfer data	<b>Figure 8-1, Flow 3</b>
8.1.4.1	<b>Action:</b> Discharge patient from current setting.	The patient is discharged and transferred to the next setting of care. Relevant patient information is communicated to the transport team as appropriate.





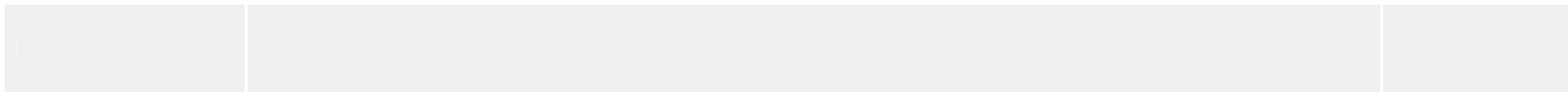
Code	Description	Comments
8.1.4.2	<p><b>Action:</b> Transfer information that is available for the patient at time of discharge is communicated to the receiving setting.</p>	<p>The core set of transfer data that is available at time of discharge is communicated to the receiving setting. This information is also utilized by the transport team that may be transporting the patient to the next care setting. The core set of transfer data is communicated to the patient’s personally controlled health records which may include PHRs, health record banks, etc. and the other care providers for the patient such as the primary care physician. This activity corresponds to Figure 8-1, Flow 3.</p> <p>In addition to the core transfer dataset, additional relevant patient information may be communicated to the receiving care setting. This may include documentation such as images, EKGs, case manager documentation, therapies (PT/OT/ST) documentation, history and physical, nursing notes, operative notes, etc.</p> <p>There are standardization needs for the development of the core dataset required by a receiving setting from a discharging/transferring setting during a transfer of care. The core dataset may be the same set of data that was communicated during the transfer coordination process, but the comprehensive information may not be completed at time of transfer coordination or at the time of actual patient discharge/transfer. The discharge summary may be not completed and all pending tests may not be resulted at the time of actual patient discharge and may need to be communicated when available.</p>
8.1.5	<p><b>Event:</b> Transmit additional patient data upon completion</p>	<p><b>Figure 8-1, Flow 4</b></p>
8.1.5.1	<p><b>Action:</b> Patient data becomes available or is updated after the patient has left the discharging/transferring setting.</p>	<p>Core patient data such as the discharge summary or pending test results may become available after the patient has been discharged. Patient data may be modified or annotated after patient discharge.</p>







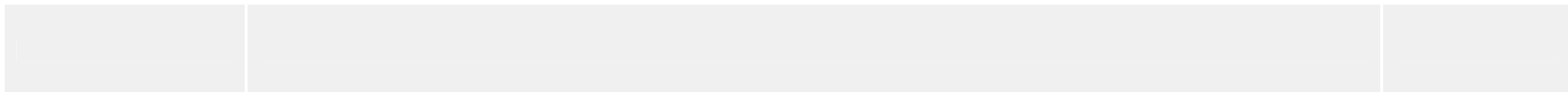
Code	Description	Comments
8.1.5.2	<b>Action:</b> Communicate patient data to the receiving setting upon availability.	<p>Newly available data that is part of the core set of transfer data is communicated to the receiving setting. This information is also communicated to the patient and other transfer dataset recipients such as the primary care physician and patient, which corresponds to Figure 8-1, Flow 4.</p> <p>The receiving care setting and other transfer dataset recipients may receive annotated data that is part of the core transfer dataset or a may receive a notification that annotated data is available on a patient.</p>
8.1.6	<b>Event:</b> Provide access to additional patient data	<b>Figure 8-1, Flow 5</b>
8.1.6.1	<b>Action:</b> The discharging/transferring setting receives a request for additional patient data that is not part of the core transfer dataset.	Patient information is reviewed by the clinician at the receiving care setting. At any time during the course of care for the patient in the receiving setting, a clinician may request additional data from the discharging/transferring setting.
8.1.6.2	<b>Action:</b> The discharging/transferring setting provides access to additional patient data in response to the request.	The receiving setting is provided access to the additional patient data requested. The types of additional information needs are broad and vary based upon patient details. This information could be in electronic and/or paper format and corresponds to Figure 8-1, Flow 5.





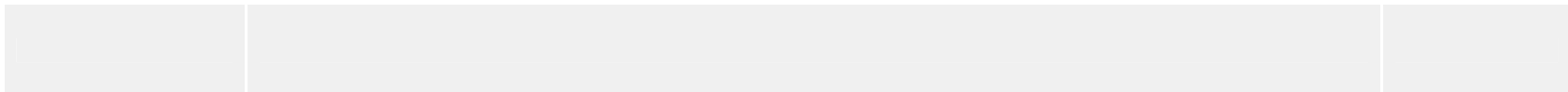
**Figure 8-4. Transfers of Care, Receiving Setting Perspective**

