DICOM Change Proposal

STATUS	Final Text
Date of Last Update	2026-02-01
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Change Number CP-2528
Log Summary: Add missing Attributes to Scheduled/Performed Protocol Code Sequence in MPPS tables
Name of Standard PS3.3, PS3.4
Rationale for Change: With CP-1479, various Macro tables were introduced to PS3.4 that define the content of Code Sequences, e.g., for the MPPS service. Unfortunately, this CP also removed the rows “All other Attributes of the Scheduled Protocol Code Sequence” and “All other Attributes of the Performed Protocol Code Sequence” from the main MPPS table (PS3.4 Table F.7.2-1), so that it is no longer consistent with Table C.4-15 from PS3.3. That means, the Protocol Context Sequence (0040,0440) Attribute is now missing from PS3.4, so that it is unclear what the requirements for an SCU and SCP are. It is, therefore, proposed to re-add the “All other Attributes…” statements to PS3.4 Table F.7.2-1 and, in one case, also change the value in the “Usage N-SET (SCU/SCP)” column for this row to something that seems more appropriate. The same problem can be found in PS3.4 Table F.8.2-1, where it should also be fixed. Furthermore, it is proposed to add a separate table row indicating the Billing and Material Management Code Module to both tables, so that the inclusion of the Attributes from the separately defined Module is more visible.
Change Wording:

Modify PS3.3 Section C.4.10.1 as indicated

(changes to existing text are bold and underlined for additions and bold and struckthrough for removals):

C.4.10.1 Protocol Context Sequence

The Protocol Context Sequence (0040,0440) allows the specification of parameters that further qualify the **~~scheduled~~** protocol, provided through a set of generic name/value pairs of context Content Items.

Note

This allows the specification of clinical, acquisition, or procedural qualifiers for the **~~scheduled~~** protocol, such as a specific body part, imaging technique, or parameters of a preparatory event (e.g., radionuclide injection). Specific uses of this Sequence may be documented in a Template defined in accordance with PS3.16.

Modify PS3.4 Section F.7.2.1.1 as indicated

(changes to existing text are bold and underlined for additions and bold and struckthrough for removals):

F.7.2.1.1 Modality Performed Procedure Step Subset Specification

[…]

Table F.7.2-1. Modality Performed Procedure Step SOP Class N-CREATE, N-SET and Final State Attributes

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Attribute Name	Tag	Usage N-CREATE (SCU/SCP)	Usage N-SET (SCU/SCP)	Usage Final State (see Note 1)
…				
Performed Procedure Step Relationship				
Scheduled Step Attributes Sequence	(0040,0270)	1/1	Not allowed	
…				
>Requested Procedure ID	(0040,1001)	2/2	Not allowed	
>Requested Procedure Code Sequence	(0032,1064)	3/3	Not allowed	
>>Include Table F.7.2-1a "Modality Performed Procedure Step Enhanced Code Value Macro with no N-SET"				
>Requested Procedure Description	(0032,1060)	2/2	Not allowed	
>Scheduled Procedure Step ID	(0040,0009)	2/2	Not allowed	
>Scheduled Procedure Step Description	(0040,0007)	2/2	Not allowed	
>Scheduled Protocol Code Sequence	(0040,0008)	2/2	Not allowed	
>>Include Table F.7.2-1a "Modality Performed Procedure Step Enhanced Code Value Macro with no N-SET"				
>>All other Attributes of the Scheduled Protocol Code Sequence		**3/3**	**Not allowed**	
Patient's Name	(0010,0010)	2/2	Not allowed	
…				
Image Acquisition Results				
Modality	(0008,0060)	1/1	Not allowed	
Study ID	(0020,0010)	2/2	Not allowed	
Performed Protocol Code Sequence	(0040,0260)	2/2	3/2	
>Include Table F.7.2-1e "Modality Performed Procedure Step Enhanced Code Value Macro with N-SET, Optional Meaning"				

Attribute Name	Tag	Usage N-CREATE (SCU/SCP)	Usage N-SET (SCU/SCP)	Usage Final State (see Note 1)
>All other Attributes of the Performed Protocol Code Sequence		**3/3**	**3/3**	
Performed Series Sequence	(0040,0340)	2/2	3/1	1 (see ~~n~~**N**ote 2)
…				
>All other Attributes of the Performed Series Sequence		3/3	3/3	
Billing and Material Management Code				
All ~~other~~ Attributes of the Billing and Material Management Code Module		3/3	3/3	

Modify PS3.4 Section F.8.2.1.1 as indicated

(changes to existing text are bold and underlined for additions and bold and struckthrough for removals):

F.8.2.1.1 Modality Performed Procedure Step Retrieve IOD Subset Specifications

...

