Integrating the Healthcare Enterprise

IHE Patient Care Coordination (PCC)

Technical Framework Supplement

Cross-enterprise Tumor Board Workflow Definition (XTB-WD)

Public Comment

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Foreword

This page is standard language for all IHE supplements. The Introduction section following will list all other IHE documents that are modified by this supplement. This document is a supplement to the IHE PCC Technical Framework Revision 7.0 The technical framework can be found at http://www.ihe.net/Technical_Framework/index.cfm#pcc.

This and all IHE supplements are written as changes to a base document. The base document is normally one or more IHE Final Text documents. Supplements tell a technical editor and the reader how to modify the final text (additions, deletions, changes in wording). In order to understand this supplement, the reader needs to read and understand all of the base documents that are modified by this supplement.

In this supplement you will see "boxed" instructions similar to the following:

Replace Section X.X by the following:

These "boxed" instructions are for the author to indicate to the Volume Editor how to integrate the relevant section(s) into the overall Technical Framework.

This format means the reader has to integrate the base documents and the supplement. When the material in the supplement is considered ready for incorporation into the final text of the Technical Framework, the IHE committees will update the technical framework documents with the final text. Supplements are written in this format to avoid duplication material. This means that two IHE documents (one possibly final text, and the other a supplement) should not contain contradictory material.

Text in this document is not considered final for the Technical Framework. It becomes Final Text only after the IHE PCC Technical Committee ballots the supplement (after testing) and agrees that the material is ready for integration with the existing Technical Framework documents.

It is submitted for Public Comment starting <Month XX, 20XX>

Comments on this supplement may be submitted to http://forums.rsna.org:

1. Select the "IHE - Integrating the Healthcare Enterprise" forum
2. Select "PCC Technical Framework"
3. Select "2012 Supplements for Public Comment"
4. Select Cross-enterprise Tumor Board Workflow Definition

Please use the Public Comment Template provided there when starting your New Thread.

Details about IHE may be found at: www.ihe.net

Details about the IHE Patient Care Coordination may be found at:
http://www.ihe.net/Domains/index.cfm

Details about the structure of IHE Technical Frameworks and Supplements may be found at: http://www.ihe.net/About/process.cfm and http://www.ihe.net/profiles/index.cfm

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Introduction

This supplement is written for Public comment. It is written as addition to the documents listed below. The reader should have already read and understood these documents:

1. PCC Technical Framework Volume 1, Revision 7.0
2. PCC Technical Framework Volume 2, Revision 7.0

This supplement also references other documents[1]. The reader should have already read and understood these documents:

1. IT Infrastructure Technical Framework Supplement Cross-enterprise Document Workflow (XDW)
2. IT Infrastructure Technical Framework, Latest Revision
3. The Patient Identifier Cross-Reference (PIX) and Patient Demographic Query (PDQ) HL7 v3 Supplement to the IT Infrastructure Technical Framework.
4. HL7 and other standards documents referenced in Volume 1 and Volume 2

Open Issues and Questions

Introduction

This proposal arises from the necessity of different actors to manage the Tumor Board workflow. Looking at the process, both the workflow and the content form an integral part of this process. We therefore propose to combine an XDW Definition profile and PCC Content Integration Profile to define the Care Pathway for a Tumor Board review.

The value statement of this proposal is:

- the creation of a workflow definition for the management of a tumor board, including scheduling, tasks, and documents. Also, the tracking of the status of all workflow components;

- the monitoring of documents used in the process, and the creation of an integrated TB report to document the conclusions and recommendations;

- the creation of an instrument able to respond at the present needs and possibly to extend to future requirements.

[1] The first three documents can be located on the IHE Website at http://www.ihe.net/Technical_Framework/index.cfm#IT. The remaining documents can be obtained from their respective publishers.

- Templates of XDW Workflow Documents and the linked Input and Output documents can be stored together in Patient Care Coordination to create a Tumor Board Review care pathway.

The Cross-enterprise Tumor Board Workflow definition profile proposal connects two domains, ITI and PCC, leading to the complete management of a oncological care pathway. In fact, with the support of the first domain and, in particular, of the XDW profile, it increases the consistency of workflow interoperability and it is allowed to share and update all events of the process between different enterprises. The PCC domain has the duty to define the specific workflow, in this case the workflow processes and a reference to all related document content around a Tumor Board Review. The workflow definition can be understood and executed among the participating systems/applications. The orchestration of a specific workflow allows the workflow participants to share a common understanding of the specific tasks, the dependencies between these tasks, and a number of rules that control the workflow execution and leading the interoperability between different information systems. Execution details, task staging and references to the relevant input- and output documents are conveyed through the XDW Workflow Document. The input- and output documents that accompany each workflow are step can be defined in the PCC domain. These documents may be described by their function, that is: the role or function of the documents in the process. As an example, one of the input documents for a Tumor Board Review may be defined as a Radiological Diagnostic Study. The actual document used for a certain patient may be a CT scan or an MRI, both of which perform the same function . In the XTB-WD profile, both input- and output documents are described by their function. The technical type of then document is described in the XDS realm, the function it performs in a workflow is within the domain of the PCC Workflow Definition profiles.

Open Issues

3. What should be the format of a XTB-WD template document?

Answer from Luca Zalunardo, 13-03-2012:

I've not an answer: it could be just a .doc document and the different application implement the rules inside their business logics, it could be a more automate description (BPEL, etc). For a linear workflow as the tumor board could be I suggest to create a complete WD document as example and use a document to describe the rules. In the future I'm sure that we will define with IHE a coded way do define a template but at the moment it is too early.

NOTES - Luca: ITI must also be involved in the CDA format of the template.
Anna Orlova - Lisa Nelson - Consolidated CDA document, 2nd version of CDA (HL7)
Keith Boone is involved as well – next Face2Face? Care Plan: Face2Face (April, Chicago).

NOTES from Lynn Felhofer, 27-03-2012:

- general: Before you finally publish this, you will need to use the Vol 1 template to represent the Actors, Options and Groupings in a standard IHE way. Perhaps it's early in the development

of the document to have used the template.
See: ftp://ftp.ihe.net/../Document_templates/Supplement_template/

- 1.11.2: For eventCodeList, I think you are setting this value in line with the XDW workflow element workflowStatus. If so, the value is either OPEN or CLOSED (ie not CLOSE). I think it would help to refer specifically to that element
- 1.11.3: How is both documentID and homeCommunityID encoded for the input & output?. I see it in your examples, but perhaps we need a **CP** to XDW?
- 1.11.4: It would help your readers if you used the actual XDW elemen, eg Task type should be taskType – nog nog uniformeren
- 1.11.4: Note that your example is missing some req'd elements

Closed Issues

1. How should XDW documents be linked to each other?
In the current situation, an XDW document can be added as output document. Is this enough for linking purposes, or is a stronger linking mechanism necessary? In practice, a care pathway of a patient is described by a series of smaller XDW documents. Each of these steps describe a part of the care pathway, and we are looking for a way to connect these XDW documents.
Also, some Workflow definitions are a description of one of the steps in another Workflow definition, see the example in Chapter 1.5. In this case, there is a kind of hierarchy in the description of the tasks, where a Step in one WD is described in more detail (and more steps) in another WD. We think that the Owner of a certain Step should have the possibility to register what WD he has used to perform that Step, thereby linking the two XDW documents logically together. In other words: the Owner of a Step says: these are my Input- and Output Documents, and I used WD <XYZ> for the execution of the step.
Is it possible to add a parameter to a Step that holds this kinf of rerefence to a 'lower-level' Workflow definition document?

Answer from Luca Zalunardo. 13-03-2012:

```
After an analysis I think that it could be sufficient that if you have 2 WD
related each other you use the input and output element of the task as link.
In this case as link you have to use not the documentId of the new WD but the
folderId in which the WD to be linked is (you have to use the folderId
because the WD is replaced step by step and so the documentId is not fix;
inside the folder you have just one WD in approved status). If you put a
reference to a new WD folder as input/output of the task it means that you
should see the new workflow document to understand the workflow related.

We have had the same doubt when we have written the XDW but during the
discussion inside the committee it seems sufficient. The problem we have had
was that we haven't simplified sufficiently the workflow and we have
discovered that the same workflow could be described at the same way in a
simpler way. In the example you have proposed you could have one WD which is
```

the main WD and for each task (where necessary) you can link a different WD to specified the process inside the task.

Only a suggestion, describe the process as simple as possible because otherwise you will be the only implementer (as it has happened in the pharmacy domain). You should write a profile which could be used in many different realities.

