



Device Interface Overview

Hemo Xper

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Introduction

Hemo Xper device interface supports the import from the HL7 output of the Philips Xper IM system into ASCEND Clinical Reporting for the ASCEND Cath knowledge base

Key features

- Imported inventory populates the device selection list in the ASCEND report menu
- Macros designed for implementation in Xper Hemo, can be used to record diagnostic procedural narrative
- Ability to split the report if two physicians work on the separate portions of the same case (i.e. a diagnostic portion and an interventional portion).
- Multiple, successive imports
 - If the device report is imported multiple times, the re-imported findings overwrite the findings from the prior device import.

Import scope

- **Demographics**
 - Date of birth (disabled by default)
 - Gender (disabled by default)
 - Race (disabled by default)
 - Height, weight (disabled by default)
 - Age, BSA – calculated in ASCEND
- **Study date** (disabled by default)
- **Contrast**
 - Contrast agent
 - Contrast volume
 - Contrast wasted
- **Fluoroscopy**
 - Fluoroscopy dose
 - Fluoroscopy time
- **Laboratory results**
 - BUN
 - Creatinine
 - Hematocrit
 - Hemoglobin
 - INR
 - Potassium
 - Sodium
 - Platelets
 - PT
 - PTT
 - WBC
 - Glucose
- **Allergies**
 - Allergies
 - No known allergies
- **Hemodynamics**
 - Condition
 - Cardiac output
 - Vascular resistances
 - Saturations
 - Pressures
 - Shunts
 - Valve data (all 4 valves)
- **Diagnostic procedures**
 - Macros (quick reports) for diagnostic procedure steps**
 - Inventory used - accessible and directly imported only in table (table disabled by default) *
- **Administered medications***
 - Medication name
 - Dose, units, rate, rate units
 - Medication routes
 - Summation of medications
 - Administered sites
- **Complications***
- **Coronary and peripheral lesions***
 - Location by native vessel and segment
 - Stenosis percent
 - Residual stenosis
- **Coronary and peripheral vascular interventions***
 - Inventory used - accessible and directly imported in narrative and table (table disabled by default) *
 - Inflation details (number of inflations and maximum inflation pressure)
- **Grafts (peripheral and coronary)**
- **Structural heart procedures**
- **Configuration***

*See additional information below

** List and description of macros provided in Imported data elements document

Excluded

- NCDR CathPCI Registry

Procedural device interface macro mapping

The ASCEND device interface supports the import of the diagnostic procedure steps recorded in Xper in the “Pre-Procedure Notes”, “Intra Procedure Notes”, and “Post-Procedure Notes” sections of Xper as free text. The steps for any given diagnostic procedure are recorded using the diagnostic procedure macros.

ASCEND’s Xper device interface supports the import of Xper procedural steps as Quick Report macros. For each Xper procedural step desired to import into ASCEND, a corresponding ASCEND QR macro needs to be recorded. ASCEND maintains a default set of best-practice macros for Xper that have been aligned with Xper procedural steps.

In order for ASCEND to import the Xper procedural step macros, Xper must be configured to add the diagnostic procedure macro names and a suffix to each procedural step, to filter out procedural steps from nursing log items. The suffix designated for this purpose is {ASCENDMACRONAME} and is placed on each ‘procedural step’ string via configuration, e.g., *Left Coronary Angio {Angio.Cor.L}*. The Xper procedure step string is informative and is not required to be an exact match to the ASCEND default procedural step macros but the {ASCENDMACRONAME} is required to be an exact match.

Inventory handling for diagnostic procedures

In the ASCEND Xper device interface, inventory items are classified and placed into the appropriate drop-down picklists, so that users can reconcile the inventory use within the procedures while the report is being generated. Inventory does not directly import in the procedure narrative because it cannot be associated with diagnostic procedures in Xper Hemo but the inventory used during the case imports into an inventory table.

Medications

Xper requires configuration of administered medications, which by default export as a single text string, in order to export them as structured data which will include the medication name, unit, route, and dose.

Complications

Complications are not discreet data in Xper IM. Complications are text strings in the “Procedure Notes” and import into the ASCEND report.

Coronary lesions

Lesions are described in the Xper Hemo coronary diagram and tagged with lesion numbers, e.g., L1, L2, etc.

Vascular Interventions

Xper Hemo has been configured to build a menu for the vascular interventions that by default are otherwise described in the “Procedure notes” and export as free text. The interventional narrative is recorded in the Xper Interventional lesion menu by first selecting a lesion number to tie the lesion with the intervention.

Split Studies by Physician

Xper Hemo utilizes a “New Physician” event for marking which data belongs to which physician when two physicians work together on a case (e.g., diagnostic and interventional). The scope of the split involves:

- Administered medications
- Contrast
- Procedures and interventions
- Complications
- Hemodynamic measurements

Device interface configuration

Configuration states are utilized in the Xper Hemo to ASCEND interface primarily to populate the inventory dropdowns in the report based on the device inventory categories, and enable/disable the import of allergies, demographics, unrecognized medications and complications, inventory table. The full list of the configuration states is specified in the ASCEND configuration guide.

Device configuration

The configuration of the Xper Hemo system based on the ASCEND configuration guide is required in order to import the Xper data into the physician report.

Vendor licenses

The HL7 Outbound license is required in order to be able to export data from the Xper Hemo system. The interface broker is required to be the Philips IntelliBridge Enterprise (IBE) in order to build the Xper configuration required by the Xper to ASCEND import interface.



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