Log Summary: Extend semantic of TID 11003 to be more flexible to the needs and correct node numbering in example

Name of Standard
PS3.16, PS3.17 2019e

Rationale for Correction:
Within part 16, TID11008, Row 5 it may become possible that one has to describe a manual administered administration of agents e.g. Oral Administration.

Although the Req. Type is MC and the Condition is IF TID 11007 Row 4 = (130173, DCM, “Automated Administration”), which leads to not include TID 11003, one would have to include TID 11003 for the reason of describing the used contrast agent. By this one is forced to code also the “Starting Flow Rate of Administration” in Row 4 of TID 11003, which makes no sense for manual actions.

Main problems is:
One does not originally have a true “Starting Flow Rate of Administration”, if one does it manually. This value has to be calculated artificially and may not correspond to reality.

Suggested Solution:
Change TID 11003 Row 4, Req. Type from M to MC and add the same condition as in Row 9, so Starting Flow Rate is not needed to be included for manual Administration:

   IF TID 11007 Row 4 = (130173, DCM, "Automated Administration")

Within PS3.17, Example MMMM.1, content tree structure table: node 1.13.7 has to be a child of 1.13.6 and therefore has to be assigned the number 1.13.6.1 (see part16 TID 10024 Row 10, which is indented by two chevrons with respect to one chevron of Row 9). In the following Nodes of Layer 1.13.x with x>7 has to be renumbered.

PS3.17, MMMM.1, simplify Example by using the new feature of TID11008 (Starting Flow Rate of administration).
Correction Wording:
PS3.16, TID11003:
• Change Req. Type of Row 4 of TID 11003 to MC
• Add the following Condition to Row 4 of TID 11003:
  IF TID 11007 Row 4 = (130173, DCM, "Automated Administration")
  AND
  IFF root Concept Name Code Sequence = (130227, DCM, "Performed Imaging Agent Administration")

PS3.17, Example MMM.1:
• Change node number 1.13.7 to 1.13.6.1
• Change node number 1.13.8 to 1.13.7
• Change node number 1.13.9 to 1.13.8
• Change node number 1.13.9.1 to 1.13.8.1
• Change node number 1.13.9.2 to 1.13.8.2

PS3.17, Example MMM.1:
• Remove line of Node 1.21.3.8.3.3
• Renumber Node 1.21.3.8.3.4 to 1.21.3.8.3.3
• Renumber Node 1.21.3.8.3.5 to 1.21.3.8.3.4

Amend DICOM PS3.16 TID11003 as follows
(since the original document text contains bold face typing, changes to existing text are bold, size 9 and underlined for additions and struckthrough for removals):

TID 11003 Imaging Agent Administration Syringe/Pump Phase Activity
This template describes a single Syringe/Pump activity as part of the single imaging administration phase. A phase activity is the lowest level of the Imaging Agent delivery model.
Type: Extensible
Order: Non-Significant
Root: No

Table TID 11003. Imaging Agent Administration Syringe/Pump Phase Activity

<table>
<thead>
<tr>
<th>NL</th>
<th>Rel with Parent</th>
<th>VT</th>
<th>Concept Name</th>
<th>VM</th>
<th>Req Type</th>
<th>Condition</th>
<th>Value Set Constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>&gt; CONTAINS</td>
<td>NUM</td>
<td>EV (130208, DCM, &quot;Starting Flow Rate of Administration&quot;)</td>
<td>1</td>
<td>MC</td>
<td>IF TID 11007 Row 4 = (130173, DCM, &quot;Automated Administration&quot;)</td>
<td>UNITS = EV (ml/s, UCUM &quot;ml/s&quot;)</td>
</tr>
</tbody>
</table>

Amend DICOM PS3.17 as follows
(changes to existing text are bold and underlined for additions and struckthrough for removals):
<table>
<thead>
<tr>
<th>Node</th>
<th>Code Meaning of Concept Name</th>
<th>Code Meaning or Example Value</th>
<th>Reference to TID/ CID/ Comments</th>
</tr>
</thead>
</table>
| 1.13.6 | Body Mass Index | 21.23 | TID 10024  
UNITS=EV (kg/m², UCUM, "kg/m²") |
| 1.13.76.1 | Equation | (122265, DCM, "BMI=W/H²") | TID 10024 |
| 1.13.87 | Serum Creatinine | 2.7 | TID 10024  
UNITS=DT (mg/dl, UCUM, "mg/dl") |
| 1.13.98 | Glomerular Filtration Rate | 38 | TID 10024  
UNITS=DT (ml/min(1.73_m²), UCUM, "ml/min/1.73m²") |
| 1.13.98.1 | Measurement Method | (113570, DCM, "Cockroft-Gault Formula estimation of GFR") | TID 10024  
CID 10047 |
| 1.13.98.2 | Equivalent meaning of concept name | (LN,33914-3, "Glomerular Filtration Rate (MDRD) ") | TID 10024  
CID 10046 |
| 1.14 | Imaging Agent Information | | TID 11002 |
| ... | | | |
| 1.21.3.8.3.2 | Volume Administered | 1000 | TID 11003  
UNITS = EV (ml, UCUM, "ml")  
Same value as 1.21.3.8.4 |
| 1.21.3.8.3.3 | Starting Flow Rate of administration | 0.37 | TID 11003  
UNITS = EV (ml/s, UCUM "ml/s")  
**Calculated value: 4000ml /2700s** |
| 1.21.3.8.3.34 | DateTime Started | 20181012101531 | TID 11003  
Since root Concept Name is "Performed Imaging Agent Administration" |
| 1.21.3.8.3.45 | Duration | 2700 | TID 11003  
UNITS = EV (s, UCUM, "s")  
Since root Concept Name is "Performed Imaging Agent Administration" |
| 1.21.3.8.4 | Total Phase Volume Administered | 1000 | TID 11008  
UNITS = EV (ml, UCUM, "ml") |
<table>
<thead>
<tr>
<th>Node</th>
<th>Code Meaning of Concept Name</th>
<th>Code Meaning or Example Value</th>
<th>Reference to TID/ CID/ Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Same value as 1.21.3.8.3.2</td>
</tr>
</tbody>
</table>