Decision: When linking Workflow definitions, there are two possibilities. The first is that at the end of a Workflow Definition, there is a link to the next phase of the process. In this case as link you have to use not the documentId of the new WD but the folderId in which the WD to be linked is (you have to use the folderId because the WD is replaced step by step and so the documentId

2. What should happen if a TBR request has been performed, but the Requestor revokes the request?

Answer from Luca Zalunardo, 13-03-2012:

It is a rule you have to define in the profile.
Decision: this is described in step 1 of the proces: RequestTBR (see 1.11.4)

4. Add Type / Function properties to an input- or otput document description.
In order to describe the type of input- and output documents that is expected in the pre-definition of a workflow, it should be possible to describe the type or function of a document.
Luca: Document already shared in the XDW-implementors Google group
The following changes have been made to the XDW technical framework definition:
<<xxx this part needs to be copied to chapter 1.11.4

```
<ns2:input>
            <ns2:part name="xdw">       <!--Lab Report-->
              <ns2:attachmentInfo>
                <ns2:identifier>urn:oid:1.2.3.4.4.1</ns2:identifier>
                <ns2:name></ns2:name>
                <ns2:accessType>urn:IHE:iti:2011:xdw:XDSregistered</ns2:accessType>
                <ns2:contentType></ns2:contentType>
                <ns2:contentCategory></ns2:contentCategory>
                <ns2:attachedTime></ns2:attachedTime>
                <ns2:attachedBy></ns2:attachedBy>
              </ns2:attachmentInfo>
            </ns2:part>
          </ns2:input>
          <ns2:output>
            <ns2:part name="xdw">     <!--eReferralDoc1-->
              <ns2:attachmentInfo>
                <ns2:identifier>urn:oid:1.2.3.4.4.2</ns2:identifier>
                <ns2:name></ns2:name>
                <ns2:accessType>urn:IHE:iti:2011:xdw:XDSregistered
                </ns2:accessType>
                <ns2:contentType></ns2:contentType>
                <ns2:contentCategory></ns2:contentCategory>
                <ns2:attachedTime></ns2:attachedTime>
                <ns2:attachedBy></ns2:attachedBy>
              </ns2:attachmentInfo>
            </ns2:part>
```

```
</ns2:output>
```

5. How should XTB-WD be tested?

The different steps in a workflow can be described as 'lightweight' actors. These are grouped with one or more of the XDW actors (Content Creator, Content Consumer and Content Updater). By describing the actors for each step of the workflow (grouping), the tasks that have to be performed can be described. We propose to deliver a 'test-set' of documents that can be used by all participants in the Connectathon, as well as some expected end-results in terms of what the XDW documents should look like at the end of each stage of the process.
Luca Zalunardo wrote:

```
Luca Zalunardo, 13-03-2012:
At the connect-a-thon I think there will be 2 level of tests:

- basic level: the different actors have to create/read/update (it depends by
the actor tested) a WD. For example if we are testing the actor content
updater we will check it is able to read a WD and update it (the tests will
be done in an XDS-b infrastructure)

- scenarios test: we will simulate for example a tumor board workflow with
the update of the XDW step by step.

The definition of the test will be done by Lynn. Remember that XTB-WD is not
under test this year so it will be just a scenario. I don't know what will be
the final decision of Lynn for the tests.

Lynn should provide to all the participants a test description at the end of
the month.
```

7. Can the Owner of a certain step change anything in another step, such as it's state or input document?

We would advocate that this should be possible, especially if you look at the XDW documents as posible drivers for processes.
An example: after the Requestor in Step 1 (Request TBR) has written the Request Document, this document may be one of many output documents in the first step. The Owner of the first step knows what document is needed as Input document for the second step. Our proposal would be, that the Owner of the first step changes the status of that step to 'Completed', and of the next step to 'Ready'. This could function as a trigger for any XDW-document monitoring applications to pick up the availability of a next action that has to be performed.
In pseudocode, at the end of Step 1 the document should look like this (the parts that the Owner of Step 1 has changed are in **bold**):

Step 1 – Request TBR
Status = **Completed**
Input Function = 'Medical Documents'
Input = **<link to CT scan (in XDS Registry)><link to Pathology report>**
Output Function = 'Request Document'
Output = **<link to Request Document><link to Medical Summary>**

Step 2 – Schedule TBR
Status = **Ready**
Input Function = 'Request Document'
Input = **< link to Request Document >**
Output Function = 'Decision Note'
Output = <>
Step 3 – Prepare TBR
Status = Created
Input Function = 'Decision Note'
Input = < >


```
      Output Function = 'Request Document'
      Output =  <>
Step 4 – TBR Meeting
      Status      =  Created
      Input Function   = '(Any documents)'
      Input       = <>
      Input Function   = 'TBR Report (preliminary)'
      Output =  <>
Step 5 Finalize TBR
      Status      =  Created
      Input Function   = 'TBR Report (preliminary)'
      Input       = <>
      Input Function   = 'TBR Report (finalized)'
      Output =  <>
```

```
Luca Zalunardo wrote:
... I think that you have a problem when something change in the linear
process (the workflow stops earlier for example) because you have to cancel
all the tasks already created (or move all to a status cancelled and it can
confuse). What I can suggest is to create the next task in status ready (or
in the status defined by the profile) when you want to create the trigger
event. You will have the same result in a simpler way I think.
```

Luca
Next week mockup documents and testing scripts Eric Poiseau and Lynn .

8 Are all input- and output documents in a XDW document available to all the steps in the Workflow Definition?
We propose to include the note in the XDW Technical Framework Supplement, that makes clear that:

The purpose of the Input Documents have lead to some discussion, so we would like it to be specified, that previously entered documents may be used by later steps. If you look at the schema above (question 7), the Owner of Step 2 has the Request Document as input, but must also be able to view the Medical Documents that have been entered as Input Documents of Step 1. Also, in Step 4, the term (All Documents) refers to the idea, that all input- and output documents in the XDW document are accessible for any Step in the process. In other words: if they are not specificially mentioned as input Document, they should still be accessible. So, in fact, the Input Documents – part of Step 4 can be left empty if desired. Input Documents are meant as direct input for a step, and any other documents that help in a certain step are accessible, so they do not have to be specifically mentioned.

```
Answer from Luca Zalunardo, 13-03-2012:
```

I think that it is better not to specify because there could be some use cases in which this is not request or it is forbidden. This note has to be done inside the workflow definition profile as a rule.

I have some example in which someone would like that the author of the task can see only the documents in input of that task or at least the document in output of the previous one and XDW has to be sufficient flexible to support all the use cases.

*** Complete at the end***

Version history

v0.3.3	January 23rd, 2012	Vincent van Pelt
v0.3.4	Februari 17th, 2012	Vincent van Pelt

Volume 1 – Profiles

Add the following to section 1.1.5

1.1 Copyright Permissions

Add the following to section 2.5

1.2 Dependencies of the PCC Integration Profiles

Cross-enterprise Document Workflow	XDW	<?>	<->

Add the following to section 2.7

1.3 History of Annual Changes

Add Section X

Introduction to the Cross-enterprise Tumor Board Workflow Definition Profile

Screening, diagnosis, treatment and aftercare of oncological patients require cooperation of a multidisciplinary team of healthcare professionals. Typically, an oncological care pathway is both multidisciplinary and cross-enterprise, with participants from different specialisms and different hospitals. In order to be able to work together, the participating specialists, nurses and paramedics need an overview of the current status of the process, what steps have been completed and what steps are planned. They also need the images, reports and other documents that have been created in the different steps of the process.

1.4 Purpose

In many countries, the Tumor Board Review is an important step in the multidisciplinary oncological care pathway. These reviews are meetings where a team of medical professionals of different professions, and often from different hospitals, get together (physically or by remote conference) to weigh all the different medical information, discuss the cases, and advise on the further treatment of the patient. Most Tumor Board Review (TBR) meetings are held for specific tumor types, such as oesophageal cancer, colon cancer, lung cancer, et cetera.
The main output of a TBR is a report of the collective findings, conclusions and recommendations for the further treatment of the patient. This may also be a decision whether a patient should be included in a trial. Tumor Board reviews are held after the diagnostic studies have been completed (pre-therapeutic TBR), and often also after the treatment of the patient (post-therapeutic).
Tumor Board Review meetings also serve as a platform for sharing the latest guidelines, developments and insights in the diagnosis and treatment of the cancer type.

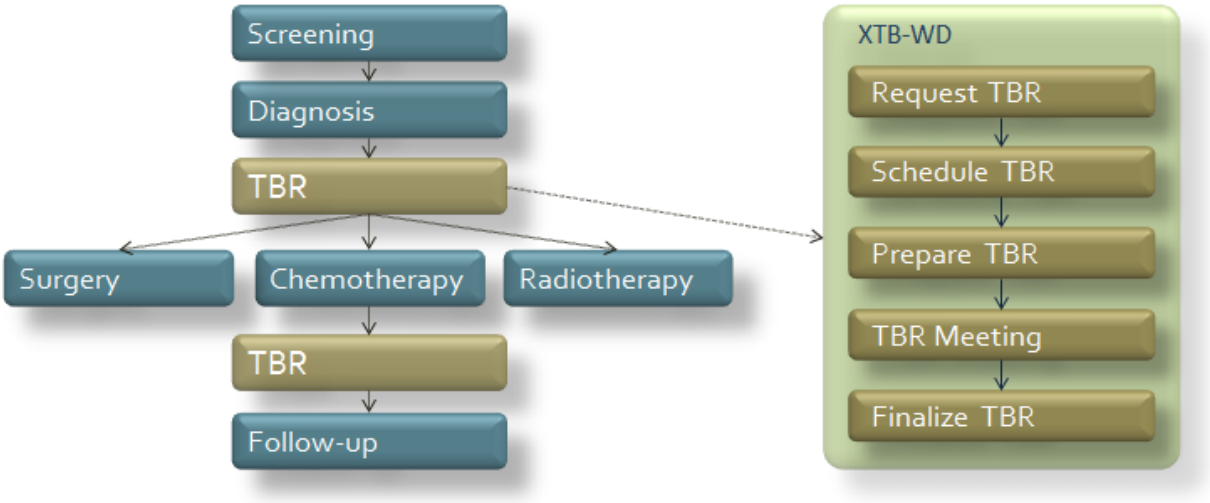
On average, between 5 and 20 Tumor Board meetings are held each week in a hospital. Between 5 and 15 patients are being reviewed, each taking about 5 minutes.
A typical TBR team consists of the following participants:

Role	**Function(s)**
<specialist>	diagnosis, (surgery)
Radiologist	review of medical images
Pathologist	review of biopsies
Oncologist	chemotherapy
Radiotherapist	radiotherapy
Specialized nurse	counseling, main contact person

Also, other healthcare professionals such as plastic surgeons, case managers, psychologists, or others may participate; in cross-enterprise settings, there can be more than one radiologist or pathologist.

