The Society of Interventional Radiology standardized procedure reporting templates have undergone extensive review by a committee of private practice and academic interventional radiologists, billing and coding experts, regulatory advisors and clinical researchers. A pilot study at numerous practices aided in the refinement of these templates to balance report length with data elements required to optimize billing, satisfy PQRS and Joint Commission requirements and provide a logical description of the procedure that is easy to read by clinicians and interventionalists. The short answer format allows searchability of the reports for registry and research data extraction.

The reports have been streamlined by removing unnecessary data fields and defaulting to the most common selection options. However, certain elements of the reports can be modified to reflect local practice conditions without impacting the ability to collect meaningful data elements. For example, pick-lists (menu of user-defined response elements) can be updated with selections appropriate to each institution. Investing a few minutes to update each reporting template will improve dictation speed and ease of use.
The following is a sample report, with an explanation of why each data element is present, and some supplemental information to help you use these reports in an optimal manner. At the end of this user guide is a short guide to how the standardized reports can be imported into Powerscribe (with screen shots).

The first page of the report is an **executive summary** which summarizes the key information of the procedure.

**PROCEDURE:**  
Title of the procedure. Joint Commission requirement

**Procedural Personnel**  
Joint Commission requirement

**Attending(s):**  
Can be set up for automatic population. Must be unique in your practice setting (For example, include first name/initial if necessary – J. Smith, MD or John Smith MD). Title defaulted as “MD” but can be changed.

**Fellow(s):**  
Modify the pick-list to include your fellows, if applicable

**Resident(s):**  
Modify the pick-list to include your residents, if applicable

**Advanced practice provider(s):**  
Modify the pick-list to include your NPs, PAs or RAs, if applicable

**Pre-procedure diagnosis:**  
Patient’s underlying diagnosis – may not be the reason for procedure. Joint Commission requirement

**Post-procedure diagnosis:**  
Defaults to “same” but can be edited if diagnosis changes during procedure. Joint Commission requirement

**Indication(s):**  
Procedure indication. If auto-populated from referral, edit as needed to be informative and clinically meaningful, justifying the procedure. Joint Commission requirement

**Complications:**  
Defaults to none; any complications should be entered here. Joint Commission requirement

**IMPRESSION:**  
The overall impression. As findings are not explicitly listed in the executive summary, any significant, unusual, or unexpected findings can be highlighted here as well based on operator discretion. Findings are located within modules in the Procedure Details section.

**Plan:**  
Immediate post-procedure plan, and/or follow-up plan

**PROCEDURE SUMMARY:**  
Itemized list of the procedures performed to guide billing activities, also serving as a reference to referring MDs and future IRs to know what was done. Defaulted to the most common components of each procedure but can be edited as needed.

**PROCEDURE DETAILS:**  
The remainder of the report constitutes a more technical description arranged as a series of chronologically arranged modules providing consistency across procedure types. Any modules not relevant to a certain procedure can either be designated “Not applicable” or deleted (for example, the venography module in a port placement report may be deleted for cases where venography is not performed).

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**The following are standardized modules for all templates---**

**Pre-procedure**

**Relevant imaging review:**  
Prior imaging comparison - study type and date

**Prophylactic antibiotic administered:**  
The prophylactic antibiotic administration time module is a **CMS-approved performance measure**. The percentage of procedures where antibiotics are appropriately started within the recommended one-hour time window prior to incision time (two hours for vancomycin or fluoroquinolones) will be a metric by which we are measured, and can impact reimbursement. The specific antibiotic does not need to be specified here if already included in the medication administration record (MAR).

**Preparation:**  
The central venous catheter sterile preparation statement is a **CMS-approved performance measure**. The percentage of cases where complete sterile preparation was performed will be a metric by which we are measured, and can impact reimbursement. If complete sterile preparation is not performed, an explanatory exception statement is valid.