Code	Description	Comments
8.2.1	<b>Event:</b> Receive and review patient data and determine ability to accept the patient	<b>Figure 8-1, Flow 2</b>
8.2.1.1	<b>Action:</b> The receiving setting receives a request to accept a patient.	<p>The care coordinator or clinician at the receiving setting receives a request to accept a patient, which corresponds to Figure 8-1, Flow 2. This request includes information that is critical to determining whether the receiving setting is able to accept the patient. Information received in the EHR includes (but is not limited to) the presence of lines and catheters, oxygen requirements, cognitive status, and skin conditions/pressure ulcers. Insurance details and power of attorney information is also needed or communicated during this coordination process.</p> <p>There are standardization needs to develop the core data set to coordinate a transfer of a patient. The type of data that is needed by the receiving setting includes (but is not limited to): patient demographic information, insurance/administrative information, reason for admission and history of present illness, expected date of transfer, transfer instructions, problems, medications, allergies, past medical history, treatment summary, advance directives, case manager/discharge planning notes, functional status, plan of care/discharge orders, pertinent labs, and pending tests.</p>
8.2.2	<b>Event:</b> Accept patient and coordinate transfer	
8.2.2.1	<b>Action:</b> The receiving setting notifies the discharging/transferring setting that it is able to accept the patient and begins the transfer coordination process.	<p>The receiving setting determines the ability to accept the patient based upon patient care information received. If needed, the receiving setting may request additional data from the discharging/transferring setting to make this determination.</p> <p>The receiving setting notifies the discharging/transferring setting that it is able to accept the patient and continues the process of transfer coordination.</p>



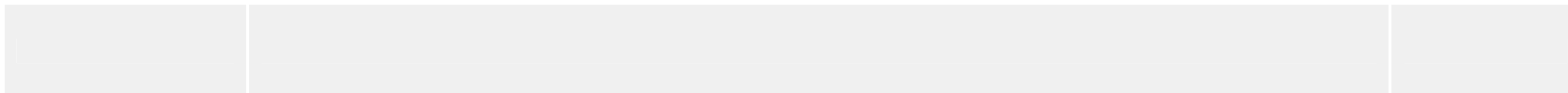


Code	Description	Comments
8.2.2.1a	<p><b>Alternative Action:</b> The receiving setting notifies the discharging/transferring setting that it is not able to accept the patient.</p>	<p>The receiving setting determines it does not have the ability to accept the patient based upon patient care information received or current census. If needed, the receiving setting may request additional data from the discharging/transferring setting to make this determination.</p> <p>The receiving setting notifies the discharging/transferring setting that it is unable to accept the patient.</p>
8.2.2.2	<p><b>Action:</b> The receiving setting prepares for patient transfer.</p>	<p>The receiving setting completes any preparations required for the patient's arrival and addresses any special care and equipment needs based upon information received in the core transfer dataset.</p>
8.2.3	<p><b>Event:</b> Receive and review patient data and evaluate/manage patient</p>	<p><b>Figure 8-1, Flow 3 and Flow 4</b></p>



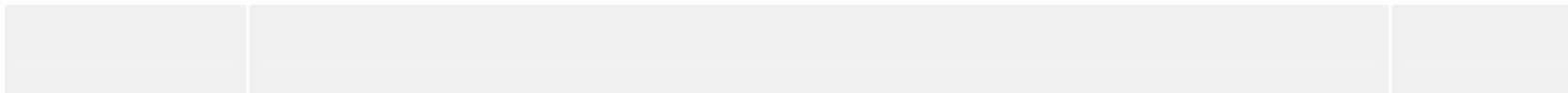


Code	Description	Comments
8.2.3.1	<p><b>Action:</b> Receive patient data and prepare for patient arrival.</p>	<p>The core transfer dataset and additional relevant patient information (images, EKGs, case manager documentation, therapies (PT/OT/ST) documentation, history and physical, nursing notes, operative notes, etc.) is received from the discharging/transferring setting. This information corresponds to Figure 8-1, Flow 3.</p> <p>There are standardization needs to develop the core dataset required by a receiving setting from a sending setting during a transfer of care. The core dataset may be the same set of data that was communicated during the transfer coordination process, but the comprehensive information may not be completed at time of transfer coordination or at the time of actual patient discharge/transfer. The discharge summary may be not completed and all pending tests may not be resulted at the time of actual patient discharge and may be received after patient arrival to the receiving care setting.</p> <p>The receiving setting continues and completes any preparations required for the patient's arrival and addresses any special care and equipment needs based upon information received in the core transfer data sent at time of discharge from the transferring setting.</p>
8.2.3.2	<p><b>Action:</b> Review patient data and evaluate patient.</p>	<p>The clinician at the receiving setting reviews patient data received from the discharging/transferring setting. Upon patient arrival, the transport team verbally communicates relevant information to the receiving setting and may provide documentation of information captured during transport. The clinician at the receiving setting evaluates the patient upon arrival. The clinician initiates admission orders, performs reconciliation of medications during this process, and enacts a care plan for the patient within an EHR. When the patient is ready to be discharged or transferred to another setting, the receiving care setting now becomes the discharging/transferring setting and follows the processes outlined within that setting.</p>





Code	Description	Comments
8.2.3.3	<b>Action:</b> Receive additional patient data from the discharging/transferring setting.	The clinician receives and reviews data that is part of the core set of transfer data that was pending at time of patient transfer (e.g., discharge summary, pending tests), which corresponds to Figure 8-1, Flow 4. If any data previously received was modified, the receiving care setting may receive modified or annotated data, or may receive notification that updated information may be accessed. If required, the clinician makes any modifications to the patient's care plan as appropriate.
8.2.3.4	<b>Action:</b> Continue to manage patient.	The receiving care setting continues to provide care for the patient and document patient information within an EHR. When the patient is ready to be discharged or transferred to another setting, the receiving care setting now becomes the discharging/transferring setting and follows the processes outlined within that setting.
8.2.4	<b>Event:</b> Access additional patient data	<b>Figure 8-1, Flow 5</b>
8.2.4.1	<b>Action:</b> The receiving setting may request additional data that was not part of the core dataset or additional information previously transmitted by the discharging/transferring setting.	The receiving setting requests additional information from the discharging/transferring setting or other available data sources via health information exchange.
8.2.4.2	<b>Action:</b> Access additional patient data.	Access additional patient data via health information exchange in the EHR, which corresponds to Figure 8-1, Flow 5.
8.2.5	<b>Event:</b> Continue to manage patient	