Table F.8.2-1. Modality Performed Procedure Step Retrieve SOP Class N-GET Attributes

Attribute Name	Tag	Usage (SCU/SCP)
…		
Performed Procedure Step Relationship		
Scheduled Step Attributes Sequence	(0040,0270)	3/1
…		
>Requested Procedure ID	(0040,1001)	-/2
>Scheduled Procedure Step ID	(0040,0009)	-/2
>Scheduled Procedure Step Description	(0040,0007)	-/2
>Scheduled Protocol Code Sequence	(0040,0008)	-/2
>>Include Table 8-5a "Enhanced SCU/SCP Coded Entry Macro with no SCU Support and Optional Meaning for SCP"		
>>All other Attributes of the Scheduled Protocol Code Sequence		**-/3**
Patient's Name	(0010,0010)	3/2

Attribute Name	Tag	Usage (SCU/SCP)
…		
Image Acquisition Results		
Performed Series Sequence	(0040,0340)	3/2
…		
>All other Attributes of the Performed Series Sequence		-/3
Modality	(0008,0060)	3/1
Study ID	(0020,0010)	3/2
Performed Protocol Code Sequence	(0040,0260)	3/2
>Include Table 8-5a "Enhanced SCU/SCP Coded Entry Macro with no SCU Support and Optional Meaning for SCP"		
>All other Attributes of the Performed Protocol Code Sequence		**-/3**
Billing and Material Management Code		
All ~~other~~ Attributes of the Billing and Material Management Code Module		3/3

For reference unchanged PS3.3 Section C.4.10:

30 ## C.4.10 Scheduled Procedure Step Module

Table C.4-10. Scheduled Procedure Step Module Attributes

Attribute Name	Tag	Attribute Description
Scheduled Procedure Step Sequence	(0040,0100)	One or more Scheduled Procedure Steps for one Requested Procedure.
…		
>Scheduled Protocol Code Sequence	(0040,0008)	Sequence describing the Scheduled Protocol following a specified coding scheme. One or more Items shall be included in this Sequence.
>>Include Table 8.8-1 "Code Sequence Macro Attributes"		*No Baseline CID is defined.*
>>Protocol Context Sequence	(0040,0440)	Sequence that specifies the context for the Scheduled Protocol Code Sequence (0040,0008) Item. One or more Items shall be included in this Sequence. See Section C.4.10.1.
>>>Include Table 10-2 "Content Item Macro Attributes"		*No Baseline TID is defined.*

Attribute Name	Tag	Attribute Description
>>>Content Item Modifier Sequence	(0040,0441)	Sequence that specifies modifiers for a Protocol Context Content Item. One or more Items shall be included in this Sequence. See Section C.4.10.1.
>>>>Include Table 10-2 "Content Item Macro Attributes"		*No Baseline TID is defined.*
>Scheduled Procedure Step ID	(0040,0009)	Identifier that identifies the Scheduled Procedure Step.
…		

For reference PS3.3 Section C.4.15 (unchanged)

35 ## C.4.15 Image Acquisition Results Module

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Table C.4-15. Image Acquisition Results Module Attributes