**Anesthesia/sedation**

**Level of anesthesia:**  
These are defined by Joint Commission and the American Society of Anesthesiologists as four levels.  
- **Minimal sedation:** A drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, cardiovascular and respiratory functions are unaffected.  
- **Moderate sedation:** A drug-induced depression of consciousness during which patients respond purposefully to verbal commands either alone or accompanied by light tactile stimulation. No intervention is required to maintain a patent airway, spontaneous ventilation is adequate, and cardiovascular function is maintained.  
- **Deep sedation:** A drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated stimulation. Patients may require assistance in maintaining a patent airway, spontaneous ventilation may be inadequate, but cardiovascular function is usually maintained.  
- **General anesthesia:** A drug-induced loss of consciousness during which patients are not arousable even by painful stimulation. Cardiovascular and respiratory function may be impaired.  

**Other:** could include spinal or regional anesthesia.

**Anesthesia administered by:**  
For moderate sedation, continuous monitoring by an independent trained observer (a nurse or other qualified person) must be documented. Minimal sedation may or may not require such monitoring, depending on the situation. Deep or general anesthesia is typically administered by anesthesia.

**Duration of anesthesia/sedation:**  
Time of sedation is typically billed in 15 minute blocks, so the duration of sedation is important for procedures where the sedation is not bundled with the procedure itself.

**Access**  
The access module contains the verbiage that is required to bill for ultrasound access, including
Arterial closure success:
The vessel accessed.
Access site angiography performed:
The vessel accessed.

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**The following are some procedure modules for a port placement report**

**Venography**
A venography module is included in central venous access templates for the scenario where venography is performed. Since this is often not necessary, "Not applicable" may be used by default, or this module can be deleted.

Vein catheterized:
Billing for venography requires declaration of the vein catheterized.

Indication for venography:
Billing for venography requires an appropriate indication.

Findings:
Billing for venography requires declaration of findings.

Port placement
A standard technique statement is included in this module, which can be modified if desired.

Port placed:
As new devices are continually introduced to market, not all available devices may be included here. Each institution should create an appropriate pick-list including their available devices, following the format in this template.

Catheter size:
The French size of the catheter. Eventually this may be auto-populated by scanning the unique device identifier (UDI).

Catheter tip position:
Traditionally, catheter tip location was described as SVC or cavoatrial junction or right atrium, etc. However, these anatomic locations cannot be accurately or reliably determined by the appearance on fluoroscopy. Thus, a more objective measure of tip position is used here, which can be reliably determined and then be subjected to future evaluations to determine the ideal tip position. Catheter tip for supradiaphragmatic catheters is described first as central (meaning inferior to the C7-T1 intervertebral disc and medial to the lateral rib margin) or peripheral (outside these landmarks). Next, the spine is used as an internal ruler to determine the catheter tip location by number of vertebral body units (the height of one vertebral body + one disc space) above or below the carina. Of note, the cavoatrial junction averages 2.25 to 2.5 vertebral body units below the carina, though there is fairly wide variation among individuals. For infradiaphragmatic catheters, the same internal ruler is used with the lumbosacral junction as the reference point.

Unique Device Identifier (UDI):
This is a unique identifier that will be associated with each particular device. The UDI will encode the device brand, type, size, and other information. Eventually a bar-code scanner or similar mechanism will allow scanning of the UDI directly into the report for auto-population.

Catheter flush:
The most common catheter flush solutions are included here.

Closure
A standard technique statement is included in this module, which can be modified if desired.

Access site closure technique:
The technique is described in general terms, but this pick-list can be modified to include the specific techniques favored by each institution.

Incision closure technique:
The technique is described in general terms, but this pick-list can be modified to include the specific techniques favored by each institution.

Patient discharged from procedure suite with device accessed:
This indicates whether the device was left accessed for immediate use.

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**The following are some procedure modules for a uterine artery embolization report**

**Arteriography**
The most common vessels catheterized are default for the UAE report, with each vessel having its own module. These modules can be deleted if the vessel is not catheterized, and the modules can be copy/pasted to add additional vessels.

Vessel catheterized:
The most common arteries embolized in the procedure are documented in a pick-list.

Indication for arteriography:
Indication for arteriography is required for billing. Angiograms done only to roadmap for a procedure or to check catheter position are often not billable. Diagnostic angiograms are typically billable. These pick-lists can be modified as desired.

