National Endoscopy Database (NED)

**Business Message Specification  
SendBatchMessage**

Version: 1.16.1

Date: 18/01/2018

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# Introduction

This document provides information concerning the National Endoscopy Database (NED) interface and describes the scope, purpose and overview of the NED project.

## Background

The JAG is introducing a facility to enable Endoscopy System Suppliers to submit, electronically, procedure information on behalf of endoscopists to a national database, NED.

Endoscopy System Suppliers who wish to use the NED Import service must register with the JAG to do so.

Use of the NED Import service will remove the need for endoscopists to manually key in procedure data thus saving time, improve quality and increase coverage of procedures recorded throughout England.

## Purpose of this document

This document defines the detailed format and content for the logical business message, which enable the electronic communication of procedure information between the Endoscopy System Supplier and NED. It is aimed, primarily, at technicians and analysts who need a detailed understanding of these messages when involved in implementing an end point connection to the interface (e.g. from a local Endoscopy system).

## Scope

This document is one of a number that when taken together describe the NED Import service. The complete documentation set is shown in the following table, with this document highlighted.

|  |  |
| --- | --- |
| Document | Description |
| **Business Message Specification SendBatchMessage Version 1.04** | **Defines the content of the business message that will pass from the Local Endoscopy System to NED.** |
| Business Message Specification GetBatchStatusMessage Version 1.16 | Defines the content of the message received by the Local Endoscopy System when querying the status of a procedure batch in NED. |
| Interface Specification  Version 1.16 | Defines the operational interface and security requirements for connecting to NED Import service including the transmission of data. |
| Website specification  Version 1.00 | Defines how to use the NED website to upload data manually and monitor procedure data being imported. |

The focus of this document is the physical message format of the business messages used for the business information exchange between the end points (Local Endoscopy System and NED).

## Assumptions

The content of this document is based on the following assumptions.

* The procedure data message will always contain at least one procedure – this implies that the Local Endoscopy System supplier will never send empty batches.

## References

The table below lists references to other relevant documentation. References to these documents, within the text of this document, are made using the square-bracket notation shown in the “Ref” column of the table.

|  |  |
| --- | --- |
| **Ref** | Description |
| [1] | Interface specification document. |
| [2] | Website specification document. |

## Abbreviations & Terminology

This section provides definitions of abbreviations and unusual terminology used in this document.

**Abbreviations**

|  |  |
| --- | --- |
| Abbreviation | Meaning |
| ES | Endoscopy System Supplier |
| NED | National Endoscopy Database |
| JETS | JAG Endoscopy Training System ([www.jets.nhs.uk](http://www.jets.nhs.uk)) |
| JAG | Joint Advisory Group on GI Endoscopy ([www.thejag.nhs.uk](http://www.thejag.nhs.uk)) |
| µg | Microgram (mcg) |
| Mg | Milligrams |
| ODS | Organisation Data Service (ODS) codes For example: RGQ for IPSWICH HOSPITAL NHS TRUST.  A complete listing can be found in the blow (<http://www.connectingforhealth.nhs.uk/systemsandservices/data/ods/datafiles/tr.csv/view>) |
| ERS | Endoscopy Reporting System |

**Terminology**

|  |  |
| --- | --- |
| Term | Meaning |
| XML Schema | A standard for defining the format of XML documents. The standard provides a means by which tools can know the correct format of a document, enabling them to provide generic operations such as validation |

# Message Content

This section of the document provides detailed descriptions of the business data content that is contained within each business message that can be communicated over the NED Import service interface.

It defines, at a detailed level, the business data that each message communicates and the technical format for the representation of that business data. It does not contain any information related to the creation of a message or the mechanism of its delivery, nor does it define the format of message wrappers or headers. All these are covered in the Interface Control Document [1].

XML documents provide the ability to organise data contained within them hierarchically. This approach is reflected in the data definitions that follow, both to indicate how the data is organised and to allow lengthy definitions to be provided in a digestible manner. The approach taken is to describe data content at higher levels and, within these, make reference to lower level detail that is subsequently expanded. These lower levels of the data structure are referred to within the text as sub-structures. In XML, these are known as complex types.

The data content is described in tabular format and using diagrams to illustrate the XML structures used. Each data item is described by name and by a more lengthy description. A column indicates whether the data item is mandatory or optional and a further column defines the type or format of the data.

Data items within a lower level sub-structure that is referenced from higher levels may be marked as mandatory even though the entire sub-structure is marked as optional at the higher level. Where this occurs, it indicates that the data item is mandatory within the sub-structure if the sub-structure is included.

The Type/Format column either describes the format of the data for the relevant data item (e.g. YYYY for a 4-digit year) or references a description elsewhere. Where this references a lower-level sub-structure that is defined as part of the definition of that message, the name used to make that reference is shown in italic text and refers to the relevant sub-heading within the document. References are also made to sub-structures that are applicable to more than one message (shared complex types) and to definitions that describe a set of valid values to which the item is constrained or other formatting constraints that are too lengthy to fit neatly in the table. These are defined in separate sub-sections of this section of the document after the individual message definitions.

The tables provided for the message includes an additional column labelled ‘ABV’. This column includes a ‘Y’ (for ‘Yes’) to indicate items that have additional business validation (i.e. over and above XML schema validation) upon receipt of the message from NED. The additional business validation is described in section 5 of this specification.

The XML schemas that specify these message formats at a machine-readable technical level are provided at the end of this document.

# Business Message Format

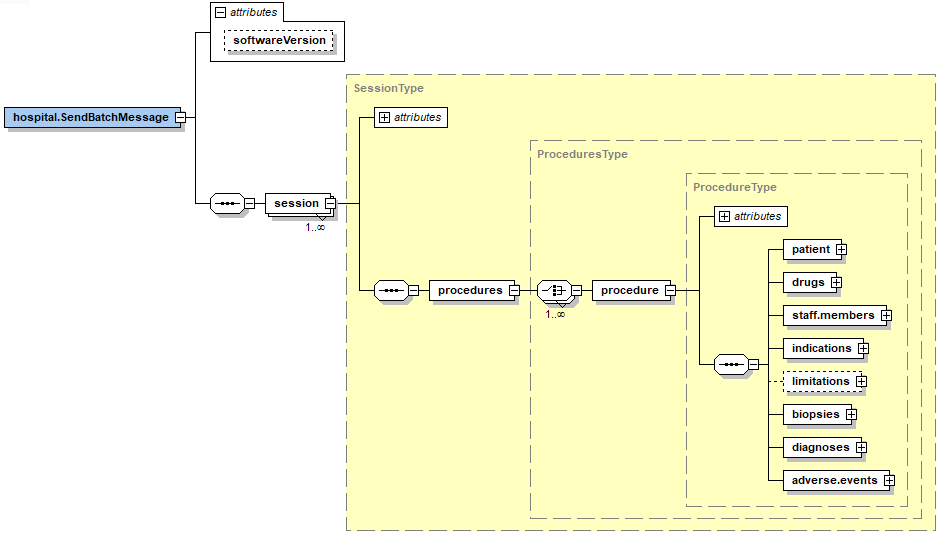
## Description

This data definition describes the logical groups for this message. It provides the data for a batch of sessions belonging to a hospital/unit, each batch contains one or more procedures.

Note: The complete expanded visual representation of the XML Schema can be found in Appendix A.