Code	Description	Comments
8.2.5.1	<b>Action:</b> Continue to manage patient.	The receiving care setting continues to provide care for the patient and document patient information within an EHR. When the patient is ready to be discharged or transferred to another setting, the receiving care setting now becomes the discharging/transferring setting and follows the processes outlined within that setting.

**Figure 8-5. Transfers of Care, Patient Perspective**

Code	Description	Comments
8.3.1	<b>Event:</b> Receive discharge/transfer data	<b>Figure 8-1, Flow 3 and Flow 4</b>
8.3.1.1	<b>Action:</b> The patient receives discharge/transfer information.	<p>Discharge/transfer information is communicated to the patient's personally controlled health record which may include PHRs, health record banks, etc., via health information exchange for access by the patient and/or family members. This communication corresponds to Figure 8-1, Flow 3.</p> <p>There are standardization needs for the set of information communicated to the next care setting. The same set of information can be communicated to both the next care setting and the patient.</p>
8.3.1.2	<b>Action:</b> The patient receives additional or updated information upon availability.	The patient may receive newly available data generated after discharge or data that may have been modified or annotated after discharge, which corresponds to Figure 8-1, Flow 4.

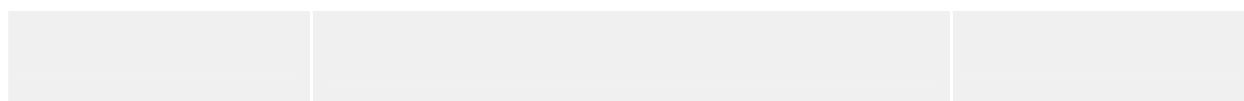


## 9.0 Information Exchange

This section highlights selected information exchange capabilities which enable the scenarios described in this use case. These functional capabilities may be provided fully or partially by a variety of organizations including free-standing or geographic health information exchanges (e.g., RHIOs), integrated care delivery networks, provider organizations, health record banks, public health networks, specialty networks, and others supporting these capabilities.

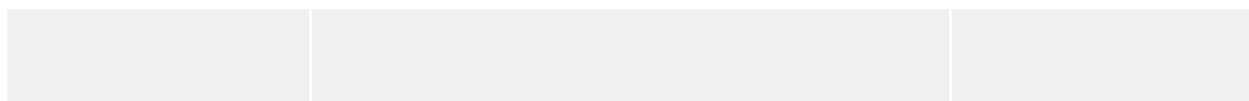
**Figure 9-1. Consultations and Transfers in Care Information Exchange Capabilities**

Code	Capability	Comments
9.1	Data delivery – including secure data delivery, data receipt and confirmation of delivery to EHRs, personally controlled health records, other systems and networks	Capability to securely deliver data to the intended recipient, confirm delivery, including the ability to route data based on message content, if required. For example, the request for consultation is delivered to the consulting clinician along with relevant clinical information.
9.2	Data retrieval – including data lookup, retrieval and data location registries	Capability to locate and retrieve requested data subject to consumer access decisions and local policies. For example, after evaluating the request for consultation, the consulting clinician may need to review additional clinical information about patient.
9.3	Subject-data matching	Capability to match available data to the appropriate person during retrieval or routing. For example, when the consulting clinician requests additional clinical information for a specific person, the systems, processes and policies facilitating information exchange are utilized to confirm that the data available for retrieval match the person of interest to the clinician.





Code	Capability	Comments
9.4	Summary patient record exchange	Capability to exchange a summary patient record including, at times, the capability to compose the summary record from available data. For example, information provided during a consultation or transfer in care would include core consultation data or core transfer data, respectively, which is delivered to the receiving patient care organization or location. In addition to core data, additional relevant patient information for the consultation/transfer may be exchanged.
9.5	Support for notification of availability of new/updated data	Capability to inform recipients that new or updated information is available for subsequent review or retrieval. For example, in a transfer in care situation, additional relevant clinical information may become available after a summary patient record has already been communicated (pathology report, discharge summary, etc.)
9.6	Support for personally controlled health records – including managing consumer-identified locations to store their personally controlled health information; support consumer requests for information as well as routing of information to the consumer's preferred personally controlled health record	Capability to maintain and implement information identifying the consumers preferred personally controlled health record (e.g., a PHR or health record bank) to support data routing and retrieval. For example, a consultation report provided by the clinician could be delivered to the consumer's preferred personally controlled health record through this process. Similarly, a consumer could retrieve and retain a consultation summary in their personally controlled health record.