1.5 Scope

The Cross-enterprise Tumor Board Workflow Definition (XTB-WD) describes the different steps of a Tumor Board Review process, and the accompanying information in the form of input- and output documents that are linked to the different steps in the process. The XTB-WD describes a relatively small part of a larger workflow definition, in this case an oncological care pathway. Other parts of the oncological pathway will be defined in a later stage. The different Workflow definitions can be used as 'building blocks' to describe the actual care pathway of an individual patient. Below is a schema that shows the position of this Workflow Definition in an oncological pathway:



During a care episode, different Workflow Definition documents, some of which are linked together, describe the actual steps of the care pathway. The relative unpredictability of the different steps in a care episode requires a flexible method that allows the total process to be divided into smaller steps. The XTB-Workflow Definition is one of those building blocks. By linking different WD documents, the relation between the different XDW documents can be created.

Instantiation

XTB-WD documents are XDW documents with a specific content. They are created from the XTB-WD template document, and for each workflow and each patient, a new XTB-WD document is created. XDW documents record the task state, input- and output documents for each individual Tumor Board Review (TBR).

Workflow Definition documents can be linked by adding an XDW document as output document. The possibility to refer to other workflow definitions in XDW enables the description of all the steps and processes in complex care pathways through the combination of smaller Workflow Definition documents. In this way, a more flexible and practical workflow description is created, is **Appendix A**, at the end of this document, shows an example of the nesting / linking of Workflow Definitions.

1.6 Deployment

The XTB-WD is easy to deploy: no additional centralized infrastructure is necessary. It is an instantiation of a XDW Workflow Document, which in its turn builds upon the already secured sharing of health documents provided by other IHE profiles such as XDS, ATNA, CT and BPPC. The XDW actors (Content Creator, Content Updater and Content Consumer) are the main (and currently the only) actors of this profile.

1.7 Process Flow

1.7.1 Stages of a Tumor Board Review process

A typical Tumor Board Review (TBR) can be described by the following chronological steps:

1. **Request TBR**
2. **Schedule TBR**
3. **Prepare TBR**
4. **TBR Meeting**
5. **Finalize TBR**

Each step in this Workflow definition is accompanied by input- and output documents, as shown in the schema below:

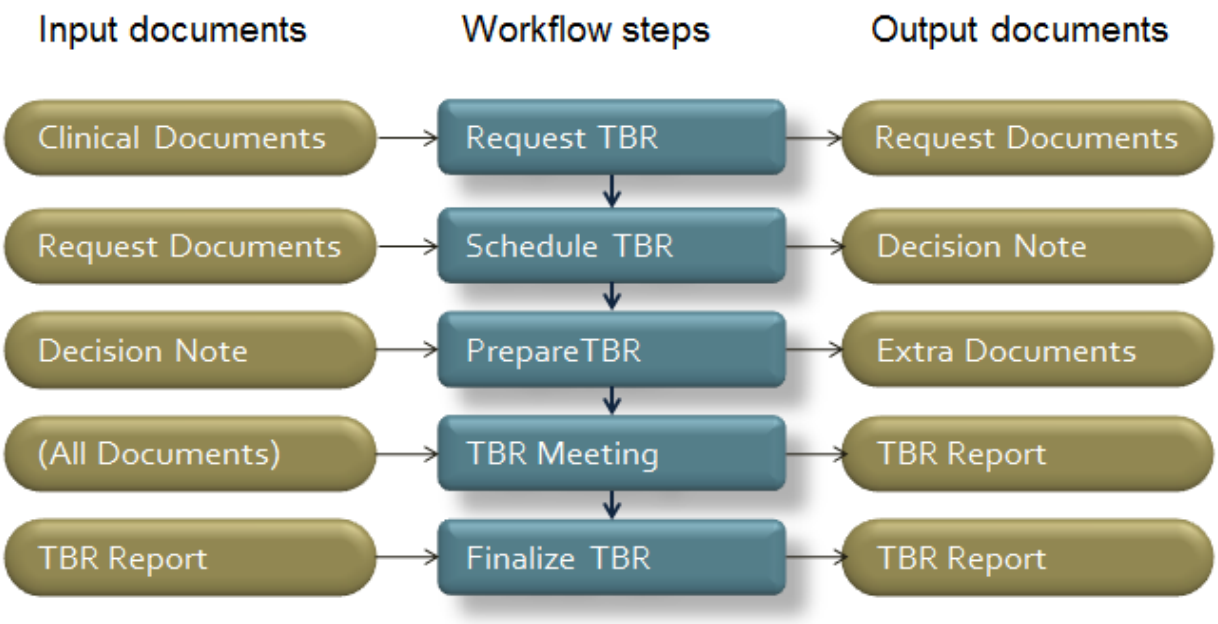


Figure 1 - XTB-WD steps and documents

The steps are explained b elow.

- **Request TBR**
  If a patient meets the in- and exclusion criteria of a certain Tumor Board Review, the attending physician may decide to present the case to the Tumor Board for review. The owner of this step is called the Requestor. In this step, any documents, images or reports that have led to the diagnosis of the patient may be added as Input Documents for this step. As Output Documents, the Requestor describes the reason for referral, and gives a short description of the patient's case. Any other medical information can be added as input for the next step.
- **Schedule TBR**
  The owner of this step is called the Scheduler, This can be the chairperson of the TBR, or a medical secretary. The Scheduler reads the request for admission to the TBR, checks the inclusion- and exclusion criteria for the TBR at hand. The Scheduler uses the information that has been attached to the first step for the assessment, and decides whether, and when, the case will be presented in one of the next TBR meetings. The Output Document of this step is the Decision Note, that describe the decision of the Scheduler if, and when, the patient will be presented. This Decision Note can be sent to the requestor. For each requested patient, a decision Note is created. The Decision Notes can be used to create the work list for the next Tumor Board review.

- **Prepare TBR**
  In this phase, all members of the Tumor Board have access to all the images and documents that have been linked to the TBR workflow so far. This information can be used to prepare for the actual meeting. In the case where extra input from any of the members is requested, a second opinion or report may be added to this step as Output Document. Also, if someone wishes to pose a question or a remark on the case, he or she can add this as an Output Documents. This also creates the possibility of a discussion between the members even before the actual TBR Meeting, to increase the efficiency of the actual meeting
- **TBR Meeting**
  In this stage, all members of the Tumor Board convene and discuss the cases that have been scheduled , using all relevant information that has been gathered by the team members. The discussion between members leads to a consensus-based diagnosis, and a recommendation for the further treatment of the patient. These findings and recommendations are written down by a minutes secretary, and must be validated by all participants. This is used as the Output Document of this stage, and is called the Preliminary Tumor Board Report.
- **Finalize TBR**
  In the final phase of the workflow, the Preliminary Tumor Board Report is used to create the Final Tumor Board Report, which is the output Document of this step. This consists of a document with the relevant patient information, the original request of the Requestor, and the information of the Preliminary Tumor Board Report. The exact content of this report may vary between the specific Tumor Boards. The Final Tumor Board Report document can be sent to the designated recipients of the Report, such as the Requestor, the General Physician of the patient, or any other party.

Any type of Tumor Board Review workflow can be described in these five simple steps. As is the case with XDW, each step of the Workflow Definition can be viewed as a black box as far as the execution of the task is concerned.

Xxx hier nog nog verwijzing naar linken van xdw documenten, (protocollen RT)

The Owner of a step can decide how the task is being performed, as long as the defined output documents are being filled in properly. The difference between a TBR for colon cancer and lung cancer lies in the definition of the content of the input- and output documents that are linked to these steps. The actual content of the documents depend on the type of tumor, the agreements between different parties and the technical possibilities to import and export these documents.

1.7.2 Analysis of the current situation

For the correct management of a Tumor Board Review, each of the participants of the Tumor Board should have the possibility to share and manage the patient's complete clinical picture.

Currently, this is not possible, as there are no standardized means of monitoring and managing the different stages of the workflow, or of the information created in these different steps.

The key elements for improvement of the current processes are:

- Managing TBR workflow
- Tracking the relevant events and related documents
- Tracking of the status of each subtask in the workflow
- Access to all relevant images, reports and other documents created in the process
- Linking the created documents to the different steps in the process, thereby defining the context of these documents

Problems with the current processes

In the current situation, problems arise at all of the above stages:

1. Request TBR

   Specialists complain about the cumbersome process of gathering the necessary images, reports, and excerpts from their EPR. Currently, texts are faxed (and have to be re-entered into the EPR of the hospital where the TB meeting is held), and images are sent by CD or DVD. The images and reports on these cd's have to be linked manually to the right patient in the receiving HIS/EPR. This is a time consuming and error-prone process.

2. Schedule TBR

   The chairperson of the Tumor Board has to decide whether the patient fits the constraints for the particular TB meeting, and whether all necessary documents and images are available. If the maximum number of patients has been reached, the chairperson has to determine which patients can be postponed to a later TB meeting. These tasks are time-consuming and often require extra phone calls to the requestor. There is no overview of the status of all requests.

3. Prepare TBR

   In the current situation, results from diagnostic studies such as CT scans, X-ray images and endoscopic images can only be seen by the radiologist. Faxes have to be copied if someone wishes to prepare the TB meeting beforehand. In most cases, preparation is not possible for most team members except the radiologist.