## Top Level

The following diagram and table describe the data content of this data definition at the top level, with the sub-sections that follow drilling down into further detail.



|  |  |
| --- | --- |
| Type | Description |
| softwareVersion | (Attribute to hospital.sendBatchMessage) Allowing ERS supplier to specify their ERS version String (50 Max). |
| session | Provides session level information containing one or more procedures. |
| procedures | Provides a grouping of procedures. |
| Procedure | Provides procedure information |
| patient | Provides patient demographics information. |
| drugs | Provides information on drugs dosages. |
| staff.members | A list of staff who were present during the procedure. |
| indications | A list of indications for the procedure. |
| Limitations | A list of limitations for the procedure. |
| Biopsies | A list of biopsies for the procedure. |
| diagnoses | A list of diagnoses for the procedure. |
| adverse.events | A list of adverse events that may have occurred during the procedure. |

## SessionType

The Session structure provides various elements of information relating to a unique session.

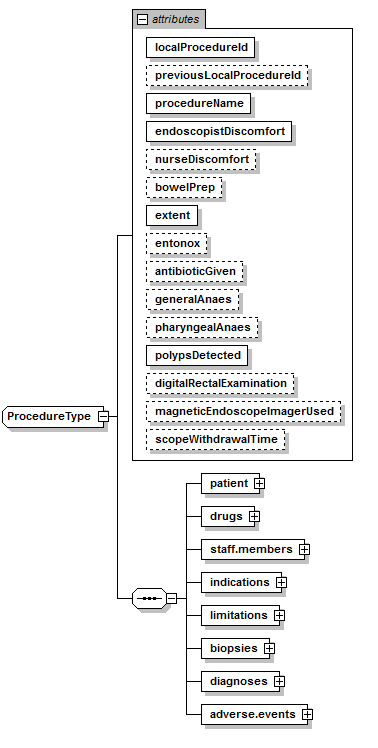


**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| uniqueId | String (255 Max) | A local unique Identification used to identify the session within the ERS. |  | M |
| description | string | A local description of the session e.g. local session name. |  | M |
| date | *UKDateType* | The date the session was undertaken. *See Other Types sub-section.* |  | M |
| time | *TimeEnum* | When during the day the session was undertaken. *See Other Types sub-section.* |  | M |
| type | *SessionTypeEnum* | The type of list this session belongs to. *See Other Types sub-section.* |  | M |
| site | string | Unique hospital site code where the session has taken place (ODS Code) | Y5.1 | M |

## ProcedureType

The procedure structure provides various elements of information relating to a procedure.



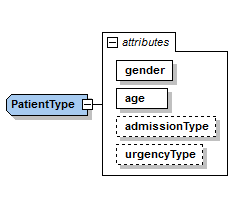
**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| localProcedureId | String (255 Max) | A local unique Identification number (as used by the ERS) is used in conjunction with the hospital ODS code to identify the individual procedure. This identifier is then used to subsequently update that unique procedure. |  | M |
| previousLocalProcedureId | String (255 Max) | If the patient has a previous procedure specify what the local unique Identification number for that procedure was.1 |  | O |
| procedureName | *ProcedureNameEnum* | The type of procedure |  | M |
| endoscopistDiscomfort | *DiscomfortEnum* | The discomfort score as recorded by the endoscopist performing the procedure. *See Other Types sub-section.* |  | M |
| nurseDiscomfort | *DiscomfortEnum* | The discomfort score as recorded by the nurse assisting in the procedure. *See Other Types sub-section.* |  | O |
| bowelPrep | *BowelPrepEnum* | Using a modified version of Aronchick to provide the bowel prep rating. | Y5.19 | O |
| extent | *ExtentTypeEnum* | The overall extent of the examination | Y5.2 | M |
| entonox | *YesNoEnum* | Was Entonox given to the patient? |  | O |
| antibioticGiven | *YesNoEnum* | Antibiotic given if clinically indicated. *See Other Types sub-section.* | Y5.4 | O |
| generalAnaes | *YesNoEnum* | Was Patient given a general anaesthetic? *See Other Types sub-section.* |  | O |
| pharyngealAnaes | *YesNoEnum* | Was Patient given a pharyngeal anaesthetic? *See Other Types sub-section.* | Y5.5 | O |
| polypsDetected | Integer | Polyps detected (excluding rectal hyperplastic polyps) | Y5.6 | M |
| digitalRectalExamination | *YesNoEnum* | Was a digital rectal examination performed? *See Other Types sub-section.* | Y5.7 | O |
| magneticEndoscopeImagerUsed | *YesNoEnum* | Was a Magnetic Endoscope used?  *See Other Types sub-section.* | Y5.8 | O |
| scopeWithdrawalTime | Integer | Time to withdraw scope in minutes. | Y5.9 | O |

1 *We are currently investigating the option to use pseudonymisation in place of the Previous Local Procedure Id (to provide a cross hospital and cross database relationship).*

## PatientType

This structure provides information about the patient the procedure was performed on.



**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| gender | *GenderType* | Patients gender *See Other Types sub-section.* |  | M |
| age | Integer | Patients age at procedure |  | M |
| admissionType | *AdmissionTypeEnum* | The type of admission for the patient *See Other Types sub-section.* |  | O |
| urgencyType | *UrgencyEnum* | The type of urgency for the patient. *See Other Types sub-section.* |  | O |

## DrugsType

This structure provides dosages of drugs given to the patient as a result of the procedure.

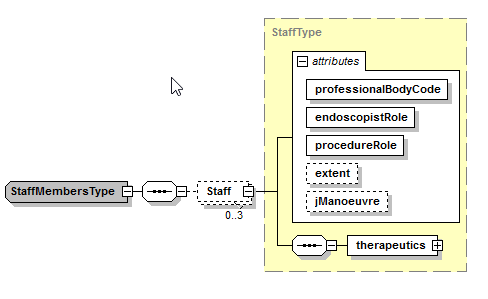


**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| pethidine | float | Dosage in Milligrams (mg) |  | M |
| midazolam | float | Dosage in Milligrams (mg) |  | M |
| fentanyl | float | Dosage in Micrograms (µg) |  | M |
| buscopan | float | Dosage in Milligrams (mg) |  | O |
| propofol | float | Dosage in Milligrams (mg) |  | O |
| noDrugsAdministered | *YesNoEnum* | Indication that no drugs were administered. |  | O |

## StaffMembersType

Provides information relating to the staff involved in the procedure and their role during procedure.



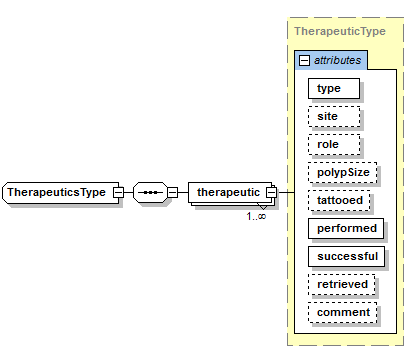
**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| professionalBodyCode | string | The professional registration number of the staff member, for example GMC/NMC2 |  | M |
| endoscopistRole | *EndoscopistRoleTypeEnum* | The role of the endoscopist during the procedure e.g. Trainer, Trainee. *See Other Types sub-section.* |  | M |
| procedureRole | *ProcedureRoleTypeEnum* | The role performed during the procedure e.g. Observing.  *See Other Types sub-section.* | Y5.17 | M |
| extent | *ExtentTypeEnum* | The extent which the staff member achieved.  *See Other Types sub-section.* | Y5.2 | O |
| jManoeuve | *YesNoEnum* | Was a jManoeuve or Rectal Retroversion carried out by this member of staff.  *See Other Types sub-section.* | Y5.10 | O |
| therapeutics | TherapeuticType | List of Therapeutic procedures carried out |  | M |

*2 Staff members who do not have a professional body code can obtain a local NED code by logging into NED and going to their “My profile” page.*

## TherapeuticType

Provides information relating to the Therapeutic procedures performed by a staff member.

