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Physician Quality Reporting System  
Group Practice Reporting Option  
**Extensible Markup Language (XML)**  
Accountable Care Organization  
Microsoft Excel 2010  
Program Year 2012  
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## **1 INTRODUCTION**

The purpose of this document is to provide information on how to use Extensible Markup Language (XML) files in the Accountable Care Organization (ACO) Group Practice Reporting Option (GPRO) Web Interface with Excel 2010.

The XML files exported from the ACO GPRO Web Interface may be imported into an Excel spreadsheet. All XML files exported from the ACO GPRO Web Interface may be imported into an Excel workbook. The Excel spreadsheets may be used to update the Patient XML data before exporting the Excel spreadsheet to the Patient XML format required for upload into the ACO GPRO Web Interface. All other XML files may be viewed in the Excel workbook, but XML files may not be exported.

The changes to Excel 2010 prohibit resolving external resources. This document provides the steps to map the XML Schema Definition (XSD) file in an Excel 2010 workbook that can be used to import and export the Patients XML files and to import the Patient Discharge XML. Although the Patient Discharge cannot be generated using Excel, importing the XML file provides a means of reading the file exported from the ACO GPRO Web Interface and to gather data to be input into an XML file for upload into the ACO GPRO Web Interface.

## **2 REFERENCED DOCUMENTS**

The documents listed in Table 2-1 were used in whole or in part to develop the content within this document.

**Table 2-1. Referenced Documents**

<b>Document Name</b>	<b>Document Number</b>	<b>Issuance Date</b>
PQRS-GPRO-ACO 2012 XML SPECIFICATION 011813.pdf		01/18/13

### 3 XML TO EXCEL 2010 PROCESSING

The Patient, Patient Discharge, Patient Ranking, Clinic, and Provider XML files exported for the ACO GPRO Web Interface may be imported into an Excel file. The Excel file may also be used to create the Patient XML file to be uploaded into the ACO GPRO Web Interface.

The sections below describe how to perform the following tasks:

#### 3.1 General Steps

An Excel 2010 workbook with XML Mapping cannot be saved and reopened. To work with the data in Excel 2010 in multiple sessions, a new Excel workbook with the mapping must be created for each session. The XML may be exported in one session and then imported in the new Excel workbook at the next session.

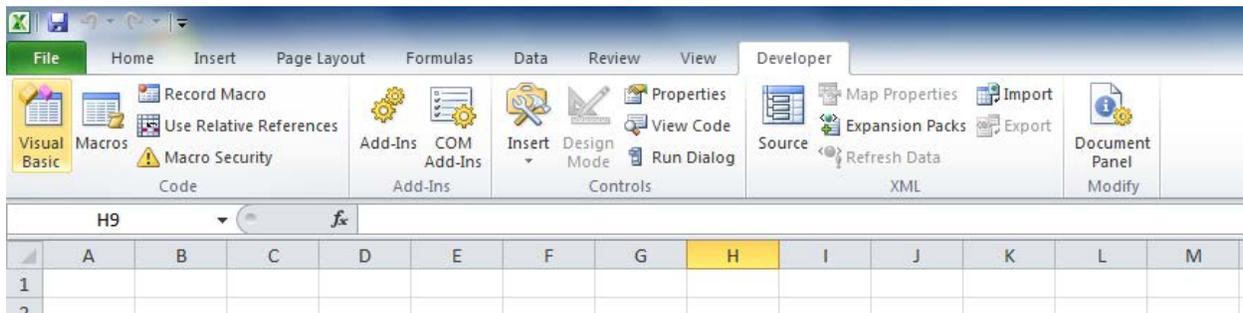
To use Excel with the Patient XML files:

1. Create the Excel workbook with XML Mapping.
2. Import the Patient XML file.
3. Update the data for the patients using the values defined in the PQRS-GPRO-ACO 2012 XML SPECIFICATION 011813.pdf .
4. Export the data to an XML file.
5. To edit the XML file in another session, create a new Excel workbook with the same mappings and repeat steps 2, 3, and 4.

#### 3.2 Add the Developer Ribbon to Excel

If the **Developer Ribbon** is not displayed within Excel ribbon it can be added. Figure 3-1 show the Excel ribbon with the Developer Tab displayed

**Figure 3-1. Developer Ribbon in Excel 2010**



Steps to display the **Developer Ribbon**:

1. Click the **File Tab**.
2. Click **Options**.
3. Click **Customize Ribbon** on the Excel Options window.
4. Select the **Developer** checkbox under the **Main Tabs** list if not already checked.
5. Click **OK** to apply the setting.

Figure 3-2 shows the **File Tab** with the **Options** selection highlighted.