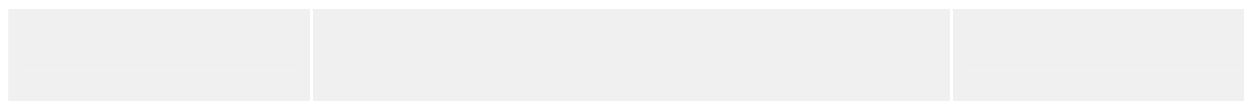
Code	Capability	Comments
9.7	Emergency access – including capabilities to support appropriate individual and population emergency access needs	<p>Capability to enable access to health information in extra-ordinary situations during which an individual may need emergency care but due to their health status is incapable of granting access permissions, or in the case of a public health emergency during which the health status of a population needs to be determined. For example, this need could arise if an individual who has elected to not participate in network exchange of their information subsequently experiences a health situation which requires emergency care while they are incapacitated or unconscious.</p> <p>In emergency situations, public health officials may need to access an individual's health information in order to identify populations or specific individuals at-risk.</p>

While not described in this section, other capabilities could support information exchange including: data integrity and non-repudiation checking; subject and user identity arbitration with like identities during information exchanges; access logging and error handling for data access and exchange; consumer review of disclosure and access logs; and routing consumer requests to correct data.

**Health Information Exchange (HIE):** For the purpose of this use case, the functional capability to exchange health information between networks in order to exchange the health information of individuals or populations. These functional capabilities may be provided fully or partially by a variety of organizations including free-standing or geographic health information exchanges (e.g., RHIOs), integrated care delivery networks, provider organizations, health record banks, public health networks, specialty networks, and others supporting these capabilities.

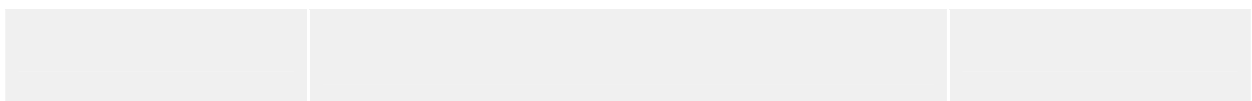
**Specialty Network:** Specialty networks may provide all or a portion of the capabilities needed to accomplish the activities involved in the exchange of health information. Specialty networks may focus on the exchange of specific types of health information, may focus on specific patient populations, may focus on the capabilities needed to support specific types of healthcare activities, or may perform a combination of information exchange activities and other services.

**Point-to-Point Exchange:** For the purposes of this use case, point-to-point exchange includes direct interactions between two systems which do not involve intermediary





information exchange functions to route and deliver the data. Representative architectures could include point-to-point messaging, service-oriented-architectures, or information exchange among participants using a common application platform.





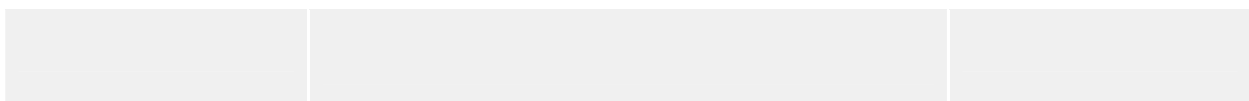
## 10.0 Consultations and Transfer of Care Dataset Considerations

At this time, there is discussion regarding what might compose a summary dataset and/or standards for the transfer of appropriate and necessary information to facilitate consultations and transfers of care between EHRs, PHRs, etc. To date, there is no established common dataset associated with consultations and transfers of care.

The core dataset is still being developed and is expected to be a complimentary process involving the various efforts in progress in the industry. The following non-exhaustive information categories and limited examples are for the purposes of addressing the scenarios in this use case.

For Consultations the following categories may be considered:

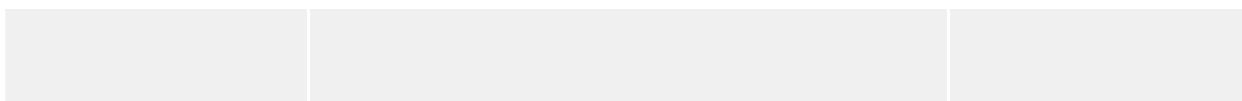
- Identification and Demographic Details
  - Dates
  - Patient Demographic Information
  - Insurance Information
  - Provider Information
  - Reason for Consultation
- Patient Clinical Information
  - Patient History and Diagnosis
  - Medications (Stopped, Modified/Added, On Hold, Current List)
  - Pertinent Results
  - Pending Results
- Consultation Completion Details
  - Consultation Treatment Summary
  - Recommended Plan of Care





For Transfers of Care the following categories may be considered:

- Identification and Demographic Details
  - Dates
  - Patient Demographic Information
  - Insurance and Administrative Information
  - Provider Information
  - Reason for Transfer/Discharge
- Patient Clinical Information
  - Past Medical History and Diagnosis
  - Pertinent Results
  - Physical Exam Details
  - Medications (Stopped, Modified/Added, On Hold, Current List)
  - Problems/Conditions
  - Allergies and Adverse Reactions
  - Reason for Admission/Visit
  - Treatment Summary
  - Discharge Diagnosis and Summary
  - Procedures
  - Relevant Notes (Case Manager, Therapies, Consults, etc.)
  - Relevant Images
  - Multidisciplinary Plan of Care
  - Advance Directives, Power of Attorney
  - Pending Information





## Appendix A: Glossary

These items are included to clarify the intent of this use case. They should not be interpreted as approved terms or definitions but considered as contextual descriptions. There are parallel activities underway to develop specific terminology based on consensus throughout the industry.

**Access Logs:** An integrated view of who has accessed the consumer/patient's health information for the purposes of direct or indirect patient care.

**Acute Care:** Treatment for a short period of time in which the patient is treated for a brief episode of illness. Acute Care is generally associated with care in a short term facility which is usually a non-emergency department setting.

