THE FOLLOWING UPDATES have been made to the clinical logic for 3M™ Potentially Preventable Complications (PPC) Classification System v29.0, based on the following:

◆ Input from the clinical review of stakeholders, feedback resulting from use in the Maryland healthcare payment system, and comments from other users of the PPC Classification System.

◆ Logic and code changes related to v29.0 ICD-9-CM diagnosis and procedure code updates.

◆ Updated normative data.

ICD-9-CM Diagnosis and Procedure Code Updates:

New and expanded diagnosis and procedure codes were clinically reviewed for appropriate inclusion or replacement of codes in the PPC logic and code lists.

Refer to the Microsoft® Excel® file attached to this pdf for a list of the code updates. If you can’t see the file attachment, refer to the online help for your version of Adobe® Acrobat® for instructions on accessing file attachments.

Major Surgical DRG and Major OR Procedure Update

Added APR DRG 513 (Uterine & Adnexa Procs for Non-Malig) and its associated procedures to the Major Surgical DRGs and Major OR Procedures.
Multiple PPC Assignment for Single Condition:

Added hierarchy logic (table P-2 in appendix P) to address situations where an admission may meet the criteria for multiple PPCs that actually represent a single condition. This is due to coding of both the general condition (e.g. post-op infection) and the specific condition (e.g. cellulitis). In such cases the PPC logic precludes assignment of the general or less significant PPC.