**Figure 3-2. Excel File Tab for Excel 2010**

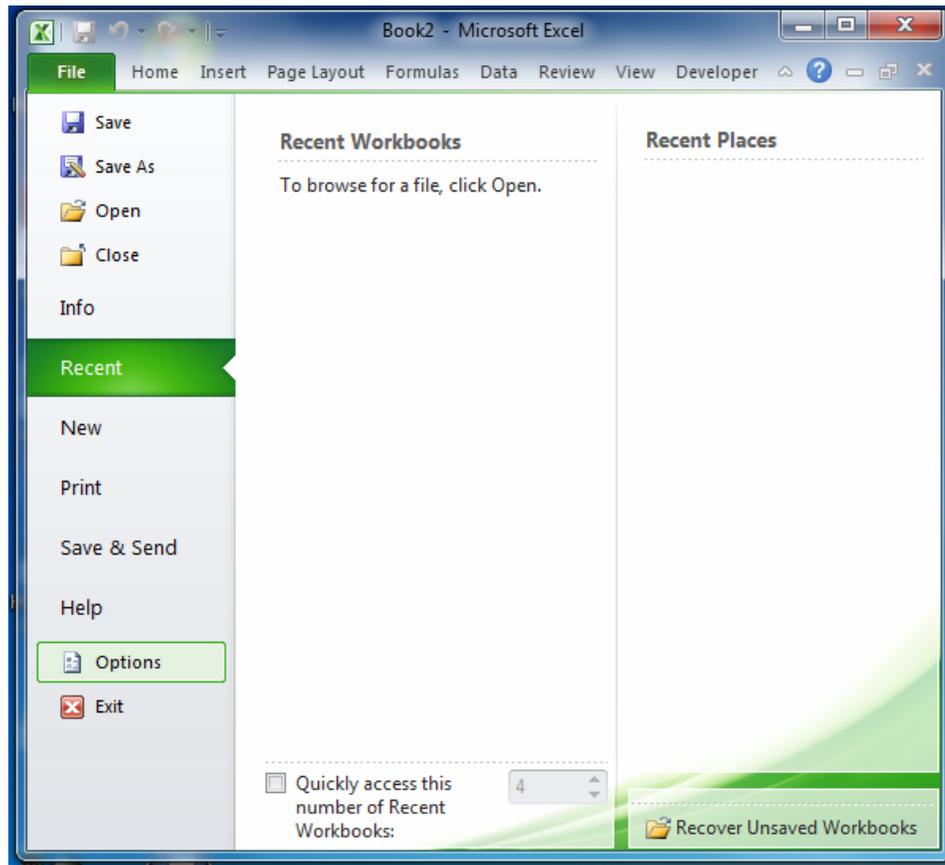
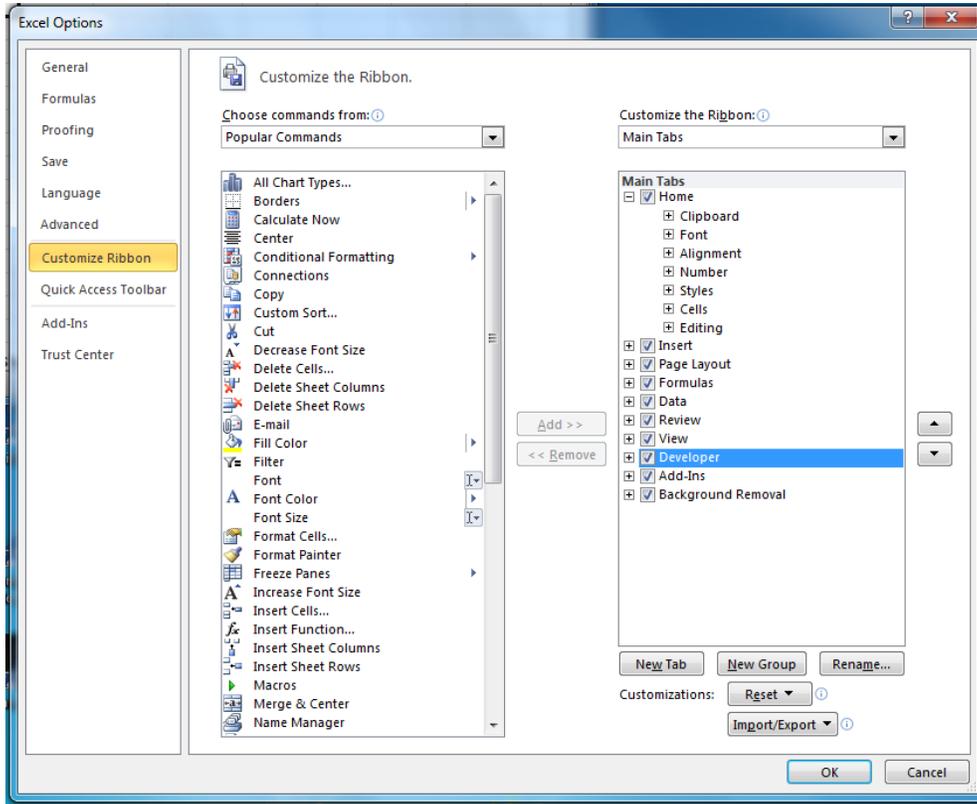


Figure 3-3 shows the Excel Options screen with the **Customize Ribbon** and the **Developer** checkbox highlighted.

**Figure 3-3. Excel Options in Excel 2010**



### 3.3 Add the XSD Mapping

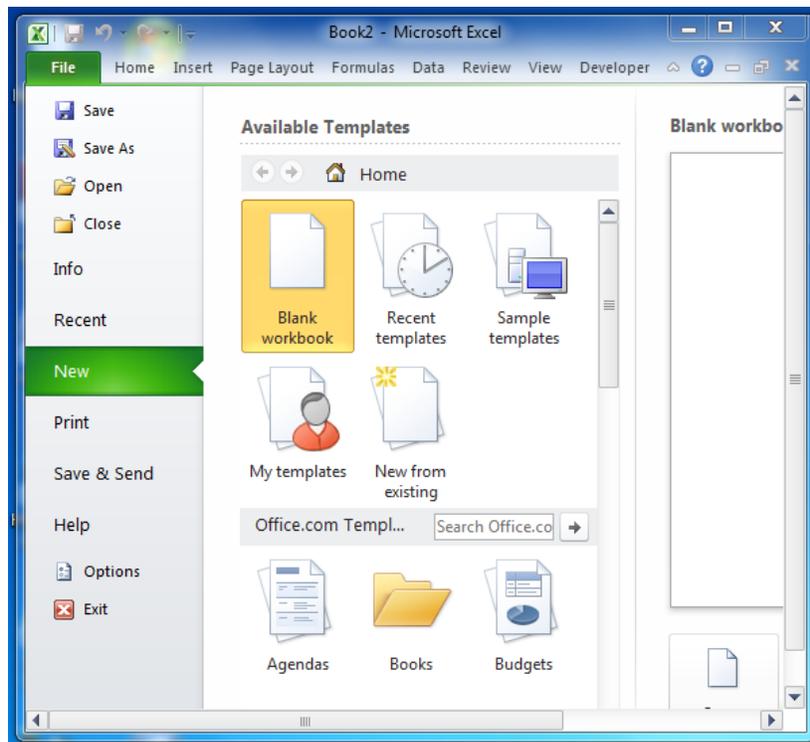
Once the **Developer Ribbon** is available, the Patient XSD or Patient Discharge XSD Mapping can be added to a new Excel Workbook.

To add the XSD Mapping:

1. From the **File Tab**, select **New >> Blank workbook**.

Figure 3-4 shows the **File Tab** with **New >> Blank workbook** selection highlighted.

**Figure 3-4. Opening a New Blank Workbook**



- From the Developer Ribbon, select Source. The XML Source is added to the workbook. Figure 3-5 shows the **Developer Ribbon** with the **Source** option highlighted.