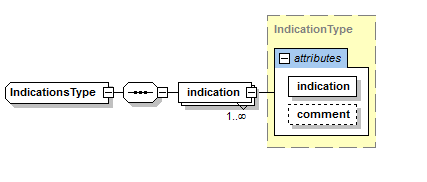


**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| therapeutic | TherapeuticType | The container for all therapeutic procedures that the staff member was responsible for. |  | M |
| type | *TherapeuticLookupEnum* | The type of therapeutic procedure.  *See Other Types sub-section.* | Y5.11 | M |
| site | *BiopsyEnum* | The location where the therapeutic procedure was performed.  *See Other Types sub-section.* | Y5.20 | O |
| role | *ProcedureRoleTypeEnum* | The role of the endoscopist who carried out the therapeutic procedure.  *See Other Types sub-section.* | Y5.19 | O |
| polypSize | *PolypSizeEnum* | The size of polyp (if found)  *See Other Types sub-section.* |  | O |
| tattooed | *TattooEnum* | Was Tattooing performed? *See Other Types sub-section.* | Y5.16 | O |
| performed | Integer | Number performed |  | M |
| successful | Integer | Number of successful |  | M |
| retrieved | Integer | Number retrieved |  | O |
| Comment | string | Use this field to define what “Other” is when selected. |  | O |

## IndicationsType

Provides a list of indications for the procedure.

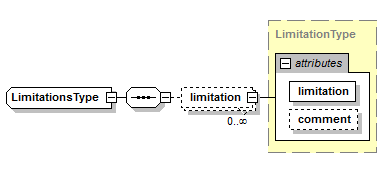


**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| Indication | *IndicationsEnum* | The indications for the procedure. *See Other Types sub-section.* | Y5.13 | M |
| Comment | string | Use this field to define what “Other” is when selected. |  | O |

## LimitationsType

Provides a list of limitations for the procedure.

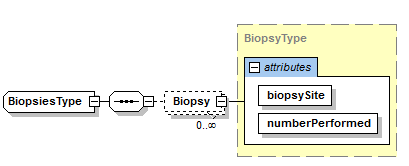


**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| Limitation | *LimitationsEnum* | The limitation for the procedure. *See Other Types sub-section.* | Y5.3 | M |
| Comment | string | Use this field to define what “Other” is when selected. |  | O |

## BiopsiesType

Provides a list of biopsies taken for the procedure.

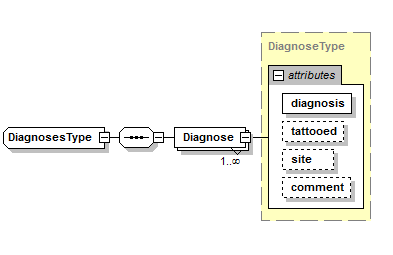


**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| BiopsySite | *BiopsyEnum* | The located where the b*iopsy was taken. See Other Types sub-section.* | Y5.12 | M |
| numberPerformed | int | Number of biopsies performed against the selected site location |  | M |

## DiagnosesType

Provides a list of diagnoses for the procedure and also indicates if tattooing because of a given diagnosis.

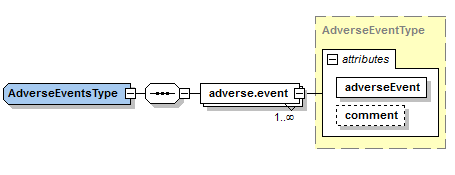


**Attributes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| diagnosis | *DiagnosisLookupEnum* | A diagnosis for the procedure.  *See Other Types sub-section.* | Y5.14 | M |
| tattooed | *TattooEnum* | If tattooing occurred because of the diagnosis e.g. a suspected cancer.  *See Other Types sub-section* | Y5.16 | O |
| Site | *BiopsyEnum* | Location of tattoo. | Y5.12 | O |
| Comment | string | Use this field to define what “Other” is when selected. |  | O |

## AdverseEventsType

Provides a list of adverse events that occurred against the procedure.



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Content | Type | Description | ABV | M/O |
| adverse.event | *AdverseEventEnum* | A adverse event  *See Other Types sub-section.* | Y5.15 | M |
| Comment | string | Use this field to define what “Other” is when selected. |  | O |

## Other Types

**UKDateType**

Values of this type represent a date. This is provided in the format DD/MMM/YYYY.

Examples:   
01/Jan/2012  
22/Jan/2013

**TimeEnum**

Permitted values for when during the day the list occurred

|  |  |
| --- | --- |
| Valid Values | Meaning |
| AM | Occurred in the Morning |
| PM | Occurred during the Afternoon or Evening. |

**SessionTypeEnum**

Permitted values for session type.

|  |  |
| --- | --- |
| Valid Values | Meaning |
| Dedicated Training List | Trainer present for >= 50% of procedures |
| Adhoc Training List | Trainer present for <50% of procedures |
| Service List | No trainer present |

**ProcedureNameEnum**Permitted values for the type of procedure performed.

|  |
| --- |
| Valid Values |
| OGD |
| FLEXI |
| ERCP |
| COLON |

**DiscomfortEnum**

Permitted values for discomfort score as provided by the Endoscopist /Nurse.

|  |  |
| --- | --- |
| Valid Values | Meaning |
| Not Specified | -- |
| Comfortable | talking / comfortable throughout |
| Minimal | 1 or 2 episodes of mild discomfort with no distress |
| Mild | More than 2 episodes of discomfort without distress |
| Moderate | Significant discomfort experienced several times with some distress |
| Severe | Frequent discomfort with significant distress |

**ExtentTypeEnum**

Permitted values for extent reached dependent upon the procedure type.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Valid Values | Colon | Flexi | | OGD | ERCP |
| Stomach |  |  | | Y | Y |
| Oesophagus |  |  | | Y | Y |
| Intubation failed |  |  | | Y | Y |
| D2 - 2nd part of duodenum |  |  | | Y | Y |
| Duodenal bulb |  |  | | Y | Y |
| Anastomosis |  |  | | Y |  |
| Transverse Colon | Y | Y | |  |  |
| Terminal ileum | Y | Y | |  |  |
| Splenic flexure | Y | Y | |  |  |
| Sigmoid colon | Y | Y | |  |  |
| Rectum | Y | Y | |  |  |
| Pouch | Y | Y | |  |  |
| Neo-terminal ileum | Y | Y | |  |  |
| Ileo-colon anastomosis | Y | Y | |  |  |
| Hepatic flexure | Y | Y | |  |  |
| Descending Colon | Y | Y | |  |  |
| Caecum | Y | Y | |  |  |
| Ascending Colon | Y | Y | |  |  |
| Anus | Y | Y | |  |  |
| Papilla |  |  |  | | Y |
| Pancreatic duct |  |  |  | | Y |
| Common bile duct |  |  |  | | Y |
| CBD and PD |  |  |  | | Y |
| Abandoned | Y | Y | Y | | Y |