<table>
<thead>
<tr>
<th>PPC Assigned</th>
<th>PPC Hierarchically Excluded</th>
</tr>
</thead>
<tbody>
<tr>
<td>06 - Aspiration Pneumonia</td>
<td>05 - Pneumonia &amp; Other Lung Infections</td>
</tr>
<tr>
<td>06 - Aspiration Pneumonia</td>
<td>08 - Other Pulmonary Complications</td>
</tr>
<tr>
<td>06 - Aspiration Pneumonia</td>
<td>48 - Other Complications of Medical Care</td>
</tr>
<tr>
<td>03 - Acute Pulmonary Edema and Respiratory Failure</td>
<td>05 - Pneumonia &amp; Other Lung Infections</td>
</tr>
<tr>
<td>without Ventilation</td>
<td></td>
</tr>
<tr>
<td>03 - Acute Pulmonary Edema and Respiratory Failure</td>
<td>06 - Aspiration Pneumonia</td>
</tr>
<tr>
<td>without Ventilation</td>
<td></td>
</tr>
<tr>
<td>03 - Acute Pulmonary Edema and Respiratory Failure</td>
<td>08 - Other Pulmonary Complications</td>
</tr>
<tr>
<td>without Ventilation</td>
<td></td>
</tr>
<tr>
<td>04 - Acute Pulmonary Edema and Respiratory Failure</td>
<td>06 - Aspiration Pneumonia</td>
</tr>
<tr>
<td>with Ventilation</td>
<td></td>
</tr>
<tr>
<td>04 - Acute Pulmonary Edema and Respiratory Failure</td>
<td>08 - Other Pulmonary Complications</td>
</tr>
<tr>
<td>with Ventilation</td>
<td></td>
</tr>
<tr>
<td>07 - Pulmonary Embolism</td>
<td>08 - Other Pulmonary Complications</td>
</tr>
<tr>
<td>07 - Pulmonary Embolism</td>
<td>16 - Venous Thrombosis</td>
</tr>
<tr>
<td>38 - Post-Operative Wound Infection &amp; Deep Wound</td>
<td>33 - Cellulitis</td>
</tr>
<tr>
<td>Disruption with Procedure</td>
<td></td>
</tr>
<tr>
<td>38 - Post-Operative Wound Infection &amp; Deep Wound</td>
<td>44 - Other Surgical Complication - Moderate</td>
</tr>
<tr>
<td>Disruption with Procedure</td>
<td></td>
</tr>
<tr>
<td>53 - Infection, Inflammation and Clotting Complications of Peripheral Vascular Catheters and Infusions</td>
<td>33 - Cellulitis</td>
</tr>
<tr>
<td>53 - Infection, Inflammation and Clotting Complications of Peripheral Vascular Catheters and Infusions</td>
<td>44 - Other Surgical Complication - Moderate</td>
</tr>
<tr>
<td>53 - Infection, Inflammation and Clotting Complications of Peripheral Vascular Catheters and Infusions</td>
<td>52 - Inflammation &amp; Other Complications of Devices, Implants or Grafts except Vascular Infection</td>
</tr>
<tr>
<td>54 - Infections due to Central Venous Catheters</td>
<td>33 - Cellulitis</td>
</tr>
<tr>
<td>54 - Infections due to Central Venous Catheters</td>
<td>52 - Inflammation &amp; Other Complications of Devices, Implants or Grafts except Vascular Infection</td>
</tr>
<tr>
<td>54 - Infections due to Central Venous Catheters</td>
<td>53 - Infection, Inflammation and Clotting Complications of Peripheral Vascular Catheters and Infusions</td>
</tr>
<tr>
<td>66 - Catheter-Related Urinary Tract Infection</td>
<td>65 - Urinary Tract Infection</td>
</tr>
<tr>
<td>35 - Septicemia &amp; Severe Infections</td>
<td>65 - Urinary Tract Infection</td>
</tr>
<tr>
<td>35 - Septicemia &amp; Severe Infections</td>
<td>66 - Catheter-Related Urinary Tract Infection</td>
</tr>
<tr>
<td>35 - Septicemia &amp; Severe Infections</td>
<td>34 - Moderate Infections</td>
</tr>
<tr>
<td>PPC Assigned</td>
<td>PPC Hierarchically Excluded</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>35 - Septicemia &amp; Severe Infections</td>
<td>37 - Post-Operative Infection &amp; Deep Wound Disruption without Procedure</td>
</tr>
<tr>
<td>35 - Septicemia &amp; Severe Infections</td>
<td>38 - Post-Operative Wound Infection &amp; Deep Wound Disruption with Procedure</td>
</tr>
<tr>
<td>35 - Septicemia &amp; Severe Infections</td>
<td>53 - Infection, Inflammation and Clotting Complications of Peripheral Vascular Catheters and Infusions</td>
</tr>
<tr>
<td>35 - Septicemia &amp; Severe Infections</td>
<td>54 - Infections due to Central Venous Catheters</td>
</tr>
<tr>
<td>60 - Major Puerperal Infection and Other Major Obstetric Complications</td>
<td>35 - Septicemia &amp; Severe Infections</td>
</tr>
<tr>
<td>60 - Major Puerperal Infection and Other Major Obstetric Complications</td>
<td>44 - Other Surgical Complication - Moderate</td>
</tr>
<tr>
<td>60 - Major Puerperal Infection and Other Major Obstetric Complications</td>
<td>54 - Infections due to Central Venous Catheters</td>
</tr>
<tr>
<td>42 - Accidental Puncture/Laceration during Invasive Procedure</td>
<td>40 - Post-Operative Hemorrhage &amp; Hematoma without Hemorrhage Control Procedure or I&amp;D Procedure</td>
</tr>
<tr>
<td>42 - Accidental Puncture/Laceration during Invasive Procedure</td>
<td>43 - Accidental Cut or Hemorrhage during Other Medical Care</td>
</tr>
<tr>
<td>42 - Accidental Puncture/Laceration during Invasive Procedure</td>
<td>44 - Other Surgical Complication - Moderate</td>
</tr>
<tr>
<td>41 - Post-Operative Hemorrhage &amp; Hematoma with Hemorrhage Control Procedure or I&amp;D Procedure</td>
<td>42 - Accidental Puncture/Laceration during Invasive Procedure</td>
</tr>
<tr>
<td>47 - Encephalopathy</td>
<td>36 - Acute Mental Health Changes</td>
</tr>
<tr>
<td>02 - Extreme CNS Complications</td>
<td>47 - Encephalopathy</td>
</tr>
<tr>
<td>52 - Inflammation &amp; Other Complications of Devices, Implants or Grafts except Vascular Infection</td>
<td>44 - Other Surgical Complication - Moderate</td>
</tr>
<tr>
<td>52 - Inflammation &amp; Other Complications of Devices, Implants or Grafts except Vascular Infection</td>
<td>50 - Mechanical Complication of Device, Implant &amp; Graft</td>
</tr>
<tr>
<td>52 - Inflammation &amp; Other Complications of Devices, Implants or Grafts except Vascular Infection</td>
<td>51 - Gastrointestinal Ostomy Complications</td>
</tr>
<tr>
<td>05 - Pneumonia &amp; Other Lung Infections</td>
<td>08 - Other Pulmonary Complications</td>
</tr>
<tr>
<td>10 - Congestive Heart Failure</td>
<td>08 - Other Pulmonary Complications</td>
</tr>
<tr>
<td>14 - Ventricular Fibrillation/Cardiac Arrest</td>
<td>09 - Shock</td>
</tr>
<tr>
<td>14 - Ventricular Fibrillation/Cardiac Arrest</td>
<td>12 - Cardiac Arrhythmias &amp; Conduction Disturbances</td>
</tr>
<tr>
<td>28 - In-Hospital Trauma and Fractures</td>
<td>64 - Other In-Hospital Adverse Events</td>
</tr>
<tr>
<td>37 - Post-Operative Infection &amp; Deep Wound Disruption without Procedure</td>
<td>33 - Cellulitis</td>
</tr>
<tr>
<td>39 - Reopening Surgical Site</td>
<td>44 - Other Surgical Complication - Moderate</td>
</tr>
<tr>
<td>40 - Post-Operative Hemorrhage &amp; Hematoma without Hemorrhage Control Procedure or I&amp;D Procedure</td>
<td>44 - Other Surgical Complication - Moderate</td>
</tr>
<tr>
<td>45 - Post-procedure Foreign Bodies</td>
<td>44 - Other Surgical Complication - Moderate</td>
</tr>
<tr>
<td>45 - Post-procedure Foreign Bodies</td>
<td>46 - Post-Operative Substance Reaction &amp; Non-O.R. Procedure for Foreign Body</td>
</tr>
<tr>
<td>49 - Iatrogenic Pneumothorax</td>
<td>44 - Other Surgical Complication - Moderate</td>
</tr>
</tbody>
</table>
4 Summary of Clinical Logic Updates for PPCs