**Figure 3-5. Source Option in the Developer Ribbon**

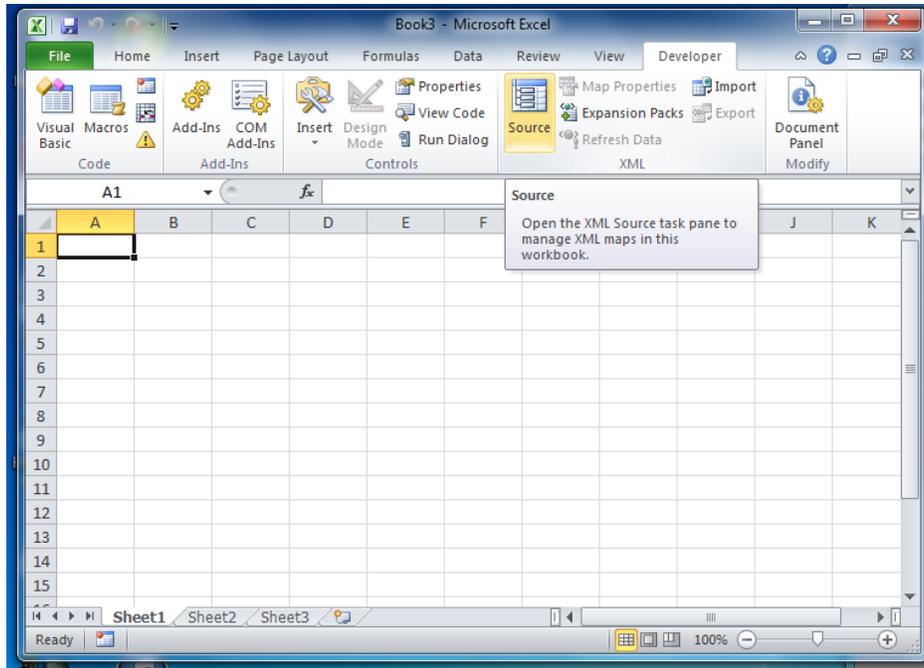
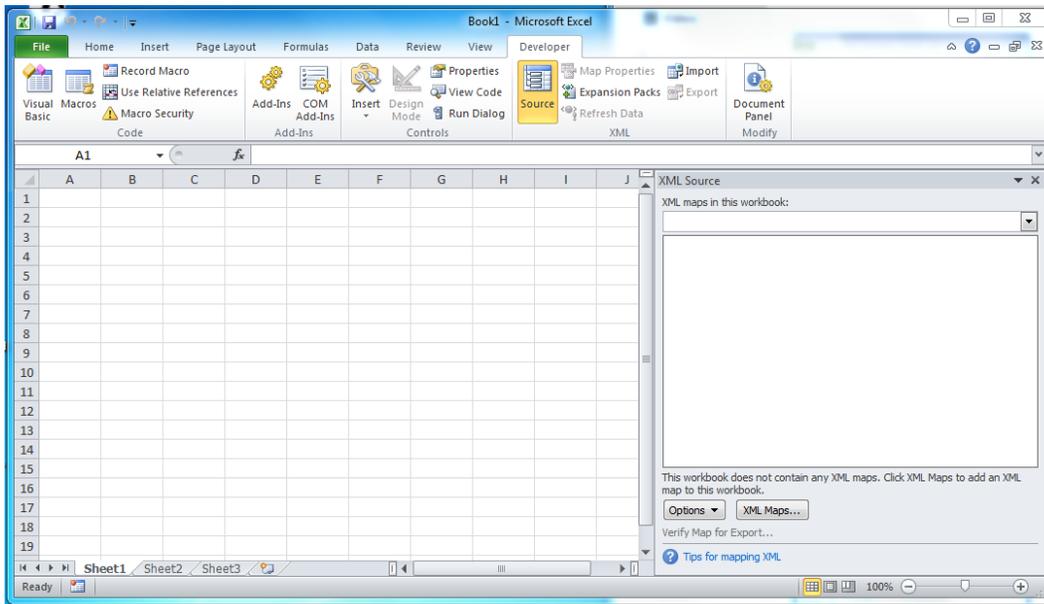


Figure 3-6 shows the blank workbook with the XML Source.

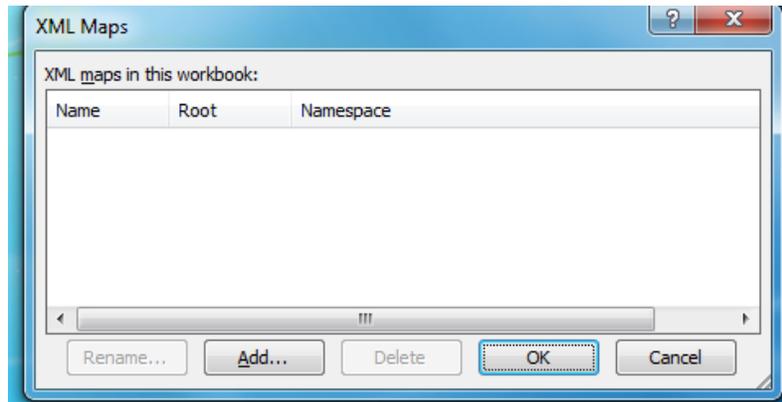
**Figure 3-6. Blank Workbook with XML Source**



3. Select the **XML Maps...** button.
4. Select the **Add...** button on the **XML Maps** screen.

Figure 3-7 shows the **XML Maps** screen before adding the Patient XSD to the maps.

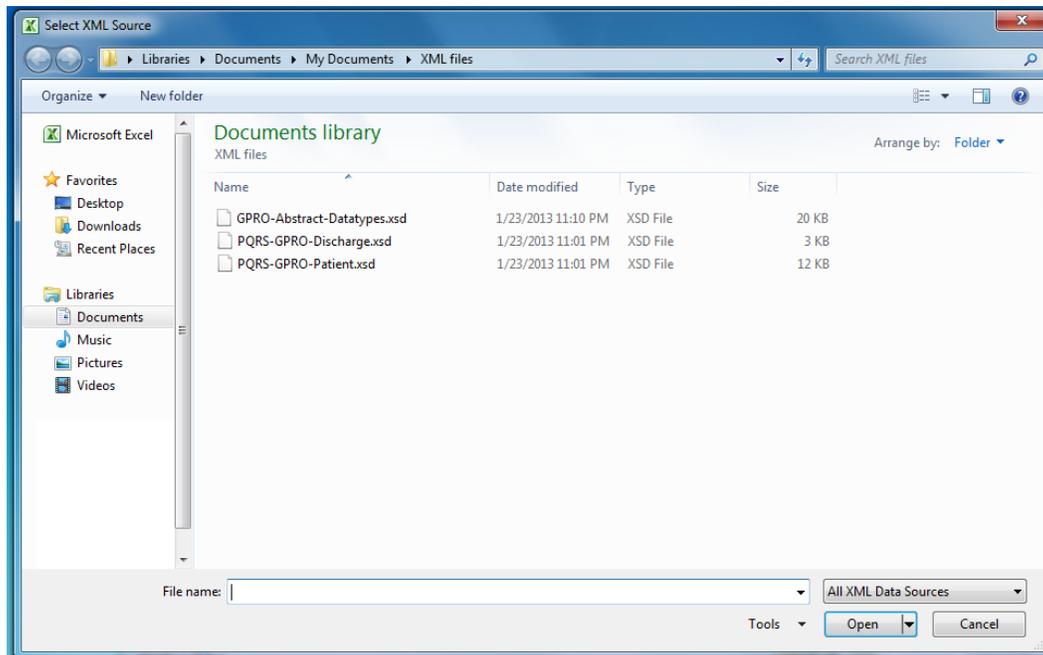
**Figure 3-7. XML Maps Screen**



5. Select the Patient XSD or Patient Discharge XSD file to be imported and click **Open**.

Figure 3-8 shows the **Select XML Source** window.

**Figure 3-8. Select XML Source Window**



6. Select **OK** in the **XML Maps** screen.

Figure 3-9 shows the **XML Maps** screen after adding the Patient XSD file.