**AHIC:** American Health Information Community; a federal advisory body chartered in 2005, serving to make recommendations to the Secretary of the U.S. Department of Health and Human Services in regards to the development and adoption of health information technology.

**Ancillary Entities:** Organizations that perform auxiliary roles in delivering healthcare services. They may include diagnostic and support services such as laboratories, imaging and radiology services, and pharmacies that support the delivery of healthcare services. These services may be delivered through hospitals or through free-standing entities.

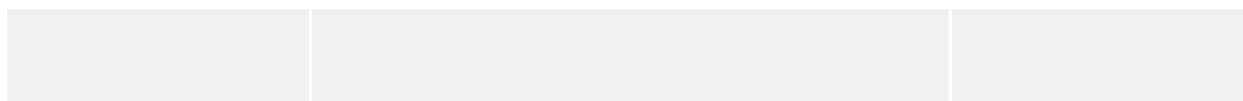
**Care Coordination:** Functions that help ensure that the patient's needs and preferences for health services and information sharing across people, functions, and sites are met over time.

**Care Coordinators:** Individuals who support clinicians in the management of health and disease conditions. These can include case managers and others.

**CCHIT:** The Certification Commission for Healthcare Information Technology; is a recognized certification body (RCB) for electronic health records and their networks, and an independent, voluntary, private-sector initiative. CCHIT's mission is to accelerate the adoption of health information technology by creating an efficient, credible, and sustainable certification program.

**Clinical Support Staff:** Individuals who support the workflow of clinicians.

**Clinicians:** Healthcare providers with patient care responsibilities, including physicians, advanced practice nurses, physician assistants, nurses, psychologists, pharmacists, and other licensed and credentialed personnel involved in treating patients.





**CMS:** Centers for Medicare & Medicaid Services; a federal agency within the Department of Health and Human Services that administers Medicare, Medicaid, and the State Children's Health Insurance Program.

**Consultation:** Meeting of two or more clinicians to evaluate the nature and progress of disease in a particular patient and to establish diagnosis, prognosis, and therapy.

**Consumers:** Members of the public that include patients as well as caregivers, patient advocates, surrogates, family members, and other parties who may be acting for, or in support of, a patient receiving or potentially receiving healthcare services.

**Department of Health and Human Services (HHS):** The United States federal agency responsible for protecting the health of the nation and providing essential human services with the assistance of its operating divisions that include: Administration for Children and Families (ACF), Administration on Aging (AOA), Agency for Healthcare Research and Quality (AHRQ), Agency for Toxic Substances and Disease Registry (ATSDR), Centers for Disease Control and Prevention (CDC), Centers for Medicare & Medicaid Services (CMS), Food and Drug Administration (FDA), Health Resources and Services Administration (HRSA), Indian Health Services (IHS), National Institutes of Health (NIH), Program Support Center (PSC), and Substance Abuse and Mental Health Services Administration (SAMHSA).

**Diagnostic Imaging Service Providers:** Organizations which provide radiology and diagnostic imaging services to patients in various settings, which perform and analyze the study as ordered by clinicians to assess the health status of patients.

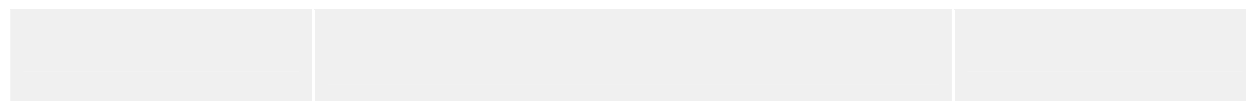
**Electronic Health Record (EHR):** An electronic, cumulative record of information on an individual across more than one health care setting that is collected, managed, and consulted by professionals involved in the individual's health and care. This EHR description encompasses similar information maintained on patients within a single care setting (a.k.a., Electronic Medical Record (EMR)).

**Electronic Health Record (EHR)/Personal Health Record (PHR) System Suppliers:** Organizations which provide specific EHR and/or PHR solutions to clinicians and patients such as software applications and software services. These suppliers may include developers, providers, resellers, operators, and others who may provide these or similar capabilities.

**FDA:** Food and Drug Administration; a federal agency within the Department of Health and Human Services responsible for the safety regulation of foods, dietary supplements, vaccines, drugs, medical devices, veterinary products, biological medical products, blood products, and cosmetics.

### **Geographic Health Information Exchange/Regional Health Information**

**Organizations:** A multi-stakeholder entity, which may be a free-standing organization





(e.g., hospital, healthcare system, partnership organization) that supports health information exchange and enables the movement of health-related data within state, local, territorial, tribal, or jurisdictional participant groups. Activities supporting health information exchanges may also be provided by entities that are separate from geographic health information exchanges/Regional Health Information Organizations including integrated delivery networks, health record banks, and others.

**Health Information Exchange (HIE):** The electronic movement of health-related data and information among organizations according to specific standards, protocols, and other agreed criteria. These functional capabilities may be provided fully or partially by a variety of organizations including free-standing or geographic health information exchanges (e.g., Regional Health Information Organizations (RHIOs)), integrated care delivery networks, provider organizations, health record banks, public health networks, specialty networks, and others supporting these capabilities. This term may also be used to describe the specific organizations that provide these capabilities such as RHIOs and Health Information Exchange Organizations.

