

2014 Edition Test Scenarios Development Overview Companion Narrative

This document is a companion narrative for the 2014 Edition Test Scenarios Development Overview Deck, which contains a description of the purpose, development and structure of the draft test scenarios.

SLIDE THREE: SCENARIO-BASED TESTING IN REVIEW

In 2012, ONC began working with the Health IT Standards Committee's Implementation Workgroup (IWG) to make test scenarios available as an option for testing and certification to the 2014 Edition EHR Certification Criteria. Test scenarios link unit test procedures to align testing with a clinically plausible workflow. Test scenarios help evaluate the ability of electronic health record (EHR) technology use data stored within the EHR across systems (i.e., across multiple EHRs) and within a single system (i.e., within one EHR). Scenario-based testing is intended to ensure that data can be used both within a system and across systems, and to increase the value and efficiency of testing, reduce testing setup requirements, and make testing consistent and reliable.

SLIDE FOUR: SCENARIO-BASED TESTING OVERVIEW

Unit-based testing is currently in use for testing and certification to the 2011 and 2014 Edition EHR Certification Criteria. The test procedures currently included in the 2011 and 2014 Edition Test Methods posted to the ONC website are unit tests. A unit test evaluates the conformance of EHR technology to a single certification criterion; each test is independent, and the data output or result of one test does not affect other unit tests.

Scenario-based testing will be an alternative, or optional, method for testing and certification to the 2014 Edition EHR Certification Criteria. As shown on this slide, scenario-based testing uses threaded data to link unit tests. This means that the test data result or output of one test is used as the data input for a subsequent test or tests. This can help make testing more clinically plausible, and evaluate an EHR technology's ability to use data stored within the EHR.

SLIDE FIVE: DEVELOPMENT

ONC began development of scenario-based testing in 2012. Earlier this spring, the Office of Certification worked with the IWG to create a proof of concept for scenario-based testing, including a pilot test. That pilot included a clinically-plausible workflow, test scenario procedure and test scenario data for an initial scenario named Interoperability: Intake. The results of the pilot will be discussed in more detail on the next slide. ONC plans to continue scenario development throughout 2013 and in 2014.

SLIDE SIX: PILOT

In the spring, ONC used the Interoperability: Intake scenario developed with the IWG's help to conduct a scenario-based testing pilot. The test scenario procedure and data used for the pilot were made available

for feedback on ONC's website in January. ONC invited the participation all of the ATLS; ultimately, one ATL and two vendors were able to take part in the process.

The feedback that ONC received during and after the pilot was very positive. Not only did participants feel that the pilot had demonstrated the viability of using scenario-based tests to increase the value and efficiency of testing, they specifically remarked that using scenario-based tests could potentially reduce testing time for products including multiple criteria significantly. Vendors and testers both agreed that using the pilot scenario reduced some of the burdens associated with testing.

As part of the pilot process, the Office of Certification socialized the pilot scenario and proof of concept with other members of the ONC team to get feedback from policy and clinical experts.

SLIDE SEVEN: WORKFLOW

After the successful pilot of the Interoperability: Intake scenario, ONC continued development by building a larger workflow based on the same principles that guided the development of the Interoperability: Intake workflow. In other words, ONC outlined a workflow that would allow products to be tested using clinically plausible scenarios made up of unit tests linked by threaded data. The workflow was then reviewed with ONC's clinical experts.

This workflow follows a patient from their initial contact with a provider or hospital through their care and follow-up, and follows a provider or hospital through the clinical quality measure and public health reporting processes.

On the following slides, a table will be displayed which lists the scenarios which make up the workflow, and the criteria which can be tested during each of those scenarios.

SLIDE EIGHT: OVERVIEW

This high-level table which contains overviews of the scenarios that make up the clinically-plausible workflow which will be described on subsequent slides, and the criteria tested as part of those scenarios. The entry describing the interoperability intake scenario based on the workflow developed during the proof of concept is called out in red. This table will appear in more detail on later slides.

SLIDE NINE: OVERVIEW: GROUP 1 DEVELOPMENT TIMELINE

As described on the preceding slide, ONC plans to develop test scenarios for optional testing and certification to the 2014 Edition EHR Certification Criteria, henceforth called the 2014 Edition Test Scenarios, in two groups. As the table on the preceding slide shows, the first group of scenarios will include 60% of the 2014 Edition EHR Certification Criteria and will be developed this year. The second group, which will include the remaining 40% of the criteria, will be developed in 2014.

The broad timeline outlined here describes several milestones that ONC has outlined for Group 1 development. ONC plans to post the Group 1 2014 Edition Draft Test Scenarios on September 11 and

Final Group 1 2014 Edition Test Scenarios at the end of November. You can also see that there will be an opportunity for feedback, which will be discussed in more detail on the next slide.