**Figure 3-9. XML Maps after adding Patient XSD File**

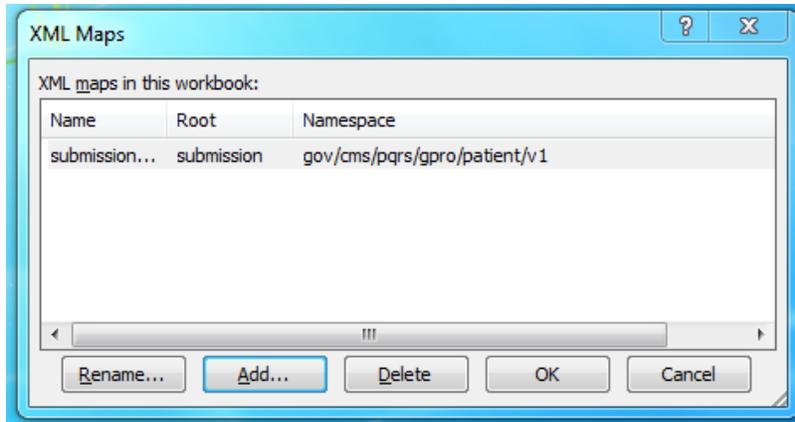


Figure 3-10 shows the **XML Maps** screen after adding the Patient Discharge XSD file.

**Figure 3-10. XML Maps after adding Patient discharge XSD File**

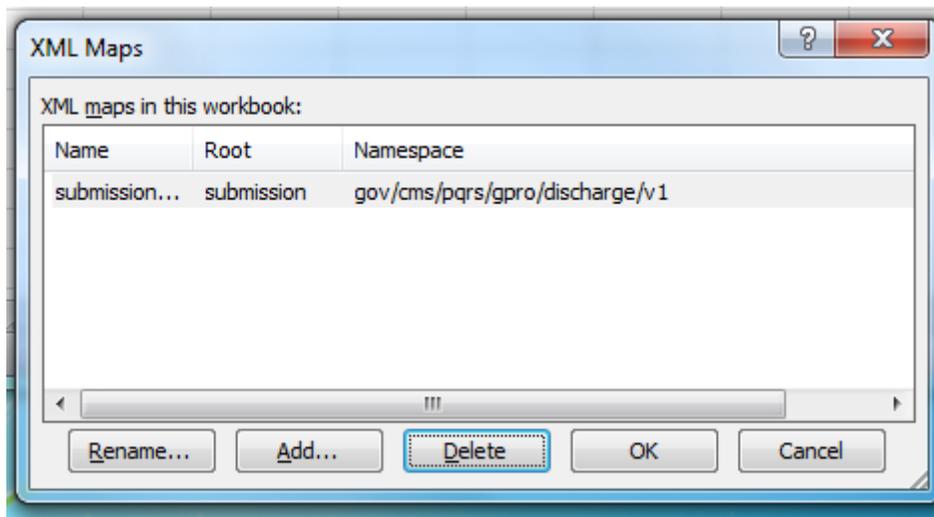
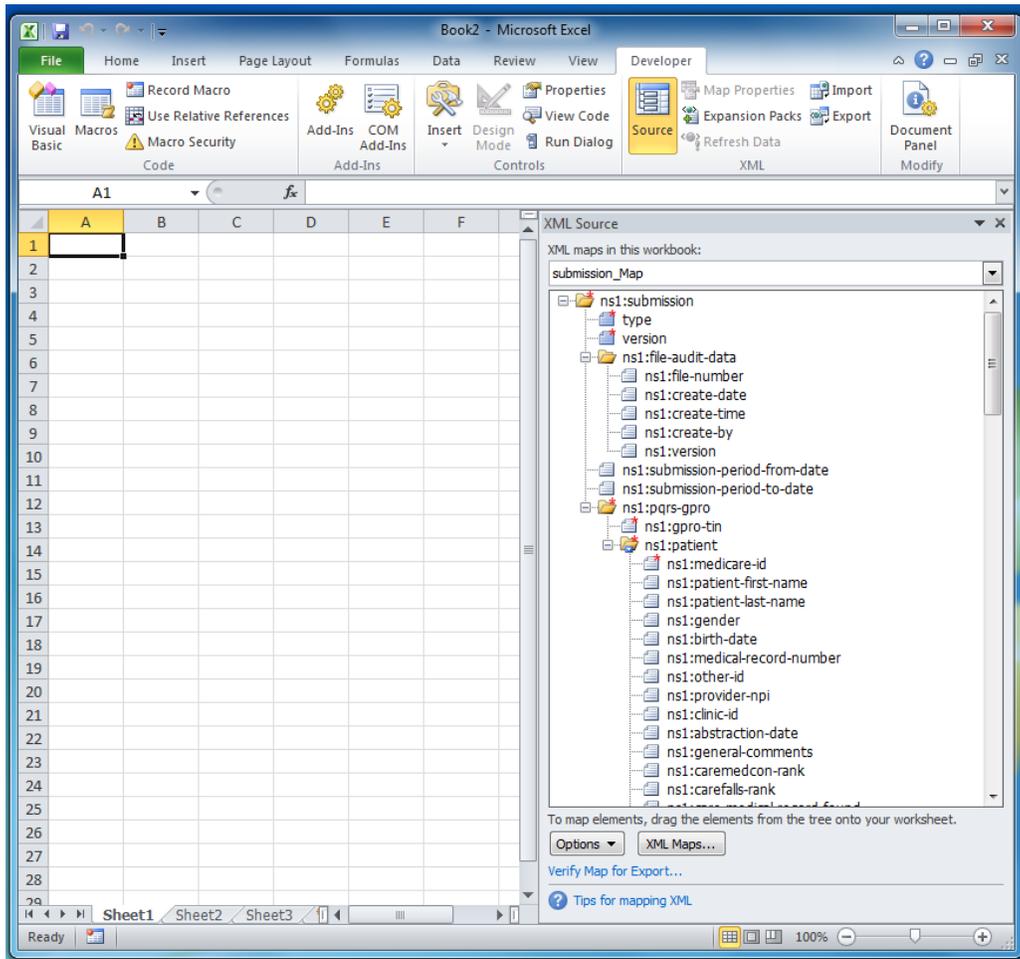


Figure 3-11 shows the workbook after adding the Patient XML Source.

**Figure 3-11. XML Maps with Patient XML Source**



7. Select the **ns1:patient** line on the XML Source with the left mouse button. Both the Patient XML Source and the Patient Discharge XML Source will have the **ns1:patient** line, but the data following the line will be different for each XSD.

Figure 3-12 shows the mapping after selecting the ns1:patient line in the Patient XML Source.