4. TBR meeting

   During the TB meeting, sometimes patients that where scheduled cannot be discussed because DVD's have not arrived on time, or not at the right address, or have not yet been linked to the patient.

   Since the patient come from different hospitals, the medical information is presented in different ways, on different EPR systems. Since most participants have never met the patients they discuss, this can lead to confusion. Also, the notes that are taken during the discussion of a patient can often not be seen or checked by the all participants.

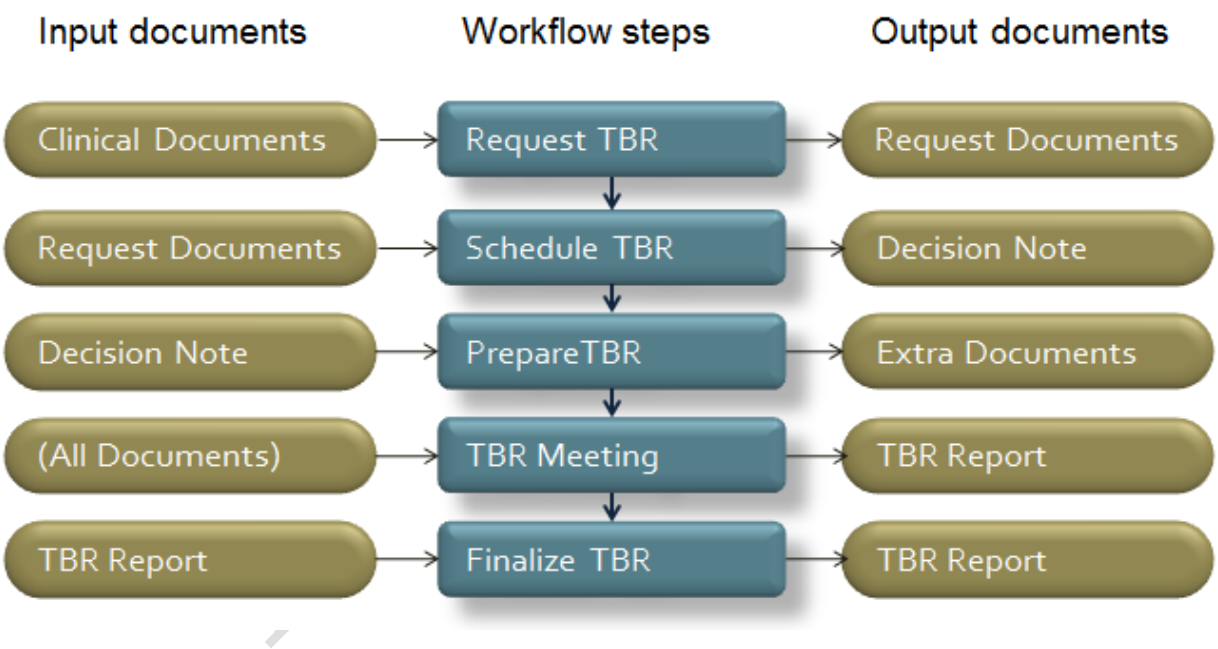
During the TB meeting, a minutes secretary writes down the findings, conclusions and recommendations for treatment of the patient. These texts have to be checked and validated by the chairperson.

5. Finalize TBR

After the TB meeting, the validated findings, conclusions and recommendations are incorporated into a Tumor Board Review Report. The TBR report is then distributed to the Requestor, and often also to the GP of the patient, and any other designated care professional. Currently, this is a time consuming process, with manual insertion of the texts into a document that has is not automatically created or distributed.

1.7.3 Diagrams

<Description of the process flow(s) and sequence diagram(s) covered by this profile in order to satisfy the use cases. If there are detailed behavioral rules that apply to a specific process flow or multiple process flows or descriptions then an appendix may be added as needed>



XDW Content Profile

1.8 Actors / Transactions XDW

<Actors are roles that are played by a system. A system may have multiple actors. This section shall contain Actor/Transaction diagrams and an Actor/Transaction table. See below for general guidelines for Actors/Transactions>

The XDW Content Profile is based on three actors, the Content Creator, the Content Consumer and the Content Updater. Content is created by a Content Creator or a Content Updater and is to be consumed by a Content Consumer or a Content Updater. The sharing or transmission of content or updates from one actor to the other is addressed by the use of appropriate IHE profiles described in the section on Content Bindings with XDS, XDM or XDR.

An XDW Content Creator shall be able to create new workflows by creating a new XDW Workflow Document and placing it into a new folder. A Content Updater shall be able to contribute to existing workflows by consuming an existing Workflow Document and replacing it with an updated XDW Workflow Document. A Content Consumer may only obtain and read XDW Workflow Content Documents.

NOTE: the term Content refers to the content of the XDW document itself, and not the input- or output documents that are being referred to in the XDW document.

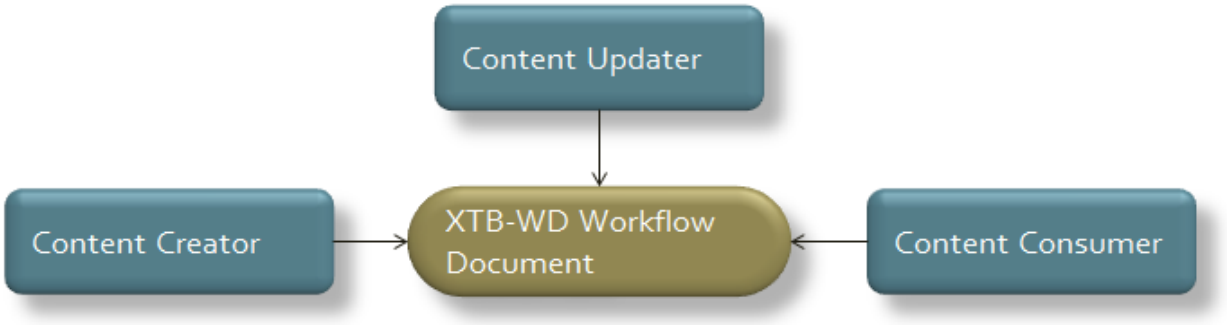


Figure 2 - XDW actor diagram

1.8.1 Cross-Enterprise Document Workflow Profile Options

Options that may be selected for this Profile are listed in the table 30.2-1 along with the Actors to which they apply.

Table 30.2-1 XDW - Actors and Options

Actor	Options	Vol & Section
Content Creator	*No options defined*	- -
Content Consumer	*View Option*	ITI TF-1: 30.2.1
	Document Import Option	ITI TF-1: 30.2.2
Content Updater	*View Option*	ITI TF-1: 30.2.1
	Document Import Option	ITI TF-1: 30.2.2

For more details on the XDW profile, see the following documentation:

1. IT Infrastructure Technical Framework Supplement Cross-enterprise Document Workflow (XDW)
2. IT Infrastructure Technical Framework, Latest Revision

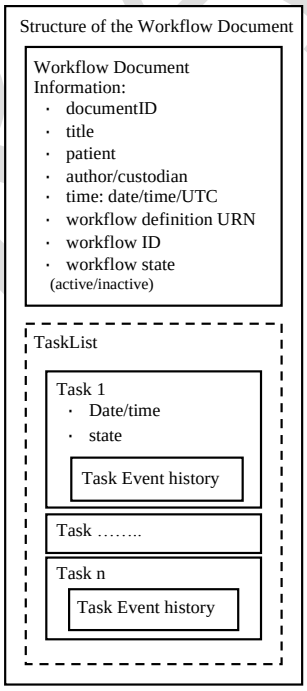


Figure 2.5.3 Workflow Document Structure

1.8.2 XDW Use-Cases and Process Flow in an XDS Affinity Domain

A broad range of use cases may be supported by the XDW Content Profile.

The purpose of this section is to describe a typical use of XDW with no intent to present the breadth and flexibility of XDW. The use case described in this section provides the necessary background to the reader in understanding the basic capabilities of XDW.

The XTB-WD is an example of a Profile defined in the Patient Care Coordination domain, that is based upon the XDW ITI profile.

1.8.3 Cross-enterprise Tumor Board Review Use Case

A typical Tumor Board Review (TBR) can be described by the following chronological steps:

1. **Request TBR**
2. **Schedule TBR**
3. **Prepare TBR**
4. **TBR Meeting**
5. **Finalize TBR**

Each step in this Workflow definition is accompanied by input- and output documents, as shown in the schema below:

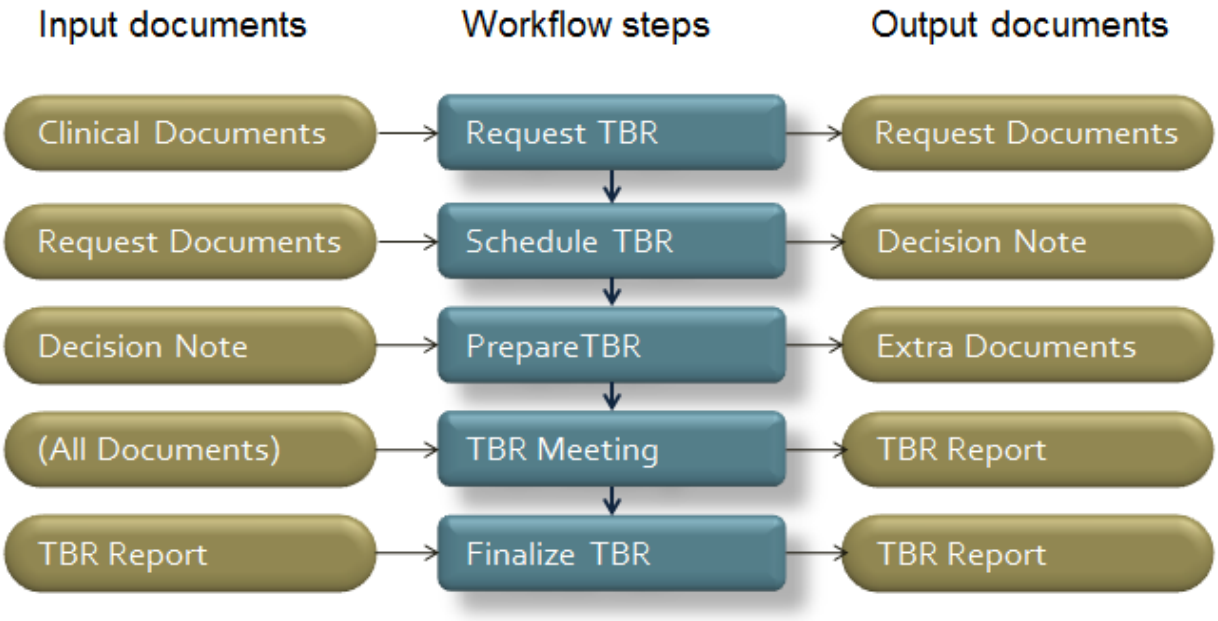


Figure 3 - steps and related functional document descriptions

1.8.4 Referral Workflow Use Case - Step by Step

We present below the detailed chronological sequence of steps:

- **Request TBR**
  If a patient meets the in- and exclusion criteria of a certain Tumor Board Review, the attending physician may decide to present the case to the Tumor Board for review. The owner of this step is called the Requestor. In this step, any documents, images or reports that have led to the diagnosis of the patient may be added as Input Documents for this step. As Output Documents, the Requestor describes the reason for referral, and gives a short description of the patient's case. Any other medical information can be added as input for the next step.

- **Schedule TBR**
  The owner of this step is called the Scheduler, This can be the chairperson of the TBR, or a medical secretary. The Scheduler reads the request for admission to the TBR, checks the inclusion- and exclusion criteria for the TBR at hand. The Scheduler uses the information that has been attached to the first step for the assessment, and decides whether the case will be presented in one of the next TBR meetings. The Output Document of this step is the Decision Note, that describe the decision of the Scheduler if, and when, the patient will be presented. This Decision Note can be sent to the requestor. For each requested patient, a decision Note is created. The Decision Notes can be used to create the work list for the next Tumor Board review.

- **Prepare TBR**
  In this phase, all members of the Tumor Board have access to all the images and documents that have been linked to the TBR workflow so far. This information can be used to prepare for the actual meeting. In the case where extra input from any of the members is requested, a second opinion or report may be added to this step as Output Document. Also, if someone wishes to pose a question or a remark on the case, he or she can add this as an Output Documents. This also creates the possibility of a discussion between the members even before the actual TBR Meeting, to increasethe efficiency of the actual meeting

- **TBR Meeting**
  In this stage, all members of the Tumor Board convene and discuss the cases that have been scheduled , using all relevant information that has been gathered by the team members. The discussion between members leads to a consensus-based diagnosis, and a recommendation for the further treatment of the patient. These findings and recommendations are written down by a minutes secretary, and must be validated by all participants. This is used as the Output Document of this stage, and is called the Preliminary Tumor Board Report.

- **Finalize TBR**
  In the final phase of the workflow, the Preliminary Tumor Board Report is used to create the Final Tumor Board Report, which is the output Document of this step. This consists of a document with the relevant patient information, the original request of the Requestor, and the information of the Preliminary Tumor Board Report. The exact content of this report may

vary between the specific Tumor Boards. The Final Tumor Board Report document can be sent to the designated recipients of the Report, such as the Requestor, the General Physician of the patient, or any other party.

Any type of Tumor Board Review workflow can be described in these five simple steps. As is the case with XDW, each step of the Workflow Definition can be viewed as a black box as far as the execution of the task is concerned. The Owner of a step can decide how the task is being performed, as long as the defined output documents are being filled in properly. The difference between a TBR for colon cancer and lung cancer lies in the definition of the content of the input- and output documents that are linked to these steps. The actual content of the documents depend on the type of tumor, the agreements between different parties and the technical possibilities to import and export these documents. The input documents and output documents in the XTB-WD definition are not actual documents, but functional descriptions of the documents. For each referred document in the XTB-WD document, two parameters are described: its functional type, and a reference to the actual document (to be found in the XDS Registry) that fulfills theat function.

1.9 XDW Security Considerations

The XDW content profile relies on the security controls in the underlining transport (e.g. XDS). The XDW content is an administrative document that should not include clinical information but administrative information can be just as sensitive as clinical information.

The XDW Workflow Document will be authored by different organizations. As the document is updated the active version will be replaced with a newer version as the workflow progresses. However, with clinical documents it is not expected that organizations will replace documents authored by other organizations, as typically a clinical document comes from only one organization or individual. Therefore in order to adhere to the principle of least privilege organizations want to prevent clinical documents from being replaced by other organizations, while allowing XDW Workflow Documents to be replaced. It is recommended that organizations retain general restrictions on XDS documents, but make an exception for XDW Workflow Documents, based on classCode.

When a Workflow Description Profile is created a risk assessment following the Security Cookbook may result in additional security considerations beyond those for the usual clinical report.

1.10 Options for Workflow definitions

<This section contains a table describing the additional capabilities available for this profile and references to all sections that state requirements for compliance to the Option. Options in a

Profile are synonomous with options on an automobile in that the purchaser of the automobile may choose the sunroof and upgraded stereo options, but is not required to do so in order to purchase and use the automobile. In another example the purchaser may have the option of an automatic transmission or a manual transmission. In this case the purchaser must choose one option or the other as a car cannot be driven without a transmission.>

The management of the workflow related to clinical processes is becoming a fundamental topic with the increasing use by different sectors of document sharing related IHE profiles with their different types of document and information.

XTB-WD Workflow Definition Profile

1.11 Rules for Workflow Definition of XTB-WD

In this chapter a set of rules which defines the workflow of the XTB-WD process and the relationship with the actors involved are described. If real-world scenarious need a technical workflow management the actors involved in the process can use the "Workflow Management" option which groups the XTB-WD actors with the XDW actors.

The ITI XDW profile is a core component of a common, workflow-independent interoperability infrastructure that provides a platform upon which a wide range of specific workflows can be defined by "content specialization" with minimal specification and implementation efforts by the different domains. For the definition of the XTB-WD workflow it is possible to use the ITI XDW profile as an infrastructure layer to define a set logical or clinical tasks definitions and rules to apply. The rules in the workflow definition ensure that the different participants in a workflow operate jointly to advance within tasks and to move from one task to an other in a consistent way.

To integrate the XTB-WD profile with ITI XDW profile it is necessary to introduce the integrations described in the follow paragraphs.

1.11.1 Actors and Grouping

If the "Workflow Management" option is supported the following XTB-WD actors shall be grouped with XDW actors to allow access and manipulation of the XDW-WD (XDW Workflow document).

Actor	Groups with	Note
TBR Requestor	XDW: Content Creator XDW: Content Consumer XDW: Content Updater	The TBR Requestor actor shall create the XTB-WD to start the process. It also consumes and maybe updates the XTB-WD document in case of modification to the Request.
TBR Scheduler	XDW: Content Consumer XDW: Content Updater	The TBR Scheduler actor consumes and updates the XTB-WD after validation of a TBR Request.
TBR Preparator	XDW: Content Consumer XDW: Content Updater	The TBR Preparator actor consumes and updates the XTB-WD after adding a comment or question to the discussion thread.
TBR Report Writer	XDW: Content Consumer XDW: Content Updater	The TBR Report writer actor consumes and updates the XTB-WD after adding the final comment or question to the discussion thread, and creating the Preliminary TBR report document

Actor	Groups with	Note
TBR Finalizer	XDW: Content Consumer XDW: Content Updater	The TBR Finalizer actor consumes and updates the XTB-WD after ceating the Finalized TBR Report and sending it to the TBR Requestor.

1.11.2 XDW Workflow Document – Common Attributes

The XTB-WD Workflow Definition does not introduce new metadata and all the metadata elements used are the common XDS document metadata specified in ITI TF-3:4.1.5 and in ITI TF-3:5.4.6. In this section only the use of some specific metadata for the use of XDW in the XTB-WD context is specified.

XDSDocumentEntry Attribute	Definition
typeCode	For the Workflow Document which tracks the XTB-WD process the code for the typeCode shall be: **urn:ihe:pcc:xtbwd:2012** This code is the same code that shall be use in the element **workflowDefinitionReference** inside the Workflow Document
eventCodeList	Rule 1: An XTB-WD workflow shall be created with code OPEN and shall remain in this status until it is set to CLOSED. Rule 2: An XTB-WD workflow should be set to CLOSED when: - one of the tasks has the status FAILED; or - when you complete the workflow with the TBR-validation task in status COMPLETED. See ITI TF-3: 5.4.5.7 for a general description of this attribute.
serviceStartTime	It is the time at which work began on the first task for this workflow.
serviceStopTime	It is the time at which the status of the overall Workflow is changed from OPEN to CLOSED. It shall be empty when the workflow is still in OPEN state.

1.11.3 Workflow Task Definition

This chapter describes Workflow Tasks which are used in the XDW Workflow document to express a Tumor board Review workflow.