**LimitationsEnum**

Permitted values for limitation if the intended extent was not reached, dependent upon the procedure type.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Valid Values | Colon | Flexi | OGD | ERCP |
| Other | Y | Y | Y | Y |
| Not Limited | Y | Y |  |  |
| benign stricture | Y | Y |  |  |
| inadequate bowel prep | Y | Y |  |  |
| malignant stricture | Y | Y |  |  |
| patient discomfort | Y | Y |  |  |
| severe colitis | Y | Y |  |  |
| unresolved loop | Y | Y |  |  |
| clinical intention achieved |  | Y |  |  |

**YesNoEnum**

|  |
| --- |
| Valid Values |
| Not Specified |
| Yes |
| No |

**GenderType**

Permitted values for the gender of the patient.

|  |
| --- |
| Valid Values |
| Male |
| Female |
| Unknown |
| Indeterminate |

**AdmissionTypeEnum**

Permitted values for the source of the referral.

|  |
| --- |
| Valid Values |
| Not Specified |
| Inpatient |
| Outpatient |

**UrgencyEnum**

Permitted values for the urgency of the referral.

|  |
| --- |
| Valid Values |
| Not Specified |
| Routine |
| Urgent |
| Emergency |
| Surveillance |

**EndoscopistRoleTypeEnum**

Permitted values for the role a staff member performed.

|  |
| --- |
| Valid Values |
| Trainer |
| Trainee |
| Independent |

**ProcedureRoleTypeEnum**

Permitted values for a staff role during the procedure

|  |  |  |
| --- | --- | --- |
| Valid Values | Trainee | Trainer/Independent |
| Independent (no trainer) | Y | Y |
| Was observed | Y |  |
| Was assisted physically | Y |  |
| I observed |  | Y |
| I assisted physically |  | Y |

**TherapeuticLookupEnum**

Permitted values for therapeutic procedures undertaken by a staff member, dependent upon the procedure type.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Valid Values | Colon | Flexi | OGD | ERCP |
| None | Y | Y | Y | Y |
| Other | Y | Y | Y | Y |
| Argon beam photocoagulation | Y | Y | Y |  |
| Balloon dilation | Y | Y | Y | Y |
| Banding of haemorrhoid | Y | Y |  |  |
| Clip placement | Y | Y | Y |  |
| Endoloop placement | Y | Y | Y |  |
| Foreign body removal | Y | Y | Y |  |
| Injection therapy | Y | Y | Y | Y |
| Marking / tattooing | Y | Y | Y |  |
| Polyp - cold biopsy | Y | Y |  |  |
| Polyp - EMR | Y | Y |  |  |
| Polyp - ESD | Y | Y |  |  |
| Polyp - hot biopsy | Y | Y |  |  |
| Polyp - snare cold | Y | Y |  |  |
| Polyp - snare hot | Y | Y |  |  |
| Stent change | Y | Y | Y | Y |
| Stent placement | Y | Y | Y |  |
| Stent removal | Y | Y | Y | Y |
| YAG laser | Y | Y | Y |  |
| Balloon trawl |  |  |  | Y |
| Bougie dilation |  |  | Y | Y |
| Brush cytology |  |  |  | Y |
| Cannulation |  |  |  | Y |
| Combined (rendezvous) proc |  |  |  | Y |
| Diagnostic cholangiogram |  |  |  | Y |
| Diagnostic pancreatogram |  |  |  | Y |
| Endoscopic cyst puncture |  |  |  | Y |
| Haemostasis |  |  |  | Y |
| Manometry |  |  |  | Y |
| Nasopancreatic / bilary drain |  |  |  | Y |
| Sphincterotomy |  |  |  | Y |
| Stent placement - CBD |  |  |  | Y |
| Stent placement - pancreas |  |  |  | Y |
| Stone extraction <10mm |  |  |  | Y |
| Stone extraction >=10mm |  |  |  | Y |
| Band ligation |  |  | Y |  |
| Botox injection |  |  | Y |  |
| EMR |  |  | Y |  |
| ESD |  |  | Y |  |
| Heater probe |  |  | Y |  |
| Hot biopsy |  |  | Y |  |
| PEG change |  |  | Y |  |
| PEG placement |  |  | Y |  |
| PEG removal |  |  | Y |  |
| Polypectomy |  |  | Y |  |
| Radio frequency ablation |  |  | Y |  |
| Variceal sclerotherapy |  |  | Y |  |

**BiopsyEnum**

Permitted values for where a biopsy was taken dependent upon the procedure type

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Valid Values | Colon | Flexi | OGD | ERCP |
| None | Y | Y | Y | Y |
| Oesophagus |  |  | Y |  |
| Stomach |  |  | Y |  |
| Duodenal bulb |  |  | Y |  |
| D2 - 2nd part of duodenum |  |  | Y |  |
| Terminal ileum | Y |  |  |  |
| Neo-terminal ileum | Y |  |  |  |
| Ileo-colon anastomosis | Y |  |  |  |
| Ascending Colon | Y |  |  |  |
| Hepatic flexure | Y |  |  |  |
| Transverse Colon | Y | Y |  |  |
| Splenic flexure | Y | Y |  |  |
| Descending Colon | Y | Y |  |  |
| Sigmoid Colon | Y | Y |  |  |
| Rectum | Y | Y |  |  |
| Anus | Y | Y |  |  |
| Pouch | Y | Y |  |  |
| Caecum | Y | Y |  |  |

**IndicationsEnum**

Permitted values for indications, dependent upon the procedure type.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Valid Values | Colon | Flexi | OGD | ERCP |
| Other | Y | Y | Y | Y |
| Abdominal pain | Y | Y | Y |  |
| Abnormality on CT / barium | Y | Y | Y |  |
| Anaemia | Y | Y | Y |  |
| Barretts oesophagus |  |  | Y |  |
| Diarrhoea |  |  | Y |  |
| Dyspepsia |  |  | Y |  |
| Dysphagia |  |  | Y |  |
| Haematemesis |  |  | Y |  |
| Heartburn / reflux |  |  | Y |  |
| Melaena | Y | Y | Y |  |
| Nausea / vomiting |  |  | Y |  |
| Odynophagia |  |  | Y |  |
| PEG change |  |  | Y |  |
| PEG placement |  |  | Y |  |
| PEG removal |  |  | Y |  |
| Positive TTG / EMA |  |  | Y |  |
| Stent change | Y | Y | Y |  |
| Stent placement | Y | Y | Y |  |
| Stent removal | Y | Y | Y |  |
| Follow up of gastric ulcer |  |  | Y |  |
| Varices surveillance / screening |  |  | Y |  |
| Weight loss | Y | Y | Y |  |
| BCSP | Y |  |  |  |
| Abdominal mass | Y | Y |  |  |
| Abnormal sigmoidoscopy | Y | Y |  |  |
| Chronic alternating diarrhoea / constipation | Y | Y |  |  |
| Colorectal cancer - follow up | Y | Y |  |  |
| Constipation - acute | Y | Y |  |  |
| Constipation - chronic | Y | Y |  |  |
| Defaecation disorder | Y | Y |  |  |
| Diarrhoea - acute | Y | Y |  |  |
| Diarrhoea - chronic | Y | Y |  |  |
| Diarrhoea - chronic with blood | Y | Y |  |  |
| FHx of colorectal cancer | Y | Y |  |  |
| FOB +'ve | Y | Y |  |  |
| IBD assessment / surveillance | Y | Y |  |  |
| Polyposis syndrome | Y | Y |  |  |
| PR bleeding - altered blood | Y | Y |  |  |
| PR bleeding - anorectal | Y | Y |  |  |
| Previous / known polyps | Y | Y |  |  |
| Tumour assessment | Y | Y |  |  |
| Abnormal liver enzymes |  |  |  | Y |
| Acute pancreatitis |  |  |  | Y |
| Ampullary mass |  |  |  | Y |
| Bile duct injury |  |  |  | Y |
| Bile duct leak |  |  |  | Y |
| Cholangitis |  |  |  | Y |
| Chronic pancreatitis |  |  |  | Y |
| Gallbladder mass |  |  |  | Y |
| Gallbladder polyp |  |  |  | Y |
| Hepatobiliary mass |  |  |  | Y |
| Jaundice |  |  |  | Y |
| Pancreatic mass |  |  |  | Y |
| Pancreatic pseudocyst |  |  |  | Y |
| Pancreatobiliary pain |  |  |  | Y |
| Papillary dysfunction |  |  |  | Y |
| Pre lap choledocholithiasis |  |  |  | Y |
| Primary sclerosing cholangitis |  |  |  | Y |
| Purulent cholangitis |  |  |  | Y |
| Stent dysfunction |  |  |  | Y |