**Figure 3-12. Patient XML Source with the ns1:patient Line Selected**

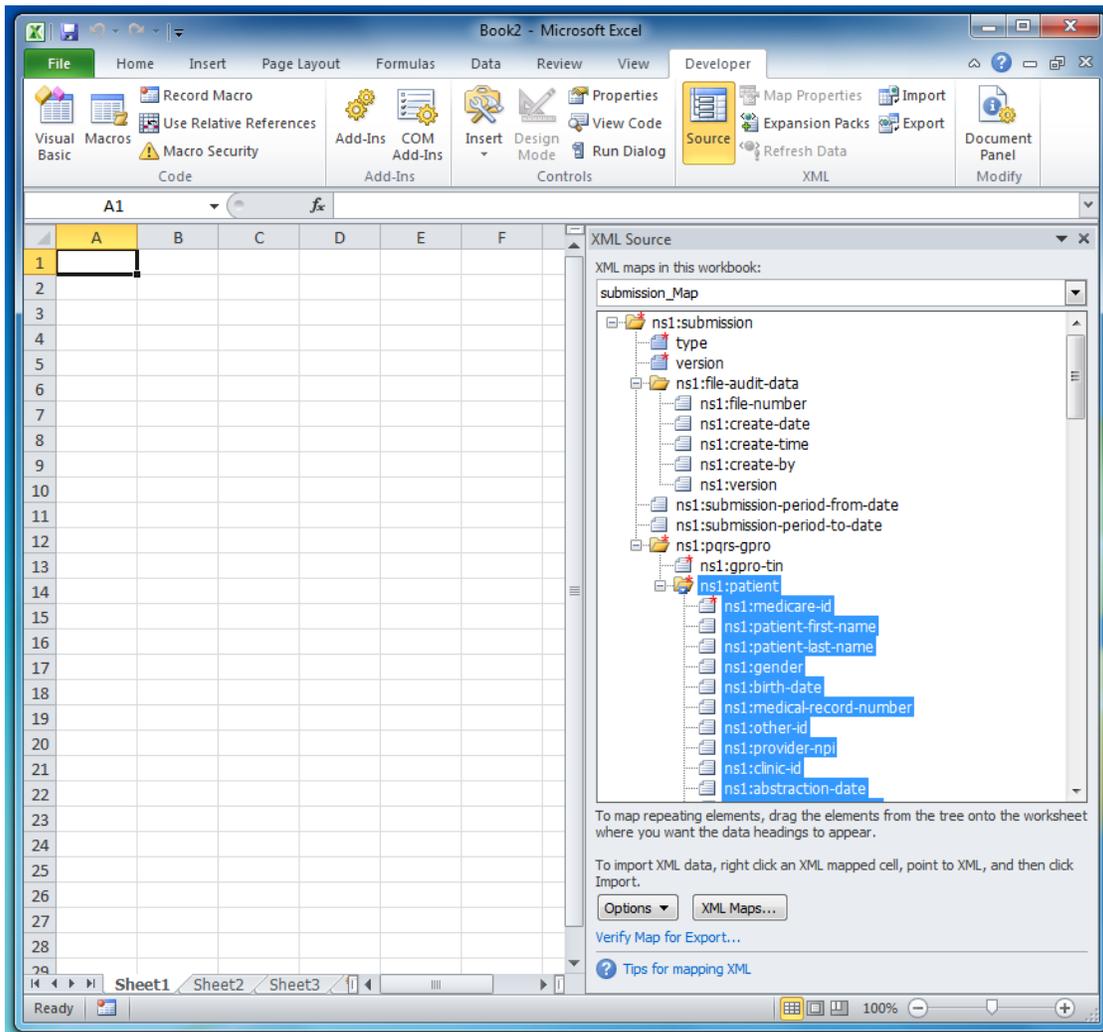
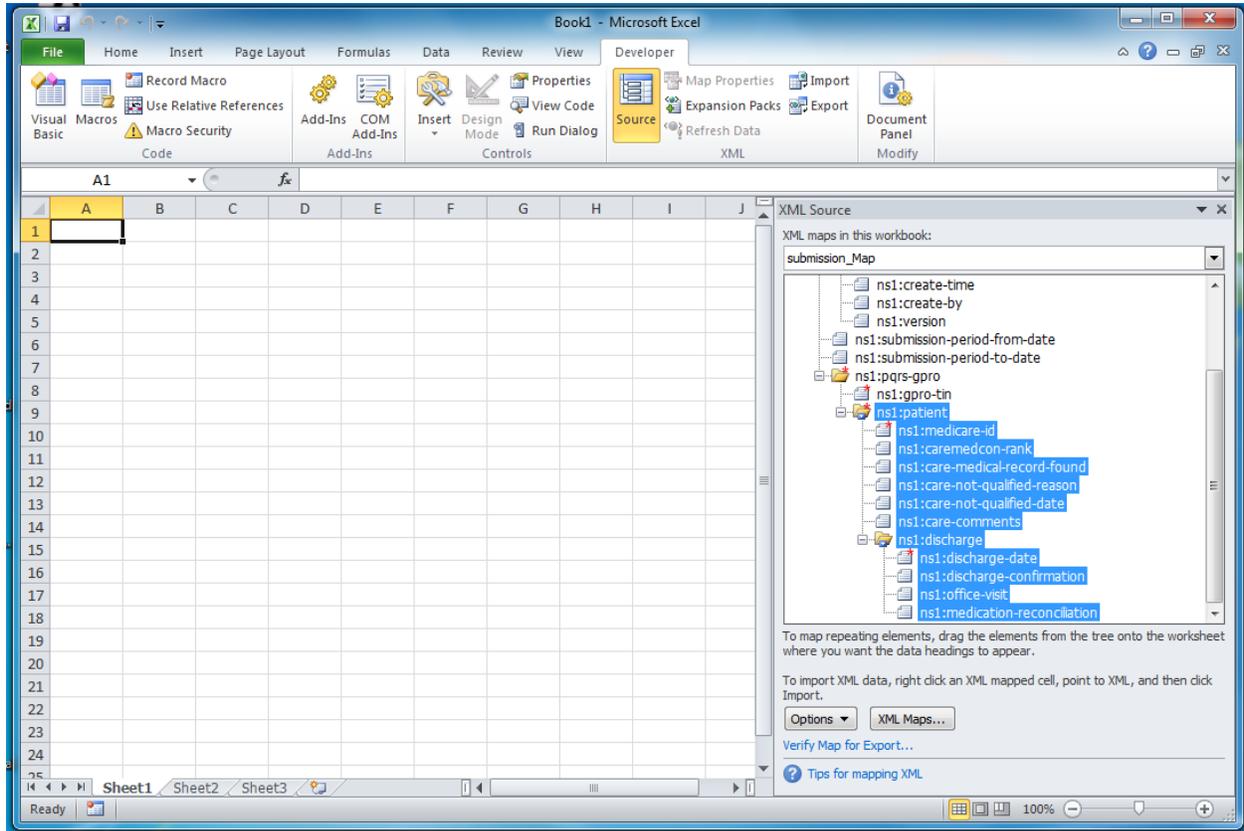


Figure 3-13 shows the mapping after selecting the ns1:patient line in the Patient Discharge XML Source.