**Health Information Management (HIM) Personnel:** Personnel who manage healthcare data and information resources, encompassing services in planning, collecting, aggregating, analyzing, and disseminating individual patient and aggregate clinical data.

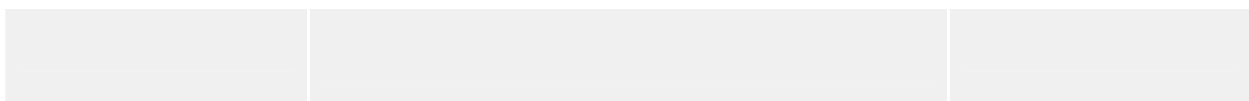
**Health Record Banks:** Entities/mechanisms for holding an individual's lifetime health records. This information may be personally controlled and may reside in various settings such as hospitals, doctor's offices, clinics, etc.

**Healthcare Entities:** Organizations that are engaged in or support the delivery of healthcare. These organizations could include hospitals, ambulatory clinics, long-term care facilities, community-based healthcare organizations, employers/occupational health programs, school health programs, dental clinics, psychology clinics, care delivery organizations, pharmacies, home health agencies, hospice care providers, and other healthcare facilities.

**Healthcare Payors:** Insurers, including health plans, self-insured employer plans, and third party administrators, providing healthcare benefits to enrolled members and reimbursing provider organizations.

**HITSP:** The American National Standards Institute (ANSI) Healthcare Information Technology Standards Panel; a body created in 2005 in an effort to promote interoperability and harmonization of healthcare information technology through standards that would serve as a cooperative partnership between the public and private sectors.

**Laboratories:** A laboratory (often abbreviated lab) is a setting where specimens are sent for testing and analysis, are resultated, and then results are communicated back to the





requestor. The types of laboratories may include clinical/medical, environmental, and veterinarian, and may be both private and/or public.

**Medication Network Intermediaries:** These entities support the healthcare process by accomplishing communication among providers, pharmacies, and pharmacy benefits managers or payors as needed for medication dispensing and reimbursement. In this role, they are both a conduit for communication and a source of information on aspects of medication management such as medication prescription history, dispensing status, and pharmacy benefits. This group includes Pharmacy Network Intermediaries, ePrescribing Network Intermediaries, clearinghouses, and similar organizations.

**ONC:** Office of the National Coordinator for Health Information Technology; serves as the Secretary's principal advisor on the development, application, and use of health information technology in an effort to improve the quality, safety, and efficiency of the nation's health through the development of an interoperable harmonized health information infrastructure.

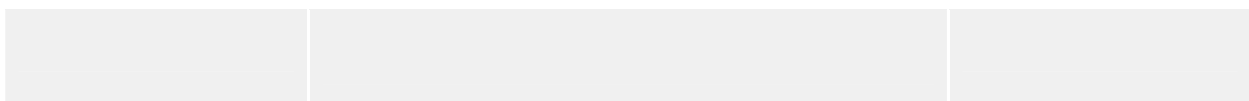
**Patients:** Members of the public who receive healthcare services. For hospice providers, the patient and family are considered a single unit of care. Synonyms used by various health care fields include client, resident, customer, patient and family unit, consumer, and health care consumer.

**Personal Health Information (PHI):** PHI is confidential, personal, identifiable health information about individuals that is created or received by a health plan, provider, or health care clearinghouse and is transmitted or maintained in any form. "Identifiable" means that a person reading this information could reasonably use it to identify an individual. PHI includes written documents, electronic files, and verbal information. Information from an informal conversation can be considered PHI. Examples of PHI include completed health care claim forms, detailed claim reports, explanations of benefits (EOB), and notes documenting discussions with plan participants.

**Personal Health Record (PHR):** An electronic, cumulative record of health-related information on an individual, drawn from multiple sources, that is created, collected, and managed by the individual or an agent acting for the individual. The content of and rights of access to the PHR are controlled by the individual or agent. The PHR is also known as the electronic Personal Health Record (ePHR).

**Pharmacy Benefit Managers:** These entities manage pharmacy benefits on behalf of payors, interacting with pharmacies and providers via a medication network intermediary. As part of this role, they can provide information on pharmacy benefits available to an individual consumer and an individual consumer's medication history.

**Providers:** The healthcare clinicians within healthcare delivery organizations with direct patient interaction in the delivery of care, including physicians, nurses, psychologists, and other clinicians. This can also refer to healthcare delivery organizations.

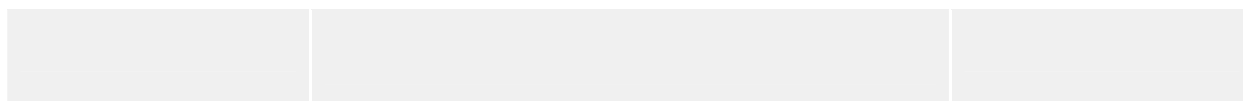






**Public Health Agencies/Organizations (local/state/territorial/federal):** Federal, state, local, territorial, and tribal government organizations and clinical care personnel that exist to help protect and improve the health of their respective constituents.

**Registries:** Organized systems for the collection, storage, retrieval, analysis, and dissemination of information to support health needs. This also includes government agencies and professional associations which define, develop, and support registries. These may include emergency contact information/next of kin registries, patient registries, disease registries, etc.