**DiagnosisLookupEnum**

Permitted values for diagnoses, dependent on the procedure type.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Valid Values | Colon | Flexi | OGD | ERCP |
| Normal | Y | Y | Y | Y |
| Other | Y | Y | Y | Y |
| Anal fissure | Y | Y |  |  |
| Angiodysplasia | Y | Y | Y |  |
| Colitis - ischemic | Y | Y |  |  |
| Colitis - pseudomembranous | Y | Y |  |  |
| Colitis - unspecified | Y | Y |  |  |
| Colorectal cancer | Y | Y |  |  |
| Crohn's - terminal ileum | Y | Y |  |  |
| Crohn's colitis | Y | Y |  |  |
| Diverticulosis | Y | Y |  |  |
| Fistula | Y | Y |  |  |
| Foreign body | Y | Y |  |  |
| Haemorrhoids | Y | Y |  |  |
| Lipoma | Y | Y |  |  |
| Melanosis | Y | Y |  |  |
| Parasites | Y | Y |  |  |
| Pneumatosis coli | Y | Y |  |  |
| Polyp/s | Y | Y |  |  |
| Polyposis syndrome | Y | Y |  |  |
| Postoperative appearance | Y | Y |  |  |
| Proctitis | Y | Y |  |  |
| Rectal ulcer | Y | Y |  |  |
| Stricture - inflammatory | Y | Y |  |  |
| Stricture - malignant | Y | Y |  |  |
| Stricture - postoperative | Y | Y |  |  |
| Ulcerative colitis | Y | Y |  |  |
| Anastomotic stricture |  |  |  | Y |
| Biliary fistula/leak |  |  |  | Y |
| Biliary occlusion |  |  |  | Y |
| Biliary stent occlusion |  |  |  | Y |
| Biliary stone(s) |  |  |  | Y |
| Biliary stricture |  |  |  | Y |
| Carolis disease |  |  |  | Y |
| Cholangiocarcinoma |  |  |  | Y |
| Choledochal cyst |  |  |  | Y |
| Cystic duct stones |  |  |  | Y |
| Duodenal diverticulum |  |  | Y | Y |
| Gallbladder stone(s) |  |  |  | Y |
| Gallbladder tumor |  |  |  | Y |
| Hemobilia |  |  |  | Y |
| IPMT |  |  |  | Y |
| Mirizzi syndrome |  |  |  | Y |
| Pancreas annulare |  |  |  | Y |
| Pancreas divisum |  |  |  | Y |
| Pancreatic cyst |  |  |  | Y |
| Pancreatic duct fistula/leak |  |  |  | Y |
| Pancreatic duct injury |  |  |  | Y |
| Pancreatic duct stricture |  |  |  | Y |
| Pancreatic stent occlusion |  |  |  | Y |
| Pancreatic stone |  |  |  | Y |
| Pancreatic tumor |  |  |  | Y |
| Pancreatitis - acute |  |  |  | Y |
| Pancreatitis - chronic |  |  |  | Y |
| Papillary stenosis |  |  |  | Y |
| Papillary tumor |  |  |  | Y |
| Primary sclerosing cholangitis |  |  |  | Y |
| Suppurative cholangitis |  |  |  | Y |
| Achalasia |  |  | Y |  |
| Barretts oesophagus |  |  | Y |  |
| Dieulafoy lesion |  |  | Y |  |
| Duodenal polyp |  |  | Y |  |
| Duodenal tumour - benign |  |  | Y |  |
| Duodenal tumour - malignant |  |  | Y |  |
| Duodenal ulcer |  |  | Y |  |
| Duodenitis - erosive |  |  | Y |  |
| Duodenitis - non-erosive |  |  | Y |  |
| Extrinsic compression |  |  | Y |  |
| Gastric diverticulum |  |  | Y |  |
| Gastric fistula |  |  | Y |  |
| Gastric foreign body |  |  | Y |  |
| Gastric polyp(s) |  |  | Y |  |
| Gastric postoperative appearance |  |  | Y |  |
| Gastric tumour - benign |  |  | Y |  |
| Gastric tumour - malignant |  |  | Y |  |
| Gastric tumour - submucosal |  |  | Y |  |
| Gastric ulcer |  |  | Y |  |
| Gastric varices |  |  | Y |  |
| Gastritis - erosive |  |  | Y |  |
| Gastritis - non-erosive |  |  | Y |  |
| Gastropathy-portal hypertensive |  |  | Y |  |
| GAVE |  |  | Y |  |
| Hiatus hernia |  |  | Y |  |
| Mallory-Weiss tear |  |  | Y |  |
| Oesophageal candidiasis |  |  | Y |  |
| Oesophageal diverticulum |  |  | Y |  |
| Oesophageal fistula |  |  | Y |  |
| Oesophageal foreign body |  |  | Y |  |
| Oesophageal polyp |  |  | Y |  |
| Oesophageal stricture - benign |  |  | Y |  |
| Oesophageal stricture - malignant |  |  | Y |  |
| Oesophageal tumour - benign |  |  | Y |  |
| Oesophageal tumour - malignant |  |  | Y |  |
| Oesophageal ulcer |  |  | Y |  |
| Oesophageal varices |  |  | Y |  |
| Oesophagitis - eosinophilic |  |  | Y |  |
| Oesophagitis - reflux |  |  | Y |  |
| Pharyngeal pouch |  |  | Y |  |
| Pyloric stenosis |  |  | Y |  |
| Scar |  |  | Y |  |
| Schatzki ring |  |  | Y |  |

**AdverseEventEnum**

Permitted values for adverse events, dependent on the procedure type.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Valid Values | Colon | Flexi | OGD | ERCP |
| None | Y | Y | Y | Y |
| Other | Y | Y | Y | Y |
| Ventilation | Y | Y | Y | Y |
| Perforation of lumen | Y | Y | Y | Y |
| Bleeding | Y | Y | Y | Y |
| O2 desaturation | Y | Y | Y | Y |
| Flumazenil | Y | Y | Y | Y |
| Naloxone | Y | Y | Y | Y |
| Consent signed in room | Y | Y | Y | Y |
| Withdrawal of consent | Y | Y | Y | Y |
| Unplanned admission | Y | Y | Y | Y |
| Unsupervised trainee | Y | Y | Y | Y |
| Death | Y | Y | Y | Y |
| Pancreatitis |  |  |  | Y |