Exclusion Group Changes:

PPC code exclusion group 26—Other Respiratory Diagnoses except Signs, Symptoms & Minor Diagnoses.

Codes were removed from this Exclusion Group for consistency.
Code exclusion group 26 applies to PPC 8, Other Pulmonary Complications.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2142</td>
<td>Lipoma of the Intrathoracic Region</td>
</tr>
<tr>
<td>2311</td>
<td>Carcinoma in situ of Trachea</td>
</tr>
<tr>
<td>2312</td>
<td>Carcinoma in situ of Bronchus and lung</td>
</tr>
<tr>
<td>2318</td>
<td>Carcinoma in situ of Other specified parts of respiratory system</td>
</tr>
<tr>
<td>2319</td>
<td>Carcinoma in situ of Respiratory system, part unspecified</td>
</tr>
</tbody>
</table>

PPC Specific Logic Changes:

PPC Specific Malignancy-Related Exclusions.

The following malignancy exclusions were added to specific PPCs to invoke the exclusion at the PPC level if it did not meet global malignancy exclusion criteria:

<table>
<thead>
<tr>
<th>Description</th>
<th>Codes</th>
<th>PPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Malignancy</td>
<td>DRG 136</td>
<td>05 – Pneumonia &amp; Other Lung Infections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>06 – Aspiration Pneumonia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>08 – Other Pulmonary Complications</td>
</tr>
<tr>
<td>Liver &amp; Pancreas Malignancy</td>
<td>DRG 281</td>
<td>19 - Major Liver Complications</td>
</tr>
<tr>
<td>Leukemia &amp; Lymphoma</td>
<td>MDC 17</td>
<td>34 – Moderate Infections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35 – Septicemia &amp; Severe Infections</td>
</tr>
<tr>
<td></td>
<td></td>
<td>65 – Urinary Tract Infection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66 – Catheter Related Urinary Tract Infection</td>
</tr>
</tbody>
</table>
PPC 03 – Acute Pulmonary Edema and Respiratory Failure without Ventilation.

PPC assignment logic updated to prevent exclusion error when patient has mechanical vent on procedure day. PPC 03 will only be assigned if MV is performed on a non-surgical day.

PPC 31 – Decubitus Ulcer.

PPC logic updated to include the pediatric population and narrow the assignment criteria to the more severe stages. The MDC 15 Exclusion was removed. Stage I (70721), Stage II (70722), and Unspecified (70720) Decubitus Ulcers were removed from PPC assignment.

PPC 34 – Moderate Infections.

Removed Sdx code 2866 (defibrination syndrome) from PPC assignment because it is used to code multiple conditions not all of which are infections.

PPC 35 – Septicemia & Severe Infections.

PPC logic updated to include the pediatric patients in a surgical admission APR DRG excluding newborns (MDC 15). New exclusion groups were added for patients less than 18 years of age. The length of stay criteria for all patients was increased to three days.

PPC 45 – Post-Procedure Foreign Bodies.

Logic updated to add exclusion of all patients not in a surgical DRG or DRG 191 and 192. This results in the excluded patients being assigned a PPC status of 0 (PPC excluded, would not have been assigned) or 1 (PPC excluded, would have been assigned). Previously these patients were assigned a PPC status of 2 (not assigned, not excluded).

PPC 65 – Urinary Tract Infection.

Formerly PPC 22, this PPC was renumbered to be in sequence with the new PPC 66, Catheter-Related Urinary Tract infections. PPC 65 logic was updated to exclude patients less than 18 years of age (previously excluded only newborn patients in MDC 15). This PPC no longer includes catheter-related urinary tract infections (99664, React-indwll urin cath).

PPC 66 – Catheter-Related Urinary Tract Infection.

PPC 66 was created to include the pediatric population excluding newborns (MDC 15) in catheter-related urinary tract infections.
Updated PPC Norm Files

PPC norms were calculated from the State of California (OSHPD) Inpatient Discharge Dataset* from 2008 and 2009. The norm file contains norms data aggregated by Admission APR DRG and SOI for each PPC.

* Hospitals with poor POA reporting quality were excluded. Any patient record found to be suspect based on the criteria found in the PPC Grouping Software Installation and User's Guide was rejected prior to the system considering it for the PPC classification. Patient records with errors were not counted in the PPC rate calculations.