The Tumor Board Review workflow has the following scenario:

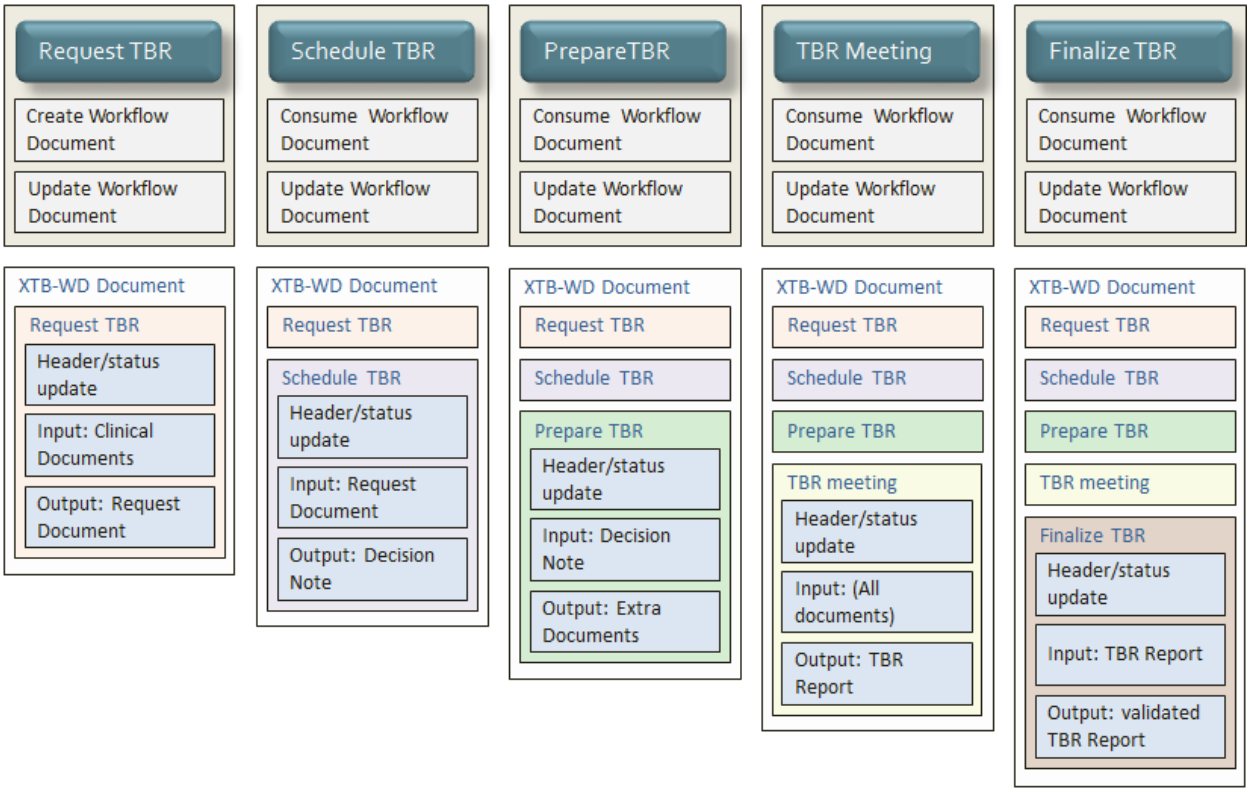
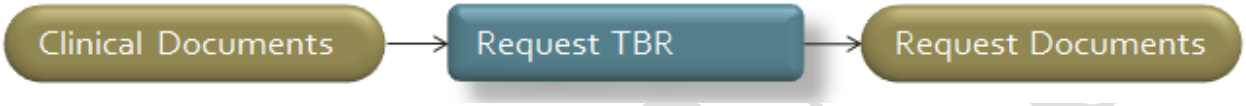


Figure 2 - XTB-WD Workflow Steps and buildup of the XDW document

Important note: When referencing input and output documents in tasks, both document uniqueId and homeCommunityId of the document shall be used.

1.11.4 Task: Request TBR



Task attributes	Rules for the task "RequestTBR"
Task id <<xxx check out the names of the fields in this column>>	Unique id of the instance of the task
TaskType	**RequestTBR**
TaskName	Request Tumor Board Review
TaskDescription	A tumor board review meeting for a patient is requested by the organiser.
TaskDependencies	Ancestors: None Successors: Schedule TBR
StatusAllowed	**CREATED** Task 'RequestTBR' is described, but not yet allocated. **READY** Task 'RequestTBR' is ready to be performed. **IN PROGRESS** Task 'RequestTBR' is being performed by the Owner, but not finished yet. **COMPLETED** Task 'RequestTBR' is completed. **FAILED**

Task attributes	Rules for the task "RequestTBR"
	Task 'RequestTBR' has been revoked by the requestor.
StatusTransactions	From **CREATED** to **READY** or **FAILED** From **READY** to **IN PROGRESS** of **FAILED** From **IN PROGRESS** to **COMPLETED** or **FAILED**
Input	• Required ○ All relevant documents for the understanding of the case.

Output	• Required
	  ○ Request Document.
	• Optional
	  ○ CCD Document.

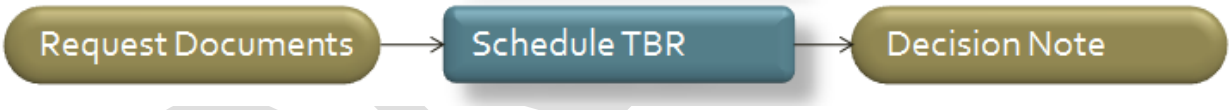
Owner	Creator of the Request
OwnerChanges	No
<TaskEvent>	Only one

Example XML for this XDW task:

```
        :
<ns3:taskData>
<!-- <<xxx needs rework after changes to XDW profile definition>>
        <ns2:taskDetails>
                <ns2:id>urn:oid:1.1.1.1.1</ns2:id>
                <ns2:taskType>RequestTBR</ns2:taskType>
                <ns2:name> Request Tumor Board Review</ns2:name>
                <ns2:status>COMPLETED</ns2:status>
                <ns2:createdTime>2006-05-04T18:13:51.0Z</ns2:createdTime>
                <ns2:lastModifiedTime>2006-05-04T18:13:51.0Z</ns2:lastModifiedTime>
                <ns2:renderingMethodExists>false</ns2:renderingMethodExists>
        </ns2:taskDetails>

        </ns2:description>

        <ns2:input>
                <ns2:part name="document">
                        <!-- Document useful to understand the reason of the Request -->
```

```
                        <!-- uid: the document uniqueId, home: the homeCommunityId -->
                        <reference uid="urn:oid:1.2.3.4.4.3.2.2.3" home="urn:oid:1.2.3"/>
                </ns2:part>
        </ns2:input>

        <!-- output documents -->
        <ns2:output>
                <ns2:part name="Request Document">
                        <!—Request document -->
                        <!-- uid: the document uniqueId, home: the homeCommunityId -->
                        <reference uid="urn:oid:1.2.3.4.4.4" home="urn:oid:1.2.3"/>
                </ns2:part>
        </ns2:output>

</ns3:taskData>
```

1.11.5 Task: Schedule TBR



Task attributes	Rules for the task “ScheduleTBR”
Task id	Unique id of the instance of the task
Task type	**ScheduleTBR**
Task name	Schedule Tumor Board Review
Task description	Scheduling the patients for a certain Tumor Board Review Meeting.
Task dependencies	Ancestors: RequestTBR Successors: PrepareTBR
Status allowed	**CREATED** Task ‘ScheduleTBR’ is described, but not yet allocated.

Task attributes	Rules for the task "ScheduleTBR"
	READY Task 'ScheduleTBR' is ready to be performed . **IN PROGRESS** Task 'ScheduleTBR' is being performed by the Owner, but not finished yet. **COMPLETED** Task 'ScheduleTBR' shall be set to COMPLETED when the request for a Tumor Board Review is accepted by the task owner. **FAILED** Task 'ScheduleTBR' shall be set to FAILED when the request for a Tumor Board Review is rejected by the task owner.
Status transactions	From **CREATED** to **READY** or **FAILED** From **READY** to **IN PROGRESS** of **FAILED** From **IN PROGRESS** to **COMPLETED** or **FAILED**
input	• Required o Request Document.
Output	• Required o Decision Notice.
Owner	Planner of the TBR [explain role in introduction of this subchapter]
changes of task owner	No
<taskEvent>	Only one

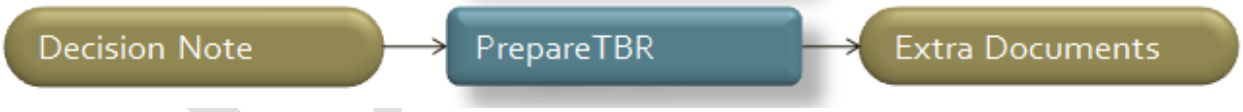
Example XML for this XDW task:

```
        :
<ns3:taskData>


        <ns2:taskDetails>
                <ns2:id>urn:oid:2.2.2.2.2</ns2:id>
                <ns2:taskType>ScheduleTBR</ns2:taskType>
                <ns2:name> Schedule Tumor Board Review</ns2:name>
                <ns2:status>COMPLETED</ns2:status>
                <ns2:createdTime>2006-05-04T18:13:51.0Z</ns2:createdTime>
                <ns2:lastModifiedTime>2006-05-04T18:13:51.0Z</ns2:lastModifiedTime>
```



```
                <ns2:renderingMethodExists>false</ns2:renderingMethodExists>
        </ns2:taskDetails>

        <!-- input documents -->
        <ns2:input>
                <ns2:part name="RequestDocument">
                        <!-- Request Document -->
                        <!-- uid: the RequestDocument uniqueId, home: the homeCommunityId -->
                        <reference uid="urn:oid:1.2.3.4.4.4" home="urn:oid:1.2.3"/>
                </ns2:part>
        </ns2:input>

        <!-- output documents -->
        <ns2:output>
                <ns2:part name="DecisionNotice">
                        <!-- uid: the DecisionNotice uniqueId, home: the homeCommunityId -->
                        <reference uid="urn:oid:1.2.3.4.4.5" home="urn:oid:1.2.3"/>
                </ns2:part>
        </ns2:output>

</ns3:taskData>
```