**PolypSizeEnum**

Permitted values for Polyp size.

|  |
| --- |
| Valid Values |
| ItemLessThan10mm |
| Item10to19mm |
| Item20OrLargermm |

**BowelPrepEnum**

Permitted values for a Modified version of the Aronchick scale.

|  |  |
| --- | --- |
| Valid Values | Description |
| excellent | >90 % of mucosa seen, mostly liquid stool, minimal suctioning needed for adequate visualization |
| good | >90 % of mucosa seen, mostly liquid stool, significant suctioning needed for adequate visualization |
| fair | >90 % of mucosa seen, mixture of liquid and semisolid stool, could be suctioned and / or washed |
| inadequate | < 90 % of mucosa seen, mixture of semisolid and solid stool that could not be suctioned or washed |
| Not Specified | Bowel Preparation has not been recorded. |

**TattooEnum**

Permitted values for tattooing.

|  |
| --- |
| Valid Values |
| Yes |
| No |
| Previously Tattooed |

# Additional Business Validation (ABV)

The following additional validation outside of the XSD schema is applied during the upload process.  
Where the business validation references another table for “further information” then the ES will need to ensure only those values contained in the table for the given procedure are supplied. Validation will fail if a lookup value belonging to one procedure is used on another where it is not applicable.

## Hospital site code

The hospital site code (ODS Code) is validated against the site code being passed when the file is uploaded to the NED Import service. This site code must exist in JETS for the file to be accepted by the interface.

## Extent

The extent reached field is procedure specific. See the ExtentTypeEnum table for further information.  
  
An extent is mandatory for a trainee where they have a procedure role of “was assisted physically”.

## Limited by

The limited by field is procedure specific. See the LimitationsEnum table for further information.

## Antibiotics given

Applies to ERCP only.

## Pharyngeal Anaesthesia

Applies to OGD and ERCP only.

## Polyps detected

Applies to OGD, Colon and Flexi.

## Digital Rectal Examination Performed

Mandatory Yes/No is required for Flexi and Colon procedures.

## Magnetic endoscope imager used

Applies to Flexi and Colon only.

## Scope Withdrawal time

Applies to Colon only.

## J manoeuvre performed

Mandatory Yes/No is required for OGD.  
Mandatory Yes/No is required for Colon and Flexi procedures (Rectal retroversion)

## Therapeutic type

The Therapeutic type field is procedure specific. See the therapeuticLookupEnum table for further information.

## Biopsy taken from

The Biopsy field is procedure specific. See the BiopsyEnum table for further information.

## Indications

The indications field is procedure specific. See the IndicationsEnum table for further information.

## Diagnosis

The Diagnosis field is procedure specific. See the DiagnosisEnum table for further information.

## Adverse events

Adverse events are procedure specific. See the AdverseEventsEnum table for further information.

## Tattoo

This field is mandatory if the Therapeutic type polyp size found is greater than 19mm.   
Or  
A procedure diagnosis of “Colorectal cancer” has been specified.

## Procedure role

The procedure role field options are limited to the endoscopist’s Role. See the ProcedureRoleTypeEnum for further information.

## Bowel Preparation

Applies to Colon and Flexi only.

## Therapeutic Role

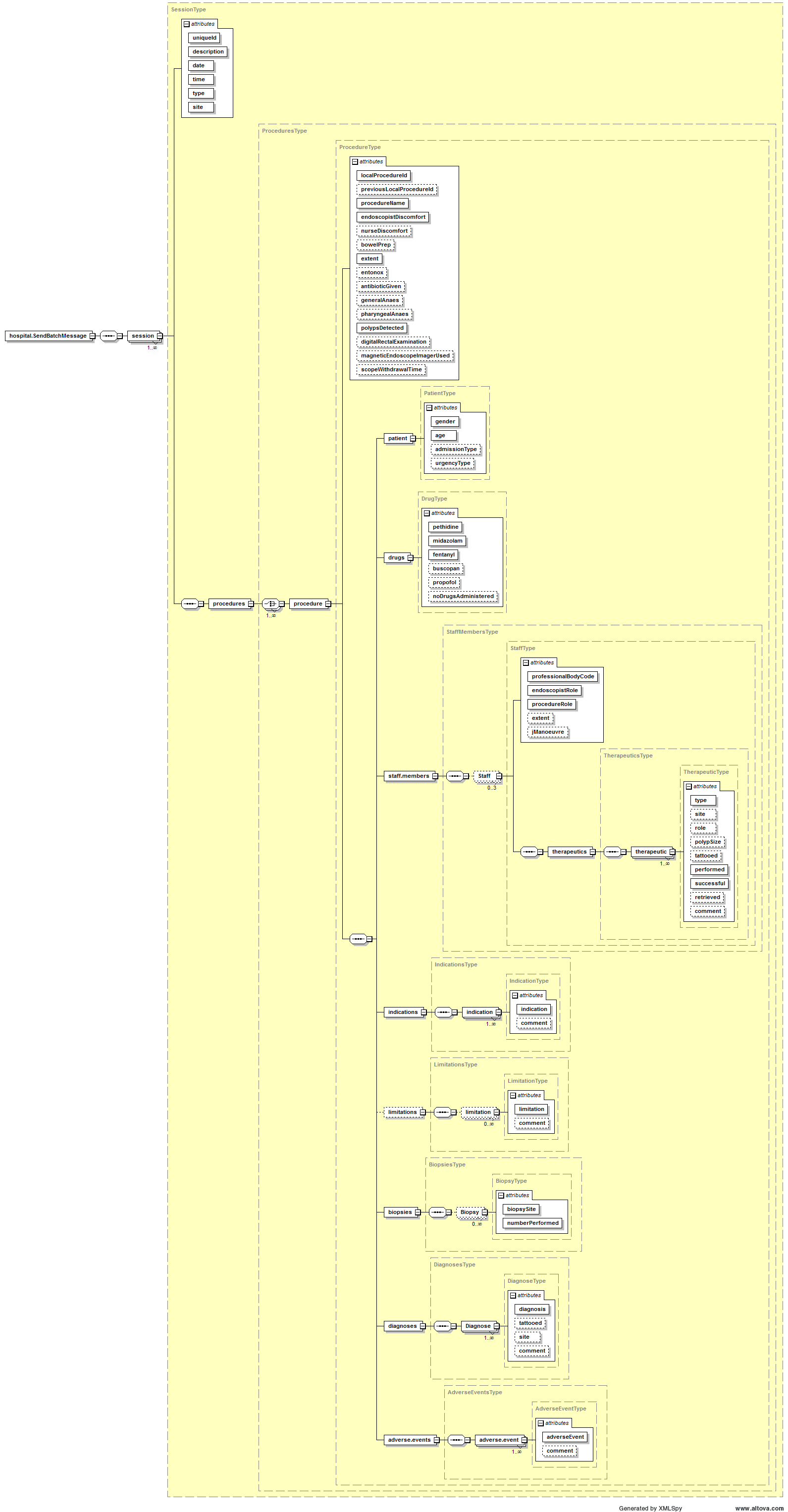
This field is optional if the Therapeutic type is none, otherwise it is mandatory.

## Site

The site field is procedure specific. See the BiopsyEnum table for further information.  
This field is optional if the Therapeutic type is none, otherwise it is mandatory.

# Appendix A – Visualizing the Schema file

The following diagram shows a visual representation of the XML schema in its entirety.