Findings:
Findings are required for billing. Pick-lists can be modified as desired.

**Embolization**
The most common catheter positions are documented in a pick-list.

Left uterine artery:
The typical arteries embolized in the procedure are defaulted, with each vessel embolized having its own module.

Catheter position for embolization:
The most common catheter positions are documented in a pick-list.

Angiographic endpoint:
A semi-objective measure of angiographic endpoint will allow standardization.

Stasis: Static contrast column for at least five heart beats
Near-stasis: Not static, but contrast still visible for at least five heart beats
Stowed flow: Contrast is visible for less than five heart beats
Distal pruning: Flow rate appears normal but there is occlusion of distal vasculature

Primary embolic material:
The most common embolics are provided in a pick-list. This can be modified by each institution.

Total volume of primary embolic administered:
The volume of actual embolic material (so ½ vial of embospheres would be 1 cc)

Additional embolic material:
This is provided for situations where a different size or type of embolic is also used.

Total volume of additional embolic administered:
The volume of actual embolic material (so ½ vial of embospheres would be 1 cc)

Closure
Angiography at the access site.

Access site angiography performed:
Closure site angiography is typically not billable if it is being done to determine suitability for a closure device. However, if it is being done for a different reason, it may be billable.

Findings:
Findings with the most common findings provided in a pick-list.

Arterial closure technique:
Manual compression, common closure devices, and radial bands included in a pick-list. This can be modified for each institution.

Arterial closure success:
An objective measure of closure success will allow standardization.

Successful closure device: Closure device used and produced immediate hemostasis
Partially successful closure device: Closure device used and up to five minutes supplemental compression needed to achieve hemostasis
Unsuccessful closure device: Closure device used and >5 minutes supplemental compression needed to achieve hemostasis

Manual 15 minutes: No closure device, up to 15 minutes compression required

Manual 30 minutes: No closure device, 16-30 minutes compression required

Manual 45 minutes: No closure device, 31-45 minutes compression required

Manual 60 minutes: No closure device, 46-60 minutes compression required

Manual unsuccessful: No closure device, manual compression could not produce hemostasis, please specify action taken

Sheath left in place: No closure, sheath was left in place

Radial band successful: Radial compression band successfully achieved hemostasis

Radial band unsuccessful: Radial compression band did not achieve hemostasis

— the following resume standardized modules for all reports —

Contrast
Contrast agent: Several common contrast agents are included; this can be modified by each institution.
Contrast volume: Defaults to zero for procedures where contrast injection is not typically performed.

Radiation Dose
Radiation dose reporting is a CMS-approved performance measure. The percentage of procedural reports documenting radiation exposure indices will be a metric by which we are measured, and could impact reimbursement.

Fluoroscopy time: Fluoroscopy time in minutes.
Reference air kerma: Air kerma in mGy. Some fluoroscopy units may use Gray, ensure that units are converted appropriately.
Kerma area product: Kerma area product in Gy-cm² (also known as dose area product). Some fluoroscopy units may use mGy-cm², ensure that units are converted appropriately.

Additional Details
Additional description of procedure: Space provided for description of additional or adjunctive procedures performed
Additional findings: Space provided to describe the findings of the additional or adjunctive procedures described just above
Additional equipment: Space provided to list additional equipment used, which may be helpful if the procedure is repeated in the future.
Specimens removed: Joint Commission requirement
Estimated blood loss: Joint Commission requirement
Standardized report: This unique code identifies the use and version number of the SIR report.

Attestation
The attestation statement should auto-populate the supervising attending, who can then document their level of involvement, which could vary from presence during the entire procedure, presence for key elements of the procedure, or supervision from a nearby location.
How to Import Reports into Powerscribe

1. **RadPortal** is the website for administrative access for template import and export in Powerscribe 360.
2. Your local IT experts can provide RadPortal access.
3. Once you access the website, select “Import...” on the Administration screen.

4. Next, import PS360 formatted XML files. Importing the single "SIRreportbundle" XML file will upload all reporting template files at once, or individual XML documents can be imported.

5. Once templates are imported into PS360, they can be promoted to users.