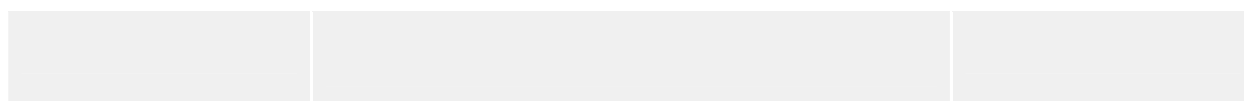
## Appendix B: Detailed Core Dataset Considerations

There have been many discussions regarding the information set that might compose a summary dataset and/or standards for the transfer of appropriate and necessary information to facilitate consultations and transfers of care between EHRs, PHRs, etc. In addition to these efforts, the Centers for Medicare & Medicaid Services (CMS) is conducting a Post Acute Care (PAC) Payment Demonstration in early 2008 involving the development of a standardized patient assessment tool for use in transfers of care. This tool, the Continuity Assessment Record and Evaluation (CARE) tool, measures the health and functional status of Medicare acute discharges and measure changes in severity and other outcomes for Medicare PAC patients. The Joint Commission (TJC) also has specific requirements for information that must be available during transitions in care.

The core dataset is still being developed and is expected to be a complimentary, coordinated process involving the various efforts in progress in the industry. The following non-exhaustive information categories and limited examples are provided as background information for a work group to be convened on information needs for Consultations & Transfers of Care:

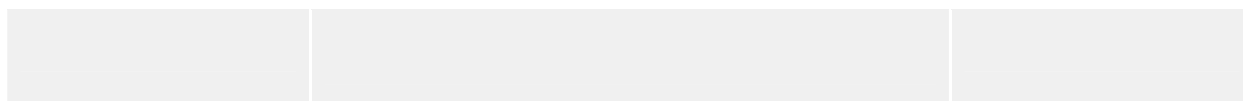
**Figure B-1. Consultations Detailed Dataset Table**

Data ID #	Types of Data	Data Exchanged During Scenario 1: Consultations, Flow 1	Data Exchanged During Scenario 1: Consultations, Flow 4
1.0	Dates: Consultation/Referral Date, Preferred Date	X	X
2.0	Patient Demographic Information	X	X
3.0	Insurance Information	X	X
4.0	Requesting Clinician Information (Name, Group, Provider ID, Address, Phone)	X	X
5.0	Consulting Clinician Information (Name, Group, Provider ID, Address, Phone)	X	X
6.0	Reason for Consultation	X	X





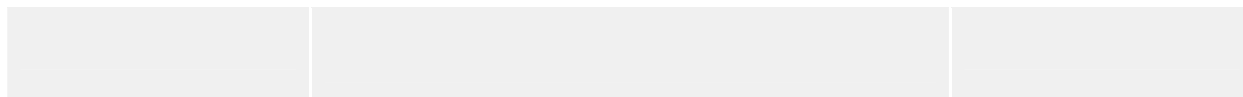
<b>Data ID #</b>	<b>Types of Data</b>	<b>Data Exchanged During Scenario 1: Consultations, Flow 1</b>	<b>Data Exchanged During Scenario 1: Consultations, Flow 4</b>
<b>7.0</b>	Patient History and Treatment Summary	X	X
<b>8.0</b>	Diagnosis	X	X
<b>9.0</b>	Completed and Pending Test Results	X	X
<b>10.0</b>	Services Desired (Initial Consultation Only, Diagnostic Test (Specify), Consultation with Specific Procedures (Specify), Specific Treatment, Global OB Care & Deliver, Other (Explain), Number of Visits)	X	
<b>11.0</b>	Authorization Information (Authorization Number, Start/Stop Dates, Number of Visits Approved)	X	X
<b>12.0</b>	Place of Service (Office, Outpatient Medical/Surgical Center, Radiology, Laboratory, Inpatient Hospital, Extended Care Facility, Other (Specify), Specific Facility Name)	X	X
<b>13.0</b>	Signatures	X	X
<b>14.0</b>	Consultation Treatment Summary		X
<b>15.0</b>	Recommended Plan of Care		X
<b>16.0</b>	Medications (Stopped, Modified/Added, On Hold, Complete List)	X	X





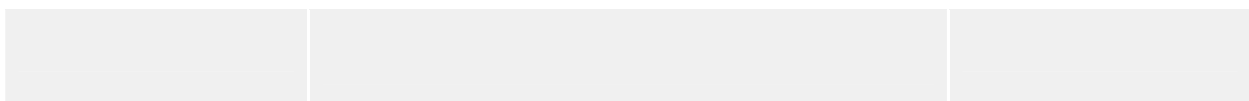
**Figure B-2. Transfers of Care Detailed Dataset Table**

<b>Data ID #</b>	<b>Types of Data</b>	<b>Data Exchanged During Scenario 2: Transfers of Care, Flow 2</b>	<b>Data Exchanged During Scenario 2: Transfers of Care, Flow 3 and Flow 4</b>	<b>Data Exchanged During Scenario 2: Transfers of Care, Flow 5</b>
1.0	Patient Demographics/Admission Data	X	X	
2.0	Insurance Information, Secondary Insurance	X	X	
3.0	Power of Attorney	X	X	
4.0	Administrative Data (For this Encounter), Eligibility Determination/Screening Data for Medicare?		X	
5.0	Reason for Admission	X	X	
6.0	Brief History of Present Illness (Narrative)	X	X	
7.0	History Prior to Illness		X	
8.0	Expected Date of Transfer	X	X	
9.0	Transfer Transport Details/Instructions	X	X	
10.0	Physical Exam		X	
10.1	Vital Signs, Physiologic Factors		X	
10.2	Height, Weight		X	
10.3	Pain Scale		X	
10.4	Skin Assessment/Braden Scale		X	
10.5	Neurological Exam		X	