Attribute Name	Tag	Attribute Description
Modality	(0008,0060)	Type of device, process or method that originally acquired the data used to create the Instances associated with this Modality Performed Procedure Step. See Section C.7.3.1.1.1 for Defined Terms. Note A Modality value in the created SOP Instances may be different from the MPPS Modality value. For example, multiple Series may have been created during the MPPS (images, waveforms, softcopy presentation states and/or structured reports) with SOP Instances in different Series having different modality values.
Study ID	(0020,0010)	User or equipment generated Study Identifier.
Performed Protocol Code Sequence	(0040,0260)	Sequence describing the Protocol performed for this Procedure Step. Zero or more Items shall be included in this Sequence.
>Include Table 8.8-1 "Code Sequence Macro Attributes"		*No Baseline CID is defined.*
>Protocol Context Sequence	(0040,0440)	Sequence that specifies the context for the Performed Protocol Code Sequence (0040,0260) Item. One or more Items shall be included in this Sequence. See Section C.4.10.1.
>>Include Table 10-2 "Content Item Macro Attributes"		*No Baseline TID is defined.*

Attribute Name	Tag	Attribute Description
>>Content Item Modifier Sequence	(0040,0441)	Sequence that specifies modifiers for a Protocol Context Content Item. One or more Items shall be included in this Sequence. See Section C.4.10.1.
>>>Include Table 10-2 "Content Item Macro Attributes"		*No Baseline TID is defined.*
Performed Series Sequence	(0040,0340)	Attributes of the Series that comprise this Modality Performed Procedure Step. Zero or more Items shall be included in this Sequence.
>Performing Physician's Name	(0008,1050)	Name of the physician(s) administering this Series.
>Performing Physician Identification Sequence	(0008,1052)	Identification of the physician(s) administering the Series. One or more Items shall be included in this Sequence. If more than one Item, the number and order shall correspond to the value of Performing Physician's Name (0008,1050), if present.
>>Include Table 10-1 "Person Identification Macro Attributes"		
>Operators' Name	(0008,1070)	Name(s) of the operator(s) who supporting this Series.
>Operator Identification Sequence	(0008,1072)	Identification of the operator(s) supporting the Series. One or more Items shall be included in this Sequence. If more than one Item, the number and order shall correspond to the value of Operators' Name (0008,1070), if present.
>>Include Table 10-1 "Person Identification Macro Attributes"		
>Protocol Name	(0018,1030)	User-defined description of the conditions under which the Series was performed. Note This Attribute conveys Series-specific protocol identification and may or may not be identical to the one presented in the Performed Protocol Code Sequence (0040,0260).
>Series Instance UID	(0020,000E)	Unique Identifier of the Series.
>Series Description	(0008,103E)	Description of the Series.
>Series Description Code Sequence	(0008,103F)	A coded description of the Series. Only a single Item shall be included in this Sequence.
>>Include Table 8.8-1 "Code Sequence Macro Attributes"		*No Baseline CID is defined.*
>Retrieve AE Title	(0008,0054)	Title of the DICOM Application Entity where the Images and other Composite SOP Instances in this Series may be retrieved on the network.

Attribute Name	Tag	Attribute Description
		Note The duration for which this location remains valid is unspecified.
>Archive Requested	(0040,A494)	The Instances in this Series are expected to be archived in the long term archive. Enumerated Values: **NO** **YES**
>Referenced Image Sequence	(0008,1140)	A Sequence that provides reference to Composite SOP Instances created during the acquisition of the procedure step. Zero or more Items shall be included in this Sequence. Note The use of Referenced Image Sequence is historical, and in this context it allows the reference of any Composite SOP Instance.
>>Include Table 10-11 "SOP Instance Reference Macro Attributes"		
>>Container Identifier	(0040,0512)	The identifier for the container that contains the specimen(s) imaged.
>>Specimen Description Sequence	(0040,0560)	Sequence of identifiers and detailed description of the specimen(s) imaged. One or more Items shall be included in this Sequence.
>>>Specimen Identifier	(0040,0551)	A departmental information system identifier for the Specimen.
>>>Specimen UID	(0040,0554)	Unique identifier for the Specimen.
>Referenced Non-Image Composite SOP Instance Sequence	(0040,0220)	Uniquely identifies Instances, other than images, of any SOP Class that conforms to the DICOM Composite IOD Information Model, such as Waveforms, Presentation States or Structured Reports, created during the acquisition of the procedure step, and that are not referenced in Referenced Image Sequence (0008,1140). Zero or more Items shall be included in this Sequence.
>>Include Table 10-11 "SOP Instance Reference Macro Attributes"		