# Appendix B – Schema file

|  |
| --- |
| <?xml version="1.0" encoding="utf-8"?>  <!-- Version 1.16.1 -->  <xs:schema xmlns="http://weblogik.co.uk/jets/Hospital.SendBatchMessage.xsd" xmlns:mstns="http://weblogik.co.uk/jets/Hospital.SendBatchMessage.xsd" xmlns:xs="http://www.w3.org/2001/XMLSchema" targetNamespace="http://weblogik.co.uk/jets/Hospital.SendBatchMessage.xsd" elementFormDefault="qualified" id="SendBatchMessageFile">  <!-- Root Element -->  <xs:element name="hospital.SendBatchMessage">  <xs:complexType>  <xs:sequence>  <xs:element name="session" type="SessionType" minOccurs="1" maxOccurs="unbounded"/>  </xs:sequence>  <xs:attribute name="softwareVersion" type="xs:string" use="optional"/>  </xs:complexType>  </xs:element>  <!-- Session Element-->  <xs:complexType name="SessionType">  <xs:sequence>  <xs:element name="procedures" type="ProceduresType" minOccurs="1" maxOccurs="1"/>  </xs:sequence>  <xs:attribute name="uniqueId" type="xs:string" use="required"/>  <xs:attribute name="description" type="xs:string" use="required"/>  <xs:attribute name="date" type="UKDateType" use="required"/>  <xs:attribute name="time" type="TimeEnum" use="required"/>  <xs:attribute name="type" type="SessionTypeEnum" use="required"/>  <xs:attribute name="site" type="xs:string" use="required"/>  </xs:complexType>  <xs:complexType name="ProceduresType">  <xs:choice minOccurs="1" maxOccurs="unbounded">  <xs:element name="procedure" type="ProcedureType"/>  </xs:choice>  </xs:complexType>  <!-- Procedure Types -->  <xs:complexType name="ProcedureType">  <xs:sequence>  <xs:element name="patient" type="PatientType" minOccurs="1" maxOccurs="1"/>  <xs:element name="drugs" type="DrugType" minOccurs="1" maxOccurs="1"/>  <xs:element name="staff.members" type="StaffMembersType" minOccurs="1" maxOccurs="1"/>  <xs:element name="indications" type="IndicationsType" minOccurs="1" maxOccurs="1"/>  <xs:element name="limitations" type="LimitationsType" minOccurs="0" maxOccurs="1"/>  <xs:element name="biopsies" type="BiopsiesType" minOccurs="1" maxOccurs="1"/>  <xs:element name="diagnoses" type="DiagnosesType" minOccurs="1" maxOccurs="1"/>  <xs:element name="adverse.events" type="AdverseEventsType" minOccurs="1" maxOccurs="1"/>  </xs:sequence>  <xs:attribute name="localProcedureId" type="xs:string" use="required"/>  <xs:attribute name="previousLocalProcedureId" type="xs:string" use="optional"/>  <xs:attribute name="procedureName" type="ProcedureNameEnum" use="required"/>  <xs:attribute name="endoscopistDiscomfort" type="DiscomfortEnum" use="required"/>  <xs:attribute name="nurseDiscomfort" type="DiscomfortEnum" use="optional"/>  <xs:attribute name="bowelPrep" type="BowelPrepEnum" use="optional"/>  <xs:attribute name="extent" type="ExtentTypeEnum" use="required"/>  <xs:attribute name="entonox" type="YesNoEnum" use="optional"/>  <xs:attribute name="antibioticGiven" type="YesNoEnum" use="optional"/>  <xs:attribute name="generalAnaes" type="YesNoEnum" use="optional"/>  <xs:attribute name="pharyngealAnaes" type="YesNoEnum" use="optional"/>  <xs:attribute name="polypsDetected" type="xs:int" use="required"/>  <xs:attribute name="digitalRectalExamination" type="YesNoEnum" use="optional"/>  <xs:attribute name="magneticEndoscopeImagerUsed" type="YesNoEnum" use="optional"/>  <xs:attribute name="scopeWithdrawalTime" type="xs:int" use="optional"/>  </xs:complexType>  <!-- Staff Types -->  <xs:complexType name="StaffMembersType">  <xs:sequence>  <xs:element name="Staff" type="StaffType" minOccurs="0" maxOccurs="3"/>  </xs:sequence>  </xs:complexType>  <xs:complexType name="StaffType">  <xs:sequence>  <xs:element name="therapeutics" type="TherapeuticsType" minOccurs="1" maxOccurs="1"/>  </xs:sequence>  <xs:attribute name="professionalBodyCode" type="xs:string" use="required"/>  <xs:attribute name="endoscopistRole" type="EndoscopistRoleTypeEnum" use="required"/>  <xs:attribute name="procedureRole" type="ProcedureRoleTypeEnum" use="required"/>  <xs:attribute name="extent" type="ExtentTypeEnum" use="optional"/>  <xs:attribute name="jManoeuvre" type="YesNoEnum" use="optional"/>  </xs:complexType>  <!-- Limitation Element -->  <xs:complexType name="LimitationsType">  <xs:sequence>  <xs:element name="limitation" type="LimitationType" minOccurs="0" maxOccurs="unbounded"/>  </xs:sequence>  </xs:complexType>  <xs:complexType name="LimitationType">  <xs:attribute name="limitation" type="LimitationsEnum" use="required"/>  <xs:attribute name="comment" type="xs:string" use="optional"/>  </xs:complexType>  <!-- Indications Element -->  <xs:complexType name="IndicationsType">  <xs:sequence>  <xs:element name="indication" type="IndicationType" minOccurs="1" maxOccurs="unbounded"/>  </xs:sequence>  </xs:complexType>  <xs:complexType name="IndicationType">  <xs:attribute name="indication" type="IndicationsEnum" use="required"/>  <xs:attribute name="comment" type="xs:string" use="optional"/>  </xs:complexType>  <!-- Diagnoses Element-->  <xs:complexType name="DiagnosesType">  <xs:sequence>  <xs:element name="Diagnose" type="DiagnoseType" minOccurs="1" maxOccurs="unbounded"/>  </xs:sequence>  </xs:complexType>  <xs:complexType name="DiagnoseType">  <xs:attribute name="diagnosis" type="DiagnosisLookupEnum" use="required"/>  <xs:attribute name="tattooed" type="TattooEnum" use="optional"/>  <xs:attribute name="site" type="BiopsyEnum" use="optional"/>  <xs:attribute name="comment" type="xs:string" use="optional"/>  </xs:complexType>  <!-- Biopsies Element -->  <xs:complexType name="BiopsiesType">  <xs:sequence>  <xs:element name="Biopsy" type="BiopsyType" minOccurs="0" maxOccurs="unbounded"/>  </xs:sequence>  </xs:complexType>  <xs:complexType name="BiopsyType">  <xs:attribute name="biopsySite" type="BiopsyEnum" use="required"/>  <xs:attribute name="numberPerformed" type="xs:int" use="required"/>  </xs:complexType>  <!-- Therapeutics Element -->  <xs:complexType name="TherapeuticsType">  <xs:sequence>  <xs:element name="therapeutic" type="TherapeuticType" minOccurs="1" maxOccurs="unbounded"/>  </xs:sequence>  </xs:complexType>  <xs:complexType name="TherapeuticType">  <xs:attribute name="type" type="TherapeuticLookupEnum" use="required"/>  <xs:attribute name="site" type="BiopsyEnum" use="optional"/>  <xs:attribute name="role" type="ProcedureRoleTypeEnum" use="optional"/>  <xs:attribute name="polypSize" type="PolypSizeEnum" use="optional"/>  <xs:attribute name="tattooed" type="TattooEnum" use="optional"/>  <xs:attribute name="performed" type="xs:int" use="required"/>  <xs:attribute name="successful" type="xs:int" use="required"/>  <xs:attribute name="retrieved" type="xs:int" use="optional"/>  <xs:attribute name="comment" type="xs:string" use="optional"/>  </xs:complexType>  <!-- Adverse Events Element -->  <xs:complexType name="AdverseEventsType">  <xs:sequence>  <xs:element name="adverse.event" type="AdverseEventType" minOccurs="1" maxOccurs="unbounded"/>  </xs:sequence>  </xs:complexType>  <xs:complexType name="AdverseEventType">  <xs:attribute name="adverseEvent" type="AdverseEventEnum" use="required"/>  <xs:attribute name="comment" type="xs:string" use="optional"/>  </xs:complexType>  <!-- Patient Element-->  <xs:complexType name="PatientType">  <xs:attribute name="gender" type="GenderType" use="required"/>  <xs:attribute name="age" type="xs:int" use="required"/>  <xs:attribute name="admissionType" type="AdmissionTypeEnum" use="optional"/>  <xs:attribute name="urgencyType" type="UrgencyEnum" use="optional"/>  </xs:complexType>  <!-- Lookup Types -->  <!-- Dose Element-->  <xs:complexType name="DrugType">  <xs:attribute name="pethidine" type="xs:float" use="required"/>  <xs:attribute name="midazolam" type="xs:float" use="required"/>  <xs:attribute name="fentanyl" type="xs:float" use="required"/>  <xs:attribute name="buscopan" type="xs:float" use="optional"/>  <xs:attribute name="propofol" type="xs:float" use="optional"/>  <xs:attribute name="noDrugsAdministered" type="YesNoEnum" use="optional"/>  </xs:complexType>  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<xs:enumeration value="Caecum"/>  <xs:enumeration value="Ascending Colon"/>  <xs:enumeration value="Anus"/>  <xs:enumeration value="Papilla"/>  <xs:enumeration value="Pancreatic duct"/>  <xs:enumeration value="Common bile duct"/>  <xs:enumeration value="CBD and PD"/>  <xs:enumeration value="Abandoned"/>  </xs:restriction>  </xs:simpleType>  <xs:simpleType name="LimitationsEnum">  <xs:restriction base="xs:string">  <xs:enumeration value="Other"/>  <xs:enumeration value="Not Limited"/>  <xs:enumeration value="benign stricture"/>  <xs:enumeration value="inadequate bowel prep"/>  <xs:enumeration value="malignant stricture"/>  <xs:enumeration value="patient discomfort"/>  <xs:enumeration value="severe colitis"/>  <xs:enumeration value="unresolved loop"/>  <xs:enumeration value="clinical intention achieved"/>  </xs:restriction>  </xs:simpleType>  <xs:simpleType name="AdmissionTypeEnum">  <xs:restriction base="xs:string">  <xs:enumeration value="Not Specified"/>  <xs:enumeration 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# Document Control