1.11.6 Task: Prepare TBR



Task attributes	Rules for the task "PrepareTBR"
Task id	Unique id of the instance of the task
Task type	**PrepareTBR**
Task name	Prepare Tumor Board Review
Task description	TBR preparation by (individual) participants are made.
Task dependencies	Ancestors: ScheduleTBR

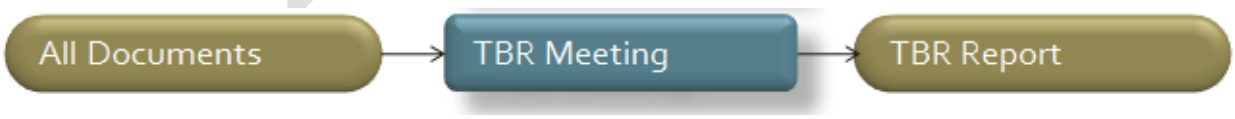
Task attributes	Rules for the task "PrepareTBR"
	Successors: TBRMeeting
Status allowed	**CREATED** Task 'Prepare TBR' is described, but not yet allocated. **READY** Task 'Prepare TBR' is ready to be performed. **IN PROGRESS** Task 'Prepare TBR' is being performed by the Owner, but not finished yet. **COMPLETED** Task 'Prepare TBR' shall be set to COMPLETED when all relevant preparation work is done before the TBR meeting. **FAILED** Task 'Prepare TBR' shall be set to FAILED when a review of this patient for the TBR meeting is cancelled in this phase.
Status transactions	From **CREATED** to **READY** or **FAILED** From **READY** to **IN PROGRESS** of **FAILED** From **IN PROGRESS** to **COMPLETED** or **FAILED**
Input	• Required ○ DecisionNotice
Output	• Optional ○ Extra documents necessary for the case.
Owner	TBR participants
changes of task owner	Yes The owner may change, different participants may add information necessary for the TBR.
<taskEvent>	At least one

Example XML for this XDW task:

```
<ns3:taskData>

        <ns2:taskDetails>
                <ns2:id>urn:oid:3.3.3.3.3</ns2:id>
```

```
            <ns2:taskType> PrepareTBR </ns2:taskType>
            <ns2:name> Prepare Tumor Board Review </ns2:name>
            <ns2:status>COMPLETED</ns2:status>
            <ns2:createdTime>2006-05-04T18:13:51.0Z</ns2:createdTime>
            <ns2:lastModifiedTime>2006-05-04T18:13:51.0Z</ns2:lastModifiedTime>
            <ns2:renderingMethodExists>false</ns2:renderingMethodExists>
      </ns2:taskDetails>


      <!-- input documents -->
      <ns2:input>
            <ns2:part name="DecisionNotice">
                  <!-- DecisionNotice -->
                  <!-- uid: the DecisionNotice uniqueId, home: the homeCommunityId -->
                  <reference uid="urn:oid:1.2.3.4.4.4" home="urn:oid:1.2.3"/>
            </ns2:part>



      <!-- output documents -->
      <ns2:output>
            <ns2:part name="Extra documents">
                  <!-- Extra documents -->
                  <!-- uid: the ExtraDocuments uniqueId, home: the homeCommunityId -->
                  <reference uid="urn:oid:1.2.3.4.4.6" home="urn:oid:1.2.3"/>
            </ns2:part>
      </ns2:output>
```

1.11.7 Task TBR Meeting



Task attributes	Rules for the task “TBRMeeting”

Task attributes	Rules for the task "TBRMeeting"
Task id	Unique id of the instance of the task
Task type	**TBRMeeting**
Task name	Tumor Board Review Meeting
Task description	TBR meeting with input from relevant participants.
Task dependencies	Ancestors: TBRPreparation Successors: TBRValidation
Status allowed	**CREATED** Task 'TBRMeeting' is described, but not yet allocated. **READY** Task 'TBRMeeting' is ready to be performed. **IN PROGRESS** Task 'TBRMeeting' is being performed by the Owner(s), but not finished yet. **COMPLETED** Task 'TBRMeeting' shall be set to COMPLETED when the patient has been discussed during the TBR Meeting. **FAILED** Task 'TBRMeeting' shall be set to FAILED when a review of this patient during the TBR meeting has been cancelled.
Status transactions	From **CREATED** to **READY** or **FAILED** From **READY** to **IN PROGRESS** of **FAILED** From **IN PROGRESS** to **COMPLETED** or **FAILED**
input	• Required ○ All relevant documents for the TBR Meeting
output	• Required ○ TBRReport.
owner	Chairman of the TBR.
changes of task owner	No
<taskEvent>	At least one

Example XML for this XDW task:


```
<ns3:taskData>

        <ns2:taskDetails>
                <ns2:id>urn:oid:3.3.3.3.3</ns2:id>
                <ns2:taskType> TBRMeeting </ns2:taskType>
                <ns2:name> Tumor Board Review Meeting</ns2:name>
                <ns2:status>COMPLETED</ns2:status>
                <ns2:createdTime>2006-05-04T18:13:51.0Z</ns2:createdTime>
                <ns2:lastModifiedTime>2006-05-04T18:13:51.0Z</ns2:lastModifiedTime>
                <ns2:renderingMethodExists>false</ns2:renderingMethodExists>
        </ns2:taskDetails>


        <!-- input documents -->
        <ns2:input>
                <ns2:part name="All relevant documents for the TBR Meeting">
                        <!-- All relevant documents for the TBR Meeting -->
                        <!-- uid: the document uniqueId, home: the homeCommunityId -->
                        <reference uid="urn:oid:1.2.3.4.4.4" home="urn:oid:1.2.3"/>
                </ns2:part>



        <!-- output documents -->
        <ns2:output>
                <ns2:part name="TBRReport">
                        <!-- TBRReport -->
                        <!-- uid: the TBRReport uniqueId, home: the homeCommunityId -->
                        <reference uid="urn:oid:1.2.3.4.4.6" home="urn:oid:1.2.3"/>
                </ns2:part>
        </ns2:output>

</ns3:taskData>
        :
```


1.11.8 Task Finalize TBR

Task attributes	Rules for the task "FinalizeTBR"
Task id	Unique id of the instance of the task
Task type	**FinalizeTBR**
Task name	Finalize Tumor Board Review Report
Task description	Finalize the TBR Report and send it to requestor.
Task dependencies	Ancestors: TBRMeeting Successors: None
Status allowed	**CREATED** Task 'FinalizeTBR' is described, but not yet allocated. **READY** Task 'FinalizeTBR' is ready to be performed. **IN PROGRESS** Task 'FinalizeTBR' is being performed by the Owner, but not finished yet. **COMPLETED** Task 'FinalizeTBR' shall be set to COMPLETED when the TBR Report has been completed, validated and is sent to the designated recipients. **FAILED** Task 'FinalizeTBR' shall be set to FAILED when a the TBR Report has not been created or has not been approved, and will not be approved in the future.
Status transactions	From **CREATED** to **READY** or **FAILED** From **READY** to **IN PROGRESS** of **FAILED** From **IN PROGRESS** to **COMPLETED** or **FAILED**
input	• Required ○ TBRReport
output	• Required

Task attributes	Rules for the task "FinalizeTBR"
	○ Finalized TBRReport.
owner	Chairman of the TBR.
changes of task owner	No
<taskEvent>	At least one

Example XML for this XDW task:

```
<ns3:taskData>

        <ns2:taskDetails>
                <ns2:id>urn:oid:3.3.3.3.3</ns2:id>
                <ns2:taskType> FinalizeTBR</ns2:taskType>
                <ns2:name> Finalize Tumor Board Review Report</ns2:name>
                <ns2:status>COMPLETED</ns2:status>
                <ns2:createdTime>2006-05-04T18:13:51.0Z</ns2:createdTime>
                <ns2:lastModifiedTime>2006-05-04T18:13:51.0Z</ns2:lastModifiedTime>
                <ns2:renderingMethodExists>false</ns2:renderingMethodExists>
        </ns2:taskDetails>


        <!-- input documents -->
        <ns2:input>
                <ns2:part name="TBRReport ">
                        <!-- Prescription document according to PRE profile -->
                        <!-- uid: the document uniqueId, home: the homeCommunityId -->
                        <reference uid="urn:oid:1.2.3.4.4.4" home="urn:oid:1.2.3"/>
                </ns2:part>

        <!-- output documents -->
        <ns2:output>
                <ns2:part name="Finalized TBRReport">
                        <!-- Finalized TBRReport -->
                        <!-- uid: the FinalizedTBRReport uniqueId, home: the homeCommunityId -->
```



```
                        <reference uid="urn:oid:1.2.3.4.4.6" home="urn:oid:1.2.3"/>
                </ns2:part>
        </ns2:output>

</ns3:taskData>
        :
```

1.12 Groupings

<This section specifies Actors from other profiles, possibly in other domains, that this profile shall, may or should be grouped with; including any additional requirements placed upon them when grouped with actors of this profile (and vice versa).>

[Volgens mij geen]

