ONC Use Case Guidance

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Office of the National Coordinator
for Health Information Technology (ONC)
ONC Use Case Guidance

The development and refinement of use cases are important steps in many of the ONC processes. Several contracts require the development of a minimum of three recommended use cases and, in general, use cases will play an important role in focusing the different processes on shared examples of business needs. As described in ONC’s recently awarded contracts, use cases:

...address specialized variations and extensions of the general case of patients receiving care from a health care provider or health care organization (e.g., a free standing lab) and requiring the exchange of their relevant health information with other providers or health care organizations to support the clinical delivery of care at a different time and/or setting. Additionally, use-cases shall be developed that illustrate health data transmission and/or exchange for public health purposes, such as bio-surveillance, outbreak management, alerting and communication with health providers, and public health detecting and reporting.

This document contains guidelines to help prepare and document use cases. By utilizing a common format and nomenclature, ONC will be able to converge the details of these use cases. Once harmonized, the use cases will be easily exchangeable among the involved parties, facilitate the identification of common actions and activities for coordination and standardization, and be used to drive subsequent activities.

During the first meeting of the American Health Information Community (the Community) on October 7, 2005, five “breakthrough” areas were identified as priorities: (1) chronic disease monitoring, (2) biosurveillance, (3) personal empowerment, (4) e-prescribing, and (5) quality measurement.

At the next Community meeting to be held November 29, the Community members will continue their discussion of these breakthroughs. Based on the Community deliberations, ONC will identify and distribute the final list of at least three of breakthrough areas to the involved parties, who in turn, will describe each of these three breakthroughs in greater detail.
Once ONC distributes the official list of breakthroughs, ONC contractors and other entities will prepare more detailed use cases in accordance with the methodology described below:

1. **Use Case Revision History Table.** The revision history table will help the authors and reviewers of the use case presentations track changes and modifications.

2. **Description of Use Case.** This section should include a description of the use case in enough details to provide context for the entire overview section. This is not meant to be a technical description; it should describe the process. Keep in mind that the primary audience for this section is the health care professional.

3. **Scope of Use Case.** This section should describe the scope of the use case. If the scope will be addressed in phases of the project, that detail must be outlined in this section. Scope should be address in two terms – what is to be included and what is to be excluded from this use case.

4. **Stakeholders of Use Case.** This section should list all primary actors involved in the use case and individuals and entities outside of the use case that will also be affected by the processes in the use case.

5. **Preconditions for Use Case.** This section should list all things that must be in place before the start of the use case. This can include, but is not limited to, the state of an actor, data that must be available somewhere or an action that must have occurred. This section should also include triggers for the initiation of the use case.

6. **Obstacles to Implementing Use Case.** In this section, obstacles and risks to implementing this use case should be listed. These obstacles should be at a level of abstraction, such that they reflect obstacles to achieving the use case (i.e., limited physician access to computing device), as opposed to issues internal to the process that should represent an alternate flow (i.e., drug ordered has potential interaction with existing patient medication).

7. **Postconditions for Use Case.** This section should list all things that will be a result or output of the use case. This can include but is not limited to the state an actor will be in upon conclusion of the use case, data that will be created or now available, and actions that will be required.

8. **Details of Use Case Perspectives.** This section will describe the use case from the variety of entity-driven perspectives. Each perspective will be further described by a sequence of events that consists of multiple actions, and represented in an enumerated table.

Each use case will consist of multiple perspectives which, at a high level of abstraction, will describe the use case from the perspective of a single entity – either a person or an organization (e.g., provider, patient, administrative staff, pharmacy). Each perspective will consist of a “sequence of events” that describe a flow or the typical course of activities in that process. Each event, in turn, will be further detailed by its component “actions.”

Each perspective may also contain alternate paths (i.e., variations on the main sequence of events) or exceptions (i.e., what happens when things go wrong) that will be described in “if..then..else..” statements. The alternative paths and exceptions will make use of the
numbering of the basic course of events to show at which point they differ from the basic scenario, and if appropriate where they rejoin. The intention is to avoid repeating information unnecessarily.

To help readers understand flows across perspectives, the use case table will call out relationships between events and actions across perspectives. A visual representation of the relationship between the perspectives, events, and actions is provided below.

A high-level taxonomy for a theoretical e-prescribing example is provided below.