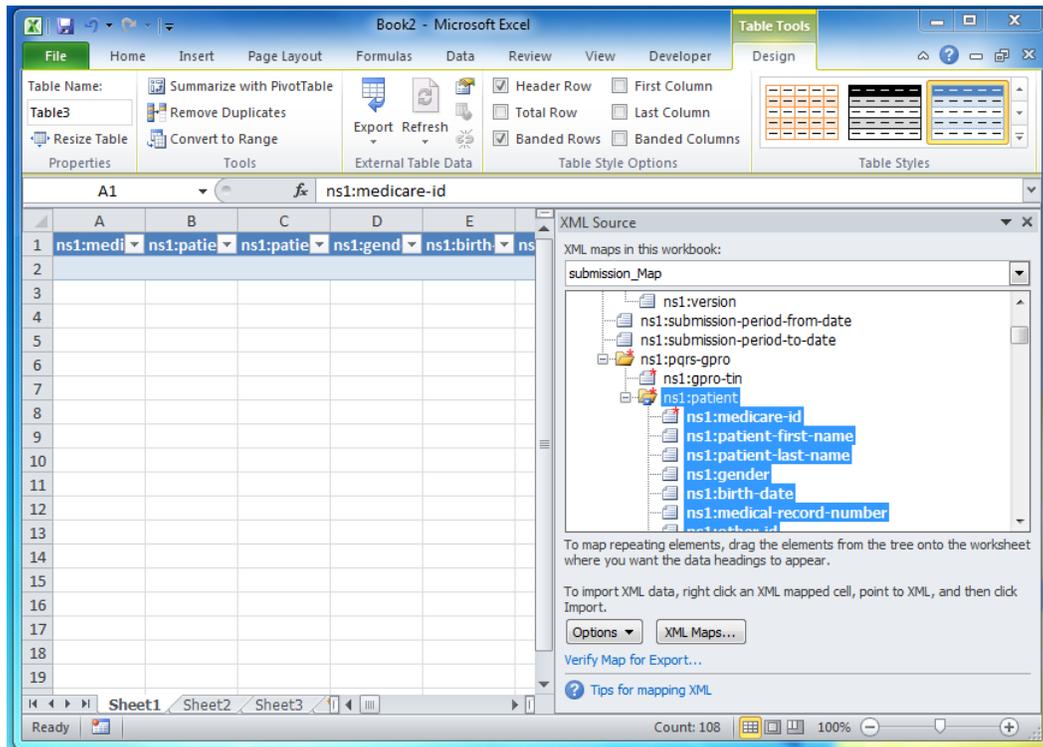
**Figure 3-13. Patient Discharge XML Source with the ns1:patient Line Selected**



8. Holding the left mouse button, drag the **ns1:patient** line to the **A1** cell in the workbook and then release the mouse button.

Figure 3-14 shows the workbook after dragging and dropping the Patient XML Mapping to the workbook.

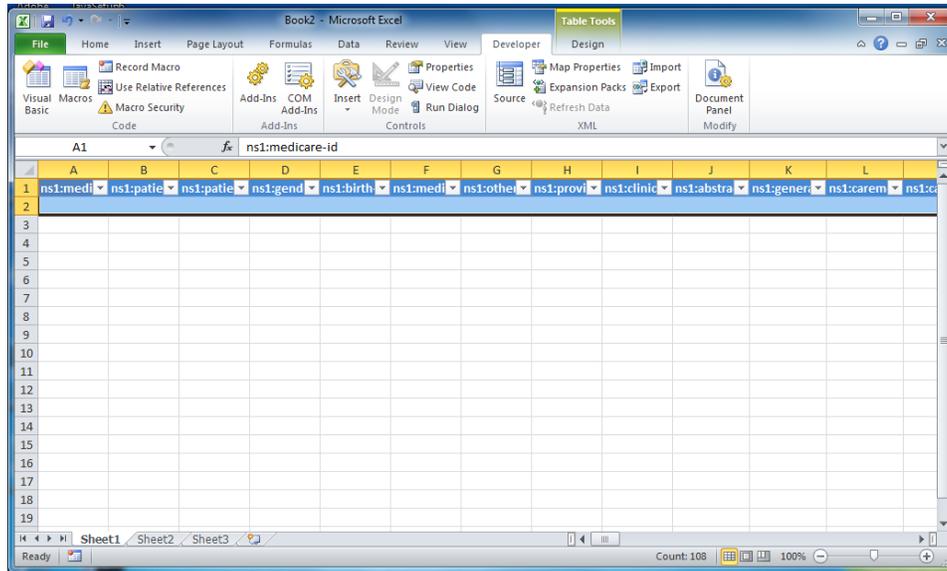
**Figure 3-14. Workbook with Patient Mapping Completed**



9. Close the XML Source by selecting the **Source** option in the **Developer Ribbon**, or selecting the “X” in the upper right corner of the XML Source.

Figure 3-15 shows the Excel workbook after closing the XML Source.

**Figure 3-15. Workbook after XML Source Closed**



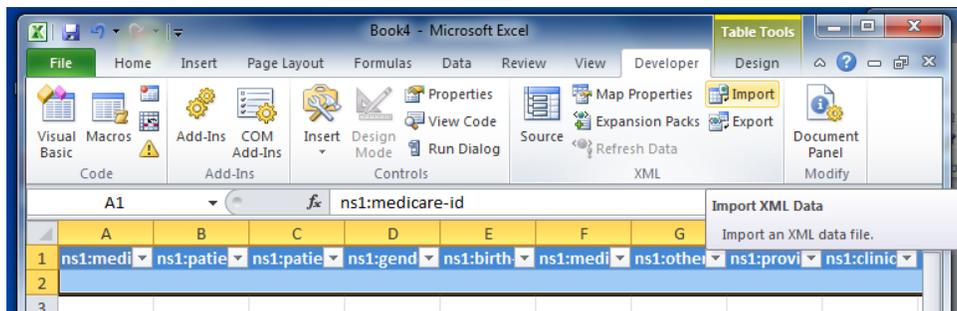
### 3.4 Import the XML File

Once the XML Mapping is complete, the XML file may be imported into the workbook. To import the file:

1. From **Developer Ribbon**, click **Import**.

Figure 3-16 shows the Excel ribbon with **Developer Ribbon** with the **Import** option highlighted.