1.13 Security Considerations

<Description of the Profile specific security considerations. This should include the outcomes of a risk assessment. This likely will include profile groupings, and residual risks that need to be assigned to the product design, system administration, or policy.>

[Volgens mij geen]

1.14 Content Modules

<This section defines which document and/or section content module(s) shall be used. Not all profiles will have content in this section. Tables should be used to show data element mappings between different standards. See below for an example from the Antepartum Summary profile mapping ACOG data elements to PCC section templates.>

Table X.7-1 Antepartum History and Physical Content Modules

ACOG Antepartum Record Datum	CDA Section
Drug Allergy/Latex Allergy	Allergies and Other Adverse Reactions
Is Blood Transfusion Acceptable	Advance Directives
Antepartum Anesthesia Consult Planned	Plan of Care

Problems/Plans	Problems
Medication List	Active Medications
EDD Confirmation/18-20 Week EDD Update	Estimated Delivery Dates
Prepregnancy Weight	Visit Summary Flowsheet
Visit Flowsheet	Visit Summary Flowsheet

<Appendix A> Actor Summary Definitions

<add any actor definitions for new actors defined specifically for this profile>

<Appendix B> Transaction Summary Definitions

<add any transaction definitions for new transactions defined specifically for this profile>

Glossary

Add the following terms to the Glossary:

<any glossary additions associated with the profile draft go here>

Volume 2 – Transactions and Content Modules

<A PCC Profile will have sometimes have Transactions, will sometimes have Content Modules, and sometime may have both. Following are guidelines on the content needed in sections for both Transactions and Content Modules.>

IHE Transactions

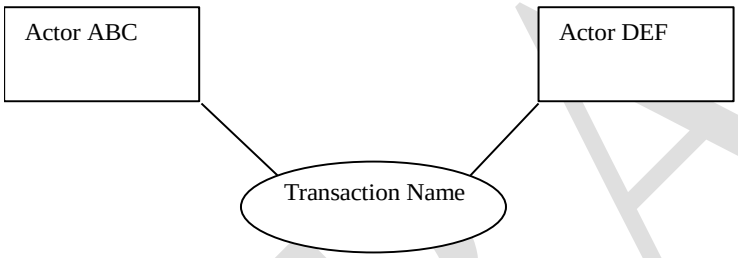
Add section 3.Y

1.15 <Transaction Name>

<This section corresponds to Transaction Y of the IHE Technical Framework. Transaction Y is used by the <ABC> and <DEF> actors. This section may or may not be present depending on the issues the profile addresses.>

1.15.1 Scope

1.15.2 Use Case Roles



Actor:

Role:

Actor:

Role:

Actor:

Role: .

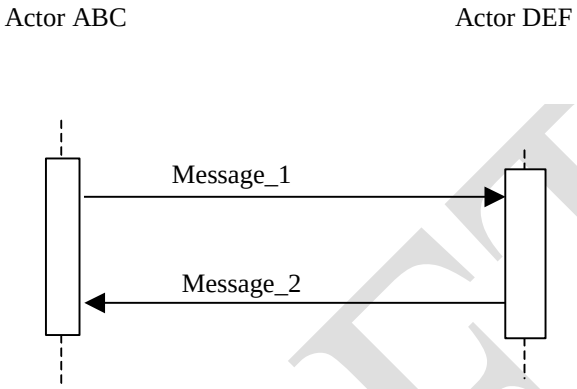
1.15.3 Referenced Standard

<e.g., HL7 2.3.1 Chapters 2, 3>

<e.g. DICOM 2008 PS 3.3: A.35.8 X-Ray Radiation Dose SR IOD>

1.15.4 Interaction Diagram

<the interaction diagram shows the detailed standards-based message exchange that makes up the IHE transaction>



1.15.4.1 <Message_1 Name>

<One or two sentence description of the first message of the above interaction diagram, typically relating the message to the relevant standard>

1.15.4.1.1 Trigger Events

<description of the real world events that cause the initiation of the first message>

1.15.4.1.2 Message Semantics

<detailed description of the meaning, structure and contents of the first message including any IHE specific clarifications of the message format, attributes, etc.>

1.15.4.1.3 Expected Actions

<description of the actions expected to be taken as a result of sending or receiving this message>

1.15.4.2 <Message_2 Name>

<One or two sentence description of the the next message in the above interaction diagram, typically relating the message to the relevant standard. Note, repeat this section as necessary based on the number of messages in the interaction diagram>

1.15.4.2.1 Trigger Events

<description of the real world events that cause the initiation of the next message>

1.15.4.2.2 Message Semantics

<detailed description of the meaning, structure and contents of the next message including any IHE specific clarifications of the message format, attributes, etc.>

1.15.4.2.3 Expected Actions

<description of the actions expected to be taken as a result of sending or receiving this message>

1.15.5 Security Considerations

<description of the transaction specific security consideration. Such as use of security profiles. >

1.15.5.1 Security Audit Considerations

<This section should specifiy any specific ATNA security audit event that is associated with this transaction and requirements on the encoding of that audit event. >

1.15.5.1.1 Actor Specific Security Considerations

<This section should specifiy any specific security considerations on an Actor by Actor basis.>

Namespaces and Vocabularies

<This section lists the namespaces and identifiers defined or referenced by the IHE PCC Technical Framework, and the vocabularies defined or referenced therein. Additional namespaces and vocabularies shall be added to the table in the following format. For specific examples see PCC TF-2:5.0>

codeSystem	codeSystemName	Description

1.16 IHE Format Codes

<This section contains a table that lists the format codes, template identifiers and media types used by the IHE Profiles specified in the PCC Technical Framework, and also lists, for reference purposes the same values for other selected IHE Profiles from other committees. For specific examples see PCC TF-2:5.1>

Profile	Format Code	Media Type	Template ID
2010 Profiles			

PCC Content Modules

1.17 Folder Content Modules

Add section 6.2.Y

1.17.1 <Folder Specification Name>

<This section corresponds to Folder Specification Y of the IHE Technical Framework. Folders are typically used to manage content profiles. This section may or may not be present depending on the issues the profile addresses.>

1.18 HL7 Version 3.0 Content Modules

1.18.1 CDA Document Content Modules

Add section 6.3.1.A

1.18.1.1 <Document Content Module Specification Name>

<This section corresponds to Document Content Module Specification A of the IHE Technical Framework. This section may or may not be present depending on the issues the profile addresses.>

1.18.2 CDA Header Content Modules

Add section 6.3.2.B

1.18.2.1 <Header Content Module Specification Name>

<This section corresponds to Header Content Module Specification B of the IHE Technical Framework. This section may or may not be present depending on the issues the profile addresses.>

1.18.3 CDA Section Content Modules

Add section 6.3.3.C

1.18.3.1 <Section Content Module Specification Name>

<This section corresponds to Section Content Module Specification C of the IHE Technical Framework. This section may or may not be present depending on the issues the profile addresses.>

1.18.4 CDA Entry Content Modules

Add section 6.3.4.D

1.18.4.1 <Entry Content Module Specification Name>

<This section corresponds to Entry Content Module Specification D of the IHE Technical Framework. This section may or may not be present depending on the issues the profile addresses.>

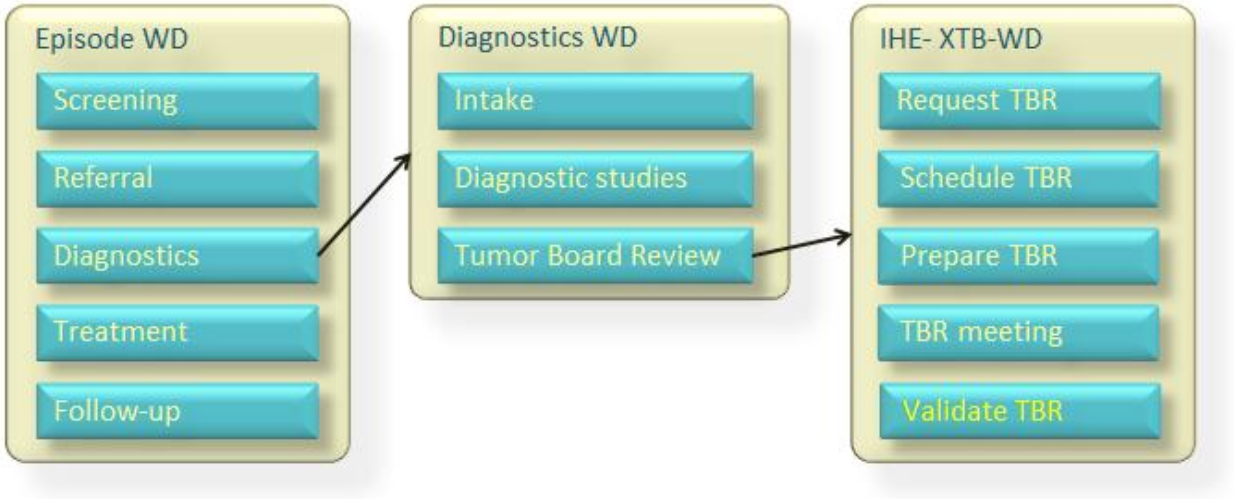
1.19 PCC Value Sets

Add section 6.5.A

1.19.1 <Value Set Name>

<This section corresponds to Value Set A of the IHE Technical Framework. This section may or may not be present depending on the issues the profile addresses.>

Appendix A – Example of a Nested set of Workflow Definitions



NOTES:

Voorstellen / discussiepunten:

Als stap is afgesloten (COMPLETED) dan mag er niets meer aan worden gewijzigd

Prepare task: taken toevoegen

Uitwerken