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| --- | --- | --- |
| **Date** | **Version** | **Change** |
| 20/01/2014 | 1.04 | Initial version |
| 05/02/2014 | 1.05 | 1. **Entonox** is now optional in xml schema.  2. **AntibioticGiven** is now optional in xml schema, however further business validation check in place to check it can only be specified for a ERCP Procedure.  3. **GeneralAnaes** is now optional in xml schema.  4. **PharyngealAnaes** is now optional in xml schema, however further business validation check in place to check it can only be specified for OGD/ERCP Procedures.  5. **MagneticEndoscopeImageUsed** is now optional in xml schema, however further business validation check in place to check it can only be specified for Colon/Flexi Procedures.  6. **DigitalRectalExamination** is now optional, however further business validation enforces that a value is specified for Colon/Flexi Procedures.  7. **Jmanoeuvre** is now optional, however further business validation enforces that a value is specified for OGD/Colon Procedures.  8. **ScopeWithdrawalTime** is to remain optional in the schema, however it should be noted that further business validation enforces that a value is specified for OGD/Colon procedures.  9. **Indications**, at least one indication is required per procedure.  10. **Diagnosis**, at least one indication is required per procedure.  11. **Therapeutic**, at least one indication is required per procedure.  12. **Extent** is mandatory for trainees. |
| 24/02/2014 | 1.06 | 1. **Biopsy** section added. 2. **Nurse Discomfort** is now optional.  3. **Comments** added to **IndicationType** 4. **Comments** added to **TherapeuticType** 5. **Comments** added to **AdverseEventType** (this is a new type) 6. **Biopsy** removed from **TherapeuticType**  7. **admission Type** is now optional.  8. **Urgency** is now optional.  9. **No Drugs Administered** option added to DrugType.  10. Ability to record **location** and **Tattooed** for Diagnosis type of colorectal cancer. |
| 10/03/2014 | 1.07 | 1. **SessionTypeEnum** & SessionType.**type** have been removed from the schema as the type of session e.g. Dedicated, Training, Service list is now calculated during the import based on the new+existing data and staff roles.  2. The **TherapeuticsRoleTypeEnum** used on Therapeutic.**Role** is to be replaced with the standard procedure lookup values as per **ProcedureRoleTypeEnum**. |

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| 09/04/2014 | 1.08 | 1.**SessionTypeEnum** reinstated and auto calculation removed.  2. **Other** added to **AdverseEventEnum**. |
| 22/05/2014 | 1.09 | 1. Remove duplicate **YAG Laser** from T**herapeutics**.  2. Max length for **session** and **procedure Ids** defined.  3. **Scope withdrawal time** now only applies to Colonoscopy.  4. **Scope withdrawal time** redefined as minutes.  5. J manoeuvre (Rectal retroversion) added to Flexi procedures.  6. Allow multiple Limitations to be specified. Also **LimitedByEnum** has been renamed to **LimitationsEnum**.  7. Add Caecum to the **BiopsyEnum.**  8.Staff extent is mandatory for trainees who were physically assisted ( see validation section 5.2 ). |
| 27/05/2014 | 1.10 | 1. Addition of Unknown and Indeterminate to **GenderType** |
| 04/06/2014 | 1.11 | 1. Allow independent role for trainer in **ProcedureRoleTypeEnum.** |
| 28/07/2014 | 1.12 | **TherapeuticType.role** has been made optional when **TherapeuticType.type** is None. |
| 15/12/2014 | 1.13 | Addition of **site** to **TherapeuticType.** |
| 05/02/2015 | 1.14 | 1. **DiagnoseType** site field now maps to **BiopsyEnum** rather than ExtentTypeEnum.  2. Removed **Colonic biopsy series** from **BiopsyEnum.** |
| 29/03/2016 | 1.5 | Change to web service XML Schema ‘**TherapeuticLookupEnum’** lookup values to match NED database using the <> symbols.   1. ‘Stone extraction &gt;=10mm’ 2. ‘Stone extraction &lt;10mm’   Notice the use of xml escape characters, for ‘<’ use ‘&lt;’ and for ‘>’ user ‘&gt;’ |
| 24/01/2017 | 1.6 | No Changes to this document. |
| 18/01/2018 | 1.6.1 | Introduction of ‘**SoftwareVersion’** string to the top level xml node. This is optional and can be set by ERS suppliers to indicate their ERS software version. Example: |