**Figure 3-16. Import Using Developer Ribbon in Excel 2010**



2. Select the desired XML file from the file selection window.
3. Click **Import**.

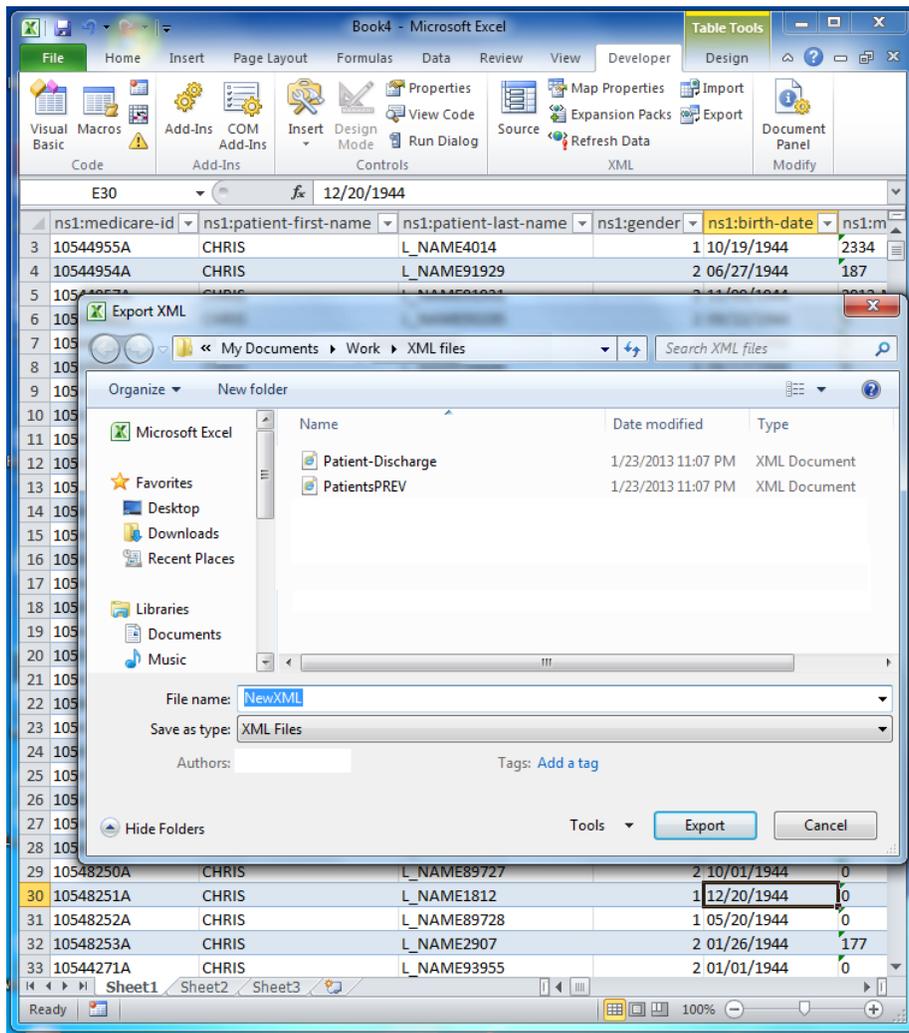
### 3.5 Export the Modified Data (Patient XML Only)

After editing the imported data, the modified data can be exported into the XML format. The file will require modification after exporting from Excel and before uploading into the ACO GPRO Web Interface. To export the file:

1. From the **Developer Ribbon**, click **Export**.
2. Type the filename to be used for the XML file.
3. Set **Save as ...** type: to XML file if not set and click **Export**.

Figure 3-17 shows the Excel worksheet with the Export options highlighted.

**Figure 3-17. Exporting XML from Excel 2010**



4. Refer to the steps in Section 3.8 to remove the Excel generated namespace (ns1) in the exported file and to add the required header. ***Files with the namespace or without the correct header will fail the XML validation when uploaded to the ACO GPRO Web Interface.***

## 3.6 Errors using Excel 2010

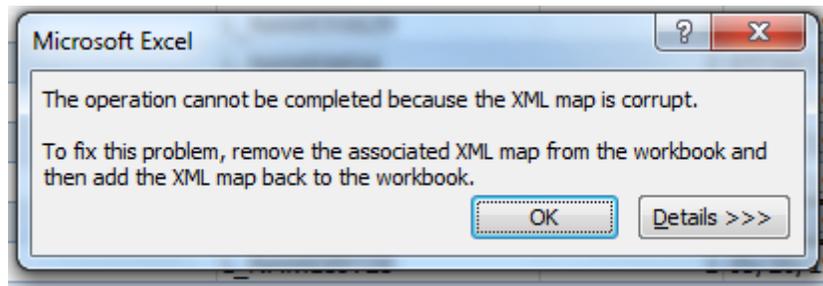
### 3.6.1 Patient XML

If you save the Excel workbook with your imported and updated Patient XML data, open the saved file, and then attempt to export the file after additional updates, you will receive an error. The updated XML file must be exported, a new workbook mapped, then the updated XML imported into the new Excel mapped workbook.

Because of the error received when exporting with a saved workbook with XML mapping in Excel 2010, the template distributed with the XML Specifications will only work with Excel 2003 or Excel 2007. If the template is opened in Excel 2010 an error will be received when attempting to import an XML file.

Figure 3-18 shows the error received when attempting to import from a saved Excel workbook.

**Figure 3-18. Error when Importing from a Saved Excel Workbook**

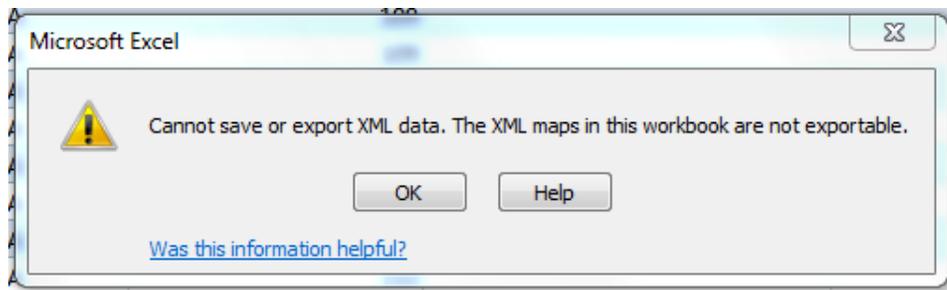


### 3.6.2 Patient Discharge XML

The Patient Discharge XML cannot be created with Excel because multiple discharges may exist for each patient. If the Patient Discharge XML is imported and an attempt is made to export the data an error indicating that the XML maps in the workbook are not exportable.

Figure 3-19 shows the error received when attempting to export from a saved Excel workbook.

**Figure 3-19. Error when Exporting from a Saved Excel Workbook**



### 3.7 Removing the XML Mapping (Patient Discharge Only)

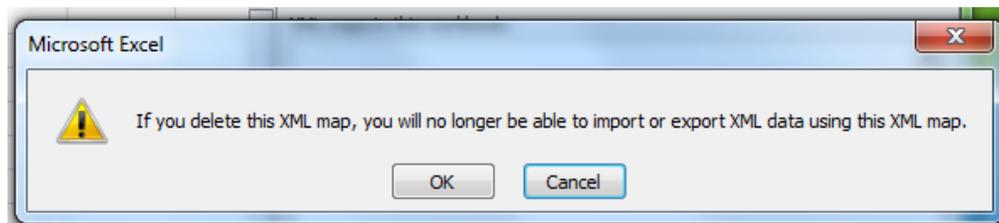
The Patient Discharge Excel workbook cannot be used to create XML, so the XML mapping may be deleted in order to allow the workbook to be saved and reopened. Once the XML mapping is removed, the file has the same functionality as an Excel workbook that does not use XML mapping.

To remove the XML mapping:

1. If the XML Source has been closed, select the **Developer Ribbon**, then select **Source**.
2. Select the **XML Maps...** button.
3. Select the **Delete** button.
4. Select the **OK** button on the Microsoft Excel confirmation popup.

Figure 3-21 shows the confirmation received after selecting the **Delete** button on the XML Maps window.

**Figure 3-20. Confirmation to Delete XML Map**



5. Select the **OK** button on the XML Maps window.
6. Close the XML Source by selecting the **Source** option in the Developer tab, or selecting the “**X**” in the upper right corner of the XML Source.