SLIDE TEN: OVERVIEW: GOALS

The 2014 Edition Test Scenarios developed in 2013 and 2014 will be comprehensive – the two groups outlined on the overview slide and discussed in more detail later in this presentation will include all of the 2014 Edition EHR Certification Criteria. They will be the first in a library of test scenarios for use in testing and certification to the 2014 Edition EHR Certification.

ONC requests feedback on each of the Group 1 Draft 2014 Edition Test Scenarios posted before October 11.

SLIDE ELEVEN: OVERVIEW: WORKFLOW GROUPS

ONC began developing the 2014 Edition Test Scenarios by drafting a clinically-plausible workflow. The workflow is intended to represent one way that unit tests could be linked in a clinically-plausible workflow. In this instance, the draft workflow contains eight scenarios which represent one way that all of the 2014 Edition EHR Certification Criteria could be linked. The draft workflow presented in the following slides does not represent the only way that the unit tests could be linked in a clinical workflow, and does not imply anything about how providers should use EHRs in their workflows.

SLIDE TWELVE: OVERVIEW: WORKFLOW DESCRIPTIONS

This slide provides more detail about the two development groups, and the workflow and scenarios which ONC has drafted. The Interoperability: Intake scenario developed during the proof of concept and used for the pilot is called out here, just for purposes of illustration.

Each group will be discussed in more detail later, but this slide outlines how, for development purposes only, ONC grouped scenarios by activities that largely represent the clinical end of the certification criteria spectrum, included in Group 1, and activities that mostly represent the administrative end of the certification criteria spectrum, included in Group 2.

ONC recognizes that this is only one way that activities, and the criteria associated with them, could be grouped. These groupings, used for development purposes only, do not imply any requirements for how providers might group their own activities. The names used here for these scenarios are for descriptive purposes only – they are not intended to be prescriptive in any way.

SLIDE THIRTEEN: OVERVIEW: WORKFLOW ASSUMPTIONS

On the following slides, each Test Scenario development group is discussed in more detail. As mentioned earlier, ONC has outlined what criteria could be included in each scenario. The outlines on the following slides assume that testing will proceed through each scenario sequentially. ONC realizes that this will not be the case in every testing instance, and will be providing additional guidance to users for what may be

required should scenarios be tested out of sequence. ONC also recognizes that there may be instances when a unit test could be removed (“popped” out) from a scenario for various reasons (for instance, when a unit test is not applicable to a specific setting).

SLIDE FOURTEEN: GROUP 1: SCENARIOS

ONC plans to develop five scenarios in Group 1. These scenarios represent activities that are largely clinical and could take place in the context of an encounter with a provider or other members of a patient’s care team. The names provided for each scenario are for descriptive purposes only.

In the context of an encounter, ONC has outlined five scenarios, beginning with patient intake and progressing through the incorporation of a transition of care document, ordering care for the patient, receiving the results of orders and providing resources for the patient and provider, and the follow up for an encounter with a patient.

An overview of the criteria assignment for the first scenario will be displayed on the following slide.

SLIDE FIFTEEN: GROUP 1: SCENARIOS BY CRITERIA

This slide contains a snapshot of the outline ONC used in developing the scenarios, which aligns to the outline on slide eight, with the second group, which formed the basis of the Interoperability: Intake scenario used for the pilot, highlighted for purposes of illustration.

As mentioned earlier, ONC will provide instructions in the test scenarios for what criteria must be included if this scenario is tested out of sequence – the criteria included here are only those required if the scenario is tested in sequence.

SLIDE SIXTEEN: EXAMPLE

This slide contains snapshots of the draft test scenarios, posted on September 11. Again, for purposes of illustration, these snapshots are drawn from the scenario for Interoperability: Intake developed as part of the proof of concept and used during the pilot.

One element of each scenario is a script which provides the workflow developed in the spring as a narrative for users. Each scenario will have its own script.

SLIDE SEVENTEEN: GROUP 2: SCENARIOS

Group 2, which ONC will develop in 2014, includes three scenarios which encompass reporting and other administrative or system-wide criteria. In this context, reporting includes public health as well as clinical quality measure reporting. Group 2 scenarios will also include privacy and security criteria and recording and calculation functions.

SLIDE EIGHTEEN: GROUP 2: SCENARIOS BY CRITERIA

Although the Group 2 scenarios will be developed in 2014, ONC has outlined the criteria for each scenario. This slide contains a snapshot of the handout with an example of how the criteria will be included in one of the scenarios.

SLIDE NINETEEN: NEXT STEPS

ONC asks that feedback on the Group 1 2014 Edition Draft Test Scenarios be provided before October 11. Feedback or questions should be sent to ONC.Certification@hhs.gov with the subject line “2014 Edition Draft Test Scenarios”.

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