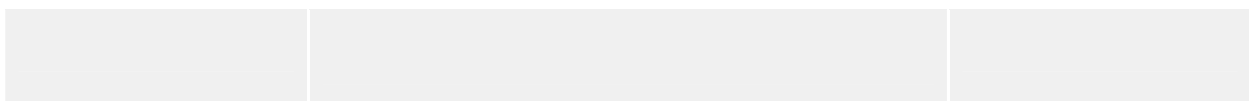


<b>Data ID #</b>	<b>Types of Data</b>	<b>Data Exchanged During Scenario 2: Transfers of Care, Flow 2</b>	<b>Data Exchanged During Scenario 2: Transfers of Care, Flow 3 and Flow 4</b>	<b>Data Exchanged During Scenario 2: Transfers of Care, Flow 5</b>
10.6	Cardiac Exam		X	
10.7	Pulmonary Exam		X	
10.8	Gastrointestinal Exam		X	
10.9	Musculoskeletal Exam		X	
10.11	Genitourinary Exam		X	
10.12	Depression		X	
10.13	Endocrine		X	
10.14	Impairments - Hearing, Vision, Swallowing, Cognitive/Mental Status, Weight-bearing, Grip Strength, Endurance		X	
12.0	Problems/Conditions	X	X	
12.0	Medication Data	X	X	
12.1	Discharge Medications		X	
12.2	Pre-Admission Medications		X	
12.3	Detail Discrepancies Pre/Post Discharge		X	
13.0	Allergies and Adverse Reactions	X	X	
14.0	Reason for Admission/Visit	X	X	
15.0	Treatment Rendered (e.g. Hospital Course)	X	X	
16.0	Response to Treatment		X	



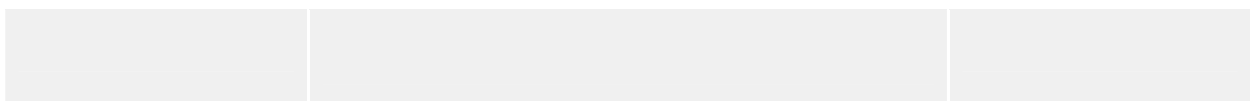


<b>Data ID #</b>	<b>Types of Data</b>	<b>Data Exchanged During Scenario 2: Transfers of Care, Flow 2</b>	<b>Data Exchanged During Scenario 2: Transfers of Care, Flow 3 and Flow 4</b>	<b>Data Exchanged During Scenario 2: Transfers of Care, Flow 5</b>
17.0	Discharge Diagnoses	X	X	
18.0	Procedures Performed	X	X	
19.0	Past Medical History	X	X	
19.1	Encounter/Visit and Surgery History		X	
19.2	Procedure History		X	
19.3	Prior Discharge Summaries			X
20.0	Laboratory Results		X	
21.0	Reports/Results (e.g., Radiology, Cardiology, Operative)		X	
22.0	Multidisciplinary Plan of Care (Pending Orders, Interventions, Encounters, Services, Procedures; Goals, Reminders; Follow-up Instructions; Infection Control)	X	X	
22.1	Medication Orders	X	X	
22.2	Dietary Orders	X	X	
22.3	Medical Equipment Orders (e.g. O2, presence of lines and catheters, baricare bed, wheelchair)	X	X	
22.4	Activity Status/Functional Status Orders	X	X	
22.5	Therapy Orders	X	X	





Data ID #	Types of Data	Data Exchanged During Scenario 2: Transfers of Care, Flow 2	Data Exchanged During Scenario 2: Transfers of Care, Flow 3 and Flow 4	Data Exchanged During Scenario 2: Transfers of Care, Flow 5
	(e.g., PT, OT, ST, RRT)			
22.6	Nursing Care Orders (e.g. Wound Care, Skin Conditions, Pressure Ulcers, Restraints)	X	X	
22.7	Pain Management?	X	X	
22.8	Follow-up Orders		X	
22.9	Activity/Functional Status (e.g. alertness/level of consciousness, fall risk)	X	X	
23.0	Immunizations		X	
24.0	Patient Support, Emergency Contact		X	
25.0	Family History		X	
26.0	Social History		X	
27.0	Pending Data		X	
28.0	Advance Directives, Power of Attorney	X	X	
29.0	Healthcare Providers		X	
30.0	Case Manager/Discharge Planner Transfer Notes	X	X	
31.0	Images (e.g. Radiology, Cardiology, EKG Other)			X
32.0	Therapy Notes			X





Data ID #	Types of Data	Data Exchanged During Scenario 2: Transfers of Care, Flow 2	Data Exchanged During Scenario 2: Transfers of Care, Flow 3 and Flow 4	Data Exchanged During Scenario 2: Transfers of Care, Flow 5
33.0	Nursing Notes			X
34.0	Progress Notes			X
35.0	Consult Notes			
36.0	Dietician Notes			X
37.0	H&P (History & Physical)			X
38.0	Bedside Chart, Nursing Assessment			X
39.0	Medication Administration Record (MAR)			X
40.0	Transfusion Report			X
41.0	Patient Forms: Signed Patient HIPAA Form, Informed Consent, DNR			X