### 3.8 Editing the Exported Patient XML File

Excel adds a target name space to the exported XML tags. These tags must be removed before uploading the file into the ACO GPRO Web Interface.

The template for the Patient XML file has had the header information removed to allow import of the XML files into Excel. The header needs to be added prior to uploading the file into the ACO GPRO Web Interface.

### 3.8.1 Remove the Name Space from the XML Tags

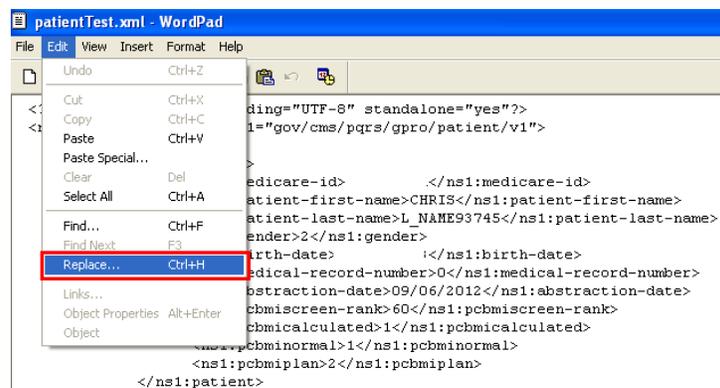
The directions below provide the information to remove the name space using WordPad. If any other editor is used, care should be exercised when saving the file to ensure that hidden characters or non UTF-8 characters are not added to the file. Files should be saved using UTF-8 encoding.

To remove the name space added by Excel:

1. Open the file with WordPad and click **Edit**.
2. Click **Replace** from the Edit toolbar option.

Figure 3-21 shows a file in WordPad with the Replace option highlighted.

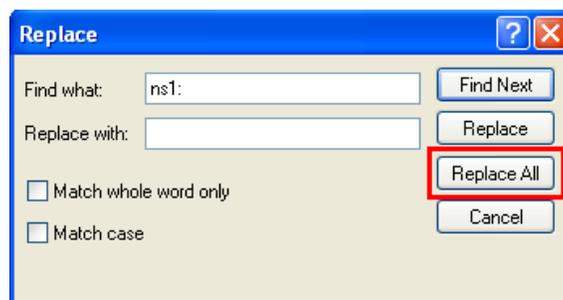
**Figure 3-21. Editing XML File Using WordPad**



3. The **Replace** screen is displayed
4. **Enter** "ns1:" in the **Find What:** field
5. Leave the **Replace with:** field blank
6. Click **Replace All**

Figure 3-1 shows the Replace screen in WordPad used to remove the name space.

**Figure 3-22. Removing Name Space Using WordPad**



### 3.8.2 Add the Header, Audit Data, and Group Identification Data to the XML File

The Header and Group Identification Data are required in the file. The Audit Data is optional to provide tracking information on the file. The lines below should be added to the beginning of the file. The header must be an exact match to the header provided below. Replace the “MM/DD/YYYY”, “HH:MM”, “XXXXXX” in the lines below appropriate data in the file. The Taxpayer Identification Number in the file must match the Taxpayer Identification Number associated to the IACS ID of the user uploading the data.

The following three lines are added when the XML file is created by Excel. They should be removed.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns1:submission xmlns:ns1="gov/cms/pqrs/gpro/patient/v1">
  <ns1:aco-gpro>
```

After removing those lines, insert the following lines at the top of the file. Note that the <submission> element should be on one line without line returns.

```
<?xml version="1.0" encoding="UTF-8"?>
<submission version="1.0" type="ACO-GPRO-PATIENT"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:noNamespaceSchemaLocation="PQRS-ACO_Patient.xsd"
xmlns="gov/cms/pqrs/aco/patient/v1">
  <file-audit-data>
    <file-number>1</file-number>
    <create-date>MM/DD/YYYY</create-date>
    <create-time>HH:MM</create-time>
    <create-by>XXXXXX</create-by>
    <version>1.0</version>
  </file-audit-data>
  <submission-period-from-date>01/01/2012</submission-period-from-date>
  <submission-period-to-date>12/31/2012</submission-period-to-date>
  <aco-gpro>
    <aco-tin>XXXXXX</aco-tin>
```

### 3.8.3 Save the Modified File with UTF-8 Encoding

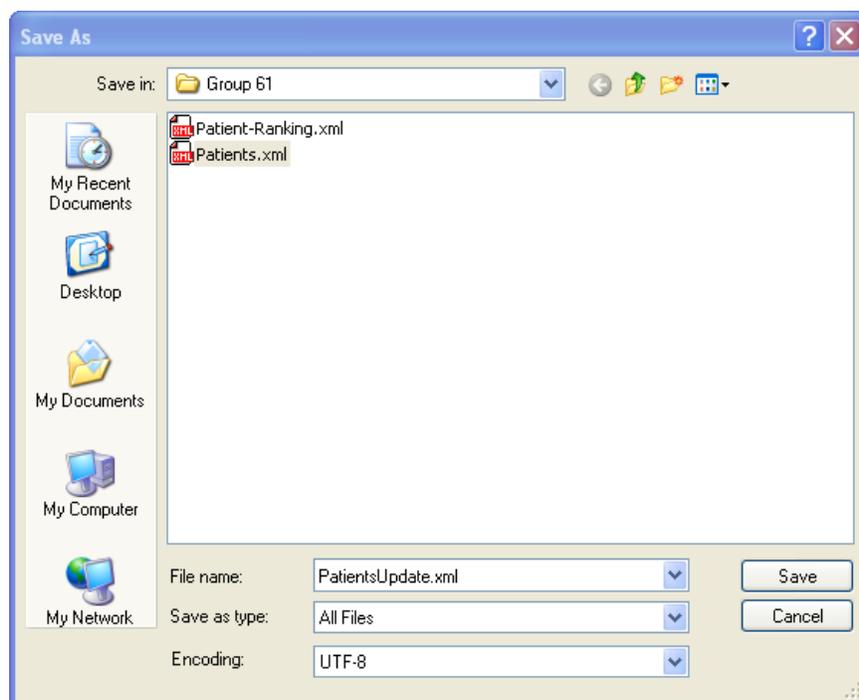
After modifying the file to remove the Namespace and replace the header, the file must be saved with UTF-8 Encoding. Files that are not saved with UTF-8 encoding will fail the XML format validation.

To save the file with UTF-8 Encoding in Notepad:

1. Click **File**.
2. Click **Save As**.
3. Enter the file name with a .xml extension in the **File name:** field.
4. Select **All Files** in the **Save as type:** pull down menu.
5. Select **UTF-8** in the **Encoding:** pull down menu.
6. Select **Save**.

Figure 3-23 shows the **Save As** window with the UTF-8 selections needed when saving the file.

**Figure 3-23. Saving File with UTF-8 Encoding**



## **APPENDIX A – ACRONYMS**

This section describes the acronyms used in this document.

<b>Acronym</b>	<b>Description</b>
ACO	Accountable Care Organization
GPRO	Group Practice Reporting Option
XSD	XML Schema Definition
XML	Extensible Markup Language