

## Component 7, Unit 3: Understanding Information Exchange in HIT Systems

### About the (Optional) Orientation Videos:

#### Health Information Exchange Demonstration

Videos are provided as files with a .swf extension. These .swf files are designed to be opened in all major web browsers. If the file does not open in your browser you can download a free .swf player at the Adobe site:

<http://www.adobe.com/products/flashplayer/>

Step-by-step instructions for completing the activities are provided below for those who do not prefer to view the .swf files.

#### **Transcript for optional demo video**

This is a demonstration of information exchange in Health IT systems. We're going to demonstrate the concept of moving a summary patient record from an EHR to a PHR. We'll also learn about the difference between human readable documents and structured machine readable documents. So I'm going to start by looking at our demonstration EHR system VistA. You can see that I have the record for Patient Eight open here. Imagine that I want to give this patient information from his record in the EHR to take home and add to a personal health record (or PHR) system. So to get information out of this demonstration EHR system, I'll go over to the reports tab. For the sake of this demonstration I'll pull up the "Brief Clinical" report. Now you can see the system has produced a report in a human readable format. You can see that a human can read and make sense of this. If I right-click on this report I have the option to print it. I could print this to a connected printer, which would produce a paper copy of our report. If I wanted to export this to some type of electronic format, I could with a little effort save this report as a word processing file or as a PDF file. That would be an example of an electronic document, but the contents of the file would only be in a human readable format. The problem with the report we are looking at here, even if we put it into a word processing file or PDF format, is that I could not readily import it into another EHR system or PHR system. A human could take the report and retype the information into one of these systems, but that would require someone with skill in health information management and familiarity with the destination HIT system to be sure the data was entered correctly. The goal of health information exchange is for the systems to be able to exchange data without that kind of effort. The exchange of information in many cases should be in real time or near real time. For that to happen, a report like this one needs to be in a format that the HIT systems can understand. We

refer to this type of information as “machine readable”. So let’s take a look at a document that is in a machine readable format, and can be readily imported into an EHR or PHR system. This is a sample CCD, or continuity of care document. If we look inside this—I’m going to open it with notepad. You’ll see that this is what is called an XML file, which is a structured format that can be read by a machine. Now you can see the difference between this machine readable report and the human readable report that we saw before. This is not easy to read by a human, but it has all of the information a computer needs to be able to import the data. So let’s look at an example of that.

I’m going to import this sample CCD document into a PHR system, HealthVault in this case. I’ve already signed in. I’m going to go to my “Health Information” tab. And here I’m going to add a Continuity of Care Document. I’ll click the little plus sign, browse for that file. You’ll see here’s the sample CCD document. Open. I’ll call this “Sample CCD Document” and save it. So this PHR has imported the continuity of care document successfully, and you can see it here. Now if I click on that document, you’ll see that it has converted that machine readable file into a report that is human readable. This information is not actually mine, but another sample patient. But it has all of the medical information that was contained in the CCD file. I can add this information to my PHR by clicking the “Add items” button, which I’m not actually going to do here since this is just sample patient data.

This concludes the demonstration of moving information from an electronic health record into a personal health record.

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